Response to Requests for Approved Equals - RFP for Zero Emission Electric Bus Solution

Item #	Requestor I.D.	Requestor Question #	RFP Section	RFP Language	Request for Approved Equal/Exception	City of Knoxville Response
1	BYD	1	5.28.4	Coolant Filtration. The cooling system shall be equipped with a properly sized water filter with a spin-on element. The filter shall not release or contain supplemental coolant additives.	Our cooling system does not require a filter. We respectfully request to not use a filter.	Request approved.
2	BYD	2	5.31.2	[5.31.2.1] All fluid lines and piping shall be supported to prevent chafing damage, fatigue failures, and tension strain. All hydraulic line routings shall be supported by click-bond supported Hellermann-Tyton fittings and clamps designed for this application. Lines passing through a panel, frame, or bulkhead shall be protected by grommets (or similar device) that fit snugly to both the line and the perimeter of the hole that the line passes through to prevent chafing and/or wear. Fluid lines shall not be the lowest point of the bus undercarriage.	Our hydraulic system uses a different brand of clamps. It would be very difficult to switch. We respectfully request to use a fittings and clamps that are proven to work well with our system.	Request approved.
3	BYD	3	5.50.12	Electrical, Electronic and Data Communication Systems - Grounds The battery shall be grounded to the vehicle chassis/frame at one location only, as close to the batteries as possible. When using a chassis ground system, the chassis shall be grounded to the frame in multiple locations, evenly distributed throughout the vehicle to eliminate ground loops. No more than three ring terminal connections shall be made per ground stud with spacing between studs ensuring conductivity and serviceability. Electronic equipment requiring an isolated ground of the battery (i.e., electronic ground) shall not be grounded through the chassis.	Both our low-voltage and high-voltage systems have circuit protection as relevant to their voltages. However, safety regulations require that only the low-V system be grounded to the chassis. We request to ground only our low-voltage system to the chassis in order to ensure safety and prevent bus shutdown.	Request approved. Though not written perfectly clear, the intent of this section was to address grounding of the low-voltage system.

4	New Flyer	1	5.10 Interchangeability	5.10.1 Unless otherwise agreed, all buses and components procured under the resulting contract, whether provided by the awarded Contractors suppliers or manufactured by the Contractor, shall be duplicates in design, manufacture and installation to ensure interchangeability among buses in each order group in this procurement. This interchangeability extends to the individual components as well as to their locations in the buses. These components include, but are not limited to, passenger window hardware, interior trim, lamps, lamp lenses, seat assemblies, etc.	New Flyer requests approval to provide a coach which is manufactured within a given production run to be duplicates in design; However, since this request for proposal includes options for additional coaches, interchangeability cannot be guaranteed between option orders.	All buses manufactured under the same purchase order shall be of duplicate design as stated in 5.10. KAT and the City of Knoxville expects no more than six buses on a single purchase order.
5	New Flyer	2	5.11 Training	5.11.5 At a minimum, the Contractor shall provide the full range of training courses listed above and offered within the proposal at no additional charge for the first year starting with delivery of the first order of buses.	New Flyer requests approval that all training be priced separately from the bus price. This will ensure proper costing regardless of the number of buses in the base order, and each subsequent delivery.	Request approved.
6	New Flyer	3	5.20.9 Wheel Area Clearance	Wheel area clearance shall be no less than 8 inches for parts fixed to the bus body and 6 inches for parts that move vertically with the axles.	New Flyer requests that wheel area clearance shall be no less than 8 inches for parts fixed to the bus body and 5.6 inches for parts that move vertically with the axles.	The City of Knoxville is receptive to minor variances to this specific item in the bus specification as long as the variance is consistent with the manufacturer's standard design for the proposed bus.
7	New Flyer	4	5.20.11 Interior Headroom	At the centerline of the window seats, headroom shall be no lower than 65 inches.	New Flyer requests approval that at the centerline of the window seats, headroom shall be no lower than 56 inches only at the rear bench window seats. See BID-INTERIOR DIM-40FT_XCELSIOR (002)	Request approved.

8	New Flyer	5	5.27.2.4 Propulsion System Controller	A control shall be available to the operator to allow a 30-second override which, when depressed, will allow the operator to delay the drive system shutdown but not the activation and alarm system.	New Flyer requests a deviation to not supply an override switch. Our propulsion system has been designed to prevent propulsion faults from causing sudden or uncontrolled shut-down of the drive system. Even for major faults the propulsion system will always try to delay shut down until the vhicle is safe (i.e. parked with shifter in neutral). During this time the driver will recieved multiple warnings and/or alarms alerting them to get the bus to safer location. Overriding a system fault would likely result in component failure and potentially cause a more dangerous condition that the one you are trying to over come. In particular it is highly inadvisale to push lithium batteries beyond their safe operating conditions even during an emergency as doing could lead to a potentially danger thermal run-away event.	Request approved.
9	New Flyer	6	5.27.7 Energy Storage System Safety	5.27.7.4 Proposers shall provide a means to isolate the high-voltage battery during maintenance operations. Manual and automatic disconnects should open both poles of each physical battery pack.	New Flyer would like to clarify that the battery strings are isolated on both poles at the Battery Disconnect Unit to separate the strings. However the manual disconnects located inside the strings bread the series connection in the string, so technically, they do not break both poles.	New Flyer's design for this item is acceptable.

10	New Flyer	7	5.27.8 Battery Containers	All electrical connections shall be fully shielded and hand-operable.	On the external portion of the ESS, New Flyer meets the intent of the spec. The external connections for the HV are shielded from any type of accidental contact. New Flyer wishes to clarify that the internal to the ESS enclosure is where there are connections that are not shielded. However, only trained personnel should be inside an ESS enclosure. Also, NF has HVIL switches on the ESS enclosure doors to isolate the pack anytime the units are open. Therefore these connections are shielded by the enclosure itself. The non-hand operable connections follow the same logic.	New Flyer's design for this item is acceptable.
11	New Flyer	8	5.28.1.1 Cooling System Design	A screen guard must installed on electric motor fans per SAE J1308. The EMP electric cooling system is preferred if the bus design allows.	New Flyer requests not to provide the screenguards for rooftop mounted electric motor cooling fans. The electric motor cooling fans already have finger guards as part of the design.	Request approved.
12	New Flyer	9	5.28.2.2 Component Thermal Management	In the event that a component temperature sensor must disable the bus, the component/system must comply with the automatic propulsion system protection/shutdown override feature requirement addressed in the Propulsion System Controller section above.	New Flyer requests to remove component shutdown override requirement based on the deviation to remove the shutdown override switch.	Request approved.

13	New Flyer	10	5.33 Corrosion	All exposed metal surfaces under the bus shall be both Ecoated and powder coated.	New Flyer requests approval to provide Axalta's Ganicin Zinc-Rich Polyurethane primer which is used as our primary corrosion protection. All materials used are low VOC (Volatile Organic Compound). New Flyer considers this to be the best protection coating and application process for Carbon Steel in the industry. Please refer to the attached document for more information. SIB 304-001	Request approved.
14	New Flyer	11	5.39.4 Wheel Housing Design and Construction	If fiberglass wheel housings are provided, then they shall be color-impregnated to match interior finishes.	New Flyer requests approval for fiberglass wheelhouse covers that are not color-impregnated. New Flyer utilizes standard fiberglass layup techniques and only the A surface is gelcoat painted.	Request approved.
15	New Flyer	12	5.40.1 Chassis Suspension	Necessary adjustments shall be easily accomplished without removing or disconnecting the components.	New Flyer would like to clarify that bolts must be removed to install washers/shims between the radius rods and the frame. No components need to be removed.	New Flyer's design for this item is acceptable.
16	New Flyer	13	5.41.2 Tires	Tires will be Bridgestone 315/80R22.5 load range H.	New Flyer's Xcelsior design can only incorporate 305/70R/22.5 size tires. As the Procuring agency is supplying the tires, please keep in mind that the tires you supply must be rated for a 65-mph speed (100 km/h). New Flyer requests approval.	If the awarded manufacturer's electric bus design requires a tire size other than Bridgestone 315/80R22.5 load range H, then the bus manufacturer shall supply the tires required for their bus design. The bus manufacturer, however, must provide tire manufacturer documentation demonstrating the supplied tires meet Buy America requirements at 49 CFR 661.5 (Buy America requirements for Iron, Steel and Manufactured Products).

17	New Flyer	14	5.43 Steering Axle	The front axle should be of an independent suspension design, non-driving with a load rating sufficient for the bus loaded to GVWR and shall be equipped with grease type front wheel bearings and seals.	New Flyer requests approval for cast iron dropped beam with hollow center sections, steered, non-driven. Please provide customer a copy of SIB#203-002..	Request approved.
18	New Flyer	15	5.47.1 Service Brake	Brake wear indicators shall be provided on exposed push rods.	New Flyers proposal is based on providing disc brakes without the visible stroke indicators as this feature is not applicable to a disc brake system. The brake chamber pushrod is totally enclosed and sealed against the caliper, therefore not visible. This is done to improve reliability of the brake system. New Flyer provides a brake wear indicator on the instrument panel in the driver's area. See SIB 203-204.	Request approved.
19	New Flyer	16	5.47.5.1 Hubs and Discs	5.47.5.1 Replaceable wheel bearing seals shall run on replaceable wear surfaces or be of an integral wear surface sealed design. Wheel bearing and hub seals shall not leak or weep lubricant for 100,000 miles when running on the route operating profile	New Flyer would like to clarify that for all axles we use unitized wheel bearings. The seals are self-contained with replaceable wear surfaces. The wheel bearings are lubed-for-life with grease.	New Flyer's design for this item is acceptable.
20	New Flyer	17	5.47.6 Parking/Emergency Brake	The parking brake valve button will pop out when air pressure drops below requirements of FMVSS 121.	New Flyer requests approval to provide our standard configuration which incorporates a valve that will pop out when the pressure in the system drops below (40) PSI. To clarify, FMVSS 121 is not related to this requirement and is not necessary.	Request approved.
21	New Flyer	18	5.48 Passenger Door Interlocks	5.48.3 All door systems employing brake and accelerator interlocks shall be supplied with supporting failure mode effects analysis (FEMA) documentation, which demonstrates that failure modes are of a failsafe type, thereby never allowing the possibility of release of interlock while an interlocked door is in an unsecured condition, unless the door master switch has been actuated to intentionally release the interlocks.	New Flyer requests approval not to provide FEMA documentation. This information is highly technical and the contents therein can be easily misinterpreted. In addition, this information is highly business sensitive/confidential and we would prefer to maintain the integrity of this type of information.	Request approved.

22	New Flyer	19	5.49.3.3 Air Lines and Fittings	The compressor discharge line between power plant and body-mounted equipment shall be flexible convoluted copper or stainless steel line, or may be flexible Teflon hose with a braided stainless steel jacket. Other lines necessary to maintain system reliability shall be flexible Teflon hose with a braided stainless steel jacket.	New Flyer would like to clarify that our discharge lines are Teflon braided sst jacket. Other hoses are only Teflon if temp will exceed capabilities of the standard rubber hose (i.e. Manuli or Aeroquip hose). So, standard is the rubber hose anywhere other than compressor discharge.	New Flyer's design for this item is acceptable.
23	New Flyer	20	5.49.3.3 Air Lines and Fittings	Flexible lines shall be supported at 2 foot intervals or less.	New Flyer requests approval to provide a supporting interval for flexible lines of 30 inches or less.	Request approved.
24	New Flyer	21	5.50.1 Electrical System Overview	5.50.1.5 Data communications systems area divided into three levels to reflect the use of multiple data networks. See Figure (to view the figure please refer to the word file) 4. -Drivetrain Level: Components related to the drivetrain including the drive motor, transmission, and anti-lock braking system (ABS), which may include traction control. -Information Level: Components whose primary function is the collection, control or display of data that is not necessary to the safe drivability of thevehicle; i.e., the vehicle will continue to operate when those functions are inoperable. These components typically consist of those required for automatic vehicle location (AVL) systems, destination signs, fareboxes, passenger counters, radio systems, automated voice and signage systems, video surveillance and similar components. -Multiplex Level: Electrical or electronic devices controlled through input/output signals such as discrete, analog and serial data information, i.e., on/off switch inputs, relay or relay control outputs. Multiplexing is used to control components not typically found on the drivetrain or information levels, such as lights, wheelchair lifts, doors, heating, ventilation and air conditioning (HVAC), and gateway devices.	New Flyer's clarifies electric bus CAN network topology does not have the separation of the drivetrain and multiplex network as found on a non-electric configuration. There are two main CAN backbone where we define as the PRIMARY CAN and SECONDARY CAN. Primary CAN network has the Propulsion system, ESS controller, multiplex system, ABS, DCDC converter. Secondary CAN has the cooling pumps/fans, HVAC, and any information level systems required on the bus. In addition, there are two proprietary CAN backbones where the ESS and Propulsion systems are connected.	New Flyer's design for this item is acceptable.

25	New Flyer	22	5.50.6 Jump Start	If jump starting is within the electric bus design, such as for propulsion system initiation, a jump-start connector shall be located next to the battery disconnect switch.	New Flyer requests approval not to provide a jump start connector for the electric buses as this is not required for our bus design.	The RFP language allows for flexibility in this design. New Flyer's design is acceptable.
26	New Flyer	23	5.50.7 Low-Voltage Battery Compartment	5.50.7.2 The vehicle shall be equipped with one or more 12 VDC and 24 VDC quick disconnect switches.	New Flyer wishes to clarify that we are only supplying one (1) quick disconnect switch for both 12VDC and 24 VDC.	The RFP language allows for flexibility in this design. New Flyer's design is acceptable.
27	New Flyer	24	5.50.7 Low-Voltage Battery Compartment	5.50.7.4 The batteries shall be securely mounted on a stainless steel or equivalent tray that can accommodate the size and weight of the batteries.	New Flyer requests approval to provide a polyethylene battery tray supported by a stainless steel sub-frame (similar to what was provided in the previous builds). This design is corrosion resistant, light weight and has proven to be extremely robust. Please note that the batteries are supported by structural stainless steel U-channels sized to support up to four (4) Group-31 batteries. See SIB 260-001-X which provides further information the battery tray.	Request approved.
28	New Flyer	25	5.50.8 Auxiliary Electronic Power Supply	As a means to provide electrical power to additional accessories and as a means to minimize accessory drain upon the ESS, proposers are encouraged to include an auxiliary power supply within the bus design. Auxiliary power supplies, if included in the bus design, should only be accessible from the bus exterior by maintenance personnel. All auxiliary electronic power supplies should be recharged through the ESS depot charging system; not the bus ESS unless their SOC reach an unacceptable level (level where accessories are not adequately powered).	New Flyer wishes to clarify that we do not meet the requirement for Auxiliary Electronic Power Supply. The required USB charging ports may be powered by the low-voltage batteries. Also, since ESS depot charging is required, dedicated ESS and CAN charger controller for the Auxiliary power supply must be installed separately. This will have significant impact on cost. Lastly, the requirement for propulsion ESS to charge the auxiliary power supply once its SOC reaches an unacceptable level defeats the purpose of minimizing drain from the propulsion ESS.	This section of the electric bus specification was not a requirement, but a suggestion for proposers to consider in their design. Thank you for your comments.

29	New Flyer	26	5.50.9 Master Battery Switch	Turning the master switch "OFF", with the power plant operating, shall not damage any component of the electrical system.	New Flyer would like to clarify that while steps are taken to minimize the impact of shutting off the vehicle using the master battery switch, it is impossible to guarantee that there would be no impact to vehicle if this were to be done on a regular basis. Proper procedure in normal operation is to apply an orderly shutdown through the standard ignition switches (i.e. the master run switch on the side console panel or equivalent). The master battery disconnect switch is meant for emergency and maintenance applications and should only be used in such instances.	New Flyer's design for this item is acceptable.
30	New Flyer	27	5.50.11 Circuit Protection	Fuses shall be used only where it can be demonstrated that circuit breakers are not practicable.	New Flyer wishes to clarify that we use high current fuses for circuits with current requirements of 80 amps or higher. These would be the main power distribution circuits that originate in the fuse box and distribute power throughout the coach. Other examples of these circuits would be power to the equalizer, power to the rear panel, power to the side console, power to climate control unit, power to radiator and power to grid heater. Please note that failure of one of these high current fuses would indicate a severe problem that would require immediate action.	New Flyer's design for this item is acceptable.

31	New Flyer	28	5.50.15 Electrical Compartments	Rear Start and Run controls shall be mounted in an accessible location in the engine/drive motor compartment and shall be protected from the environment.	New Flyer requests approval not to provide a rear start and run control box. The distributed nature of the propulsion batteries are such that there is no requirement to perform gauge checks or other primary diagnostics from the rear engine compartment. All propulsion battery checks are designed to be performed inside the vehicle from the rear panel with a suitably equipped laptop. At the rear of the bus on the street side, switches are provided to activate the service lighting and a switch to select the coolant fill modes.	Request approved.
32	New Flyer	29	5.53.4 Normal Bus Operation Instrumentation and Controls	The audible alarm shall be tamper-resistant and shall have an outlet level between 80 and 83 dBA when measured at the location of the operators ear.	New Flyer requests approval to provide a tamper-resistant audible alarm with an outlet level between 75 and 80dBA when measured at the location of the operator's ear.	Request approved.
33	New Flyer	30	5.53.4 Normal Bus Operation Instrumentation and Controls - Transit Bus Instruments and Alarms	To view the table details please refer to the word file. System start, rear Approved momentary switch (not required for vehicles without an ICE) Engine compartment Activates vehicle systems	New Flyer requests to remove this requirement as there is no rear control box on the XE model. Therefore, there is no rear start button, or rear run switch. All controls are in the driver's area.	Request approved.
34	New Flyer	31	5.53.4 Normal Bus Operation Instrumentation and Controls	Drive selector Touch panel switch Side console Provides selection of propulsion: forward, reverse and neutral Gear selection	New Flyer provides a shift selector which is positioned on the right side of the instrument panel in easy reach of the driver. This layout allows for the defroster controls to be located on the left side of the instrument panel giving the driver easy access to both of these controls. Please see approval drawing 655299 for details.	New Flyer's design for this item is acceptable. Approval for final positioning of controls are subject to decisions made during pre-production meeting.

35	New Flyer	32	5.53.4 Normal Bus Operation Instrumentation and Controls	Front door ramp/kneel enable Two-position keyed switch1 Front door remote or dash right wing Permits ramp and kneel activation from front door area, key required1 Amber light	New Flyer requests approval not to provide a separate switch to enable the kneeling and WC ramp controls. New Flyer provides a momentary/maintained three position switch for Kneeling which works as described below: When placed in the RAISE position, the kneel toggle switch will latch and continue to raise the vehicle until full ride height is reached at which point the raising action will automatically stop. In order to interrupt the raising operation during its cycle, the toggle switch must be set to the HOLD position.	Request approved.
36	New Flyer	33	5.53.4 Normal Bus Operation Instrumentation and Controls	Front kneel Three-position momentary switch Front door remote Permits kneeling activation and raise and normal at front door remote location Amber or red dash indicator exterior alarm and amber light	New Flyer requests approval to provide the front kneeling switch on the right-hand side of dash. Please see approval drawing 655299 for details.	New Flyer's design for this item is acceptable. Approval for final positioning of controls are subject to decisions made during pre-production meeting.

37	New Flyer	34	5.53.4 Normal Bus Operation Instrumentation and Controls - Transit Bus Instruments and Alarms	To view the table details please refer to the word file. Fire suppression Red push button with protective cover Dash left wing or dash center Permits driver to override and manually discharge fire suppression system Red light	New Flyer requests approval to provide the fire suppression switch located above the driver on the saw tooth panel (as a standard location). This mounting location is ideal as it's easy to access by a seated driver. New Flyer would also like to clarify that our standard enclosure design does not incorporate application of fire suppression extinguishing agent directly inside the high voltage battery enclosure. A true Lithium battery fire such that an currently available onboard vehicle suppression system would not be sufficient to extinguish the event. The best way to suppress a Lithium battery fire is to prevent the fire from occurring in the first place through the continuous monitoring of the battery cell temperatures and a preventative disconnect of problem cells at a critical threshold that is well below the point where a risk of fire would be present.	New Flyer's design for this item is acceptable. Approval for final positioning of controls are subject to decisions made during pre-production meeting.
38	New Flyer	35	5.53.4 Normal Bus Operation Instrumentation and Controls	Low-profile microphone Low-profile discrete mounting Steering column Permits driver to make announcements with both hands on the wheel and focusing on road conditions	New Flyer requests approval to provide a gooseneck microphone that's mounted to the A-pillar and not a discrete microphone that's mounted on the steering column. This gooseneck microphone allows for the driver to make announcements with both hands on the steering wheel when provided in conjuction with PA floor mounted momentary foot switch. For further information on the gooseneck microphone see drawings 442272.	Request approved.

39	New Flyer	36	5.53.4 Normal Bus Operation Instrumentation and Controls	Regenerative brake disable Two-position switch Within reach of operator or approved location Permits driver override to disable brake regeneration Red light	New Flyer requests approval to provide this switch inside the destination sign compartment (out of operator's reach). If activated, they help the driver retain control under very slippery conditions. However, this also means that brake pad wear will increase and high voltage batteries will not recharge upon deceleration. See Approval drawing 655299 for details.	New Flyer's design for this item is acceptable. Approval for final positioning of controls are subject to decisions made during pre-production meeting.
40	New Flyer	37	5.53.4 Normal Bus Operation Instrumentation and Controls	Alarm acknowledge Push button momentary Approved location Permits driver to acknowledge alarm condition	New Flyer requests to remove this requirement as this is not an available option. Allowing the alarm to be extinguished could result in the root cause of the problem not get immediately addressed which could cause more severe damage. Please note that the audible alarms indicate a serious issue that requires action.	Request approved.
41	New Flyer	38	5.54.3 Storage Box	An enclosed dirver storage area shall be provided with a positive latching door and/or lock. The minimum size is 2750 cubic inches.	New Flyer requests approval for the following smalller stoarge box options: Storage box above the seated driver: 12""H x 13-19""L x 9W (~1728 in.3) Storage box behind the seated driver: 12""H x 19""L x 7""W (~1596 in.3) Space in driver's area does not allow for anything larger.	Request approved.
42	New Flyer	39	5.55.1 Windshield Wipers	A variable-speed feature shall be provided to allow adjustment of wiper speed for each side of the windshield between approximately five and 25 cycles per minute.	New Flyer requests approval approval for wiper speed of approximately 20 and 45 cycles per minute. This is based off Comotech specs.	Request approved.

43	New Flyer	40	5.58.3 Drivers Side Window	The operators side window shall not be bonded in place and shall be easily replaceable.	New Flyer wishes to clarify that if flush style passenger windows are required, then a flush (bonded) driver's window would be required. Please confirm with style of windows are to be included for both driver's and passenger windows.	Bus side windows shall be bonded frame, flush mounted with an inward opening transom. From the exterior of the bus, the side windows should provide a seamless appearance as much as possible.
44	New Flyer	41	5.58.4 Side Window Configuration	Side windows shall not be bonded in place, but shall be easily replaceable without disturbing adjacent windows and shall be mounted so that flexing or vibration from engine operation or normal road excitation is not apparent.	New Flyer request clarification regarding the type of windows to be provided. The specification Side windows shall not be bonded in place "Side windows shall not be bonded in place" which in turn describes a framed window system. However, the paragraph later states "All side windows shall be seamless (hidden frame) with inward-opening transom (fixed bottom, tip-in top)." Flush style windows are bonded to the bus frame which provides the flush style of glass. Please confirm if framed (not bonded) passenger windows OR is flush style (bonded) windows are required.	Bus side windows shall be bonded frame, flush mounted with an inward opening transom. From the exterior of the bus, the side windows should provide a seamless appearance as much as possible.
45	New Flyer	42	5.59.1 Capacity and Performance	5.59.1.2 The HVAC unit should be roof-mounted; ThermoKing all electric preferred.The HVAC shall provide an integrated solution for passenger heating and cooling along with required cooling capacity to be used for the vehicle battery cooling loop.	New flyer requests a devation to supply a rear mounted HVAC unit. This is due to the design of the bus to include part of the battery and battery management system on the roof of the bus therefore space contraints require a rear HVAC design. Additionalyl we request the use of a dedicated chiller for our ESS cooling. Having a dedicated chiller ensure that batteries can be cooled if necessary even when cabin heating is required.	Request approved.

46	New Flyer	43	5.60.11 Splash Aprons	Splash aprons, composed of 1/4inch minimum composition or rubberized fabric, shall be installed behind and/or in front of wheels as needed to reduce road splash and protect underfloor components.	New flyer would like to clarify that on New Flyer vehicle design, the splash aprons are located forward of the front wheels and rear of the rear wheels to reduce wheel splash.	New Flyer's design for this item is acceptable.
47	New Flyer	44	5.60.13 Access Door Latches/Locks	All such access doors that require a tool to open are standardized throughout the vehicle and will require a nominal 5/16 in. square male tool to open or lock.	New Flyer would like to clarify that Not all interior access doors are secured with locks. The following doors are secured with a short wing quad latch (non-locking) Entrance door mech box Destination Sign compartment	New Flyer's design for this item is acceptable.
48	New Flyer	45	5.62 Finish and Graphics	5.62.2 Paint shall be applied smoothly and evenly with the finished surface free of visible dirt and the following other imperfections: Blisters or bubbles appearing in the topcoat film Chips, scratches or gouges of the surface finish Cracks in the paint Craters where paint failed to cover due to surface contamination Overspray Peeling Runs or sags from excessive flow and failure to adhere uniformly to the surface Chemical stains and water spots Dry patches due to incorrect mixing of paint activators Buffing swirls	New Flyer requests approval to provide paint that shall be applied in accordance with New Flyer's standard Quality Assurance Paint Appearance Standards. Please refer to the attached new Flyer Paint Standards document.	Request approved. KAT still requires a single stage finish, not a dual stage (commonly known as "base coat clear coat").
49	New Flyer	46	5.62.6 Bus Exterior Color	PPG Delfleet FDGH 303769 Gray. PPG Delfleet FDGH 9700 Black. PPG Delfleet FDGH Ford YZ White	New Flyer request approval to use Axalta Imron Elite. Color specs however are complied with.	Request approved. KAT still requires a single stage finish, not a dual stage (commonly known as "base coat clear coat").

50	New Flyer	47	5.64.7 Service Area Lighting (Exterior and Interior)	Power shall latch on with activation of the switch and shall be automatically discontinued (timed out) after 30 minutes to prevent damage caused by inadvertently leaving the service area lighting switch in the "on" position after repairs are made.	New Flyer requests approval to provide power to all manually switched LED service lights through a PLC output, which is activated whenever the PLC is awake. Power shall latch on because the lights are provided with maintained switches. To reduce parasitic load on the batteries, the entire PLC shuts down automatically after a predetermined time (typically 15 to 30 minutes) when the operator turns off the vehicle. This means that when the PLC shuts down, the service lights shut down with it.	Request approved.
51	New Flyer	48	5.65.2 Interior Panels	Panels shall be easily replaceable and tamper-resistant.	New Flyer requests approval to use FMJ non-skid treatment for floor surfaces. FMJ is a similar product to Linex and provides comparable coefficients of friction.	Request approved.

52	New Flyer	49	5.65.9 Insulation	5.65.9.3 All insulation materials shall comply with the Recommended Fire Safety Practices defined in FTA Docket 90-A, dated October 20, 1993.	New Flyer requests approval to provide a coach interior which is compliant to standards of FMVSS 302 (or CMVSS). Docket 90 is a recommended standard only, and is not an industry standard. The proposed coach is designed and manufactured in accordance with all applicable FMVSS 302 for fire safety and smoke emissions regulations.	Federal Motor Vehicle Safety Standard (FMVSS) No. 302, "Flammability of Interior Materials," specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles. The purpose of this standard is to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes. The standard applies to passenger cars, multipurpose passenger vehicles (MPVs), trucks and buses. FTA Docket 90a describes FTA's recommended procedure for testing limits for smoke emission and the availability of materials to retain fire retardant chemicals after they have been exposed to water and discusses FTA's position on smoke emission performance criteria for seating, flooring, insulation and outer shell.
53	New Flyer	50	5.66 Floor Covering	The area of the front ramp platform as well as the floor area under and around the ramp in the vestibule area may be LineX sprayed-on polyurethane, non-skid surface.	New Flyer requests approval to use FMJ non-skid treatment for floor surfaces. FMJ is a similar product to Linex and provides comparable coefficients of friction.	Request approved.
54	New Flyer	51	5.66 Floor Covering	The step edge shall be LineX yellow.	New Flyer requests approval to use FMJ non-skid treatment for floor surfaces. FMJ is a similar product to Linex and provides comparable coefficients of friction.	Request approved.

55	New Flyer	52	5.66 Floor Covering	5.66.5 A one-piece center strip shall extend from the vertical wall of the rear settee between the aisle sides of transverse seats to the standee line.If the floor is of a bi-level construction, then center strip shall be one-piece at each level. The covering between the center strip and the wheel housings may be separate pieces. At the doors, however, a separate strip as wide as the door shall extend from the center strip to the outboard edge of the rear/exit area.	New Flyer would like to clarify that flooring comes in 59 inch width rolls. The seams on either side of the center strip (10 inches inbound from the outer walls) are situated under the seats and are sealed with a permanent vinyl weld and are not susceptible to harsh wear. New Flyer requests approval.	New Flyer's design for this item is acceptable.
56	New Flyer	53	5.67.11 Floor Panels	Flooring material at or around access openings shall be flush with the floor and shall be edge-bound with stainless steel or another material that is acceptable to KAT to prevent the edges from coming loose.	New Flyer requests approval to provide a plastic ring placed on perimeter of access panel secured with stainless steel screws. This is provided on thousands of New Flyer Xcelsior buses with no field issues.	New Flyer's design for this item is acceptable.
57	New Flyer	54	5.68.9.5 Door Glazing	The upper section of both front and rear doors shall be glazed for no less than 45 percent of the respective door opening area of each section.	New Flyer would like to clarify that it provides a full one-piece design glazing on each panel on front door, which provides the driver with an improved viewing area. New Flyer has standardized on the Ameriview panels to maximize the drivers visibility from the seated position.	New Flyer's design for this item is acceptable.
58	New Flyer	55	5.68.9.6 Door Exterior Projection	The exterior projection of both doors shall be minimized and shall not exceed 14 inches during the opening or closing cycles or when doors are fully opened.	New Flyer requests approval to provide the air open spring close with exterior projection of about 14 inches to the hard point and about 16.5 inches to the rubber seal.	New Flyer's design for this item is acceptable.
59	New Flyer	56	5.69.1 Low-Floor Ramp	5.69.1.1 Lift-U ramp system, most current model available.	New Flyer requests approval to use it's patented wheelchair ramp system. Our ramp meets the intent of the specifications, please refer to the attached SIB # 580-001 for more information.	Request denied. The proposed wheelchair ramp must be designed to have a supporting load capacity of at least 950 pounds. Documentation submitted with your approved equal request rates the wheelchair ramp supporting load at 660 pounds.

60	New Flyer	57	5.72.3 Speakers	Mounting shall be accomplished with rivnuts and machine screws.	New Flyer requests approval to mount the interior speakers with machine screws, flat washers and nuts (similar to what was provided in the previous builds). This combination of hardware provides a robust connection which can be removed and re-assembled multiple times without stripping.	Request approved.
61	New Flyer	58	5.72.3 Speakers	Total impedance seen at the input connecting end shall be 8 Ohms.	New Flyer requests approval to provide interior speakers with total impedance between 4-8 ohms depending on the interior speaker interface connections.	Request approved.
62	New Flyer	59	5.72.4 Radio Prewire	Power cable and antenna with cable shall be provided by KAT.	New Flyer requests approval to provide fishwire and conduit provisions for ease of routing cables after bus delivery. We do not install customer supplied cables because the length of the cable provided by the customer could be either too short or too long depending on its routing in our bus. Pre-wire requirements can be discussed at the pre-production meeting.	The awarded contractor shall provide pre-wire for the radio system's power cable and installation of the radio antenna with cable. Appropriately sized items may be obtained from the radio manufacturer, B.K. Technologies. Contact is Kent Bickel, 615.306.0534, kbickel@bktechnologies.com
63	New Flyer	60	5.72.5 Driver Display Unit (DDU)	The Contractor shall install a driver display unit as close to the drivers instrument panel as possible.	New Flyer requests clarification to confirm that the driver display unit (DDU) is part of the Clever Device's equipment? If not, could you please specify which system is it connected to?	Proposers shall include their designed, dash mounted driver display unit that provides the operator operating information of the bus. Example of operating information is air pressure, drive motor temperature, vehicle speed, battery state of charge, etc.

64	New Flyer	61	6.1.1.5 Energy Storage System and Charging System	Proposers shall define all components that make up their Energy Storage System, and Charging System, and provide information on all warranty programs proposers can make available to the City.	New Flyer asks for clarification on the battery warranty. Can KAT tell us how long of warranty period is required to be proposed as part of the bus cost ? Once we know what we are to propose as part of our base, New Flyer will provide optional extended warranties on additional times and mileages.	Proposers shall offer a six (6) year/4500 charge cycle warranty, which ever comes first, as base warranty for the ESS battery. Proposers shall also provide extended battery warranty options and battery lease options.
65	New Flyer	62	6.2.1 Occurrence and Remedy	A Fleet Defect is defined as the failure of identical items or sub-systems covered by the warranties of this contract, in proportion to the total number of buses delivered. Deliveries of four buses, the proportion shall be three buses or 75%. Deliveries of five buses, the proportion shall be three buses or 60%. Deliveries of six buses, the proportion shall be three buses or 50%. Deliveries of seven buses, the proportion shall be four buses or 57%. A Fleet Defect shall apply only to the base warranty period in sections entitled "Complete Bus", "Propulsion System", "Energy Storage System" and "Major Subsystems".	New Flyer is committed to ensuring that you get the most value from your vehicles and is requesting your approval on fleet defect coverage for the limited base bus warranty period of 1 year/50,000 miles (whichever occurs first) and the following: - Does not apply to normal wear-and-tear items or major components (high voltage batteries, HVAC). Major component manufacturers will not recognize and/or participate in fleet defect clauses, however, if the fleet defect percentage is reached in a major component, New Flyer will fully support and assist you with obtaining a remedy from the major component manufacturer.	Fleet Defect coverage shall extend throughout the base bus warranty period of 1 year/50,000 miles (whichever occurs first) plus any extended base bus warranty period, does not apply to normal wear-and-tear items, and also covers major components where New Flyer is the supplier.

66	New Flyer	63	6.3.1 Repair Performance	The Contractor is responsible for all warranty-covered repair Work. To the extent practicable, KAT will allow the Contractor or its designated representative to perform such Work. At its discretion, KAT may perform such Work if it determines it needs to do so based on transit service or other requirements.	It is New Flyers priority to ensure that all warranty covered repairs are completed by the appropriate party in order for you to receive the highest quality, least expensive and most efficient outcome possible. With this goal in mind, New Flyer is requesting your approval on the following solutions: - Minor Major Warranty-covered repairs should be carried out by KAT and reimbursed by the contractor through iWarranty. New Flyer is available to assist in completing these warranty-covered repairs when it is beyond the propertys scope of expertise. - Major Component Warranty repairs should be carried out by the equipment suppliers HVAC and destination sign suppliers in order to adhere to their mandate that all warranty repairs be performed by an authorized dealer unless KAT is an authorized warranty center. If the property elects to perform these repairs, without the written permission of the original equipment manufacturer, the remaining warranty coverage may be voided.	Request conditionally approved in that labor reimbursements to KAT shall be the standard rate of $65 per hour and the last sentence of New Flyer's requested language shall be replaced with, "If, soley upon the judgement of the City of Knoxville, New Flyer is not responsive to meeting KAT's warranty repair needs, KAT may perform such work and New Flyer shall provide reimbursement for parts and labor."

67	New Flyer	64	6.3.2 Repairs by the Contractor	The Contractor shall provide at its own expense all spare parts, tools and space required to complete repairs. At KATs option, the Contractor may be required to remove the bus from the KATs property while repairs are being effected.	The New Flyer Service team will always strive to solve your problems and get your bus up and running as fast as possible. When available, using the KATs space to complete repairs is the best location to getting the repairs done quickly. This is why New Flyer requests your approval to provide spare parts and tools required to complete warranty repairs, and whenever possible, to complete these repairs in the KATs shop space.	In these cases KAT will strive to make shop space available but only one repair bay with one set of lifts will be guaranteed; more KAT shop space will be made available if practical for KAT's on-going maintenance operation. Otherwise, if additional space is required to meet KAT's warranty repair needs, New Flyer shall be prepared to obtain use of additional repair space at their own expense. Additionally, tools are the personal property of mechanics so KAT can not provide use of tools. If a KAT mechanic is assigned to work with an awarded manufacturer's technician/engineer (which is a common practice), then we anticipate the assigned mechanic will voluntarily share what is needed from their personal tool box, though the awarded manufacturer is expected to replace any KAT mechanic's tools for which the awarded manufacturer's technician damages, destroys or loses. Additionally, repair parts available from KAT's existing stock shall also be made available but shall be reimbursed at the then current replacement cost plus 15% administrative handling fee up to $150 per claim. Anything required in performing repairs beyond this accommodation will have to be provided by the awarded manufacturer.

68	New Flyer	65	6.3.3 Repairs by KAT	The reimbursement shall be at the current price at the time of repair and shall include 15 percent handling costs.	Here at New Flyer we want you to get the best value and service out of your buses. With this goal in mind, New Flyer requests your approval to reimburse KAT for defective parts and for parts that must be replaced to correct the defect for the duration of the base bus warranty period. Parts will be reimbursed at the current published price plus applicable taxes. Handling costs will be reimbursed up to a maximum of $100 per claim.	The awarded contractor shall reimburse KAT for defective parts and for parts that must be replaced to correct the defect for the duration of the base bus warranty period plus extended base bus warranty period if included with purchase of the bus. Parts shall be reimbursed at the then current replacement cost plus applicable taxes. Handling costs will be reimbursed at 15% per claim up to $150 per claim.
69	New Flyer	66	6.3.6 Forms	KATs forms will be accepted by the Contractor if all of the above information is included. Electronic submittal shall be used for forms.	New Flyer's online warranty system enables customers to submit warranty claims more quickly and efficiently and allows the Contractor's warranty claims administrators to process the claims even faster. Because of the efficiencies gained from using an on-line warranty system, Contractor requests your approval to submit all warranty claims through the on-line warranty system. Please note that Contractor's warranty claim period is 30 days from the date of failure and any claims submitted later than 30 days may be denied. This claim period supports our goal of getting your buses up and running as soon as possible and enables us to submit the claims to the supplier sooner for your reimbursement.	Request approved contingent upon reimbursement terms are consistent with the contractual agreement, KAT's warranty work labor rate published within KAT Fleet Maintenance Plan; currently $65 per hour.

70	New Flyer	67	4.3.3 Contract Deliverables	Item 20 & 25 - Preventative maintenance manuals	Bus Preventive Maintenance information is not available as a standalone manual. New Flyer requests approval to provide this information is included within the bus Service manual and OEM component supplier published manuals.	Request approved.
71	New Flyer	68	4.3.3 Contract Deliverables	Item 21 & 26 - Final Diagnostic Procedures manuals	Bus Diagnostic Procedures information is not available as a standalone manual. New Flyer requests approval to provide this information is included within the bus Service manual and OEM component supplier published manuals.	Request approved.
72	New Flyer	69	4.3.3 Contract Deliverables	Items 19 - 23 - Draft Manuals	Draft manuals are not supplied for small bus quantity runs. New Flyer requests approval to provide sample bus manuals (copy of another customer's manual set for the same bus model) can be supplied but should not be used for ordering parts and should be destroyed after receipt of build specific bus manual set.	Request denied. KAT and the City of Knoxville expects New Flyer to provide the same high level of support for all of their customers, regardless of the number of buses ordered or number of New Flyer buses within the customer's fleet. Note that proposal responses to items such as this directly impacts evaluation scoring.
73	New Flyer	70	4.8.2 Documentaion		New Flyer provides manual updates only to the New Flyer published Bus Manuals and not any OEM component supplier manual. New Flyer requests approval to provide Bus Parts Manuals are updated for a period of 12 years. All other New Flyer Bus Manuals are maintained with updates for a period of 6 years.	This is acceptable.

74	New Flyer	71	3.9.7 Indemnification	3.9.7.1 Contractor shall defend, indemnify and hold harmless the City, its officers, employees and agents from any and all liabilities which may accrue against the City, its officers, employees and agents or any third party for any and all lawsuits, claims, demands, losses or damages alleged to have arisen from an act or omission of Contractor in performance of this agreement or from Contractor's failure to perform this agreement using ordinary care and skill, except where such injury, damage, or loss was caused by the sole negligence of the City, its agents or employees. 3.9.7.2 Contractor shall save, indemnify and hold the City harmless from the cost of the defense of any claim, demand, suit or cause of action made or brought against the City alleging liability referenced above, including, but not limited to, costs, fees, attorney fees, and other expenses of any kind whatsoever arising in connection with the defense of the City; and Contractor shall assume and take over the defense of the City in any such claim, demand, suit, or cause of action upon written notice and demand for same by the City. Contractor will have the right to defend the City with counsel of its choice that is satisfactory to the City, and the City will provide reasonable cooperation in the defense as Contractor may request. Contractor will not consent to the entry of any judgment or enter into any settlement with respect to an indemnified claim without the prior written consent of the City, such consent not to be unreasonably withheld or delayed	New Flyer requests approval to amend the following language: 3.9.7.1 Contractor shall ~~defend,~~ indemnify and hold harmless the City, its officers, employees and agents from any and all **damages** ~~liabilities~~ which ~~may accrue~~ **awarded** against the City, its officers, employees and agents or any third party for any **proven third party damages** ~~and all lawsuits, claims, demands, losses or damages alleged to have~~ **directly** arisen from an **negligent** act or omission of Contractor in performance of this agreement or from Contractor's failure to perform this agreement using ordinary care and skill, except where such injury, damage, or loss was caused by the ~~sole~~ negligence of the City, its agents or employees **in which instance each party shall be liable to the extent of their proportionate fault**. 3.9.7.2 Contractor shall save, indemnify and hold the City harmless from the **reasonable** cost of defense of **such** ~~any claim, demand, suit or cause of~~ action made or brought against the City **once third party damages proven to be the direct fault of the Contractor, to the extent of its fault**. ~~alleging liability~~	Request denied. The City of Knoxville will not change their indemnification language.

75	New Flyer	72	3.7 Data Rights	3.7.1.2 The City and KAT shall protect proprietary information provided by the Contractor to the fullest extent of the law. The Contractor shall grant a non-exclusive license to allow KAT to utilize such information in order to maintain the vehicles. In the event that the Contractor no longer provides the information, KAT has the right to reverse-engineer patented parts and software. 3.7.1.3 KAT reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, the following subject data for its purposes: (1) any subject data required to be developed and first produced in the performance of the contract and specifically paid for as such under the contract, whether or not a copyright has been obtained; and (2) any rights of copyright to which the Contractor, subcontractor or supplier purchases ownership for the purpose of performance of the contract and specifically paid for as such under the contract. The Contractor agrees to include the requirements of this clause, modified as necessary to identify the affected parties, in each subcontract and supply order placed under the contract.	The term “subject data” used in this clause means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the contract. It includes the proprietary rights of the following: Shop drawings and working drawings Technical data including manuals or instruction materials, computer or microprocessor software Patented materials, equipment, devices or processes License requirements 3.7.1.2 **The Contractor shall be the sole owner of the subject data.** The City and KAT shall protect proprietary information provided by the Contractor to the fullest extent of the law. The Contractor shall grant a non-exclusive**, non-transferable, royalty-free and irrevocable** license to allow KAT to utilize such information in order to maintain the vehicles. ~~In the event that the Contractor no longer provides the information, KAT has the right to reverse-engineer patented parts and software~~. 3.7.1.3 KAT reserves a royalty-free, non-exclusive**, non-transferable** and irrevocable license ~~to reproduce, publish or otherwise use, and to authorize others to~~ use, the following subject data **solely** for **the** ~~its~~ purposes~~:~~ **of operating and maintaining the vehicle.** ~~(1) any subject data required to be developed and first produced in the performance of the contract and specifically paid for as such under the contract, whether or not a copyright has been obtained; and (2) any rights of copyright to which the Contractor, subcontractor or supplier purchases ownership for the purpose of performance of the contract and specifically paid for as such under the contract.~~ The Contractor agrees to include the requirements of this clause, modified as necessary to identify the affected parties, in each subcontract and supply order placed under the contract.	Request approved with the exception of this license must be transferrable in the case where the bus is sold/transferred to another transit system before the end of its minimum useful life as defined in FTA Circular 5010.1E

76	New Flyer	73	3.9.8 Termination	3.9.8 Termination. The City may terminate this Agreement at any time, with or without cause, by written notice of termination to the Contractor. If the City terminates this Agreement, and such termination is not a result of a default by the Contractor, the Contractor shall be entitled to receive as its sole and exclusive remedy the following amounts from the City, and the City shall have no further or other obligations to the Contractor: the amount due to the Contractor for work executed through the date of termination, not including any future fees, profits, or other compensation or payments which the Contractor would have been entitled to receive if this Agreement had not been terminated.	New Flyer requests approval to amend the following language: If the City terminates this Agreement, and such termination is not a result of a default by the Contractor, the Contractor shall be entitled to receive as its sole and exclusive remedy the following amounts from the City, and the City shall have no further or other obligations to the Contractor: the amount due to the Contractor for work executed through the date of termination, **including contract close-out costs, and profit on work performed up to the time of termination.** ~~not including any future fees, profits, or other compensation or payments which the Contractor would have been entitled to receive if this Agreement had not been terminated.~~	Request denied. This is the City's standard termination language.

77	New Flyer	74	4.2.5 Post Delivery Tests	4.2.5.2 Buses that fail to pass the post-delivery tests are subject to non-acceptance. KAT shall provide initial notice of non-acceptance within fifteen (15) business days and shall provide Contractor details of all defects within thirty (30) business days. The Contractor, or its designated representative, shall perform the repairs after non-acceptance.	New Flyer requests approval to amend the following language: …within thirty (30) business day. **If a Bus passes these tests or if the City or KAT does not notify the Contractor of non-acceptance within 15 calendar days after delivery of the Bus, acceptance of the Bus by the Contractor shall be deemed to have occurred on the 15th day after delivery. Acceptance shall occur earlier if the City or KAT notifies the Contractor of early acceptance or places the Bus into revenue service.** The Contractor, or its designated representative., shall perform the repairs after non-acceptance...	The City of Knoxville will agree to the following language change in 4.2.5.2: …within thirty (30) business days. **If a Bus passes these tests or if the City or KAT does not notify the Contractor of non-acceptance within 15 <u>business</u> days after delivery of the Bus, acceptance of the Bus by the Contractor shall be deemed to have occurred on the 15th <u>business</u> day after delivery. Acceptance shall occur earlier if the City or KAT notifies the Contractor of early acceptance or places the bus into revenue service.** The Contractor, or its designated representative., shall perform the repairs after non-acceptance...
78	New Flyer	75	Confidentiality		New Flyer requests approval to add the following language: Confidentiality - The City, KAT and its representatives and agents agree to enter into a confidentiality agreement with the Contractor prior to commencing an audit, review or analysis in order to protect and maintain the confidentiality of the Contractor's	Request denied - the City cannot agree to enter into a confidentiality agreement due to the requrements for public open records in the Tennessee Code Annotated.
79	New Flyer	76	General	~	New Flyer requests clarification on which entity (the City or KAT) will be signing and a party to the contract, and which entity will be performing under the contract. We reserve the right once we obtain that information to revise the names of the parties accordingly.	The City of Knoxville will be signing and a party to the contract. KAT will be receiving the buses but the buses will be property of the City of Knoxville.

80	New Flyer	77	5.27.10	5.27.10.2 The City of Knoxville (Knoxville Area Transit) will ensure an appropriately sized transformer with appropriate wattage and an electrical distribution panel with appropriately sized circuit breakers is provided at the bus lot... Proposals should include underground conduit from the electrical distribution panel to devices that charge each bus. Underground conduit must provide for future expansion for charging of up to an additional eight buses.	New Flyer requests for clarification regarding the underground conduit if KAT has already considered that the location is within a bayou/body of water? Is there a separator that has to be considered?	The underground conduit from the electrical distribution panel to the chargers will all be on the KAT property and subject to NEC guidelines. The location of the KUB transformer will be made in cooperation with the property owner, and any underground path required to the transformer will be agreed upon between KUB and the property owner in the form of an easement. The type and size of transformer and main electrical panel will be based on information from the charger manufacturer. It does not appear the proximity of First Creek will be of concern for the electrical installation.
81	New Flyer	78	5.27.10		New Flyer requests for clarification that due to improvements in technology, charging equipment may not necessarily be a 1:1 charger to bus ratio. One physical charger may have the ability to charge up to two buses during the time available at night for depo charging. Is KAT open to this charging strategy?	The City of Knoxville requests New Flyer submit a proposal that, based upon requirements and intent expressed within the RFP, provides the best solution. Please refer to RFP sections 5.26.2 and 5.26.3 for more information when developing your proposal.
82	New Flyer	79	N/A		New Flyer requests clarification if KAT is open to chargers that are mounted overhead? Is there a preference to installation ie above ground or on ground?	The City of Knoxville is receptive to this approach.
83	New Flyer	80	N/A		New Flyer requests clarification if KAT can provide storage that is adequate in size, safe and secure for equipment, during construction of the infrastructure.	KAT will do it's best to accommodate the awarded contractor in this manner within physical limitations.

84	Proterra	1	Section IV Qualifications	A copy of the three (3) most recent financial statements audited by an independent third party or a statement from the proposer regarding how financial information may be reviewed by the City.	Proterra is a privately held company and does not release its financial information in conjunction with public bid proposals. To provide the financial information requested, Proterra will require the execution of a non-disclosure agreement specifically tailored to protect the confidential nature of Proterra's financials. Once the non-disclosure agreement is in place, team members from Proterra's finance organization would request a face-to-face meeting where they will present and discuss Proterra's financial statements. Please see Exhibit A for additional information and a copy of the referenced non-disclosure agreement.	Request denied. The City of Knoxville cannot sign a non-disclosure agreement due to the open records requirements of the Tennessee Code Annotated.
85	Proterra	2	Section IV Qualifications	Letter from a surety for a Performance Guarantee indicating the Contractor's ability to obtain financial guarantees in accordance with the RFP requirements.	There do not seem to be any requirements for either a bid bond or performance bond within your solicitation document. If that is the case, can the requirement for the referenced letter be removed?	Request approved. The requirement in Section IV - Qualifications, 23. Letter from a surety is hereby deleted.

86	Proterra	3	Section 5.20.4 Step Height	The step height shall not exceed 16.5 inches at either doorway without kneeling and shall not exceed 15.5 inches at the step.	Request approval for step height of 17 in. at the rear door. One of the major benefits of the Proterra Catalyst™ vehicle is the placement of the battery packs under the floor and between the wheels. Having the batteries located in this location allows for the following benefits: • Lower center of gravity, better handling; • Increased safety; • No HV batteries inside the passenger compartment • Batteries are lower than the side impact height for automobiles However, as a result, the step height and floor height are slightly taller than average vehicles at nominal ride height. The buses are still capable of full kneel functionality.	The City of Knoxville is receptive to minor variances to this specific item in the bus specification as long as the variance is consistent with the manufacturer's standard design for the proposed bus.
87	Proterra	4	5.20.9 Wheel Area Clearance	Wheel area clearance shall be no less than 8 inches for parts fixed to the bus body and 6 inches for parts that move vertically with the axles.	Request approval for Wheel Area of 7.85” for parts fixed to the bus body	The City of Knoxville is receptive to minor variances to this specific item in the bus specification as long as the variance is consistent with the manufacturer's standard design for the proposed bus.

88	Proterra	5	5.20.10 Floor height	Height of the step above the street shall be no more than 16 inches measured at the centerline of the front and rear doorway.	Request approval for step height of 17 in. at the rear door. One of the major benefits of the Proterra Catalyst™ vehicle is the placement of the battery packs under the floor and between the wheels. Having the batteries located in this location allows for the following benefits: • Lower center of gravity, better handling; • Increased safety; • No HV batteries inside the passenger compartment • Batteries are lower than the side impact height for automobiles However, as a result, the step height and floor height are slightly taller than average vehicles at nominal ride height. The buses are still capable of full kneel functionality.	The City of Knoxville is receptive to minor variances to this specific item in the bus specification as long as the variance is consistent with the manufacturer's standard design for the proposed bus.
89	Proterra	6	Section 5.23 Gradeability	Gradeability requirements shall be met on grades with a dry commercial asphalt or concrete pavement at GVWR with all accessories operating. The propulsion system shall be required to enable the bus to achieve a speed of 40 mph on a 2.5% ascending grade and 10 mph on a 10% ascending grade continuous.	While the proposed Catalyst™ bus meets or exceeds this requirement during normal operating conditions, Proterra wishes to clarify that the vehicle speed may be reduced to 26 MPH on a 2.5% grade to thermally protect drivetrain components due to ambient conditions and time spent ascending the grade.	Proterra's design for this item is acceptable.

90	Proterra	7	Section 5.27.2 Propulsion System Controller	The propulsion system controller shall regulate energy flow throughout system components in order to provide motive performance and accessory loads, as applicable, while maintaining critical system parameters (voltages, currents, temperatures, etc.) within specified operating ranges. The controller shall monitor and process inputs and execute outputs as appropriate to control the operation of all propulsion system components.	Proterra requests approval of our system design, which does not use a Propulsion System Controller (PSC). We utilize a powertrain controller to manage the traction motor and transmission, an ESM to interface to the batteries, a charge controller for charging, and a vehicle controller to integrate the systems all together. The vehicle controller manages all power flow and ancillary load management.	Request approved.
91	Proterra	8	Section 5.27.5.6	Proposers shall include certification of battery life-cycle testing by an independent testing agency.	Proterra would like to ask for clarification on the purpose of this requirement. Proterra provides and is responsible for warranties. Therefore, if the initial energy is understood and we warrant the “end of service” energy we don't believe there is value add of understanding what happens in between. Furthermore, every customer, climate, and route profile is unique; thus a general summary or conclusion of test results is unavoidable (no guarantee to a particular customer will be derived from a general analysis).	The last sentence within 5.27.5.6 is hereby removed.

92	Proterra	9	5.27.10.2 ESS Charging System	Proposals shall include a solution for installation of the bus charging system for six buses from connection to the circuit breakers to the device that plugs into each bus. Proposals should include underground conduit from the electrical distribution panel to devices that charge each bus. Underground conduit must provide for future expansion for charging of up to an additional eight buses.	Proterra respectfully requests site-drawings with dimensions as well as any additional drawings or plans being discussed with the utility to ensure appropriate infrastructure costs and successful interface, installation and operation.	Discussions with the Public Building Authority and Knoxville Utility Board have only led to approximate location plans of transformers and circuit-breaker distribution panels. The related site picture can be found at the end of this addendum. Exact details as to the transformers will be determined once a proposer is selected for contract award and we know their power requirements. Existing site plans provide engineering details from original construction of KAT's operations and maintenance facility and are also included with this addendum. Note the bus parking plan represented within the plans does not match KAT's actual method of parking buses. The actual method of bus parking is depicted in the site picture.
93	Proterra	10	5.27.10.3 ESS Charging System	Proposals shall include a “smart charging” solution that, through a browser based system, enables the transit system to schedule charging of buses connected to the charging system. This browser based system shall also enable users to monitor status of bus charge and monitor charging system activity and status. If the smart charging solution hardware requires Internet connectivity through the City network, proposals must provide details as to network requirements the City is expected to provide.	Please clarify whether The City wants to be able to manually schedule when buses charge (i.e. you decide bus 1 starts charging at 10pm, bus 2 starts charging at 11pm etc.); or charge management software to optimize when buses charge based on inputs provided (i.e. buses need to leave by 5am, all buses need to be at 90% SOC or greater when they leave, charge at the lowest cost while ensuring the key conditions are met).	The City of Knoxville prefers charge management software to optimize when buses charge based on inputs provided (i.e. buses need to leave by 5am, all buses need to be at 90% SOC or greater when they leave, charge at the lowest cost while ensuring the key conditions are met).

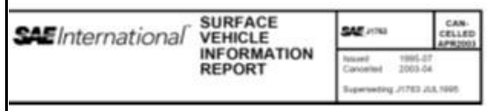
94	Proterra	11	5.27.10.4 ESS Charging System	Proposals shall provide OPTION PRICING for two charging stations inside the maintenance shop. The optional maintenance shop charging solution shall include all work and material from a circuit breaker distribution panel mounted on the work bay area interior wall to an area four to five bays across the shop. Conduit cables from the distribution panel shall be overhead up to the mounted charging device.	Proterra respectfully requests site-drawings with dimensions, including proposed future locations of switchgear, as well as any additional drawings or plans being discussed with the utility to ensure appropriate infrastructure costs and successful interface, installation and operation.	Please see the maintenance shop original engineering plans below. No determinations have yet been made for any switchgear.
95	Proterra	12	Section 5.28.1.3 Cooling System Design	Operation of required battery thermal management systems shall be automatically controlled under all normally encountered operating and charging conditions and shall be powered by an onboard source at all times. Thermal management shall be continuously monitored during all periods of charge and discharge with appropriate safety interlocks installed to react to adverse conditions.	Proterra wishes to clarify that the proposed Catalyst buses comply with this paragraph when the bus is on.	Thank you for this clarification.
96	Proterra	13	Section 5.28.3 Radiator Screen	The radiator input shall be protected by an easily cleanable screen designed to collect large debris.	Request approval of our standard design which does not incorporate a screen guard because the fan is on the roof underneath a fairing.	Request approved.
97	Proterra	14	Section 5.30.2 Regenerative Braking	Proposers must also describe how these systems are adjusted to increase or decrease the percentage of recaptured energy, and the impact to passenger discomfort when the regenerative braking system is adjusted to maximum limits.	Proterra respectfully requests approval of our regenerative braking system which is not adjustable. The proposed system is designed to maximize overall vehicle efficiency while also significantly extending the life of the service brakes	Request approved. Proterra must still, however, provide details on percentage of kinetic energy their regenerative braking system captures.
98	Proterra	15	Section 5.30.3 Regenerative Braking	The bus shall also include a regenerative braking system override/deactivation switch within reach of the bus operator with “system deactivated” indicator light for use during inclement weather road conditions.	Request approval of our regenerative braking disable switch which is located in the street-side wheel well (which is not within reach of a seated operator).	Request approved.

99	Proterra	16	Section 5.31.2.2 Fluid Lines	Flexible hoses and fluid lines shall not touch one another, or any part of the bus.	Request approval for certain fluid lines to touch one another due to the nature of the application and space available. For example, hoses running to battery packs will come into contact with themselves, HV lines, and vehicle body due to space claim; but this is minimized to the extent practicable.	Request approved. Proterra must, however, describe measures taken to prevent long term excessive wear on these lines resulting from vehicle vibrations.
100	Proterra	17	Section 5.31.2.3 Fluid Lines	Flexible hoses over 1 inch in diameter shall be in conformance with SAE J100R5.	Request approval to use 1.5” coolant hose which meets SAE J20R1. J100R5 does not exist regarding coolant or heater hoses. J100R5 is for hydraulic lines with high system pressures (coolant system is regulated to only 13 psi).	Request approved.
101	Proterra	18	Section 5.32.6 Propulsion Compartment Bulkheads	This bulkhead (or equivalent) shall be compliant with FTA Docket 90A, dated October 20, 1993 and FMVSS 302.	Proterra requests approval for the bulkhead to comply with FMVSS 302 but not Docket 90A.	Federal Motor Vehicle Safety Standard (FMVSS) No. 302, “Flammability of Interior Materials,” specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles. The purpose of this standard is to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes. The standard applies to passenger cars, multipurpose passenger vehicles (MPVs), trucks and buses. FTA Docket 90a describes FTA’s recommended procedure for testing limits for smoke emission and the availability of materials to retain fire retardant chemicals after they have been exposed to water and discusses FTA’s position on smoke emission performance criteria for seating, flooring, insulation and outer shell.

102	Proterra	19	Section 5.38.3 Rear Step Area to Rear Area	This step area shall be cut into the rear platform and shall be approximately the aisle width, a minimum 12 inches deep and approximately half the height of the upper level relative to the lower level.	Request approval of Proterra's Catalyst rear-step design which is 11.9" deep as shown in the illustration provided in Exhibit B.	Request approved.
103	Proterra	20	Section 5.40.1.3 (5.40.6.3) Kneeling	A warning light mounted near the curbside of the front door, a minimum 2.5 inch diameter amber lense, shall be provided that will blink when the kneel feature is activated.	Proterra requests approval of our kneeling lamp which is 1.75" in diameter. Please see Exhibit C for additional detail.	Request approved.
104	Proterra	21	Section 5.41.2 Tires	Tires will be Bridgestone 315/80R22.5 load range H.	Proterra recommends the use of Firestone FS400 315/80R22.5, Load Range L	If the awarded manufacturer's electric bus design requires a tire size other than Bridgestone 315/80R22.5 load range H, then the bus manufacturer shall supply the tires required for their bus design. The bus manufacturer, however, must provide tire manufacturer documentation demonstrating the supplied tires meet Buy America requirements at 49 CFR 661.5 (Buy America requirements for Iron, Steel and Manufactured Products).
105	Proterra	22	Section 5.44.5 Steering Wheel Telescopic Adjustment	The steering wheel shall have full telescoping capability and have a minimum telescopic range of 2 inches and a minimum low-end adjustment of 29 inches, measured from the top of the steering wheel rim in the horizontal position to the cab floor at the heel point.	Proterra requests approval of the Douglas Autotech steering column, model 9204850, which has a total telescopic adjustment range of 1.91 inches.	Request approved.

106	Proterra	23	Section 5.47.1 Service Brake	Brake wear indicators shall be provided on exposed push rods.	Request approval of our standard brake wear indicators which allow for inspections without removing the wheels; however, removal of the wheels would be required to inspect for wear once the pad thickness drops below 1mm. Please see Exhibit D attached herewith for details. Note that optimal regenerative braking allows well in excess of 150,000 miles before brake pads would need to be replaced.	Request approved.
107	Proterra	24	Section 5.47.2.2 Regenerative Braking	Proposers must also describe how these systems are adjusted to increase or decrease the percentage of recaptured energy, and the impact to passenger discomfort when the regenerative braking system is adjusted to maximum limits.	Proterra respectfully requests approval of our regenerative braking system which is not adjustable. The proposed system is designed to maximize overall vehicle efficiency while also significantly extending the life of the service brakes.	Request approved. Proterra must still, however, provide details on percentage of kinetic energy their regenerative braking system captures.
108	Proterra	25	Section 5.47.2.3 Regenerative Braking	The bus shall also include a regenerative braking system override/deactivation switch within reach of the bus operator with “system deactivated” indicator light for use during inclement weather road conditions.	Request approval of our regenerative braking disable switch which is located in the street-side wheel well (which is not within reach of a seated operator).	Request approved.
109	Proterra	26	Section 5.49.1.2 Pneumatic System	A quarter (¼) turn manual shutoff valve shall be added behind the fitting.	Request approval for our standard air system design which incorporates a check valve instead of quarter turn manual shutoff valve behind the service fittings. We feel like this design is more robust than the one described and prevents the inadvertent occurrence of having the valves left open.	Request approved.

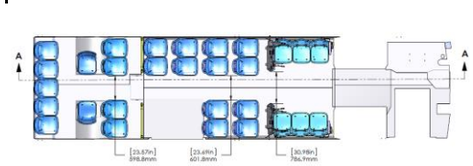
110	Proterra	27	Section 5.49.3 Air Lines and Fittings	Nylon tubing shall be installed in accordance with the following color-coding standards: • Green: Indicates primary brakes and supply • Red: Indicates secondary brakes • Brown: Indicates parking brake • Yellow: Indicates compressor governor signal • Black: Indicates doors, hill hold, and accessories.	Proterra requests approval of the following color combination for air lines: • Green: Indicates primary brakes and supply • Red: Indicates secondary brakes • Brown: Indicates parking brake • Yellow: Indicates transmission and ride height controller feed (we don't have governor air lines) • Black: Indicates accessories & doors • Blue: Indicates curb side air bags • Orange: Indicates street side air bags.	Request approved.
111	Proterra	28	Section 5.50.2.2 Modular Design	Power plant wiring shall be an independent wiring module. Replacement of the drive system compartment wiring module(s) shall not require pulling wires through any bulkhead or removing any terminals from the wires.	Request approval for our multicore cable which runs from the drivetrain to the power steering motor at the front of the vehicle. This cable passes through 2 bulkheads and is part of a drivetrain harness. The described multicore cable is connected to a Variable Frequency Drive and runs the length of the vehicle. Maintaining a constant shield is important to protect other systems from Electro-Magnetic Interference. Reducing the number of	Request approved.
112	Proterra	29	Section 5.50.8 Auxiliary Electronic Power Supply	As a means to provide electrical power to additional accessories and as a means to minimize accessory drain upon the ESS, proposers are encouraged to include an auxiliary power supply within the bus design.	Proterra wishes to clarify that our Catalyst design does not include or require an auxiliary power supply.	Proterra's design for this item is acceptable.

113	Proterra	30	Section 5.50.13.1 Low Voltage/Lo Current Wiring and Terminals	All high-voltage power and ground wiring shall conform to specification requirements of SAE J1763	Please requests that the requirement to conform to J1763 be removed as it appears to have been cancelled in 2003: 	Request approved contingent upon Proterra describing within their proposal the industry standard for which this item complies.
114	Proterra	31	Section 5.50.15.2 Electrical Compartments	“Rear Start and Run” controls shall be mounted in an accessible location in the engine/drive motor compartment	Proterra requests approval of our standard design which does not have “Rear Start and Run” controls mounted in the motor compartment. The electric drive motor does not idle like a diesel or CNG engine. Alternatively, a “run disable” switch is located in the motor compartment. It will disable the drive system and gear selection without requiring the vehicle to be turned off. The switch is protected and rated for the environment it is installed in. Also, 12/24V disable switch and High Voltage Disconnect is also available in the motor compartment. Both switches can be locked in the off position with a lockout-tagout system.	Request approved.
115	Proterra	32	5.50.19 Shielding	A shield shall be connected at one location only, typically at one end of the cable.	Proterra requests approval of our standard design which has some shields that are grounded at both ends per the component manufactures installation instructions (i.e. power cables between the motor and Inverter).	Request approved.

116	Proterra	33	5.53.4.4 Transit Bus Instruments and Alarms	Low-profile microphone on Steering Column; Permits driver to make announcements with both hands on the wheel and focusing on road conditions	Proterra's requests approval of our standard PA microphone, which is a boom mic mounted on the driver's overhead plate and controlled with a foot switch, which would permit the driver to make announcements with both hands on the wheel. Alternatively, please provide additional information for the low-profile microphone described in this table. Can the City provide us with the manufacturer and model number for this mic?	Proterra's request for their boom mounted standard PA microphone as described is approved.
117	Proterra	34	Section 5.53.5.1 Pedal Angle	The accelerator and brake pedals shall be positioned at an angle of 37 to 50 deg at the point of initiation of contact and extend downward to an angle of 10 to 25 deg at full throttle.	The proposed Catalyst electric bus accelerator pedal design has an angle of 36 deg at initiation and 15 deg at full throttle. The angles for the brake pedal are 35 deg at initiation and 8 deg at full brake.	Request approved.
118	Proterra	35	Section 5.54.3 Storage Box	An enclosed driver storage area shall be provided with a positive latching door and/or lock. The minimum size is 2750 cubic inches.	Request approval for our standard design which incorporates a lockable storage box on the Curb-Side Wheel Well which offers approx. 4,643.25 in^3 of space. Boxes come with a keyed handle within the Box. An extra ""lock key"" will need to be provided by agency or a P/N with supplier so that we can get the data and package protect for it." Please note that our design precludes incorporating the driver storage box within the panel behind the driver.	Request approved; provide a positive latching non-locking door.
119	Proterra	36	Section 5.55.1 Windshield Wipers	A variable-speed feature shall be provided to allow adjustment of wiper speed for each side of the windshield between approximately five and 25 cycles per minute.	Request approval for our standard windshield wipers which are operated by a single control for both sides.	Request approved.

120	Proterra	37	Section 5.58.3.2 Driver's Side Window	The view through the glazing at the front of the assembly should begin not more than 560 mm (26 inches) above the operator's floor to ensure visibility of an under-mounted convex mirror.	Request approval for the Catalyst operator's side window which allows the view through the glazing at the front of the assembly beginning not more than 27.2 in. above the operator's floor. Operator's view of the exterior mirror is not impaired.	Request approved.
121	Proterra	38	Section 5.58.3.3 Driver's Side Window	The operator's side window glazing material shall have a 1/4-inch nominal thickness tempered safety glass	Request approval for our standard 5mm thickness tempered safety glass.	Request approved.
122	Proterra	39	Section 5.58.4 Side Window Configuration	Side windows shall not be bonded in place	Proterra wishes to clarify that passenger side windows are flush and not bonded; however, our design does incorporate a quarter window just ahead of the front entrance door which is bonded in place.	Proterra's design for this item is acceptable, however, Proterra must provide repair/replacement procedures for the quarter window should it be broken.
123	Proterra	40	Section 5.58.5.2 Materials	Windows shall be tinted 50% gray. Window glazing shall have 50% light transmittance as measured by ASTM D-1003 and 45% solar transmittance as measured by ASTM E-424.	Proterra requests approval of our standard 3/16" tempered glass which has the following transmittance values: 1) Solar Transmittance - 48% 2) Luminous Transmittance - 50%	Request approved.
124	Proterra	41	Section 5.59 Heating, Ventilating and Air Conditioning (HVAC)	The HVAC unit should be roof-mounted; ThermoKing all electric preferred.	Request approval of Proterra's standard Eberspächer electric HVAC system as described in Exhibit E attached herewith. This proposed system is significantly lighter and also has been engineered to provide superior performance in the Catalyst electric transit buses.	Conditionally approved provided Proterra provides, within their proposal, information on a Knoxville based vendor authorized to service and perform warranty repairs on the HVAC component.
125	Proterra	42	Section 5.59.4.2 Passenger Area Air Flow	The fans shall not activate until the heating element has warmed sufficiently to assure at least 70 ºF air outlet temperature.	Request approval to Proterra's standard design where the fans come on right away to prevent the heating elements from getting to hot and causing damage or other safety issues. Our fans get to 70 degrees in less than 20 seconds	Request approved.

126	Proterra	43	Section 5.59.7.1 Driver's Compartment Requirements	The heater and defroster system shall provide heating for the operator and heated air to completely defrost and defog the windshield, operator's side window, and the front door glass in all operating conditions.	Request approval for our system design which directs conditioned air (defrost mode) to the front quarter-window, which is forward of the entrance door. The entrance door glass is not heated.	Request approved.
127	Proterra	44	Section 5.59.7.3 Driver's Compartment Requirements	A ventilation system shall be provided, which can be integrated as part of the defroster system, to ensure operator comfort and shall be capable of providing fresh air in the foot and/or head areas. Vents shall be controllable by the operator from the normal driving position. Decals shall be provided indicating "operating instructions" and "open" and "closed" positions as well. When closed, vents shall be sealed to prevent the migration of water or air into the bus.	Request approval for our system design which does not have exterior vents to provide fresh-air (exterior air) to the driver's area. Air circulation is provided by the HVAC system as well as the defroster.	Request approved.
128	Proterra	45	Section 5.59.10 Roof Ventilators	Two manually operated roof ventilators shall be provided in the roof of the bus, one approximately over or just forward of the front axle and the other, approximately over the rear axle.	Request approval for one roof ventilator, mounted approximately over the rear axle, in the proposed Catalyst 35' buses. Please note that the amount of roof mounted equipment precludes a second vent.	Request approved.
129	Proterra	46	Section 5.60.12 Service Compartments and Access Doors	Access doors, when opened, shall not restrict access for servicing other components or systems.	[illegible] have certain lower side access doors for the motor compartment which, when opened, will restrict access to the upper side access doors. All other access doors, when opened, do not restrict access for servicing other components or systems. Please see Exhibit F for additional detail.	Request approved.

130	Proterra	47	Section 5.61.2 Front Bumper	The bumper shall provide mounting provisions for a bike rack.	Please clarify whether the City is requiring provision of bike racks, or only provisions as described here. If bike racks are required, please provide additional information such as brand, capacity, color, etc.	All proposers are to include a black powdercoated Sportworks DL2 (or equal) two position bicycle rack mounted on the bus front bumper.
131	Proterra	48	Section 5.62.1 Finish and Graphics	The bus shall be painted prior to installation of exterior lights, windows, mirrors, decals and other items that are applied to the exterior of the bus.	Request approval for the base white to be gelcoat rather than paint. The gelcoat is inherent to the composite body construction and is resistant to chips and cracks.	Request approved for areas that will be base white.
132	Proterra	49	Section 5.66.3 Floor Covering	The area of the front ramp platform as well as the floor area under and around the ramp in the vestibule area may be LineX sprayed-on polyurethane, non-skid surface. The step edge shall be LineX yellow.	Request approval for Altro floor covering to be used in the area under and around the ramp in the vestibule area as well as the step-edge.	Request approved.
133	Proterra	50	Section 5.67.4 Seating Area Lighting	The interior lighting system shall provide a minimum 15 foot-candle illumination on a 1 sq ft plane at an angle of 45 degrees from horizontal, centered 33 in. above the floor and 24 in. in front of the seat back at each seat position. Allowable average light level for the rear bench seats shall be 7 foot-candles.	Request approval for our interior lighting level results as shown in Exhibit G.	Request approved.
134	Proterra	51	Section 5.67.5 Vestibules / Doors Lighting	Floor surface in the aisles shall be a minimum of 10 foot-candles, and the vestibule area a minimum of 4 foot-candles with the front doors open and a minimum of 2 foot-candles with the front doors closed.	Proterra requests approval for the front vestibule lighting level to be 0 foot-candles when the door is closed. This is designed to minimize glare on the front windshield.	Request approved.
135	Proterra	52	Section 5.68.1 Passenger Seats	Approximately 32 passenger seats shall be arranged in a transverse, forward-facing configuration, except at the wheel housings and wheelchair securement areas.	Request approval for 29-passenger seats as shown below. 	Request approved, though final approval for configuration shall occur during the preproduction meeting.

136	Proterra	53	Section 5.68.9	Doors shall be electrically powered, vapor electric transit operator.	Request Approval for Proterra's Ventura electric door actuators.	Request denied. Door actuators must be Vapor electric transit operator.
137	Proterra	54	Section 5.68.9.10.1 Door Actuators	Door actuators shall be Vapor Corporation electric transit operator door actuators.	Request Approval for Proterra's Ventura electric door actuators.	Request denied. Door actuators must be Vapor electric transit operator.
138	Proterra	55	Section 5.68.9.13 Door Controller	Position of the door control handle shall result in the following operation of the front and rear doors: •Center position: front door closed, rear door closed. •First position: Front door open, rear door closed. •Second position forward: Front door open, rear door open. •First position back: Front door closed, rear door open. •Second position back: Front door open, rear door open.	Request approval of Proterra's standard push-button door controls. Proterra's proposed door controls consist of two push-buttons, which control each door independently; the front door button is green, and the rear door button is red. When the doors are fully open, the buttons are illuminated; as the doors are opening or closing, the buttons flash; and when the doors are fully closed, the buttons are not illuminated. Proterra's proposed solution offer the same functionality while also being far	Request approved.
139	Proterra	56	Section 5.69.1.1 Low-Floor Ramp	Lift-U ramp system, most current model available.	Request clarification of whether the Lift-U LU-18 meets this requirement.	The Lift-U LU-18 is consistent with this specification requirement.
140	Proterra	57	Section 5.72.5 Driver Display Unit (DDU)	The Contractor shall install a driver display unit as close to the driver's instrument panel as possible.	Request additional information / definition of the required driver display unit.	Proposers shall include their designed, dash mounted driver display unit that provides the operator operating information of the bus. Example of operating information is air pressure, drive motor temperature, vehicle speed, battery state of charge, etc.
141	Proterra	58	Section 5.72.9 Communication System Storage Compartment	This compartment shall be lockable and should contain slide-out trays for which components are mounted.	Request approval for Proterra's electronics cabinet which is mounted on the street-side wheel well but does not contain slide-out trays. Please see Exhibit H provided herewith for additional information.	Request approved.

142	Gillig	1	5.25.1	The Altoona On-Road Energy Consumption and Range Test for buses is based on a Transit Coach Operating Duty Cycle (ADB cycle) and includes a mix of central business district (CBD), arterial (ART) and commuter (COM) cycles. Test results from the ADB cycle economy tests shall be provided to the City.	GILLIG wishes to clarify that since the establishment of new Performance Standards in 2016, the Altoona Bus Research and Testing Center is no longer using the CBD, Arterial and Cummuter cycles. Instead they use the Manhattan, Orange County and HD-UDDS cycles.	Thank you for this clarification.
143	Gillig	2	5.27.9.1	The battery management system must be designed to ISO 26262 safety principles to control state of charge, voltage, current and temperatures on a cell-to-cell level and provide diagnostic output at the lowest field-serviceable element.	Question, Clarification or Approved Equal: GILLIG wishes to clarify that ISO 26262 compliant BMS is not available in the U.S. at this time. The projection is that it will not be for at least a few years. GILLIG requests to delete this requirement	Request approved, but Gillig must provide within their proposal to what industry standard their battery management system currently complies.
144	Gillig	3	5.27.10.7	Charge system receptacles must be located on the front and rear of the bus, either on the curb side or as close to the curb side as bus design allows.	Question, Clarification or Approved Equal: GILLIG has available receptacle locations at the Front Street Side and Rear Curb Side. GILLIG does not offer a Front Curb Side option. GILLIG requests approval	Gillig's design for this item meets the intent of the RFP. Request approved.

145	Gillig	4	5.32.6	This bulkhead (or equivalent) shall be compliant with FTA Docket 90A, dated October 20, 1993 and FMVSS 302.	GILLIG wishes to advise the Agency that the GILLIG Low Floor bus is fully compliant with all the applicable Federal Motor Vehicle Safety Standards (FMVSS), including FMVSS 302, which is the current industry standard. Over the years GILLIG has continued a program with suppliers to provide components that meet or exceed these "voluntary recommended" guidelines. Developing technology, unavailability of suitable materials, product performance, reliability, and costs have precluded some materials being available for manufactures' use. Given the competitive nature of the transit bus industry, some items are very cost prohibitive in our competitive environment, and we wanted to clarify for the record that the Docket 90A requirement listed in the specifications were a voluntary recommended regulation. This is consistent with the fleet of GILLIG	Federal Motor Vehicle Safety Standard (FMVSS) No. 302, "Flammability of Interior Materials," specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles. The purpose of this standard is to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes. The standard applies to passenger cars, multipurpose passenger vehicles (MPVs), trucks and buses. FTA Docket 90a describes FTA's recommended procedure for testing limits for smoke emission and the availability of materials to retain fire retardant chemicals after they have been exposed to water and discusses FTA's position on smoke emission performance criteria for seating, flooring, insulation and outer shell.
146	Gillig	5	5.37.1.2	An increased slope shall be allowed on the upper level not to exceed 3½° off the horizontal.	GILLIG requests approval to provide a slope not to exceed 4 Degrees. This is consistent with the fleet of GILLIG buses currently in service at the agency.	Request approved.

147	Gillig	6	5.50.13.5	All wiring harnesses over 5 ft long and containing at least five wires shall include 10 percent (minimum one wire) excess wires for spares.	GILLIG wishes to clarify that we provide spares on the majority of our main harnesses to the extent practical. However, not all harnesses meet this requirement. GILLIG can work with Agency to add spares to specific harnesses if deemed necessary at the preproduction meeting if we are the successful bidder.	Request approved.
148	Gillig	7	5.51.1	Ten percent of the total number of inputs and outputs, or at least one each at each zone location shall be designated as spares.	GILLIG wishes to clarify that we provide spares on the majority of our main harnesses to the extent practical. However, not all harnesses meet this requirement. GILLIG can work with Agency to add spares to specific harnesses if deemed necessary at the preproduction meeting if we are the successful bidder.	Request approved.
149	Gillig	8	5.59.10	Two manually operated roof ventilators shall be provided in the roof of the bus, one approximately over or just forward of the front axle and the other, approximately over the rear axle.	GILLIG wishes to clarify that our 35’ design will not allow for enough room for a front roof hatch due to the real estate available including roof mounted battery packs. The design will include a Rear Roof Hatch only. GILLIG requests approval	Request approved.

150	Gillig	9	5.61.1	Romeo Rim, or equal, bumpers shall provide impact protection for the front and rear of the bus with the top of the bumper being 27 inches (+/- 2 inches) above the ground. Bumper height shall be such that when one bus is parked behind another, a portion of the bumper faces will contact each other.	GILLIG proposes to provide our standard energy-absorbing front bumper from Ro-Lab to satisfy the requirements of this contract. This is the standard bumper on all current GILLIG buses and there are no other options at this time. GILLIG requests approval.	Request approved.
151	Gillig	10	5.62.6	Color codes for the bus exterior paint scheme are as follows. Clarifications and equals shall be discussed during the pre-production meeting. • PPG Delfleet FDGH 303769 Gray. • PPG Delfleet FDGH 9700 Black. • PPG Delfleet FDGH Ford YZ White	GILLIG wishes to clarify that we use Axalta (Dupont) paint. GILLIG proposes to provide equivalent Axalta color codes to provide the agency's requested design scheme. GILLIG will provide paint chips for the agency's approval during the Pre-Production Meeting if GILLIG is the successful bidder.	Gillig's design for this item is acceptable.

152	Gillig	11	5.65.9.3	All insulation materials shall comply with the Recommended Fire Safety Practices defined in FTA Docket 90-A, dated October 20, 1993.	GILLIG wishes to advise the Agency that the GILLIG Low Floor bus is fully compliant with all the applicable Federal Motor Vehicle Safety Standards (FMVSS), including FMVSS 302, which is the current industry standard. Over the years GILLIG has continued a program with suppliers to provide components that meet or exceed these "voluntary recommended" guidelines. Developing technology, unavailability of suitable materials, product performance, reliability, and costs have precluded some materials being available for manufactures' use. Given the competitive nature of the transit bus industry, some items are very cost prohibitive in our competitive environment, and we wanted to clarify for the record that the Docket 90A requirement listed in the specifications were a voluntary recommended regulation. This is consistent with the fleet of GILLIG buses currently in service at the agency. GILLIG requests approval to delete this requirement	The Agency wishes to advise Gillig that Federal Motor Vehicle Safety Standard (FMVSS) No. 302, "Flammability of Interior Materials," specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles. The purpose of this standard is to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes. The standard applies to passenger cars, multipurpose passenger vehicles (MPVs), trucks and buses. FTA Docket 90a describes FTA's recommended procedure for testing limits for smoke emission and the availability of materials to retain fire retardant chemicals after they have been exposed to water and discusses FTA's position on smoke emission performance criteria for seating, flooring, insulation and outer shell.
153	Gillig	12	5.68.8.6	Grab straps or other extensions as necessary shall be provided for sections where vertical assists are not available and for the use by passengers that cannot reach to 70 inches. Grab straps shall be fabric.	As the Agency does not specify the quantity of grab straps required, GILLIG respectfully requests to provide what we consider a standard number for a 35' bus of 6 straps per bus to meet the agency's specification.	The awarded manufacturer shall provide ten (10) installed grab straps in each bus.

154	Gillig	13	3.5 TITLE AND WARRANTY OF TITLE	Adequate documents for registering the bus in Knox County, Tennessee shall be provided to KAT not fewer than 10 business days before delivery to KAT.	GILLIG wishes to advise that all documents required for registering of buses are shipped to the Customer as each bus is released for delivery. This package will contain the invoice, weight slip MSO and any other documentation required for registration of the buses. As the weight slip is created at the end of the production process, this package is not available 10 days before delivery. This is consistent with the process used on prior GILLIG deliveries to the Agency.	Gillig's method for providing these documents is acceptable.
155	Gillig	14	3.9.6 INSURANCE	Entire insurance section.	GILLIG maintains and pays the premiums for insurance of the types and limits it deems sufficient for its protection through the manufacturing process, and through delivery and acceptance at the Agency property. Upon delivery of the transit vehicles, the Agency, as the new Legal Owner, would be responsible to obtain and pay the premiums for insurance of the types and limits it requires for its protection. Attached is GILLIG's Certificate of Insurance for your review.	Per review of Gillig's certificate of insurance, Gillig meets the limits required by the City of Knoxville but would still be required to include the City as an additional insured per the RFP and provide the required endorsements.

156	Gillig	15	3.9.9 SUSPENSION OF WORK	3.9.9.1 The City may at any time and for any reason within its sole discretion issue a written order to the Contractor suspending, delaying or interrupting all or any part of the work for a specified period of time.	GILLIG takes exception to the Agency having full power and authority at any time and for any reason within its sole discretion issue a written order to the Contractor suspending, delaying or interrupting all or any part of the Work for a specified period of time. GILLIG, if awarded this procurement, will manufacture the vehicles as required by the approved specifications. The production is under the direction of our President and governed by bargaining agreements (Teamsters/Painters). GILLIG cannot allow outside parties the authority to suspend work in our manufacturing facility. GILLIG will resolve any issues directly with the Agency to ensure that the finished product prior to delivery will meet with the Agency's approval. GILLIG requests concurrence	Section 3.9.9.1 is hereby deleted and replaced with the following: 3.9.9.1 The City may at an time and for any reason within its sole discretion issue a written order to the Contractor suspending or delaying the manufacture of any ordered buses for which line production has not already begun.
157	Gillig	16	4.3 DELIVERIES	4.3.2 DELIVERY SCHEDULE - Delivery of all buses for each purchase order for the life of the contract shall not exceed fourteen (14) months from the date of each respective purchase order.	GILLIG requests approval to revise the delivery requirement above to read: Delivery of all 40’ buses for each purchase order for the life of the contract shall not exceed sixteen (16) months from the date of each respective purchase order. The delivery of 35’ buses will be determined at a later date pending production availability.	Request denied. The City of Knoxville can not agree to this language.

158	Gillig	17	4.4 OPTIONS AND OPTION PRICING	4.4.2 Pricing for Options. Vehicles ordered within the first year of the contract shall be the same as base order vehicles.	In order to best serve the interest of the Procuring Agency and to assist in properly determining and comparing the base bid prices for this procurement, GILLIG recommends the use of the Producer Price Index (PPI) Truck and Bus Bodies #1413 for any option orders placed after the base order of vehicles. The use of PPI on any option orders avoids arbitrary inflation estimates which may unnecessarily raise the base bus prices quoted.	Request denied. The City finds it acceptable that the initial pricing remain in place for the first year of the contract.
159	Gillig	18	4.4 OPTIONS AND OPTION PRICING	Series ID: PCU3361203361203 Not Seasonally Adjusted Industry: Heavy duty truck mfg Product: Buses, including military and firefighting vehicles (chassis of own manufacture)	GILLIG requests revision of the Producer Price Index (PPI) to "Category 1413 Truck and Bus Bodies". This category more closely reflects the costs of our type of business. Category 1413 has been well accepted in the transit industry as the industry standard and is approved by the FTA.	Request Approved. Index to be used per section 4.4.2 shall be revised to read: Series ID: WPU1413 Not Seasonally Adjusted Group: Transportation equipment Item: Truck and bus bodies

160	Gillig	19	4.4 OPTIONS AND OPTION PRICING	Excepting that the maximum annual increase shall not exceed 3.5%.	GILLIG respectfully requests an increase in the PPI cap as a means of sharing the risk of high inflation anticipated in the next few years and thus minimizing the bid price. In no way would this cause the Agency to pay more than the inflation rate as any future option pricing would still be subject to the PPI calculation as specified and could not exceed the Labor Dept's published index. This request would allow a higher cap to be used only if it became necessary. Accordingly, GILLIG requests approval of a 5% cap, which will result in only a small inflation cushion, in lieu of the percentage specified as a way of sharing the inflation risk while minimizing the bus bid price.	Request denied.

161	Gillig	20	4.6.2 PAYMENT OF TAXES	Unless otherwise provided in this Contract, the Contractor shall pay all federal, state and local taxes, and duties applicable to and assessable against any Work, goods, services, processes and operations incidental to or involved in the Contract, including but not limited to retail sales and use, transportation, export, import, business and special taxes. The Contractor is responsible for ascertaining and paying the taxes when due.	GILLIG requests that the Procuring Agency advise bidders/proposers of any federal, state and local taxes, and duties applicable to and assessable against any Work, goods, services, processes and operations incidental to or involved in the Contract, including but not limited to retail sales and use, transportation, export, import, business and special taxes that will need to be paid and/or purchased by the successful bidder/proposer as part of the performance of this contract or option of this contract. The APTA STANDARD BUS PROCUREMENT GUIDELINES advise that the "Agency shall furnish to all prospective Proposers a list of applicable state and local taxes imposed by the Agency's state or local governments. The Agency shall be liable for any such state and local taxes applicable to the complete bus as delivered that are promulgated and become effective between the Due Date and the delivery date."	The City of Knoxville is exempt from tax per the attached exemption form.

162	Mobile Climate Control	1	5.59.1.2	The HVAC unit should be roof-mounted; ThermoKing all electric preferred. The HVAC shall provide an integrated solution for passenger heating and cooling along with required cooling capacity to be used for the vehicle battery cooling loop.	We would like to propose MCC Rooftop ELECTRIC A/C as an AE. I have copied the section it would pertain to. We can meet or exceed all of the RFP specification requirements.	The language in paragraph 5.59.1.2 provides bus manufacturers flexibility to include the HVAC system that best meets their design. Understand, however, that ThermoKing all electric is preferred due to our experience with ThermoKing system's reliability, compatibility with repair parts currently stocked by KAT, KAT mechanics' familiarity with ThermoKing units, and especially the exceptional customer service provided by ThermoKing's local service center.