REQUEST FOR PROPOSAL
ORT RFP #2018-02
BUS PROCUREMENT
30 FOOT, 35 FOOT LOW FLOOR CLEAN FUEL DIESEL BUSES
with Options for CNG

ORT Contact: Karen Eccles, keccles@ozark.org
Date Issued: May 15, 2018
Due Date: June 29, 2018 4:00 pm
NOTICE
REQUEST FOR PROPOSALS
ORT RFP #2018-02

30 FOOT, 35 FOOT LOW FLOOR CLEAN FUEL DIESEL BUSES with OPTIONS

Ozark Regional Transit (ORT) of Springdale, Arkansas, is seeking responses from qualified firms for the purchase and delivery of 30 foot, 35 foot low floor clean fuel diesel buses for the ORT public transit system in accordance with requirements of the Scope of Work Documents. ORT will consider options of CNG powered buses. RFP documents may be obtained by downloading them from the ORT website: www.ozark.org, or by contacting ORT’s representative Karen Eccles at 479-361-8264, email: keccles@ozark.org.

Proposals shall be submitted to:
Karen Eccles
Ozark Regional Transit
2423 E. Robinson Avenue
Springdale, Arkansas 72764
Attn: RFP #2018-02

Proposals must be submitted on or before 4:00 PM, June 29, 2018. Proposals received after the deadline will be rejected and returned to the Proposer unopened. Any changes or any requests for changes in the specifications will not be recognized after the sealed bids are received by ORT.

A pre-proposal meeting will be held at ORT’s main offices in Springdale, Arkansas on May 30, 2018 at 2:00PM.

Any procurement contract(s) awarded as a result from this RFP is/are subject to all FTA federally required clauses, State of Arkansas required clauses, and must comply with all applicable EEO laws and regulations.

ORT hereby notifies all proposers that in regard to any contract entered into pursuant to this RFP, advertisement or solicitation, small and/or minority business enterprises will be afforded full...
opportunity to submit proposals in response and will not be subjected to discrimination on the basis of race, color, sex or national origin in consideration for an award.

ORT reserves the right to reject any and all proposals as submitted by this RFP and to waive informalities and irregularities, as it deems in its best interest.
**TS 1.1 TABLE OF CONTENTS**

NOTE: this table of contents has been prepared for the convenience of those using this contract with the sole express purpose of locating quickly the information contained herein; and no claims shall arise due to omissions, additions, deletions, etc., as this table of contents shall not be considered as part of the contract.

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ABBREVIATIONS AND COMMONLY USED TERMS

ABS: Anti-Lock Braking System

AC: Alternating Current

ADA: Americans with Disabilities Act

Ambient Temperature: The temperature of the surrounding air. For testing purposes, ambient temperature must be between +16° C (+50° F) and +38° C (+100° F).

Analog Signals: A continuously-variable signal that is solely dependent upon magnitude to express information content. Note: Analog signals are used to represent the state of variable devices such as rheostats, potentiometers, temperature probes, etc.

ANSI: American National Standards Institute

APTA: American Public Transportation Association

ArDMV: State of Arkansas, Department of Motor Vehicles

ArDOT: State of Arkansas, Department of Transportation

ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers

ASTM: American Society for Testing and Materials

ATC: Automatic Traction Control

Audible Discrete Frequency: An audible discrete frequency is determined to exist if the sound power level in any 1/3-octave band exceeds the average of the sound power levels of the two adjacent 1/3-octave bands by 4 decibels (dB) or more.

Battery Compartment: Low voltage energy storage, i.e. 12/24 VDC batteries.

Battery Management System (BMS): Monitors energy, as well as temperature, cell or module voltages, and total pack voltage. The BMS adjusts the control strategy algorithms to maintain the batteries at uniform state of charge and optimal temperatures.

Braking Resistor: Device that converts electrical energy into heat, typically used as a retarder to supplement or replace the regenerative braking.

Burst Pressure: The highest pressure reached in a container during a burst test.

Capacity (fuel container): The water volume of a container in gallons (liters).

CCTV: Closed Circuit Television
**Cells:** Individual components i.e. battery or capacitor cells.

**CF:** Compact Flash

**CFR:** Code of Federal Regulations

**Code:** A legal requirement

**Curb Weight:** Weight of vehicle, including maximum fuel, oil and coolant; and all equipment required for operation and required by this Specification, but without passengers or driver.

**dBA:** Decibels with reference to 0.0002 microbar as measured on the "A" scale.

**DBE:** Disadvantaged Business Enterprise

**DC:** Direct Current

**DC to DC Converter:** A module which converts a source of direct current (DC) from one voltage level to another.

**Destroyed:** Physically made permanently unusable.

**Discrete Signals:** A signal which can take only pre-defined values, usually of a binary 0 or 1 nature where 0 is battery ground potential and 1 is a defined battery positive potential.

**DOE:** U.S. Department of Energy

**DOT:** U.S. Department of Transportation

**DR:** Diagnostic Reader

**DRL:** Daytime Running Lights

**Driver’s Eye Range:** The 95th-percentile ellipse defined in SAE Recommended Practice J941, except that the height of the ellipse shall be determined from the seat at its reference height.

**ECM:** Engine Control Module

**ECS:** Emission Control System

**EMI:** Electromagnetic Interference

**Energy Density:** The relationship between the weight of an energy storage device and its power output in units of watt-hours per kilogram (Wh/kg).

**Energy Storage System:** A component or system of components that stores energy and for which its supply of energy is re-chargeable by a PPU and/or an off-vehicle energy source.
**EPA:** U.S. Environmental Protection Agency

**FCC:** Federal Communications Commission

**Fire Resistant:** Materials that have a flame spread index less than 150 as measured in a radiant panel flame test per ASTM-E 162-90.

**Fireproof:** Materials that will not burn or melt at temperatures less than 2,000° F.

**FMCSA:** Federal Motor Carrier Safety Administration

**FMCSR:** Federal Motor Carrier Safety Regulations (US)

**FMEA:** Failure Modes and Effects Analysis

**FMVSS:** Federal Motor Vehicle Safety Standards (US)

**Free Floor Space:** Floor area available to standees, excluding the area under seats, area occupied by feet of seated passengers, the vestibule area forward of the standee line, and any floor space indicated by manufacturer as non-standee areas such as, the floor space "swept" by passenger doors during operation. Floor area of 1.5 square feet shall be allocated for the feet of each seated passenger that protrudes into the standee area.

**FTA:** U.S. Federal Transit Administration

**Fusible Material:** A metal, alloy, or other material capable of being melted by heat.

**GAAP:** Generally Accepted Accounting Principles

**GAWR (Gross Axle Weight Rated):** The maximum total weight as determined by the axle manufacturer, at which the axle can be safely and reliably operated for its intended purpose.

**GPS:** Global Positioning System

**Gross Load:** One hundred fifty pounds for every designed passenger seating position, for the driver and for each 1.5 square feet of free floor space.

**GVW (Gross Vehicle Weight):** Curb weight plus gross load.

**GVWR (Gross Vehicle Weight Rated):** The maximum total weight as determined by the vehicle manufacturer, at which the vehicle can be safely and reliably operated for its intended purpose.

**HHDD:** Heavy, Heavy-Duty Diesel

**High Voltage (HV):** Greater than 50 volts (AC and DC).

**HMI:** Human Machine Interface
Hoses: Flexible lines.

HVAC: Heating, Ventilation and Air Conditioning

Hybrid: A vehicle that uses two or more distinct power sources to propel the vehicle.

Hybrid System Controller (HSC): Regulates energy flow throughout hybrid system components in order to provide motive performance and accessory loads, as applicable, while maintaining critical system parameters (e.g.: voltages, currents, temperatures, etc.) within specified operating ranges.

Hybrid Drive System (HDS): The mechanical and/or electromechanical components, including the PPU and energy storage system, which comprise the traction drive portion of the hybrid propulsion system.

IAS: International Approval Services

Inverter: Module that converts direct current (DC) to/from alternating current (AC).

I/O: Input/Output

ISO: International Organization for Standardization

JIC: Joint Industrial Council

Labeled: Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization, that is acceptable to the ORT having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Leakage: Release of contents through a defect or crack.

LED: Light Emitting Diode

Line: All tubes, flexible and hard, which carry fluids.

Liner: Inner gas tight container or gas container to which the overwrap is applied.

Local Regulations: Regulations below the state level.

Low Floor Bus: A bus which, between at least the front (entrance) and rear (exit) doors, has a floor sufficiently low and level so as to remove the need for steps in the aisle between the doors and in the vicinity of these doors.

Low Voltage (LV): 50 volts or less (AC and DC).

MDBF: Mean Distance Between Failure

MDBSF: Mean Distance Between Service Failure
**MDT:** Mobile Data Terminal

**MDVR:** Mobile Digital Video Recording

**Metallic Hose:** A hose whose strength depends primarily on the strength of its metallic parts; it can have metallic liners or covers, or both.

**Module:** Assembly of individual components.

**Motor (Electric):** Device that converts electrical energy into mechanical energy.

**Motor (Traction):** An electric motor used to power the driving wheels of the bus.

**MTBF:** Mean Time Before Failure

**NATEF/ASE:** The National Automotive Technicians Education Foundation/ Automotive Service Excellence

**NFPA:** National Fire Protection Association

**NHTSA:** National Highway Traffic Safety Administration

**NIC:** Network Interface Card

**OCU:** Operator Control Unit

**OEM:** Original Equipment Manufacturer (Bus Manufacturer)

**Operating Pressure:** The varying pressure which is developed in a container during service.

**ORT:** Ozark Regional Transit

**OSHA:** Occupational Safety and Health Administration

**OSI:** Open Systems Interconnect

**Participating Agency:** Ozark Regional Transit

**Physical Layer:** The first layer of the seven-layer ISO OSI reference model. This provides the mechanical, electrical, functional and procedural characteristics required to gain access to the transmission medium (e.g., cable) and is responsible for transporting binary information between computerized systems.

**PMAD:** Personnel Mobility Aid Devices

**Power:** Work or energy divided by time.

**Power Density:** Power divided by mass, volume or area.

**PPI:** Producer Price Index

**PRD:** Pressure Relief Device
**Propulsion System:** System that provides propulsion for the vehicle proportional to operator commands. Includes, as applicable, the HDS system, Energy Storage System, and the HSC.

**PWM:** Pulse Width Modulation

**Regenerative Braking:** Deceleration of the bus by switching motors to act as generators which return vehicle kinetic energy to the Energy Storage System.

**Retarder:** Device used to augment or replace some of the functions of primary friction based braking systems of the bus whether it is an accessory part of the transmission or an accessory part of the engine.

**RFI:** Radio Frequency Interference

**Rupture:** Sudden and unstable damage propagation in the structural components of the container resulting in a loss of contents.

**SAE:** Society Automotive Engineers

**Seated Load:** 150 pounds for every designed passenger seating position and for the driver.

**SLW (Seated Load Weight):** Curb weight plus seated load.

**Serial Data Signals:** Serial data signals are a current loop based representation of ASCII or Alphanumeric data used for transferring information between devices by transmitting a sequence of individual bits in a prearranged order of significance. Note: An example is the communication that takes place between two or more electronic components with the ability to process and store information.

**Solid State Alternator:** A module that converts high-voltage DC to low-voltage DC (typically 12/24 volt systems).

**Specification:** A particular or detailed statement, account, or listing of the various elements, materials, dimensions, etc. involved in the manufacturing and construction of a product. 9

**SPI:** Society of the Plastics Industry

**Standard:** A firm guideline from a consensus group.

**Standee Line:** A line marked across the bus aisle to designate the forward area that passengers may not occupy when the bus is moving.

**State of Charge (SOC):** Quantity of electric energy remaining in the battery relative to the maximum rated Amp hour (Ah) capacity of the battery expressed in percent. This is a dynamic measurement used for the energy storage system. A full SOC indicates that the energy storage system cannot accept further charging from the engine driven generator or the regenerative braking system.

**Stress Loops:** The "pig-tails" commonly used to absorb flexing in piping.

**Structure:** The structure shall be defined as the basic body, including floor deck material and installation, load bearing external panels, structural components, axle mounting provisions and suspension beams and attachment points.

**TCRB:** Transportation Cooperative Research Board
**TRB:** Transportation Research Board

**TVM:** Transit Vehicle Manufacturer

**UL:** Underwriters Laboratories

**Wheelchair:** A mobility aid belonging to any class of three (3) or four (4) wheeled devices, usable indoors, designed for and used by individuals with mobility impairments, whether operated manually or powered. A "common wheelchair" is such a device that does not exceed 30 inches in width and 48 inches in length measured 2 inches above the ground, and does not weigh more than 600 pounds when occupied.


TS 1.2.1 REQUEST FOR PROPOSALS (RFP)

AUTHORIZATION

The following Terms and Conditions govern the Request for Proposals (RFP) issued by the Ozark Regional Transit (ORT).

Proposers shall comply with the statutes and regulations as they exist on the date of their proposal and they may be modified from time to time during the term of the contract, as it may be amended.

Ozark Regional Transit has fully identified and programmed all of the funding required for this procurement; however, typical funding for procurements of this type is noted below. As ORT desires to receive proposals for diesel versions of these different size buses, the amount of funding that is needed may vary. ORT expects to purchase all of the replacement equipment identified in this proposal, however, Proposer should be aware that all funding has not yet been identified and put in place.

NOTICE OF FEDERAL PARTICIPATION/FUNDING

The anticipated funding breakdown for this procurement is as follows:

Federal Participation: 85% to 90%
FTA Section 5339 discretionary
Current FTA Grant: ##########
ORT Participation: 10% to 15%

The contract will be awarded subject to conditions of a financial assistance contract between the FTA and ORT. All contract parties must comply with all applicable FTA requirements.
1. INSURANCE REQUIREMENTS
The Proposer will be required to carry, for the term of the Contract and any amendment thereto, for the services performed under the terms of the Contract and those performed for the Proposer by its sub Proposers, the following minimum insurance coverage. Copies of all insurance certificates shall be supplied to the District prior to the commencement of service. This insurance will protect the Proposer, the District and the Consortium from claims that may arise from the successful Proposer acts or omissions.

A. Commercial General Liability
The Proposer shall carry Commercial General Liability Insurance, including premises/operations; contractual liability; personal injury; products/completed operations; property damage, providing for a per occurrence limit of Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries to or death of all persons in any one accident or occurrence, and for all damages arising out of injury to or destruction of property in any one accident or occurrence, and, subject to that limit per accident, a total (or aggregate) limit of Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries or death of all persons in all accidents or occurrences and out of injury to or destruction of property for a period of five (5) years after acceptance of the last bus delivered under this Contract for a period of Product liability.

B. Workers’ Compensation Insurance
With respect to all services the Proposer performs and all those performed for the Proposer by its sub Proposers, the Proposer and sub Proposer(s) shall carry Workers’ Compensation Insurance and, as applicable, insurance required in accordance with the U.S. Longshore and Harbor Workers’ Compensation Act, in accordance with the requirements of the laws of the State of Arkansas, and of the laws of the United States, respectively.

C. Business Automobile Insurance
The Proposer shall carry Business Automobile Liability Insurance, to cover the use of all owned, hired, and non-owned vehicles, providing for the following minimum liability limits: Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries to or death of all persons in any one accident or occurrence, and for all damages arising out of injury to or destruction of property in any one accident or occurrence.

D. Indemnification and Hold Harmless
To the fullest extent permitted by law, the Proposer shall indemnify, defend and hold harmless the Agencies and its respective officers, directors, employees and agents (“Indemnified Parties”) from and against all claims, damages, demands, losses, expenses, fines, causes of action, suits or other liabilities (including all costs of reasonable attorneys’ fees, consequential damages, and punitive damages), arising out of or resulting from, or alleged to arise out of or arise from, the performance of Proposer’s Work under the Contract whether such claim, damage, demand, loss or expense is attributable to bodily injury, personal injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting there from; but only to the extent attributable to the negligence of the Proposer or any entity for which it is legally responsible or vicariously liable and; regardless whether the claim is presented by an employee of Proposer. Such indemnity obligation shall not be in derogation or limitation of any other obligation or liability of the Proposer or the rights of the Agencies contained in this Contract or otherwise. This indemnification shall not be limited in any way by any limitation on the
amount or type of damages, compensation or benefits payable by or for the Proposer under any workers’ compensation acts, disability benefit acts or other employee benefits acts and includes any loss or injury suffered by an employee of Proposer. This indemnification shall survive the completion of the Work or the termination of the Contract.

E. Certificate of Insurance
In conjunction with the above, the Proposer agrees to furnish to ORT a Certificate of Insurance fully executed by an insurance company or companies satisfactory to the District/State for the insurance policy or policies required hereinabove which policy or policies shall be in accordance with terms of said Certificate of Insurance. For the Workers’ Compensation Insurance and, as applicable, U.S. Longshore and Harbor Workers’ Compensation Act coverage, the policy number(s) and term of the policy(ies) shall be indicated on the certificate. Each insurance policy shall state that the insurance company agrees to investigate and defend the insured against all claims for damages, even if groundless.

All such insurance coverage shall name ORT as an additional insured, provide a waiver of subrogation and such insurance shall be primary and non-contributory. Such insurance shall protect ORT and the State of Arkansas against all claims, liabilities, suits, actions, damages, or costs resulting from or arising out of the ownership, lease, operation, maintenance, repairs, or use in any way of the project equipment for the purposes of this program and for any other purpose. No project equipment shall be delivered to the Proposer, or operated by the Proposer until the Proposer has submitted a certificate of insurance to ORT naming ORT and the State of Arkansas as additional insured and indicating that all policies contain a waiver of subrogation and that such insurance is primary and non-contributory, as well as and indicating that the other insurance requirements of this Section are satisfied. Prior to the termination or lapse of any such insurance coverage, the Proposer shall submit a similar additional certificate of insurance to ORT.

Proposer’s failure to procure or maintain required insurance will constitute a material breach of the Contract.

2. PROPOSAL RESPONSES
Proposals must be mailed or hand carried in accordance with the following instructions. If the proposal is sent via a COMMERCIAL EXPRESS CARRIER, U.S. MAIL, and/or HAND CARRIED please address proposal as follows:

Karen Eccles  
keccles@ozark.org  
Ozark Regional Transit  
2423 E. Robinson Avenue  
Springdale, Arkansas 72764  
ATTN: ORT RFP #2018-02

The following forms, along with any required documentation, descriptive literature, catalogs, brochures, pictures, etc. shall be submitted part of your Proposal:

- Vehicle Technical Information
- Federal Transit Administration (FTA) Required Clauses (Noted Certifications)
- Acknowledgement of Addenda – if applicable
- Additional Requirements of the State of Arkansas Department of Transportation Form
• Affirmative Action Policy Statement Certification
• Employment Information Form
• Affidavit of Non-Collusion/Conflict of Interest Form
• Federal Suspension and Debarment Form
• Required by the State of Arkansas Form
• State of Arkansas Certification of Eligibility Form
• DBE Policy Statement
• TVM Certification
• Subcontractor/DBE Form
• Certification of Compliance with FMVSS
• FMVSS and Pollution Certificate
• Certification of Compliance with FTA’s Bus Testing Requirements
• Pre-Award and Post Delivery Audits Requirements Form
• Fly America Form
• Lobbying Form
• Price Schedule
• Required Submittals—See Section “Submittal Requirements”

Additional forms such as those listed below must be reviewed carefully and accepted by the Proposer prior to proposal submittal:
• Request for Proposal Document
• Description of Goods & Services and Additional Terms & Conditions
• Technical Specifications
• Federal Transit Administration (FTA) Required Clauses
• SEEC Form 11
• Sample Contract

Proposers are cautioned that there may be additional documents, attachments or requirements depending on the complexity of the RFP. Please read ALL RFP documents carefully and provide all required information. Failure to do so may result in rejection of your proposal.
TS 1.4 OVERVIEW

Ozark Regional Transit is a political sub-division of the State of Arkansas. ORT is governed by a Board of Directors composed of representatives from the convening authorities of the Cities of Fayetteville, Springdale, Rogers and Bentonville and the Counties of Washington, Benton, Carroll and Madison. The Board has broad powers to acquire, operate, finance, plan, develop, maintain and otherwise provide all forms of public transportation and related services. ORT is eligible and authorized under state and local law to request, receive, and manage grant funds and to execute and administer grant-funded projects. ORT provides a variety of services in support of public transportation in Northwest Arkansas.

ORT is soliciting proposals through this Request for Proposals ("RFP") from a firm or firms interested and capable of manufacturing and delivering 30’ and 35’ low floor, clean fuel diesel buses (with CNG options). The actual quantity of each length of bus will be determined during the contract award process once the apparent contract award designee has been named. There are provisions within this RFP for CNG buses.

The Contract for each order placed using this procurement shall be a firm-fixed price Contract. Specifically, ORT is requesting proposals and pricing for new and ready-for-service buses.

The specifics of the services, and other documents relevant to this RFP, are set forth in the Scope of Services and in the Exhibits attached hereto and made a part hereof.

Assignability – In the event that ORT does not purchase its maximum vehicle allotment, due to unforeseen circumstances or lack of funding, the agency may assign the remainder of its vehicle allotment (up to its maximum requirements set forth herein) to another participating agency. This right of assignment shall remain in force over the five-year contract term. This right of assignment will not change the quantity or types of vehicles that may be ordered pursuant to this solicitation. ORT shall incur no financial responsibility or other liability in connection with contracts entered into between the Contractor and another participating agency. The participating agency shall accept sole responsibility for placing orders and making payments to the Contractor.

ORT shall have the right to sell, assign or transfer the contract and all or part of the specified deliverables under the contract, both the base and/or the option quantities with all its right, title, and interest therein, to any person, firm, or corporation, and the assignee there of shall acquire all the rights granted to ORT and shall be subject to any obligations that ORT may have under the contract.

The term of this contract will be for four (4) years from the date of award so that buses may be replaced as they reach the end of their lifespan. The Contractor(s) shall comply with all applicable Federal, State, and local regulations. The buses shall meet all applicable FMVSS and shall accommodate all applicable FMCSR regulations in effect at the date of manufacture. ORT anticipates that an award will be issued in July, 2018.

Separate awards for different types of vehicles are possible under this RFP.
**Expected Four Year Equipment Need**

The information below indicates ORT’s expectations for purchases over the next four (4) years. These purchases are wholly contingent on available funding and the information below is to be used as estimates only.

**Total Estimated Purchase Over the Life of the Award**

- 30 foot bus 20
- 35 foot bus 20

Or any combination of the above sizes.

**Narrative**

- Purchase of up to 40 buses for ORT and the cities ORT serves. Initial purchase of up to 14 buses are replacement buses due to the fire on January 9, 2017 that destroyed ORT’s fleet. Replacement and expansion buses are expected to fulfill the needs of the growing population and popularity of public transit in Northwest Arkansas.
- Manufacture 30’ and 35’ low floor transit buses both clean fuel diesel and as an option, CNG powered versions.
- Please refer to the attachment, Technical Specifications for detailed description of Scope of Work.
TS 1.5 INSTRUCTIONS TO PROPOSERS

1. Proposal Schedule

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<td>RELEASE OF RFP</td>
<td>May 15, 2018</td>
</tr>
<tr>
<td>PRE-PROPOSAL MEETING (OPTIONAL)</td>
<td>May 30, 2018 2:00 pm</td>
</tr>
<tr>
<td>RECEIPT OF QUESTIONS</td>
<td>June 14, 2018 2:00 pm</td>
</tr>
<tr>
<td>ANSWERS TO QUESTIONS as ADDENDUM</td>
<td>June 21, 2018</td>
</tr>
<tr>
<td>RFP DUE DATE</td>
<td>June 29, 2018 4:00 pm</td>
</tr>
<tr>
<td>BID OPENING DATE</td>
<td>July 10, 2018 1:00 pm</td>
</tr>
<tr>
<td>ANNOUNCEMENT OF AWARD WINNER</td>
<td>July 13, 2017</td>
</tr>
<tr>
<td>CONTRACT DATE</td>
<td>July 27, 2018</td>
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</tbody>
</table>

ORT reserves the right to modify any of the dates and/or times noted above. If it becomes necessary to adjust the Proposal Schedule, the change(s) will be provided via a written Addendum and posted on the ORT website.

2. AMENDMENT OR Cancellation of the RFP

ORT reserves the right to cancel, amend, modify or otherwise change this RFP at any time if it deems it to be in the best interest of ORT to do so.

3. Internet Disclaimer

Documents and other information obtained through the Internet, World Wide Web sites or sources other than the Ozark Regional Transit approved sources are not to be construed as official information for the purposes of conducting other business with ORT.

Persons and/or entities that reproduce and/or make such information available by any means are not authorized by ORT to do so and may be liable for claims resulting from the dissemination of unofficial, incomplete and/or inaccurate information.

4. Questions

Questions for the purpose of clarifying this RFP must be received no later than the date and time specified in Section 1, “Proposal Schedule” and shall be directed to the ORT Contact, Karen Eccles via email at: keccles@ozark.org.

Questions shall be emailed simultaneously (cc) to: jgardner@ozark.org and mcampbell@ozark.org.

Note: Always include the RFP identification (RFP#2018-02 – Bus RFP) in the Subject Line of your email correspondence.

Only questions that ORT considers to be in ORT’s best interest will be answered. ORT is the only party who will determine its best interest.

5. Communications

During the period from your organization’s receipt of this Request for Proposal, and until a contact is awarded, your organization shall not contact any employee of ORT concerning this procurement except in writing directed to the ORT Contact, Karen Eccles at keccles@ozark.org; or as otherwise directed by ORT.
6. Solicitation Submission
Solicitations shall be submitted by the RFP due date and time noted in Section 1. Proposals received after the date and time specified shall be rejected.

7. Sealed Proposals (ONE (1) ORIGINAL, SIX (6) COPIES AND ONE (1) ELECTRONIC (“PDF”) COPY ON CD/DVD OR FLASH DRIVE)
Proposals must be submitted in a SEALED envelope or carton, clearly marked with RFP No., the date, and the name and address of the Proposer. Any material that is not so received may be opened as general mail, and result in invalidating the Proposer’s submission. Electronic, facsimile or unsealed proposals will not be accepted under any circumstances.

   a. This is a Request for Proposals, not an Invitation to Bid, therefore, Proposals are not opened in public on the due date.

   b. Proposals received after the time and date of due date/time specified in the RFP will not be accepted for consideration.

   c. Proposer will not be allowed to resubmit a proposal after the due date and time specified in the RFP. Incomplete proposal forms may result in the rejection of the bid. Amendments to proposals received by ORT after the due date/time specified will not be considered. Proposals may be computer prepared, typewritten or handwritten in ink. All proposals shall be signed by a person duly authorized to sign proposals on behalf of the Proposer. Unsigned proposals may be rejected.

   d. In the event of a discrepancy between the unit price and the extension, the unit price shall govern. Prices should be extended in decimal form, not fractions, to be net, and shall include transportation and delivery charges fully prepaid by the Contractor to the destination specified in the RFP, and subject only to cash discount.

   e. The Proposer full acknowledges and agrees with all of the terms and conditions contained in this Form RFP#2018-02, and the Contract. Further, if the Proposer is awarded a contract for the goods and/or services called for in the Request for Proposals, the Proposer’s signature on Proposal Form shall mean that the Proposer shall be bound by and perform fully in accordance with all of the terms and conditions set forth in the RFP, this Form RFP#2018-02 and the Contract as if the Proposer had actually executed. Form RFP#2018-02 and the Contract itself.

   f. It is the responsibility of the Proposer to review the RFP documents carefully to determine the applicability and cost for any Local, City, County, State, Franchise or Income taxes, tariffs, fees, business licenses and special taxes, or licenses 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.
TS 1.6 PROPOSAL REQUIREMENTS

1. Contract Period
ORT intends that this contract shall be in effect for a period of 4 years from Date of Execution of the Contract. ORT anticipates that an award will be issued in July, 2018.

2. Motor Carrier Safety Review
If the performance of the Contract requires the use and operation of any commercial motor vehicle, or other motor vehicle with a gross vehicle weight rating (GVWR) of 18,000 pounds or more, each proposer may be the subject of an evaluation. The primary factor in the evaluation is the current SAFESTAT score, calculated by the U.S. Federal Motor Carrier Safety Administration (FMCSA) in accordance with the provisions of Title 49, Section 385.1, et seq., of the Code of Federal Regulations.

To be deemed qualified, the proposer must have an overall SAFESTAT category rating of "D" or better, on the date of evaluation. In addition, the proposer's driver and vehicle out-of-service rates will be consulted. The rates are determined by the number of out-of-service violations cited to the motor carrier in the course of all official, reported vehicle and/or driver inspections conducted during the preceding thirty (30) months. To be deemed qualified, the proposer must not have either a vehicle or driver out-of-service rate, by percentage of out-of-service violations per the total number of inspections reported, that is more than twice the national average. In addition, the proposer must have a current federal safety management practices rating of "Satisfactory," as defined in 49 CFR Section 385.3, as amended.

Proposer must provide the company's Federal DOT ID number where specified in Exhibit B. Failure to provide this information may result in the rejection of your proposer.

Further information concerning the motor carrier safety evaluation, to which a proposer is subject, may be obtained from the federal SAFESTAT website, at http://www.ai.volpe.dot.gov/.

3. Quantities and/or Usages
Any quantities set forth in this RFP are estimated quantities and/or usages only and in no way represent a commitment and/or intent to purchase any particular amount. Actual quantities may vary and will be identified on individual purchase orders issued by the requesting entity.

4. Brand Name Specifications and/or References
The use of the name of a manufacturer or of any particular make, model or brand in describing an item does not restrict proposers to that manufacturer or specific article unless limited by the term "no substitute". However, the article being offered must be of such character and quality so that it will serve the purpose for which it is to be used equally as well as that specified, and the proposer shall warrant to ORT that it is for that purpose. RFPs on comparable items must clearly state the exact article being offered including any and all applicable options and the proposer shall furnish such other information concerning the article being offered as will be helpful in evaluating its acceptability for the purpose intended. If the proposer does not indicate that the article offered is other than as specified, it will be understood that the proposer is offering the article exactly as specified. Proposers must submit complete documentation on the specifications and quality levels of the proposed products. RFPs submitted that do not contain this documentation are subject to rejection.
5. Stability of Proposed Prices
Any price offerings from proposers must be valid for a period of One Hundred Eighty (180) days from the due date of the proposals.

6. Amendment or Cancellation of the RFP
ORT reserves the right to cancel, amend, modify or otherwise change this RFP at any time if it deems it to be in the best interest of ORT to do so.

7. Proposal Modifications
No additions or changes to any proposal will be allowed after the proposal due date, unless such modifications is specifically requested by ORT. ORT, at its opinion may seek proposer retraction and/or clarification of any discrepancy or contradiction found during its review of proposals.

8. Proposer Presentation of Supporting Evidence
Proposers must be prepared to provide any evidence of experience, performance, ability, and/or financial surety that ORT deems to be necessary or appropriate to fully establish the performance capabilities represented in their proposals.

10. Samples
The quality of accepted samples does not supersede specifications for quality in the Request for Proposals unless the sample is superior in quality. All deliveries shall have at least the same quality as the accepted sample.

Samples of items when called for must be furnished free of expense, and if not destroyed by testing may upon request, be returned at the Contractor’s sole cost and expense. Each individual sample must be labeled with the Contractor's name, Manufacturer's brand name and number, proposal number and item reference. Samples of successful contractor’s items may remain on file for the term of the contract.

Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received within ninety (90) days after proposal date. If instructions are not received within this time, the commodities shall be disposed of by ORT.

11. Erroneous Awards
ORT reserves the right to correct inaccurate awards.

12. Proposal Expenses
Proposers are responsible for all costs and expenses incurred in the preparation of proposals and for any subsequent work on the proposal that is required by ORT.

13. Ownership of Proposals
All proposals shall become the sole property of ORT and will not be returned.

14. Ownership of Subsequent Products
Any product, whether acceptable or unacceptable, developed under a contract awarded as a result of this RFP shall be the sole property of ORT unless otherwise stated in the contract.
15. Oral Agreement or Arrangements
Any alleged oral agreements or arrangements made by proposers with any ORT employee will be disregarded in any proposal evaluation or associated award.

16. Other Requirements
Accordingly, vendors are notified as follows:

(a) No state agency or quasi-public agency shall execute a contract for the purchase of goods or services, which contract has a total value to the state of fifty thousand dollars or more in any calendar or fiscal year, unless the state agency obtains the written affidavit described in subsection (b) of this section.

(b) (1) The chief official of the vendor awarded a contract described in subsection (a) of this section or the individual awarded such contract who is authorized to execute such contract, shall attest in an affidavit as to whether any consulting agreement has been entered into in connection with such contract. Such affidavit shall be required if any duties of the consultant included communications concerning business of such state agency, whether or not direct contact with a state agency, state or public official or state employee was expected or made. “Consulting agreement” means any written or oral agreement to retain the services, for a fee, of a consultant for the purposes of
   a. providing business with the State,
   b. contacting, whether in writing or orally, any executive, judicial, or administrative office of the state, including any department, institution, bureau, board, commission, ORT, official or employee for the purpose of solicitation, dispute resolution, introduction or request for information or
   c. any other similar activity related to such contract. “Consulting agreement” does not include any agreements entered into with a consultant who is registered under the provisions of Chapter 10 of the Connecticut General Statutes concerning the State’s Codes of Ethics, as of the date such affidavit is submitted.

   (2) Such affidavit shall be sworn as true to the best knowledge and belief of the person signing the certification on the affidavit and shall be subject to the penalties of false statement.

   (3) Such affidavit shall include the name of the consultant, the consultant’s firm, the basic terms of the consulting agreement, a brief description of the services provided, and an indication as to whether the consultant is a former state employee or public official. If the consultant is a former state employee or public official, such affidavit shall indicate his or her former agency and the date such employment terminated.

   (4) Such affidavit shall be updated no later than 30 days after the effective date of any such change contained in the most recently filed affidavit or upon submittal of any new bid or proposal, whichever is earlier.

(c) If a vendor refuses to submit the affidavit required under subsection (b) of this section, then the state agency shall not award the Contract to such vendor and shall award the contract to the next highest ranked vendor or the next lowest responsible qualified bidder or seek new bids or proposals.

17. ORT requires that the Invitation to Bid, of which these Terms and Conditions are a part, include a notice of the vendor certification requirements described in this document. Accordingly, vendors are notified as follows:
(a) The terms “gift,” “quasi-public agency,” “state agency,” “large state contract,” “principals and key personnel” and “participated substantially” as used in this section shall have the meanings set forth.

(b) No agency or quasi-public agency shall execute a large state contract unless the agency or quasi-public agency obtains the written certifications described in this section. Each such certification shall be sworn as true to the best knowledge and belief of the person signing the certification, subject to the penalties of false statement.

(c) Any principal or key personnel of the person, firm or corporation submitting a bid or proposal for this contract shall certify:

   (1) That no gifts were made by such person, firm, corporation, any principals and key personnel of the person, firm or corporation, who participates substantially in preparing bids, proposals or negotiated contracts, or any agent of such person, firm, corporation or principals and key personnel, which participate substantially in preparing bids, proposals or negotiating contracts, to:

   (2) any public official or employee of the agency or quasi-public agency soliciting bids or proposals for contracts, who participates substantially in the preparation of bid solicitations or requests for proposals for contracts or the negotiation or award of contracts, or:

   (3) any public official or employee of any other agency, who has supervisory or appointing ORT over such agency or quasi-public agency, that no such principals and key personnel of the person, firm or corporation, or agent of such person, firm or corporation or principals and key personnel, knows of any action by the person, firm or corporation to circumvent such prohibition on gifts by providing for any other principals and key personnel, official, employee or agent of the person, firm or corporation to provide a gift to any such public official or state employee; and

(d) That the person, firm or corporation is submitting bids or proposals without fraud or collusion with any agency personnel.

(e) Any bidder or proposer that does not make the certification required under this section shall be disqualified and the agency or quasi-public agency shall award the contract to the next highest ranked proposer or the next lowest responsible qualified bidder or seek new bids or proposals.
TS 1.7 SELECTION CRITERIA

A selection committee will review and score all proposals. The following information, in addition to the requirements, terms and conditions identified throughout this RFP Document, will be considered as part of the selection process and are listed in order of relative importance.

1. PRODUCT DESIGN AND PERFORMANCE
   1a. Conformance with Technical Specifications

   1b. Vehicle construction and system design
       1) Overall quality of vehicle design
       2) Vehicle esthetic design
       3) Vehicle weight and fuel economy

   1c. Documented reliability of proposed vehicle
       1) Preventative maintenance schedule for proposed vehicle
       2) Vehicle corrosion protection
       3) History of performance of proposed vehicle

   1d. Other design and performance elements of the components which comprise those systems.

   1e. Test results, safety and maintenance factors and cost of operation for the bus design and system components proposed.

   1f. Completeness, clarity and format of maintenance, parts, training and operating manuals, price lists and drawings.

2. DELIVERY SCHEDULE
   2a. Minimum first year purchase.

   2b. Remaining first year commitment.

   2c. Option commitment.

3. PRICE PER BUS

4. QUALIFICATIONS, PERFORMANCE AND FINANCIAL RESPONSIBILITY
   4a. Financial Capabilities
       1) Financial resources and stability
       2) Financial statements
       3) Demonstrated ability to fiscally manage and monitor contracts
       4) Willingness of any parent company to provide the required financial guaranty
       5) Ability to obtain required insurance with coverage values that meet minimum requirements

   4b. Organizational Capabilities
       1) Proposed organizational and operational structure for this project
       2) Technological resources
3) Established personnel practices and employee relations
4) Experience and qualifications of key personnel
5) Evidence that the human and physical resources are sufficient to perform the contract as specified and assure delivery of all equipment within the time specified in the Contract.
6) Adequate manufacturing facilities sufficient to produce and factory-test equipment on schedule
7) A spare parts procurement and distribution system sufficient to support equipment maintenance without delays and a service organization with skills, experience, and equipment sufficient to perform all warranty and on-site work.

4c. Previous Contract History
   1) Defaults or cancellations on previous contracts
   2) History of contracts covering past sales by vehicle model
   3) The Proposer’s experience and performance on similar industry contracts
   4) The Proposer’s demonstrated commitment and capability to satisfy warranty, repair and parts supply requirements on other contracts.
   5) The amount of effort required by other transit properties to secure satisfactory performance from the Proposer.
   6) References

5. FLEET STANDARDIZATION
   5a. Standardization of the bus fleet for training, tools and vehicle parts inventory.
       1) Proposed buses that are the same make and model in multiple sizes listed

   5b. Buses available with a compressed natural gas option

ORT may award by individual item, group of items, or the entirety of all items. ORT may also reject any and all RFPs in whole or in part, and waive minor irregularities and omissions if the best interest of ORT will be served.
The Contractor shall furnish written evidence satisfactory to ORT that they fully understand the purpose for which the equipment is intended and that they are qualified and capable of fulfilling all provisions of this contract. Please provide a written response to each item noted below for each bus type as part of RFP submission (one (1) original, six (6) copies and one (1) electronic (“pdf”) copy on CD/DVD or flash drive) to enable comparison by the Selection Committee. Please number and letter your responses to correspond with each item listed below for identification purposes. Failure to provide the required information in full will be reflected in the scoring of your proposal.

1. PRODUCT DESIGN AND PERFORMANCE
The information provided by the Proposer in its technical submittal relating to buses to be provided will be utilized to evaluate the proposal in relation to this factor.

1a. Conformance with Technical Specifications
   1) Proposer shall fully and accurately complete and submit the “Vehicle Technical Information” questionnaire for each type of vehicle proposed.

1b. Vehicle construction and system design
   1) Overall quality of vehicle design
      Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs. The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

2) Vehicle esthetic design
   Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features list, charts, tables, figures, statistics, promotional materials, photographs and any other information deemed relevant.

3) Vehicle weight and fuel economy
   Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

1c. Documented reliability of proposed vehicle
   1) Preventative maintenance schedule for proposed vehicle
      Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12
year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

2) Vehicle corrosion protection
Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

3) History of performance of proposed vehicle
Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

1d. Other design and performance elements of the components which comprise those systems
Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

1e. Test results, safety and maintenance factors and cost of operation for the bus design and system components proposed
Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs, The Penn State Bus Testing and Research Center STURAA 12 year and 500,000 mile test for this bus model. [The Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 317: Bus Testing, amends Section 12 (General Provisions) of the FTA Act of 1964]. Other tests and reports done on this bus model done by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.
1f. Completeness, clarity and format of maintenance, parts, training and operating manuals, price lists and drawings
Proposer shall submit: Reports, reference materials, specification sheets, brochures, diagrams, special features lists, charts, tables, figures, statistics, promotional materials, pamphlets, photographs. Other tests and reports done on this bus model don by Environmental Canada, Southwest Research, TRB, TCRB, FTA, State or City transit agencies and any other information deemed relevant.

2. PRICE PER BUS
The evaluation panel will consider the reliability of the buses to be provided, warranties, parts compatibility and required inventory expenses and other factors affecting the overall cost in determining its assessment of points to be awarded.

2a. Form – Price Schedule

3. DELIVERY SCHEDULE
The earliest or shortest delivery schedule from issuance of purchase order with evidence that it can be accomplished shall receive higher points.

3a. Minimum first year purchase
Proposer shall submit a delivery schedule and plan to adhere to the schedule.

3b. Remaining first year commitment
Proposer shall submit a delivery schedule and plan to adhere to the schedule.

3c. Option commitment
Proposer shall submit a delivery schedule and plan to adhere to the schedule.

4. QUALIFICATIONS, PERFORMANCE AND FINANCIAL RESPONSIBILITY
This factor will look at the capability and reputation of the bus manufacturer as presented in the Proposal or as is determined by review of information available from references or other resources. The evaluation will look at the manufacturer’s overall organizational and financial capabilities and consider key components such as organizational reporting structure, quality control, quality assurance, research and development, technical, training and parts support, response time, product capabilities, and financial history, as well as other considerations in reaching a final point determination.

4a. Financial Capabilities
1) Financial resources and stability
2) Financial Statements for the past two (2) years (should Proposers wish this information to be considered confidential, the information should be placed in a sealed envelope marked “Confidential”. This information will not be made viewable to the public and will only be reviewed by the Selection Committee.)
3) Demonstrated ability to fiscally manage and monitor contracts. Proposer shall submit references as to their fiscal management and monitoring of existing contracts of similar systems.
4) Willingness of any parent company to provide the required financial guaranty. Proposer shall submit a letter of commitment signed by an officer of the parent company.
5) Ability to obtain required insurance with coverage values that meet minimum requirements. Proposer shall submit a letter from an underwriter confirming that the Proposer can be insured for the required amount.

4b. Organizational Capabilities
1) Proposed organizational and operational structure for this project. Proposer shall submit a formal organization and operational structure of planned project staffing.
2) Technological resources. Proposer shall submit a description of the technical resources that the Proposer can bring to the project as part of the ongoing project as well as describe the additional availability of technological resources should the need for additional service be detected (crisis mode).
3) Established personnel practices and employee relations. Proposer shall submit a description of each of the following: Turnover ratio, Affirmative Action policies and practices, full time/part time ratio, hiring practices, training procedures, and pre-screening.
4) Experience and qualifications of key personnel. Proposers should submit resumes for all key personnel to be utilized on the project.
5) Evidence that the human and physical resources are sufficient to perform the contract as specified and assure delivery of all equipment within the time specified in the Contract.
6) Adequate manufacturing facilities sufficient to produce and factory-test equipment on schedule. Proposers should submit a description of the Proposer’s facilities.
7) A spare parts procurement and distribution system sufficient to support equipment maintenance without delays and a service organization with skills, experience, and equipment sufficient to perform all warranty and on-site work. Proposers should submit a description of its procurement and distribution system

4c. Previous Contract History
1) Defaults or cancellations on previous contracts. Proposers shall submit a list of any defaults or cancellations on previous contracts as well as description of issue
2) History of contracts covering past sales by vehicle model. Proposers shall provide a past sales list by vehicle type including customers contact information
3) The Proposer’s experience and performance on similar industry contracts. Proposers shall provide a list of work completed for location of similar size and make-up
4) The Proposer’s demonstrated commitment and capability to satisfy warranty, repair and parts supply requirements on other contracts. Proposer shall provide examples of the above information from existing or prior contracts
5) The amount of effort required by other transit properties to secure satisfactory performance from the Proposer. Proposer shall provide customer references as required to satisfy this requirement
6) References: Proposers shall submit references from entities that have contracted with the Proposer, including but not limited to, evidence of satisfactory performance and integrity on contracts, making timely deliveries, meeting specifications and warranty provisions, parts, availability, and steps Proposer took to resolve any judgements, liens, fleet defects history, and warranty claims.
5. FLEET STANDARDIZATION
A higher weight will be awarded to buses proposed as the same make and model in multiple sizes requested and available with a CNG drive option.

5a. Standardization of the bus fleet for training, tools and vehicle parts inventory.
   1) Proposed buses that are the same make and model in multiple sizes listed. Proposers shall submit a complete description of vehicles to be provided including make, model, size and fuel standardization.
   2) Proposers shall submit a complete description of specialty tools required for standardized diagnostics of vehicles including make, model and specialty tool warranties.

5b. Buses available with a CNG option
Proposers shall submit a complete description of vehicles to be provided including CNG make, CNG model, recommended GGE fuel size and CNG conversion company to be utilized.
**TS 1.9 SAMPLE CONTRACT**

This RFP is not a contract and alone, shall not be interpreted as such. Rather, this RFP only serves as the instrument through which proposals are solicited. ORT will pursue negotiations with the proposer whose proposal scores highest. If, for whatever reason, ORT and the initial proposer fail to reach consensus on the issues relative to a contract, then ORT may commence contract negotiations with other proposers. ORT may decide at any time to suspend the current RFP process and start the RFP process again.

Attached to this RFP is a draft sample contract and it is included in this RFP for informational purposes only in order to show some contract provisions that ORT requires. It is not intended to, and will not, be the specific contract that ORT and the successful vendor(s) will sign. After ORT selects a vendor, ORT will deliver a draft contract to the vendor for consideration and negotiation. The contract that ORT and the successful vendor will sign may vary from the attached contract. The contract may include a liquidated damages clause at the discretion of ORT.

Changes to the sample contract may be considered during the negotiation phase of a contract award.
TS 1.10 DESCRIPTION OF GOODS AND SERVICES SPECIFICATIONS AND ADDITIONAL TERMS AND CONDITIONS

1. DESCRIPTION OF GOODS AND SERVICES:

1.1 See “Technical Specifications”

1.2 INTERCHANGEABILITY
Unless otherwise agreed, all units and components procured under this Contract, whether provided by suppliers or manufactured by the Contractor will be duplicates in design, manufacture, and installation to assure interchangeability among buses in this procurement. This interchangeability will extend to the individual components as well as to their locations in the buses.

1.3 QUALITY ASSURANCE PROVISIONS
The Contractor, the Contractor’s manufacturing plant and organization shall be certified to the appropriate QS-9000/ISO 9000 series of standards.

Inspection stations shall be at the best locations to provide for the work content and characteristics to be inspected. Stations shall provide the facilities and equipment to inspect structural, electrical, hydraulic, and other components and assemblies for compliance with the design requirements.

Stations shall also be at the best locations to inspect or test characteristics before they are concealed by subsequent fabrication or assembly operations. These locations shall minimally include underbody structure completion, body framing completion, body prior to paint preparation, water test before interior trim and insulation installation, engineer installation completion, underbody dress-up and completion, bus prior to final paint touchup, bus prior to road test, and bus final road test completion.

ORT shall be represented at the Contractor’s plant by regular inspections. They shall monitor, in the Contractor’s plant, the manufacture of transit buses built under the procurement. The presence of ORT inspectors in the plant shall not relieve the Contractor of its responsibility to meet all of the requirements of this procurement.

No less than thirty (30) days prior to the beginning of bus manufacture, the primary ORT inspector shall meet with the Contractor’s quality assurance manager and shall conduct a pre-production audit meeting. They shall review the inspection procedures and finalize inspection checklists which shall be in a format agreeable to both ORT and the Contractor. The ORT inspectors may begin monitoring bus construction activities two (2) weeks prior to the start of bus fabrication.

Records and data maintained by the Contractor’s quality assurance organization shall be available for regular review by the ORT inspectors. Inspection and test records for this procurement shall be available for a minimum of one (1) year after final inspections and tests are completed.
The Contractor’s gauges and other measuring and testing devices shall be made available for use by the ORT inspectors to verify that the buses conform to all specifications requirements. If necessary, the Contractor’s personnel shall be made available to operate the devices and to verify their condition and accuracy.

Discrepancies noted by the ORT inspector during assembly shall be entered by the Contractor’s inspection personnel on a record that accompanies the major component, subassembly, assembly, or bus from start of assembly through final inspection. Actions shall be taken to correct discrepancies or deficiencies in the manufacturing processes, procedures, or other conditions that cause articles to be in nonconformity with the requirements of the contract specifications. The inspection personnel shall verify the corrective actions and mark the discrepancy record.

If discrepancies cannot be corrected by replacing the nonconforming materials, ORT shall approve the modification, repair, or method of correction to the extent that the contract specifications affected.

The primary ORT inspector shall have access to the Contractor’s plant for the duration of bus assembly work under this contract. The Contractor shall provide office space for the ORT inspectors in close proximity to the final assembly area. This office space shall be equipped with desks, outside and interplant telephones, file cabinets, chairs, and clothing lockers sufficient to accommodate the ORT staff. Only the primary ORT inspector or designee shall be authorized to release the buses for delivery. The ORT inspectors shall be authorized to approve the pre-delivery acceptance tests. Upon request to the quality-assurance supervisors, the ORT inspectors shall have access to the Contractor’s quality assurance files related to this procurement. These files shall include drawings, assembly procedures, material standards, parts lists, inspection processing and reports, and records of defects.

Fully-documented tests shall be conducted on each production bus following manufacture to determine its acceptance to ORT. These acceptance tests shall include pre-delivery inspections and testing by the Contractor and inspections and testing by ORT after the buses have been delivered.

The Contractor shall conduct acceptance tests at its plant on each bus following completion of manufacture and before delivery to ORT. These pre-delivery tests shall include visual and measured inspections, as well as testing the total bus operation. The tests shall be conducted and documented in accordance with written test plans, approved by ORT.

Additional tests may be conducted at the Contractor’s discretion to ensure that the completed buses have attained the desired quality and have met the requirements of the contract. ORT may, prior to commencement of production, demand that the Contractor demonstrate compliance with any requirement, if there is evidence that prior tests have been invalidated by Contractor’s change of supplier or change in manufacturing process. Such demonstration shall be by actual test or by supplying a report of a previously performed test on similar or like components and configuration. Any additional testing shall be recorded on appropriate test forms provided by the Contractor and shall be conducted before acceptance of the bus.
The pre-delivery tests shall be scheduled and conducted with thirty (30) days’ notice so that they may be witnessed by the ORT inspectors, who may accept or reject the results of the tests. The results of pre-delivery tests, and any other tests, shall be filed with the assembly inspection records for each bus. The under floor equipment shall be available for inspection by the ORT inspectors, using a pit or bus hoist provided by the Contractor. A hoist, scaffold, or elevated platform shall be provided by the Contractor to easily and safely inspect bus roofs.

Delivery of each bus shall require written authorization of the primary ORT inspector. Authorization forms for the release of each bus for delivery shall be provided by the Contractor. An executed copy of the authorization shall accompany the delivery of each bus.

Visual and measured inspections shall be conducted with the bus in a static condition. The purpose of the inspection testing is to verify overall dimensional and weight requirements, to verify that required components are included and are ready for operation, and to verify that components and subsystems that are designed to operate with the bus in a static condition do function as designed. Total bus operation shall be evaluated during road tests. The purpose of the road tests is to observe and verify the operation of the bus as a system and to verify the functional operation of the subsystems that can be operated only while the bus is in motion.

Each bus shall be driven for a minimum of fifteen (15) miles during the road tests. Observed defects shall be recorded on the test forms. The bus shall be retested when defects are corrected and adjustments are made. The process shall continue until defects or required adjustments are no longer detected. Results shall be pass/fail for these bus operation tests.

ORT may conduct acceptance tests (inspections) on each delivered bus. These tests shall completed within fifteen (15) days after bus delivery and shall be conducted in accordance with written test plans. The purpose of these tests is to identify defects that have become apparent between the time of bus release and delivery to ORT. The post-delivery tests shall include visual inspection and bus operations. No post-delivery test shall apply criteria that are different from the criteria applied in an analogous pre-delivery test (if any).

Buses that fail to pass the post-delivery tests are subject to non-acceptance. ORT shall record details of all defects on the appropriate test forms and shall notify the Contractor of acceptance, conditional acceptance, or non-acceptance of each bus within five (5) days after completion of the tests. The defects detected during these tests shall be repaired according to procedures defined previously in this document.

The post-delivery inspection is similar to the inspection at the Contractor’s plant and shall be conducted with the bus in a static condition. Any visual delivery damage shall be identified and recorded during the visual inspection of each bus.

Road tests will be used for total bus operation similar to those conducted at the Contractor’s plant. In addition, ORT may elect to perform chassis dynamometer tests. Operational deficiencies of each bus shall be identified and recorded.

1.4 TRAINING, MANUALS AND PARTS AVAILABILITY
The Contractor shall deliver the following training videos to participants on CD or DVD with periodic updates and changes to all manuals prior to the delivery of the first coach:
The Contractor shall also provide eighty (80) hours of maintenance training to ORT within 180 calendar days of delivery of the first bus at a time and location specified by ORT. The training program should cover (but not be limited to) the following:

A. Orientation Module
   1. History of Contractor
   2. Advantages and strong points of the bus
   3. Visuals of production system of the bus
   4. Compartment by compartment tour of the bus
   5. Special components or features of the bus

B. Electrical and Electronics
   1. Location of all key electrical components on the bus.
   2. Explanation of the wiring diagram and wiring codes.
   3. Explanation of the charging system and basic troubleshooting of the system.
   4. Explanation of the exterior and interior lighting system along with basic troubleshooting of the system.
   5. Explanation of the safety shutdown system, including the warning indicators and basic troubleshooting of the system.
   6. Operation of the multiplex system
   7. Electric cooling fan system
   8. Multiplex system
   9. Decals of electrical schematics on all electric panels

C. Engine and Accessories
   1. Explanation of the engine and location of key components.
   2. Explanation of the engine driven accessories.
   3. Explanation of the fuel, air and water system.
   4. Explanation of engine tune-up procedures.
   5. Basic troubleshooting procedures for the engine.
   6. Engine overhaul/rebuilding

D. Transmission and Controls
   1. Explanation of the transmission drive unit.
   2. Explanation of the electronic control system.
   3. Basic troubleshooting of the transmission.
   4. Transmission overhaul/rebuilding.

E. Air Conditioning
   1. Explanation of the air conditioning system and the location of all key air conditioning components.
2. Explanation of the air conditioning electrical system.
3. Explanation of the air conditioning compressor along with basic troubleshooting and preventative maintenance of the air conditioning compressor.
4. Basic troubleshooting of the air conditioning system.
5. Preventive maintenance of the air conditioning system.

F. Wheelchair Ramp/Lift System
1. Explanation of the Ramp/Lift system and the location of all Ramp/Lift components.
2. Explanation of the Ramp/Lift electrical system.
3. Proper Ramp/Lift adjustment procedures.
4. Basic troubleshooting of the Ramp/Lift system.

G. Brakes
1. Explanation of the brake system.
2. Basic brake system repair including brake adjustment.
3. ABS & traction control.

H. Air System
1. Explanation of the air system with the location of all system components.
2. Basic troubleshooting of the air system.
3. Preventive maintenance of the air system.

I. Suspension, Steering and Axles
1. Explanation of the suspension system.
2. Basic repairs to the suspensions system.
3. Basic troubleshooting of the suspension system.
4. Explanation of the steering system.
5. Basic troubleshooting of the steering system.
6. Explanation of the axles.
7. Ride height adjustment procedures.

J. Body
1. Explanation of the body & attachment method of exterior body panels to vehicle structure.
2. Basic repair of the exterior panels.

K. Door System
1. Explanation of the door system and location of components.
2. Explanation of the door electrical system.
3. Proper door adjustment procedures.
4. Rebuilding of door motors.
5. Basic troubleshooting of the door systems.

L. Parts
1. Explanation of the parts manual and how it is organized.
2. Explanation of the parts numbering system.
3. Orientation to the bus and components on the bus.
4. Practice in finding parts in the parts manual.
5. Explanation & training on warranty program.
M. Driving Instruction (For Maintenance Employees)

1. Operator Compartment
   a. Controls and switches
   b. Warning indicators and gauges
   c. Seat adjustment
   d. Door control

2. Walk Around Inspection
   a. Compartment-by-compartment explanation
   b. Mirror adjustment
   c. Climate control system

3. Driving Instruction
   a. Turns
   b. Braking
   c. Transmission shifting patterns and driving with the retarder
   d. Backing

The Contractor will provide formal training at ORT’s transit facility on the Contractor’s procedures for identifying, documenting and submitting claims for warranty reimbursement. The training shall include a description of the warranty provided on the buses, components and sub-components and warranty processing.

The Contractor will provide with the delivery of the first coach to ORT a training session for the designated Train the Trainer Supervisors who will in turn orient Bus Operators on how to inspect, safely drive the coach, and operate all the subsystems found on the coach. The training session for the operators will include classroom and driving sessions as necessary.

The program shall include, but not be limited to the following:

1. Operator Compartment
   a. Controls and Switches
   b. Warning Indicators and Gauges
   c. Seat Adjustment
   d. Door Control

2. Walk Around Inspection
   a. Compartment-by-compartment explanation
   b. Mirror adjustments
   c. Climate control systems

3. Driving Instruction
   a. Turns
   b. Braking
   c. Transmission shifting patterns
   d. Backing

The driver Train the Trainer program shall consist of a four (4) hour module on the bus. Each trainee shall be given the opportunity to operate the bus with the Contractor’s instructor on board.

The Contractor shall, at its own expense, have a competent engineering service representative(s) available on request to assist ORT’s staff in the solution of engineering or design problems within the scope of the specifications that may arise during the warranty period.
The Contractor shall provide current maintenance manuals, parts manuals and parts price list, standard operator manuals, OEM major equipment manuals and electrical and pneumatic system schedules as part of this Contract as specified below.

Operator Manuals  1 per five (5) bus order
Maintenance Manuals  1 per five (5) bus order
Parts Manuals (electronic) 1 per bus type order
Parts Price List (electronic) 1 per bus type order - updated annually
OEM Destination Sign Manuals 1 per five (5) bus order
OEM Video System Manuals 1 per five (5) bus order
OEM Engine Manual  1 per five (5) bus order
OEM Transmission Manual 1 per five (5) bus order
Bus Electrical Schematics 1 per five (5) bus order
Bus Pneumatic Schematics 1 per five (5) bus order

Detailed and well organized maintenance, parts, and operator manuals covering all items as built on the coach shall be supplied by the Contractor prior to acceptance of first coach. Manuals shall be delivered in three-ring binders and with the sections separated with sturdy plastic divider pages with tabs, and on Flash Drive or DVD. Manuals shall be easily indexed and contain data required for preventive and corrective maintenance of all parts of the buses including but not limited to the following:

- Operating and Repair Publications
- General vehicle information and specifications.
- A complete, well-developed troubleshooting guide covering all mechanical, electrical and electronic components, including engine, transmission, and HVAC units.
- All preventive maintenance, lubrication and adjustment requirements.
- Complete wiring and schematic diagrams and schedules for wire and cable sizes and ratings including actual cable lay-out, plus locations in the coach of all electric and electronic components.
- All wiring diagrams.
- All ground points control area network.
- Complete air and hydraulic diagrams showing locations in the coach of all air and hydraulic components. The air system diagram shall be 11 in. x 17 in. CAD drawing with color coding, using actual printed colors to match systems.
- Illustrative drawings, such as isometrics, exploded views or photographs identifying components in relationship to each other as mounted in the buses.
- Components shown in exploded views with all parts clearly identified including Contractor part number.
- Rebuilding procedures for all components as applicable
- Detailed, well-illustrated procedures for component change-out plus servicing, adjusting, testing, and run-in information as required.
- Body and structural information and material specifications for major accident repair.
- Seating and stanchion layouts and window diagrams.
- 11 in. x 17 in. scale drawing of driver’s compartment, detailing all driver switches, controls, control panels and equipment locations (to be approved by ORT).
- Repair and calibration instructions and values.
• List of special test equipment and tools required to maintain and repair systems down to the component level including part number and supplier source.
• Three-dimensional drawings of bus and graphics and part number for all graphics.

Serial Numbers
Upon delivery of each bus, the Contractor shall provide a complete electronic list of serialized units installed on each bus to facilitate warranty tracking. The list shall include, but is not limited to the following:
• Engine
• Transmission
• All major subcomponents of the drive system
• Alternator
• Starter
• A/C compressor and condenser/evaporator unit
• Drive axle
• Power steering unit
• Fuel cylinders (if applicable)
• Air compressor
• Mobility device/wheelchair ramp
• Engine electronic control module
• Transmission electronic control unit
• Radiator
• Muffler
• Particulate filter
• Hydraulic pump
• Steering box
• Front/rear axle
• Axle bunk right/left
• Tires
• Overhead driver keyboard
• Driver’s seat
• Roof panel front/rear

The Contractor shall provide updated serial numbers resulting from warranty campaigns. The format of the list shall be approved by the ORT prior to delivery of the first production bus. Illustrated parts manuals shall contain exploded views that show all parts used on buses as built under this contract, and no other parts.

The exploded views will show all fasteners and miscellaneous hardware. The manuals shall contain data arranged so that part numbers can be readily found and identified in the illustration for each system and subsystem component, assembly, subassembly or piece part from an orderly breakdown of the complete coach.

It shall contain a ready reference part number index and part name index and be sufficiently well illustrated to identify items requiring repair, replacement, and storage for use in the maintenance of the buses.
All subassemblies (such as wiper motors, starter motors, etc.) shall have the original manufacturer’s part number displayed at the beginning the appropriate parts listing section. Lists shall include at least the following information for all parts as built:

- Generic description and specifications
- Contractor part number
- Brand name, where applicable
- Original manufacturers part number (provide in separate cross reference binder)
- Indication if the part is custom manufactured only on request
- Standard hardware described by size, type, material and grade
- All original manufacturer names and addresses, all special tools, test and diagnostic equipment and their original manufacturer names and addresses.

All manuals shall be provided in three-ring binders and on CD, DVD or Flash Drive. Format and features shall include index and search by name, part number, assembly and subassembly. ORT reserves the right to copy all information for future use.

The parts pricing list shall list all parts by alpha order starting with “A” and ending with “Z” and then in numerically ascending order starting with “A0” and ending with “Z9”. The parts list shall supply the purchase price (including freight), and a description of the part. Updated price lists will note all part number supersede since last general issue at the price list. Unit of sale will be noted, e.g. each, minimum 5, per foot, etc.

Maintenance and parts manuals must be updated to include all changes made to the coach during production and post-delivery retrofits authorized or requested by the Contractor and to correct all errors and omissions found by ORT. Changes required to the parts and maintenance manuals due to warranty and/or post-delivery retrofits shall be completed within ninety (90) days from the date of modification approval.

Manuals shall be available from the Contractor for fifteen (15) years following acceptance of the last coach. Revised parts price lists will also be supplied as price changes. Parts shall be interchangeable with the original equipment and be manufactured in accordance with the quality assurance provisions of this contract. Prices shall not exceed the Contractor’s then current published catalog prices. Software updates to maintenance and parts manuals shall be available for fifteen (15) years following acceptance of the last coach.

Unless otherwise agreed, all units and components procured under this Contract, whether provided by suppliers or manufactured by the Contractor, shall be duplicates in design, manufacture, and installation to assure interchangeability among buses in this procurement. This interchangeability shall extend to the individual components as well as to their locations in the buses.

1.5 ACCEPTANCE OF BUS
Within fifteen (15) working (weekend & holidays not included) days after arrival at the designated point of delivery, the bus will undergo ORT tests as specified. If the bus passes these tests or if ORT does not notify Contractor of non-acceptance within fifteen (15) working days after delivery, acceptance of the bus by ORT occurs on the fifteenth day after delivery. Acceptance may occur earlier if ORT notifies the Contractor of early acceptance or places the bus in revenue service. If the bus fails these tests, if will not
be accepted until the repair procedures defined in “Repairs After Non-Acceptance” have been carried out and the bus retested until it passes.

1.6 REPAIRS AFTER NONACCEPTANCE
The Contractor or its designated representative will perform the repairs after non acceptance. If the Contractor fails or refuses to make the repairs within five (5) working days, then the work may be done by ORT’s personnel with reimbursement by the Contractor.

1.7 REPAIRS BY CONTRACTOR
After non-acceptance of the bus, the Contractor must begin work within five (5) working days after receiving notification from ORT of failure of acceptance tests. ORT will make the bus available to complete repairs timely with the Contractor repair schedule.

The Contractor will provide, at its own expense, all spare parts, tools, and space required to complete the repairs. At ORT’s option, the Contractor may be required to remove the bus from ORT’s property while repairs are being affected. If the bus is removed from ORT’s property, repair procedures must be diligently pursued by the Contractor’s representatives, and the Contractor will assume risk of loss while the bus is under its control.

Quality Assurance
The Contractor shall establish and maintain an effective in-plant quality assurance organization. It shall be a specifically defined organization and should be directly responsible to the Contractor’s top management.

1. Control. The quality assurance organization shall exercise quality control over all phases of production, from initiation of design through manufacture and preparation for delivery. The organization shall also control the quality of supplied articles.

2. Authority of Responsibility. The quality assurance organization shall have the ORT and responsibility for reliability, quality controls inspection planning, establishment of the quality control system, and acceptance/rejection of materials and manufactured articles in the production of the transit buses.

3. Quality Assurance Organization Functions and Minimum Functions. The quality assurance organization (QAO) shall include the following minimum functions:

- Work instructions: The quality assurance organization shall verify inspection operation instructions to ascertain that the manufactured product meets all prescribed requirements.
- Records maintenance: The quality assurance organization shall maintain and use records and data essential to the effective operation of its program. These records and data shall be available for review by the resident inspectors. Inspection and test records for this procurement shall be available for a minimum of three years after inspections and tests are completed.
- Corrective actions: The quality assurance organization shall detect and promptly ensure correction of any conditions that may result in the production of defective transit buses. These conditions may occur in designs, purchases, manufacture, tests.
or operations that culminate in defective supplies, services, facilities, technical data or standards.

Based on the outcome of thorough root cause investigations, the QAO is responsible to develop and implement appropriate Corrective Action(s). Potential Corrective Actions include but are not limited to: addressing vendor quality issues, employee training / retraining, revision / clarification of workshop procedures, development of improved tooling / fixtures, etc.

4. **Basic Standards and Facilities.** The following standards and facilities shall be basic in the quality assurance process:
   - **Configuration control:** The Contractor shall maintain drawings, assembly procedures and other documentation that completely describe a qualified bus that meets all of the options and special requirements of this procurement. The quality assurance organization shall verify that each transit bus is manufactured in accordance with these controlled drawings, procedures and documentation.
   - **Measuring and testing facilities:** The Contractor shall provide and maintain the necessary gauges and other measuring and testing devices for use by the quality assurance organization to verify that the buses conform to all specification requirements. These devices shall be calibrated at established periods against certified measurement standards that have known, valid relationships to national standards.
   - **Production tooling as media of inspection:** When production jigs, fixtures, tooling masters, templates, patterns and other devices are used as media of inspection, they shall be proved for accuracy at formally established intervals and adjusted, replaced or repaired as required to maintain quality.
   - **Equipment use by resident inspectors:** The Contractor’s gauges and other measuring devices shall be made available for use by the resident inspectors to verify that the buses conform to all specification requirements. If necessary, the Contractor’s personnel shall be made available to operate the devices and to verify their condition and accuracy.
   - **Safety Practices and General Workshop Procedures:** The Contractor shall provide the ORT with all appropriate Safety Practices and General Workshop Procedures which will be in effect throughout this program. Examples include but are not limited to: rooftop equipment hoisting, fall restraints, vehicle jacking and securement, high voltage safety, etc.

5. **Maintenance of Control.** The Contractor shall maintain quality control of purchases:
   - **Supplier control:** The Contractor shall require each Supplier to maintain a quality control program for the services and supplies that it provides. The Contractor’s quality assurance organization shall inspect and test materials provided by Suppliers for conformance to specification requirements. Materials that have been inspected, tested and approved shall be identified as acceptable to the point of use in the manufacturing or assembly processes. Controls shall be established to prevent inadvertent use of nonconforming materials. At the ORT’s request, the Contractor shall coordinate communications, conference calls, or meetings between the ORT staff, the Contractor, and any sub-suppliers. The Contractor shall coordinate and/or
participate in source inspection(s) of sub-supplier parts, processes, and facilities as appropriate and at any time requested by the ORT.

- Purchasing data: The Contractor shall verify that all applicable specification requirements are properly included or referenced in purchase orders of articles to be used on transit buses.

6. Manufacturing Control. Controlled conditions: The Contractor shall ensure that all basic production operations, as well as all other processing and fabricating, are performed under controlled conditions.

- Establishment of these controlled conditions shall be based on the documented Work instructions, adequate production equipment and special working environments if necessary.
- Completed items: A system for final inspection and test of completed transit buses shall be provided by the quality assurance organization. It shall measure the overall quality of each completed bus.
- Nonconforming materials: The quality assurance organization shall monitor the Contractor’s system for controlling nonconforming materials. The system shall include procedures for identification, segregation and disposition
- Statistical techniques: Statistical analysis, tests and other quality control procedures may be used when appropriate in the quality assurance processes.
- Inspection status: A system shall be maintained by the quality assurance organization for identifying the inspection status of components and completed transit buses. Identification may include cards, tags or other normal quality control devices.

7. Inspection System. The quality assurance organization shall establish, maintain and periodically audit a fully documented inspection system. The system shall prescribe inspection and test of materials, Work in process and completed articles. As a minimum, it shall include the following controls:

- Inspection personnel: Sufficient trained inspectors shall be used to ensure that all materials, components and assemblies are inspected for conformance with the qualified bus design.
- Inspection records: Acceptance, rework or rejection identification shall be attached to inspected articles. Articles that have been accepted as a result of approved materials review actions shall be identified. Articles that have been reworked to specified drawing configurations shall not require special identification. Articles rejected as unsuitable or scrap shall be plainly marked and controlled to prevent installation on the bus. Articles that become obsolete as a result of engineering changes or other actions shall be controlled to prevent unauthorized assembly or installation. Unusable articles shall be isolated and then scrapped. Discrepancies noted by the Contractor or ORT inspectors during assembly shall be entered by the inspection personnel on a record that accompanies the major component, subassembly, assembly or bus from start of assembly through final inspection. Actions shall be taken to correct discrepancies or deficiencies in the manufacturing processes, procedures or other conditions that cause articles to be in nonconformity with the requirements of the Contract specifications. The inspection personnel shall verify the corrective actions and mark the discrepancy record. If discrepancies cannot be corrected by replacing the nonconforming materials, then the
ORT staff shall approve the modification, repair or method of correction to the extent that the Contract specifications are affected.

- Quality assurance audits: The quality assurance organization shall establish and maintain a quality control audit program. Records of this program shall be subject to review by ORT.

8. **Inspection and Inspection Stations.** Inspection stations shall be at the best locations to provide the Work content and characteristics to be inspected. Stations shall provide the facilities and equipment to inspect structural, electrical, hydraulic and other components and assemblies for compliance with the design requirements.

Stations shall also be at the best locations to inspect or test characteristics before they are concealed by subsequent fabrication or assembly operations. Test locations shall minimally include underbody structure completion, body framing completion, body prior to paint preparation, water test, engine installation completion, underbody dress-up and completion, bus prior to final paint touchup, bus prior to road test and bus final road test completion.

9. **Inspectors and the Inspector’s Role.** ORT shall be represented at the Contractor’s plant by ORT inspectors, as required by FTA. Inspectors may be ORT employees or outside contractors. The ORT shall provide the identity of each inspector and shall also identify his or her level of authority in writing. They shall monitor, in the Contractor’s plant, the manufacture of transit buses built under the procurement. The presence of these ORT inspectors in the plant shall not relieve the Contractor of its responsibility to meet all the requirements of this procurement. ORT shall designate a primary inspector, whose duties and responsibilities are delineated in “Pre-Production Meetings,” “Authority” and “Pre-Delivery Tests,” below.

10. **Pre-Production and Design Review Meetings.** The primary inspector shall participate in Pre-Production and Design Review Meetings with the ORT. At these meetings, quality assurance procedures shall be addressed, the configuration of the buses and the manufacturing processes shall be finalized, and all Contract documentation provided to the inspector.

No less than thirty (30) days prior to the beginning of bus manufacture, the primary inspector may meet with the Contractor’s quality assurance manager and may conduct a Pre-Production audit meeting. They shall review the inspection procedures and finalize inspection checklists. The inspectors may begin monitoring bus construction activities two weeks prior to the start of bus fabrication.

11. **Authority.** During the project kickoff meeting the Contractor shall present and provide a copy of the manufacturers’ formal quality assurance program. ORT reserves the right to perform a quality assurance audit of the Contractor’s quality assurance system to achieve a better understanding of these processes and confirm compliance to these processes. Records and data maintained by the quality assurance organization shall be available for review by the inspectors. Inspection and test records for this procurement shall be available for a minimum of one year after inspections and tests are completed.

The Contractor’s gauges and other measuring and testing devices shall be made available for use by the inspectors to verify that the buses conform to all specification requirements. If necessary,
the Contractor’s personnel shall be made available to operate the devices and to verify their condition and accuracy.

Discrepancies noted by the inspector during assembly shall be entered by the Contractor’s inspection personnel on a record that accompanies the major component, subassembly, assembly or bus from start of assembly through final inspection. Actions shall be taken to correct discrepancies or deficiencies in the manufacturing processes, procedures or other conditions that cause articles to be in nonconformity with the requirements of the Contract specifications.

The inspection personnel shall verify the corrective actions and mark the discrepancy record. If discrepancies cannot be corrected by replacing the nonconforming materials, then the Contractor shall submit for ORT review and approval the modification, repair or method of correction.

The primary inspector may remain in the Contractor’s plant for the duration of bus assembly Work under this Contract. Only the primary inspector or designee shall be authorized to release the buses for delivery. The inspectors shall be authorized to approve the pre-delivery acceptance tests. Upon request to the quality assurance supervisors, the inspectors shall have access to the Contractor’s quality assurance files related to this procurement. These files shall include drawings, assembly procedures, material standards, parts lists, inspection processing and reports, and records of defects.

12. Support Provisions. The Contractor shall provide office space for the inspectors in close proximity to the final assembly area. This office space shall be equipped with desks, outside and interplant telephones, internet access, file cabinet and chairs. Specific ORT requirements are outlined in the contract documents.

13. Compliance with Safety Requirements. At the time of the Pre-Production Meeting, the Contractor shall provide all safety and other operational restrictions that govern the Contractor’s facilities. These issues will be discussed and the parties will agree which rules / restrictions will govern the ORT’s inspector(s) and any other ORT representatives during the course of the Contract.

14. Acceptance Tests and Responsibility. Fully documented tests shall be conducted on each production bus following manufacture to determine its acceptance to the ORT. These acceptance tests shall include pre-delivery inspections and testing by the Contractor and inspections and testing by the ORT after the buses have been delivered.

15. Pre-Delivery Tests. The Contractor shall conduct acceptance tests at its plant on each bus following completion of manufacture and before delivery to the ORT. These pre-delivery tests shall include visual and measured inspections, as well as testing the total bus operation. The tests shall be conducted and documented in accordance with written test plans approved by the ORT.

Additional tests may be conducted at the Contractor’s discretion to ensure that the completed buses have attained the required quality and have met the requirements in “Section TS: Technical Specifications.” ORT may, prior to commencement of production, demand that the
Contractor demonstrate compliance with any requirement in that section if there is evidence that prior tests have been invalidated by the Contractor’s change of Supplier or change in manufacturing process. Such demonstration shall be by actual test or by supplying a report of a previously performed test on similar or like components and configuration.

Any additional testing shall be recorded on appropriate test forms provided by the Contractor and shall be conducted before acceptance of the bus.

The pre-delivery tests shall be scheduled and conducted with thirty (30) days’ notice so that they may be witnessed by the inspectors, who may accept or reject the results of the tests. The results of pre-delivery tests, and any other tests, shall be filed with the assembly inspection records for each bus. The underfloor equipment shall be available for inspection by the inspectors, using a pit or bus hoist provided by the Contractor. A hoist, scaffold or elevated platform shall be provided by the Contractor to easily and safely inspect bus roofs. Delivery of each bus shall require written authorization of the primary resident inspector. Authorization forms for the release of each bus for delivery shall be provided by the Contractor. An executed copy of the authorization shall accompany the delivery of each bus.

16. Water Test Inspection. The pre-delivery tests shall include a water test inspection. The water test inspection checks the integrity of the vehicle’s body seams, window frame seals and other exterior component closeouts for their ability to keep rainwater, road splash, melting snow and slush, and other exterior water from entering the inside of the vehicle. The vehicle’s interior is inspected for signs of moisture and water leaks. To perform the leak inspection, interior ceiling and side panels are removed, and access doors are opened. If any moisture or water is detected, then the source of the leak will be located and repaired by the manufacturer, and the vehicle will be tested again.

17. Visual and Measured Inspections. Visual and measured inspections shall be conducted with the bus in a static condition. The purpose of the inspection testing includes verification of overall dimension and weight requirements, that required components are included and are ready for operation, and that components and subsystems designed to operate with the bus in a static condition do function as designed.

18. Total Bus Operation. Total bus operation shall be evaluated during road tests. The purpose of the road tests is to observe and verify the operation of the bus as a system and to verify the functional operation of the subsystems that can be operated only while the bus is in motion. Each bus shall be driven for a minimum of fifteen (15) miles during the road tests. If requested, computerized diagnostic printouts showing the performance of each bus shall be produced and provided to the ORT. Observed Defects shall be recorded on the test forms. The bus shall be retested when Defects are corrected and adjustments are made. This process shall continue until Defects or required adjustments are no longer detected.

19. Post Delivery Tests. The ORT may conduct acceptance tests on each delivered coach. These tests shall be completed within 15 (fifteen) days after coach delivery and shall be conducted in accordance with written test plans. The purpose of these tests is to identify Defects that have become apparent between the time of coach release and delivery to the ORT. The post-delivery tests shall include visual inspection and coach operations.
Coaches that fail to pass the post-delivery tests are subject to non-acceptance. The ORT shall record details of all Defects on the appropriate test forms and shall notify the Contractor of non-acceptance of each coach within five days after completion of the tests. The Defects detected during these tests shall be repaired according to procedures defined in the Warranty Requirements Section: WR.

20. **Visual Inspection.** The post-delivery inspection is similar to the inspection at the Contractor’s plant and shall be conducted with the coach in a static condition. Any visual delivery damage shall be identified and recorded during the visual inspection of each coach.

21. **Coach Operation.** Road tests will be used for total coach operation similar to those conducted at the Contractor’s plant. In addition, the ORT may elect to perform chassis dynamometer tests. Operational deficiencies of each coach shall be identified and recorded.

22. **Coach History Book.** The Contractor shall provide a Coach History Book for each bus at time of delivery. Each Coach History Book shall contain the following information at a minimum:
   - List of defects noted and the disposition of each
   - Listing of all serial-numbered components
   - Shipping documents
   - Shipping exceptions and unresolved / open issues
   - Summary detail of each test performed on the coach or any part of the coach
   - Complete record of inspection findings

   During the pre-production meeting, the Contractor shall provide a proposed Coach History Book for the ORT’s review and approval.

   At the ORT’s discretion, additional documentation may be added to the requirements of the Coach History Book.

### 1.8 REPAIRS BY ORT OR OTHER AGENCY

1. **Parts Used.** If ORT performs the repairs after non-acceptance of the bus, it will correct or repair the defect and any related defects using Contractor-specified parts available from its own stock or those supplied by the Contractor specifically for this repair. Monthly, or at a period to be mutually agreed upon, reports of all repairs covered by this procedure will be submitted by ORT to the Contractor for reimbursement or replacement of parts. The Contractor will provide forms for these reports.

2. **Contractor Supplied Parts.** If the Contractor supplies parts for repairs being performed by ORT after non-acceptance of the bus, these parts will be shipped prepaid to ORT from any source selected by the Contractor within ten (10) working days after receipt of the request for said parts.

3. **Return of Defective Components.** The Contractor may request that parts covered by this provision be returned to the manufacturing plant. The total costs for this action will be paid by the Contractor.
4. **Reimbursement for Labor.** ORT will be reimbursed by the Contractor for labor. The amount will be determined by multiplying the number of person-ours actually required to correct the defect by a per hour technician, straight wage rate, plus 40 percent fringe benefits, plus the cost of towing in the bus if such action was necessary. These wage and fringe benefit rates will not exceed the rates in effect in ORT’s service garage at the time the defect correction is made.

5. **Reimbursement for Parts.** ORT will be reimbursed by the Contractor for defective parts that must be replaced to correct the defect. The reimbursement will include taxes where applicable and 22.5 percent handling costs.

### 1.9 PARTS AVAILABILITY GUARANTY

The Contractor hereby guarantees to provide, within reasonable periods of time, the spare parts, software and all equipment necessary to maintain and repair the buses supplied under this Contract for a period of at least fifteen (15) years after the date of award. Parts will be interchangeable with the original equipment and be manufactured in accordance with the quality assurance provisions of this Contract. Prices will not exceed the Contractor’s ten current published catalog prices.

Where the parts ordered by ORT are not received within two (2) working days of the agreed upon time/date and a bus procured under this Contract is out-of-service due to the lack of said ordered parts, then the Contractor will provide ORT, within eight (8) hours of ORT’s verbal or written request, the original suppliers’ and/or manufacturers’ parts numbers, company names, addresses, telephone numbers and contract persons’ names for all of the specified parts not received by ORT.

Where the Contractor fails to honor this parts guaranty or parts ordered by ORT are not received within thirty (30) days of the agreed upon delivery date, then the Contractor will provide to ORT, within seven (7) days of ORT’s verbal or written request, the design and manufacturing documentation for those parts manufactured by the Contractor and the original suppliers’ and/or manufacturers’ parts numbers, company name, addresses, telephone numbers and contact persons’ names for all of the specific parts not received by ORT. Contractor’s design and manufacturing documentation provided to ORT will be for its sole use on regard to the buses procured under this Contract and for no other purpose. If parts are not received warranty on bus will be extended.

### 1.10 OPTIONAL SPARE PARTS PURCHASE

The Contractor shall provide pricing of major parts and components that may be purchased during the contract period.

### 1.11 CONSUMABLE SPARE PARTS

The Contractor shall submit a list of recommended Consumable Spare Parts within six (6) months after NTP. This list must detail parts required to maintain the fleet, identifying the vendor’s name and address, vendor part number, full part description, unit cost, anticipated lead time, and estimated annual usage and include both inventory and non-inventory items.

### 1.12 RENEWAL PARTS INVENTORY LIST AND PARTS SEMINAR

The Contractor shall provide a Renewal Parts Inventory List and a Renewal Parts Inventory Seminar to familiarize material management personnel with the coach components. The Contractor shall submit a complete suggested parts inventory list, required to support this fleet with price detail to determine the total cost required. This list must include parts that are not in inventory, as well as parts needed to support this fleet. The required parts inventory information must be provided no later than thirty (30) days prior to delivery of each Bus.
The seminar shall be for one class not to exceed twenty-five (25) people held during daylight hours at a location to be designated by the ORT. The course shall not exceed thirty (30) hours but be no less than twelve (12), and shall include both classroom and field instruction. The seminar shall be conducted within one month of delivery of each Bus. The Contractor’s materials documentation shall include a Renewal Parts Inventory List, a parts number index, and pricing. The Contractor shall provide current parts pricing within ninety (90) days after the ORT’s written approval of the draft parts manual.

1.13 WARRANTY PROVISIONS
The complete bus, propulsion system, components, major subsystems and body and chassis structure are to be warranted free from defects and related defects for three (3) years or 75,000 miles, whichever comes first, beginning on the date of revenue service. The warranty is based on regular operation of the bus under the operating conditions prevailing in ORT’s locale.

Body, body structure, structural elements of the suspension and engine cradle are warranted to be free from defects and related defects for five (5) years or 250,000 miles, whichever comes first.

Primary load-carrying members of the bus structure, including structural elements of the suspension, are warranted against corrosion failure and/or fatigue failure sufficient to cause a Class 1 or Class 2 failure for a period of twelve (12) years or 500,000 miles, whichever comes first.

Propulsion system components, specifically the engine, transmission or drive motors, generators and drive and non-drive axles shall be warranted to be free from defects and related defects for the standard two (2) years or 100,000 miles, whichever comes first. An extended warranty to a maximum of five (5) years or 300,000 miles, whichever comes first, may be purchased at an additional cost.

The warranty shall include towing, travel, and all related expenses.
Contractor warrants the ECS for five (5) years or 150,000 miles, whichever comes first. The ECS shall include, but is not limited to, the following components:

- Complete exhaust system, including catalytic converter (if required)
- After-treatment device
- Components identified as emission control devices

Major subsystems shall be warranted to be free from defects and related defects for two (2) years or 100,000 miles whichever comes first, items included as major subsystems are listed below:

- Brake system
- Destination signs
- Heating, ventilating
- AC unit and compressor
- Door systems
- Air compressor
- Air dryer
- Wheelchair lift and ramp system
- Starter
- Alternator
- Charge air cooler
- Fire suppression
• Power plant driven or mounted fan drive and power steering hydraulic or electric systems
• Cooling systems
• Radiator
• Transmission cooler
• Passenger seating (excluding fabric)
• Fuel system and delivery system
• Surveillance system including cameras and video recorders
• Communications Equipment
• Paint and decal provisions
• Corrosion protection
• Electric fan system
• Multiplex system

If, during the warranty period, repairs or modifications on any bus are made necessary by defective design, materials or workmanship are not completed due to lack of material or inability to provide the proper repair for thirty (30) calendar days, the applicable warranty period shall be extended by the number of days equal to the delay period.

The warranties shall not apply to the failure of any part or component of the bus that directly results from misuse, negligence, accident, or repairs not conducted in accordance with the Contractor-provided maintenance manuals and with workmanship performed by adequately trained personnel in accordance with recognized standards of the industry.

The warranty also shall be void if ORT fails to conduct normal inspections and scheduled preventive maintenance procedures as recommended in the Contractor’s maintenance manuals and that if that omission caused the part or component failure. ORT shall maintain documentation, auditable by the Contractor, verifying service activities in conformance with the Contractor’s maintenance manuals. The warranties shall not apply to the following items: scheduled maintenance items, normal wear-out items and items furnished by ORT.

The Contractor shall pass on to ORT any warranty, offered by a component supplier, that is superior to that required herein. The Contractor shall provide a list to ORT noting the conditions and limitations of the superior warranty not later than start of production. The superior warranty shall not be administered by the Contractor.

A fleet defect is defined as cumulative failures of 20 percent (20%) in the same components in the same or similar application where such items are covered by warranty. A fleet defect shall only apply to the warranty period.

For the purpose of fleet defects, each option order shall be treated as a separate bus fleet. In addition, should there be a change in a major component within either the base order or an option order, the buses containing the new major component shall become a separate bus fleet for the purposes of fleet defect.

The Contractor shall correct a fleet defect under the warranty provisions defined in this document. After correcting the defect, ORT and the Contractor shall mutually agree to and the Contractor shall promptly undertake and complete a work program reasonably designed to prevent the occurrence of the same
defect in all other buses and spare parts purchased under this contract. Where the specific defect can be solely attributed to particular identifiable part(s), the work program shall include redesign and/or replacement of only the defectively designed and/or manufactured part(s). In all other cases, the work program shall include inspection and/or correction of all of the buses in the fleet via a mutually agreed-to arrangement.

The fleet defect warranty provisions shall not apply to ORT-supplied items, such as radios, fare collection equipment, communication systems and tires. In addition, fleet defects shall not apply to interior and exterior finishes, hoses, fittings and fabric.

The Contractor is responsible for all warranty-covered repair work. To the extent practicable ORT will allow the Contractor or its designated representative to perform such work. At its discretion, ORT may perform such work if it determines it needs to do so based on transit service or other requirements. Such work shall be reimbursed by the Contractor.

If ORT detects a defect within the warranty period, it shall, within twenty (20) working days, notify the Contractor’s representative. The Contractor or its designated representative shall if requested, begin work on warranty-covered repairs within five (5) working days after receiving notification of a defect from ORT. ORT shall make the bus available to complete repairs timely with the Contractor’s repair schedule.

The Contractor shall provide at its own expense all spare parts, tools and space required to complete repairs. At the option of ORT, the Contractor may be required to remove the bus from the property of ORT while repairs are being affected. If the bus is removed from ORT property, repair procedures must be diligently pursued by the Contractor’s representative.

If ORT performs the warranty-covered repairs, it shall correct or repair the defect and any related defects utilizing parts supplied by the Contractor specifically for this repair. At its discretion, ORT may use Contractor-specified parts available from its own stock if deemed in its best interests.

ORT may require that the Contractor supply parts for warranty-covered repairs being performed by the ORT. Those parts may be remanufactured but shall have the same form, fit and function and warranty. The parts shall be shipped prepaid to ORT from any source selected by the Contractor within ten (10) working days of receipt of the request for said parts and shall not be subject to an ORT handling charge. The Contractor may request that parts covered by the warranty be returned to the manufacturing plant. The freight cost for this action shall be paid by the Contractor.

The Contractor shall, upon specified request of ORT, provide failure analysis of fleet defect or safety-related parts, or major components, removed from buses under the terms of the warranty that could affect fleet operation such reports shall be delivered within sixty (60) days of the receipt of failed parts.

ORT shall be reimbursed by the Contractor for labor. The amount shall be determined by ORT for a technician at a straight time wage rate plus fringe benefits and overhead adjusted for ORT’s most recently published rate in effect at the time the work is performed, plus the cost of towing the bus if such action was necessary and if the bus was in the normal service area. These wage and fringe benefit rates shall not exceed the rates in effect in ORT’s service garage at the time the defect correction is made.
The Contractor shall reimburse/respond to the warranty claim with an accept/reject decision including necessary failure analysis no later than sixty (60) days after ORT submits the claim and defective part(s), when requested. The parties should reconcile all outstanding warranty claims at least once per quarter throughout the entire warranty period.

If any component, unit or subsystem is repaired, rebuilt or replaced by the Contractor or by ORT with the concurrence of the Contractor, the component, unit or subsystem shall have the unexpired warranty period of the original. Repairs shall not be warranted if Contractor-provided or authorized parts are not used for the repair, unless the Contractor has failed to respond within five (5) working days.

If an item is declared to be a fleet defect, the warranty stops with the declaration of the fleet defect. Once the fleet defect is corrected, the item(s) shall have remaining time and/or miles of the original warranty. This remaining warranty period shall begin on the repair/replacement date for corrected items on each bus if the repairs are completed by the Contractor or on the date the Contractor provides all parts to ORT.

The following list represents requirements by ORT to the Contractor for processing warranty claims. One (1) failure per bus per claim is allowed.
1. Bus number and VIN
2. Total vehicle life mileage at time of repair
3. Date of failure/repair
4. Acceptance/in-service data
5. Contractor part number and description
6. Component serial number
7. Description of failure
8. All costs associated with each failure/repair (invoices may be required for third party costs)
   a. Towing
   b. Road calls
   c. Labor
   d. Materials
   e. Parts
   f. Handling
   g. Troubleshooting time

ORT’s standardized forms will be accepted if all of the above information is included. Electronic submittal may be used if available between the Contractor and ORT.

ORT must include the following when returning defective parts to the Contractor.
1. Part needs to be tagged with:
   • Bus number and VIN
   • Claim number
   • Part number
   • Serial number (if available)

Each claim must be submitted no more than thirty (3) days from the date of failure and/or repair, whichever is later. All defective parts must be returned to the Contractor, when requested, no more than forty-five (45) days from date of repair.
2. ADDITIONAL TERMS AND CONDITIONS:

2.1 TVM CERTIFICATIONS
The Contractor agrees to comply with all the requirements of 49 CFR 2367, as they apply to the procurement of transit vehicles under this contract, including but not limited to, furnishing the vehicle purchaser with a certification that it is in full compliance with all the regulatory requirements of 49 CFR 23.67.

2.2 DBE CERTIFICATION
Pursuant to Title 49, Code of Federal Regulations, part 23.67, a Proposers, as a condition of being authorized to bid this procurement, must certify by completing “DBE APPROVAL CERTIFICATION”, that it has on file with the FTA an approved or not disapproved annual DBE subcontracting participation goal.

2.3 INTEREST OF MEMBERS OF, OR DELEGATES TO, CONGRESS
No member of, or delegate to, the Congress of the United States will be admitted to any share or part of this Contract or to any benefit arising there from. (41U.S.C.§22.)

2.4 PROHIBITED INTEREST
No member officer or employee of ORT or of a local public body during his tenure or one (1) year thereafter will have any interest, direct or indirect, in this Contract or the proceeds thereof.

2.5 SUBCONTRACTORS
ORT must approve any and all subcontractors utilized by the Contractor prior to any such subcontractor commencing any work. Contractor acknowledges that any work provided under the Contract to any state entity is work conducted on behalf of the State and that the CEO of ORT or his/her designee may communicate directly with any subcontractor as ORT deems to be necessary or appropriate. Contractor shall be responsible for all payment of fees charged by the subcontractor(s). A performance evaluation of any subcontractor shall be provided promptly by the Contractor to ORT upon request. Contractor must provide the majority of services described in the specifications.

2.6 SINGLE PROPOSAL RESPONSE
If only one (1) proposal is received in response to this RFP, a detailed cost proposal may be requested of the single Proposer. A cost/price analysis and evaluation and/or audit may be performed of the cost proposal in order to determine if the price is fair and reasonable.

2.7 PURCHASE ORDERS
Purchase Orders will be issued by ORT. Contractors are cautioned not to perform services without receiving a purchase order number. Questions regarding Purchase Orders should be directed to ORT’s Procurement and Grants Manager, Karen Eccles, at telephone number (479) 361-8264.

Before a Contractor is used, a Certificate of Insurance, as detailed elsewhere in this document, must be on file at ORT.

2.8 SECURITY AND/OR PROPERTY ENTRANCE POLICIES AND PROCEDURES
Contractor shall adhere to established security and/or property entrance policies and procedures. It is the responsibility of each Contractor to understand and adhere to those policies and procedures prior to any attempt to enter any premises for the purpose of carrying out the scope of work described in this Contract.
2.9 DELIVERY
Unless otherwise specified, the buses shall be delivered to:
Ozark Regional Transit
2423 E. Robinson Avenue
Springdale, Arkansas 72764

Washed and with a full tank of fuel at a rate not to exceed three (3) buses per week. Delivery shall be completed with time frame specified in the executed contract documents. Hours of delivery shall be 8:00 am through 4:00 pm, Monday through Friday. Saturday and Sunday deliveries of buses will be accepted on a pre-arranged basis.

Delivery of buses shall be determined by signed receipt of ORT’s designated agent at the point of delivery and may be preceded by a cursory inspection of the bus.

2.10 CERTIFICATE OF ORIGIN
The awarded vendor must furnish a certificate of origin to the ORT unless otherwise specified. The certificate of origin must be mailed or delivered to:
Ozark Regional Transit
2423 E. Robinson Avenue
Springdale, Arkansas 72764

Along with the invoice number. All information on the certificate must be completed accurately and serial numbers and odometer reading must match the bus that was delivered. Failure to provide the proper certificate of origin will result in the delay of payment.

The Certificate of Origin will be completed as follows:
Name of Purchaser: Ozark Regional Transit
Address: 2423 E. Robinson, Springdale, Arkansas 72764
Odometer Reading: To be completed by the Contractor
Signature: Of authorized representative transferring ownership to the ORT

2.11 PURCHASE ORDER PAYMENTS
Payments will be processed by the Accounts Payable Department at ORT. Payments will be made in arrears and after receipt of a properly completed invoice. All billing must reference the ORT Purchase Order number, vendor invoice number and vendor’s Federal Identification Number.
Invoices are to be mailed to:
Ozark Regional Transit
Attn: Karen Eccles
2423 E. Robinson Avenue
Springdale, Arkansas 72764

2.12 LIQUIDATED DAMAGES
It is mutually understood and agreed by and between the parties to the Contract that time is of the essence with respect to the completion of the Work and that in case of any failure on the part of the Contractor to complete the Work within the time specified in the contract or any extension thereof, ORT will be damaged thereby. The amount of said damages, being difficult if not impossible of definite
ascertainment and proof, it is hereby agreed that the amount of such damages due ORT shall be fixed at $150.00 per calendar day per bus not delivered in substantially as good condition as inspected by ORT at the time released for shipment.

The Contractor hereby agrees to pay the above stated amounts as fixed, agreed and liquidated damages, and not by way of penalty, to ORT and further authorizes ORT to deduct the amount of the damages from money due the Contractor under the Contract, computed as aforesaid.

If the monies due the Contractor are insufficient or no monies are due the Contractor, the Contractor shall pay ORT the difference or the entire amount, whichever may be the case, within thirty (30) calendar days after receipt of a written demand by the Contracting Officer.

The payment of aforesaid fixed, agreed and liquidated damage shall be in lieu of any damages for any loss of profit, loss of revenue, loss of use, or for any other direct, indirect, special or consequential loses or damages of any kind whatsoever that may be suffered by ORT arising at any time from the failure of the Contractor to fulfill the obligations referenced in this clause in a timely manner.

ORT specifically reserves the right, without limitation of any other rights, to terminate the Contract in accordance with A.3 FTA Federally Required Contract Clauses, (21.) “Termination”.

2.13 PRICE ESCALATION/ECONOMIC PRICE ADJUSTMENT
ORT reserves the right to order buses and equipment over the four (4) year period beginning upon the day of contract award. The base price for buses furnished shall be the price agreed upon by the parties on the award date. The prices shall remain firm/fixed for any orders issued by ORT within a period of 365 days of contract award. The price(s) of any buses/equipment ordered by ORT after the initial 365 days firm/fixed price period shall be, the agreed upon base price adjusted to reflect any change which will be calculated based on the percentage change in the PPI category WPU1413 “Truck and Bus Bodies”, “Trucks, over 14,000 lbs. GVW”.

The percentage change in this price index shall be used to adjust the Base Order Prices. However, in no event will the price(s) for any purchase order be adjusted by more or less than 5 percent of the price(s) that would have been in effect twelve (12) months prior to the date of the release, in accordance with the terms and conditions set forth above. If non-cardinal modifications are made to the technical specifications, the parties will enter into negotiations to determine the final unit price for subsequent orders.

2.14 ASSIGNMENT OF CONTRACT BY ORT
At any time during the continuance of the contract, ORT shall have the right to sell, assign and transfer the contract or all of the specified deliverables under the contract both the base and/or the option quantities with all its right, title, and interest therein, to any person, firm, or corporation, and the assignee thereof shall acquire all the rights granted to ORT and shall be subject to any obligations that ORT may have under the contract.

2.15 BUSINESS OPERATIONAL CHANGES
In the event that the awarded Contractor moves or updates telephone numbers, it is the responsibility of the Contractor to advise ORT of such changes in writing. ORT will not be held responsible for payments or Purchase Orders that are delayed due to additional routing caused by the lack of notification on the Contractor’s part. Change of address or telephone updates must be forwarded to:
2.16 SITE VISIT OF CONTRACTOR
After the award of the contract, and prior to the beginning of construction, ORT staff will conduct a site visit of the contractor’s premises. All incidental costs associated with the site visit will be bore by the contractor. This is to include, but is not limited to; transportation, lodging and meals. Contractor will make arrangements with ORT staff for up to two ORT personnel for this pre-production site visit.

2.17 POST PRODUCTION/PRE-DELIVERY INSPECTION
Upon substantial completion (80% or more) of the ordered production, ORT staff will conduct a post-production/pre-delivery inspection of the completed vehicles. This on-site visit will be designed to ensure the production specifications have been met by the contractor. All incidental costs associated with the site visit will be bore by the contractor. This is to include, but is not limited to; transportation, lodging and meals. Contractor will make arrangements with ORT staff for up to two ORT personnel for this post-production/pre-delivery site visit.
TS 1.11 TECHNICAL SPECIFICATIONS

30 Foot and 35 Foot Bus

General Requirements

This procurement is for 30’ and 35’ low floor transit buses. They all are required to have a minimum expected life of 7 years or 250,000 miles, whichever comes first and are intended for the widest possible spectrum of passengers, including children, adults, the elderly, and persons with disabilities.

Options are also requested for Compressed Natural Gas powered design versions of each of these different sized buses.

These buses shall be designed to operate the "Transit Bus Duty Cycle" as described in the American Public Transportation Association "Standard Bus Procurement Guidelines". All Definitions and abbreviations listed in the APTA "Standard Bus Procurement Guidelines" shall also apply to this procurement.

The contractor(s) shall comply with all applicable Federal, state and local regulations. The bus shall meet all applicable FMVSS and shall accommodate all applicable FMCSR regulations in effect at the date of manufacture.

The contractor(s) shall ensure that the application and installation of major bus sub-components and systems are compliant with all such sub-component vendors' requirements and recommendations.

Components used in the vehicle shall be designed for and proven in public transit service. Each contractor is required to provide information necessary for the evaluation committee to access the equivalency of components or systems.

ORT, when purchasing vehicles through this procurement shall receive a complete set of separate severe duty notebook computers/diagnostic tools preloaded with software for each of the applications listed below:

- Engine programming and diagnostics
- Transmission programming and diagnostics
- Multiplex system programming and diagnostics
- HVAC system programming and diagnostics
- Anti-Lock Brake/ Electronic Stability Control diagnostics
- Electronic Destination Sign programming and diagnostics
- Video Security System programming and diagnostics
- Electronic Communication, Radio System, Passenger Counter and ITS

There will be 1 severe duty notebook computers/diagnostic tools provided for every block of 10 units purchased. Each new block of 10 requires an additional notebook.

Ex. 11 buses purchased requires two notebooks.

The Contractor will provide all necessary adapters and connections for ensuring positive communication between the bus and the severe duty notebook computer/diagnostic tool.
Preference for the manufacture/model/size of display for the above listed items will be left up to the Contractor for presentation with their proposal. It is recommended that the Contractor take into consideration the work environment that these devices will be utilized in and ensure that the devices will withstand the environment.

The Contractor will provide an A/C recovery system that is adequate to completely service the proposed HVAC systems installed in the buses. One system will be provided per minimum 10 bus order.

Jacking adapters, wheel alignment tools, heavy duty torque wrenches (or torque sticks), compartment access door keys and any other special tools required to maintain the bus shall be listed in the proposal and supplied to each transit facility receiving buses in this procurement. The number of each item to be provided is listed in the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacking Adapters</td>
<td>1 per set of 10 buses</td>
</tr>
<tr>
<td>Wheel Alignment Tools</td>
<td>1 per set of 10 buses</td>
</tr>
<tr>
<td>Heavy Duty Adjustable Torque Wrench</td>
<td>1 per set of 10 buses</td>
</tr>
<tr>
<td>Compartment Keys</td>
<td>5 per set of 10 buses</td>
</tr>
<tr>
<td>Other Tools as Recommended/Required</td>
<td>quantity appropriate based upon the number of buses</td>
</tr>
</tbody>
</table>

Test ports shall be provided for commonly checked functions on the bus such as air intake, exhaust, hydraulic, pneumatic, charge-air and engine cooling systems.

The Contractor(s) shall provide a manual listing the times required for typical repair and service items on the bus.

All systems or components subject to periodic maintenance or that are subject to periodic failures shall be readily accessible for service and inspection. To the extent practicable, removal or physical movement of components unrelated to the specific maintenance and/or repair tasks involved shall be unnecessary.

Components with identical functions shall be interchangeable to the extent practicable. These components shall include, but not limited to, passenger window hardware, interior trim, lamps, lamp lenses, and seat assemblies. Components with non-identical functions shall not be, or appear to be, interchangeable. A component shall not be used in an application for which it was neither designed nor intended.

The bus shall achieve normal operation in ambient temperature ranges of -10° F to +115° F, at relative humidity between 5 percent and 100 percent, and at altitudes up to 3,000 feet above sea level.

Degradation of performance due to atmospheric conditions shall be minimized at temperatures below -10° F, above +115° F, or at altitudes above 3,000 feet.

All the ORT systems in this procurement operate in a high corrosion environment due to the winter sand and salt and due to the high humidity levels in Northwest Arkansas. The buses proposed should address these issues.

In the design and manufacture of the bus, the Contractor(s) shall make every effort to reduce the amount of potentially hazardous waste generated by ORT when maintaining the bus in accordance with
the procedures contained in the manufacturer’s maintenance manuals. The manufacturer shall use, whenever possible, all LED lighting, cleanable filters, and non-asbestos brake blocks and gaskets. In accordance with Section 6002 of the Resource Conservation and Recovery Act the Contractor(s) shall use, whenever possible and allowed by the specifications, recycled materials in the manufacture of the bus.

The contractor(s) shall comply with all applicable Federal requirements defined in the Americans with Disabilities Act, 49 CFR Part 38, and all state regulations regarding mobility-impaired persons.

**TS 1.12 BASIC BODY**

The bus shall have a clean, smooth, modern design. The bus height shall not exceed 130 inches. The bus exterior width must be at a minimum 100 inches and at the maximum 102 inches. The exterior and body features, including grilles and louvers, shall be shaped to facilitate cleaning by automatic bus washers without snagging washer brushes. Water and dirt shall not be retained in or on any body feature to freeze or bleed out onto the bus after leaving the washer. The body and windows shall be sealed to prevent leaking of air, dust, or water under normal operating conditions and during cleaning in automatic bus washers for the service life of the bus.

Exterior panels shall be sufficiently stiff to minimize vibration, drumming or flexing while the bus is in service. When panels are lapped, the upper and forward panels shall act as a watershed. However, if entry of moisture into interior of vehicle is prevented by other means, then rear cap panels may be lapped otherwise.

The windows, hatches, and doors shall be able to be sealed. Accumulation on any window of the bus of spray and splash generated by the bus's wheels on a wet road shall be minimized.

All body panel connections to frame shall have body adhesives and sealants applied to the entire contact surface of panel to preclude corrosion between panel and structure.

The bus body and roof structure shall withstand a static load equal to 150 percent of the curb weight evenly distributed on the roof with no more than a 6-inch reduction in any interior dimension. Windows shall remain in place and shall not open under such a load. These requirements must be met without components such as roof mounted air conditioning installed.

The bus shall withstand a 25-mph impact by a 4,000-pound automobile at any point, excluding doorways, along either side of the bus with no more than 3 inches of permanent structural deformation at seated passenger hip height. This impact shall not result in sharp edges or protrusions in the bus interior.

Exterior panels below 35 inches from ground level shall withstand a static load of 2,000 pounds applied perpendicular to the bus by a pad no larger than 5 inches square. This load shall not result in deformation that prevents installation of new exterior panels to restore the original appearance of the bus.

Body materials shall be selected and the body fabricated to reduce maintenance, extend durability, and provide consistency of appearance throughout the service life of the bus. Detailing shall be kept simple; add-on devices and trim, where necessary, shall be minimized and integrated into the basic design. The body material surfaces shall be protected against graffiti and vandalism.
The bus flooring, sides, roof, understructure, axle suspension components shall resist corrosion or deterioration from atmospheric conditions and road salts for a period of 10 years or 500,000 miles whichever comes first.

The bus shall maintain structural integrity and nearly maintain original appearance throughout its service life, provided that it is maintained by ORT in accordance with the procedures specified in the Contractor's service manual. With the exception of periodically inspecting the visible coatings applied to prevent corrosion and reapplying these coatings in limited spots, the Contractor shall not require the complete reapplication of corrosion compounds over the life of the bus.

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

All structure, body, and panel-bending mode frequencies, including vertical, lateral, and torsional modes, shall be sufficiently removed from all primary excitation frequencies to minimize audible, visible, or sensible resonant vibrations during normal service.

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

The bus, loaded to GVWR and under static conditions, shall not exhibit deflection or deformation that impairs the operation of the steering mechanism, doors, windows, passenger escape mechanisms and service doors. Static conditions shall include the vehicle at rest with any one wheel or dual set of wheels on a 6-inch curb or in a 6-inch deep hole.

Prior to acceptance of first bus, the structure of the bus shall have undergone appropriate structural testing and/or analysis, including FTA required Altoona testing, to ensure adequacy of design for the urban transit service. Any items that required repeated repairs or replacement must undergo the
corrective action with supporting test and analysis. A report clearly describing and explaining the failures and corrective actions taken to ensure any and all such failures will not occur shall be submitted to ORT.

Towing devices shall be provided on each end of the bus. Towing devices should accommodate wheel lift, flat-bedding or flat-towing. Each towing device shall withstand, without permanent deformation, tension loads up to 1.2 times the curb weight of the bus within 20 degrees of the longitudinal axis of the bus. The rear towing device(s) shall not provide a toehold for unauthorized riders.

The front towing devices shall allow attachment of adapters for a rigid tow bar and shall permit lifting and towing of the bus, at curb weight, until the front wheels are clear off the ground.

The rear towing devices shall permit lifting and towing of the bus for a short distance, such as in cases of an emergency, to allow access to provisions for front towing of bus. The method of attaching the tow bar or adapter shall require the specific approval of ORT. Each towing device shall accommodate a crane hook with a 1-inch throat for towing and recovery. It shall be possible to safely jack up the bus, at curb weight, with a common 10-ton floor jack or pneumatic bag (MatJack) with or without special adapter, when a tire or dual set is completely flat and the bus is on a level, hard surface, without crawling under any portion of the bus. Jacking from a single point shall permit raising the bus sufficiently high to remove and reinstall a wheel and tire assembly. Jacking pads located on the axle or suspension near the wheels shall permit easy and safe jacking with the flat tire or dual set on a 6-inch-high run-up block not wider than a single tire. Jacking and changing any one tire shall be completed by a mechanic in less than 30 minutes from the time the bus is approached. The bus shall withstand such jacking at any one or any combination of wheel locations without permanent deformation or damage. Jacking pads shall be painted safety yellow or orange for ease of identification primary and secondary jack points.

The bus axles or jacking plates shall accommodate the lifting pads of a 4-post hoist system. Jacking plates, if used as hoisting pads, shall be designed to prevent the bus from falling off the hoist. Other pads or the bus structure shall support the bus on jack stands independent of the hoist.

Where the floor meets the walls of the bus, as well as other vertical surfaces, such as, platform risers, the surface edges shall be blended with a circular section of radius not less than 1 inch. Similarly, a molding or cove shall prevent debris accumulation between the floor and wheel housings. The vehicle floor in the area of the entrance and exit doors shall have a lateral slope not exceeding 2° to allow for drainage.

The floor seam must lap up the sidewall. The floor deck may be integral with the basic structure or mounted on the structure securely to prevent chafing or horizontal movement and designed to last the life of the bus. Sheet metal screws shall not be used to retain the floor and all floor fasteners shall be serviceable from one side only. The use of adhesives to secure the floor to the structure shall be allowed only in combination with the use of bolt or screw fasteners and its effectiveness shall last throughout life of the coach. Tapping plates, if used for the floor fasteners, shall be no less than the same thickness as a standard nut and all floor fasteners shall be secured and protected from corrosion for the service life of the bus. The floor deck shall be reinforced as needed to support passenger loads.

At GVWR, the floor shall have an elastic deflection of no more than 0.60 inches from the normal plane. The floor shall withstand the application of 2.5 times gross load weight without permanent detrimental deformation. Floor, with coverings applied, shall withstand a static load of at least 150 pounds applied
through the flat end of a \( \frac{1}{2} \) inch-diameter rod, with 1/32-inch radius, without permanent visible deformation.

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

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

The operator’s platform shall be of a height that, in a seated position, the operator can see an object located at an elevation of 42” above the road surface, 24” from the leading edge of the bumper.

Notwithstanding this requirement, the platform height shall not position the operator such that the operator’s vertical upward view is less than 15 degrees.

If the operator's platform is higher than 12 inches, then the farebox is to be mounted on platform of suitable height to provide accessibility for operator without compromising passenger's access.

If the vehicle is of a bi-level floor design, an intermediate platform shall be provided along the center aisle of the bus to facilitate passenger traffic between the upper and lower floor levels.

This intermediate platform shall be cut into the rear platform and shall be approximately the aisle width, 18 inches deep and approximately one half the height of the upper level relative to the lower level. The horizontal surface of this platform shall be covered with yellow Hypalon or approved equal ribbed rubber or skid-resistant material and shall be sloped slightly for drainage. A warning decal or sign shall be provided at the immediate platform area to alert passengers to the change in floor level. All stair risers shall be laminated.

Sufficient clearance and air circulation shall be provided around the tires, wheels, and brakes to preclude overheating when the bus is operating on the design operating profile.

Interference between the tires and any portion of the bus shall not be possible in maneuvers up to the limit of tire adhesion with weights from curb weight to GVWR. Wheel housings shall be adequately reinforced where seat pedestals are installed. Wheel housings shall have sufficient sound insulation to minimize tire and road noise and meet all requirements. Wheel housing shall withstand a direct tire blowout.

Design and construction of front wheel housings shall allow for the installation of additional seating locations, radio/electronic equipment storage compartment or its use as a luggage rack.

The exterior finish of the front wheel housings shall be scratch-resistant and complement interior finishes of the bus to minimize the visual impact of the wheel housing. If fiberglass wheel housings are provided, then they shall be color-impregnated to match interior finishes. The lower portion extending
to approximately 12 inches above floor shall be equipped with additional more resistant coating or stainless steel trim.

Wheel housings shall be constructed of corrosion-resistant, fire-resistant material. Wheel housings, as installed and trimmed, shall withstand impacts of a 2-inch steel ball with at least 200 foot-pounds of energy without penetration.

Exterior protrusions, greater than 1/2 inch and within 80 inches of the ground, shall have a radius no less than the amount of the protrusion. The exterior rearview mirrors and required lights and reflectors are exempt from the protrusion requirement. Grilles, doors, bumpers and other features on the sides and rear of the bus shall be designed to minimize the ability of unauthorized riders to secure toeholds or handholds.

Unless a uni-body, side panel exterior is provided, exterior panels below the lower daylight opening and within 35 inches above ground level shall be divided into sections that are repairable or replaceable by a mechanic in less than 30 minutes for a section up to 5 feet long (excludes painting). Lower exterior panels within 28 inches above ground level shall be equipped with removable resilient, impact resistant panels for protection against minor impacts and scratches. The panels shall withstand impacts of 200 foot-pounds of energy from a steel-faced spherical missile no less than 9 inches in diameter without any visible damage to it or underlying panel and structure. The panels shall be no greater than 8 feet in length and shall be easily replaced by a mechanic in less than 10 minutes. The panels shall be color impregnated to complement color and paint scheme.

Rain gutters shall be provided to prevent water flowing from the roof onto the passenger doors, operator's side window, and exterior mirrors. When the bus is decelerated, the gutters shall not drain onto the windshield, or operator's side window, or into the door boarding area. Cross sections of the gutters shall be adequate for proper operation. A rain gutter shall also be provided above passenger side windows.

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

Features to minimize water spray from the bus in wet conditions shall be included in wheel housing design. Any fender skirts provided shall be easily replaceable. They shall be flexible if they extend beyond the allowable body width. Wheels and tires shall be removable with the fender skirts in place.

Splash aprons, composed of 1/4-inch-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. The splash aprons shall extend downward to within 4 inches of the road surface at static conditions. Apron widths shall be no less than tire widths. Preferably, the front apron that shall extend across the width of the bus. Splash aprons shall be bolted to the bus understructure. Splash aprons and their attachments shall be inherently weaker than the structure to which they are attached. The flexible portions of the splash aprons shall not be included in the road clearance measurements. Other splash aprons shall be installed where necessary to protect bus equipment.
Conventional or pantograph hinged doors shall be used for the engine compartment and for all auxiliary equipment compartments. Access openings shall be sized for easy performance of tasks within the compartment including tool operating space. Access doors shall be of rugged construction and shall maintain mechanical integrity and function under normal operations throughout the service life of the bus. They shall close flush with the body surface. All doors shall be hinged at the top or on the forward edge and shall be prevented from coming loose or opening during transit service or in bus washing operations.

Doors with top hinges shall have safety props stored behind the door or on the doorframe. All access doors shall be retained in the open position by props or counterbalancing with over-center or gas-filled springs and shall be easily operable by one person. Springs and hinges shall be corrosion resistant. Latch handles shall be flush with, or recessed behind, the body contour and shall be sized to provide an adequate grip for opening. Access doors, when opened, shall not restrict access for servicing other components or systems.

Access doors larger in area than 100 square inches shall be equipped with latches. The latches shall be standardized and shall be openable with the use of a key or tool.

Batteries shall be securely mounted on a stainless steel or equivalent tray that can accommodate the size and weight of the batteries. The battery tray shall pull out easily and properly support the batteries while they are being serviced. The tray shall allow each battery cell to be easily serviced and filled. A locking device shall retain the battery tray in the stowed position. A decal showing battery diagram and voltage shall be attached to the interior side of each battery compartment door.

The battery compartment or enclosure shall be vented and self-draining. It shall be accessible only from outside the bus. Batteries shall not be located within the engine compartment. All components within the battery compartment, and the compartment itself, shall be protected from damage or corrosion from the electrolyte and gases emitted by the battery, and from snow, slush, salt spray, mud, etc. generated from environmental conditions outside the vehicle. The inside surface of the battery compartment's access door shall be electrically insulated, as required, to prevent the battery terminals from shorting on the door if the door is damaged in an accident or if a battery comes loose.

Lights shall be provided in the engine and all other compartments, where service may be required, to generally illuminate the area for night emergency repairs or adjustments. Sealed lamp assemblies (LED type preferred) shall be provided in the engine compartment and shall be controlled by a switch located near the rear start controls in the engine compartment. Necessary lights, located in other service compartments, shall be provided with switches on the light fixture or convenient to the light.

Bumpers shall provide impact protection for the front and rear of the bus with the top of the bumper being 28 ½ 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.

No front part of the bus, including the bumper, shall be damaged as a result of a 5-mph impact of the bus at curb weight with a fixed, flat barrier perpendicular to the bus's longitudinal centerline. The bumper shall return to its pre-impact shape within 10 minutes of the impact. The bumper shall protect the bus from damage as a result of 6.5 mph impacts at any point by the Common Carriage with Contoured Impact Surface defined in Figure 2 of FMVSS 301 loaded to 4,000 pounds parallel to the longitudinal centerline of the bus and 5.5-mph impacts into the comers at a 30 degree angle to the
longitudinal centerline of the bus. The energy absorption system of the bumper shall be independent of every power system of the bus and shall not require service or maintenance in normal operation during the service life of the bus.

No rear part of the bus, including the bumper, shall be damaged as a result of a 2-mph impact with a fixed, flat barrier perpendicular to the longitudinal centerline of the bus. The bumper shall return to its pre-impact shape within 10 minutes of the impact. When using a yard tug with a smooth, flat plate bumper 2 feet wide contacting the horizontal centerline of the rear bumper, the bumper shall provide protection at speeds up to 5 mph, over pavement discontinuities up to 1 inch high, and at accelerations up to 2 mph/sec. The rear bumper shall protect the bus, when impacted anywhere along its width by the Common Carriage with Contoured Impact Surface defined in Figure 2 of FMVSS 301 loaded to 4,000 pounds, at 4 mph parallel to, or up to a 30 degree angle to, the longitudinal centerline of the bus. The rear bumper shall be shaped to preclude unauthorized riders from standing on the bumper. The bumper shall be independent of all power systems of the bus and shall not require service or maintenance in normal operation during the service life of the bus.

Bumper material shall be corrosion-resistant and withstand repeated impacts of the specified loads without sustaining damage. Visible surfaces shall be black or color coordinated with the bus exterior. These bumper qualities shall be sustained throughout the service life of the bus.

All exterior lights shall be designed to prevent entry and accumulation of moisture or dust, and each lamp shall be replaceable in less than 5 minutes by a mechanic. Commercially available LED (Light Emitting Diode)-type lamps shall be used wherever possible. Lights mounted on the engine compartment doors shall be protected from the impact shock of door opening and closing. Lamps, lenses and fixtures shall be interchangeable to the extent practicable. Two hazard lamps at the rear of the bus shall be visible from behind when the engine service doors are opened. Light lenses shall be designed and located to prevent damage when running the vehicle through an automatic bus washer.

Lights located on the roof and sides (directional) of the bus shall have protective shields or be of the flush mount type to protect the lens against minor impacts.

Visible and audible warning shall inform following vehicles or pedestrians of reverse operation. Visible reverse operation warning shall conform to SAE Standard J593. Audible reverse operation warning shall conform to SAE Recommended Practice J994 Type C or D.

Lamps at the front and rear passenger doorways shall comply with all ADA requirements and shall activate only when the doors open. These lamps shall illuminate the street surface to a level of no less than 1 foot-candle for a distance of 3 feet outward from the outboard edge of the door threshold. The lights may be positioned above or below the lower daylight opening of the windows and shall be shielded to protect passengers’ eyes from glare. Turn-signal lights shall be provided on all sides of the bus.

Materials shall be selected on the basis of maintenance, durability, appearance, safety, flammability, and tactile qualities. Trim and attachment details shall be kept simple and unobtrusive. Materials shall be strong enough to resist everyday abuse and vandalism; they shall be resistant to scratches and graffiti. Interior trim shall be secured to avoid resonant vibrations under normal operational conditions.
Interior surfaces more than 10 inches below the lower edge of the side windows or windshield shall be shaped so that objects placed on them fall to the floor when the coach is parked on a level surface. The entire interior shall be cleanable with a hose, using a liquid soap attachment. Water and soap should not normally be sprayed directly on the instrument and switch panels.

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

The entire front end of the bus shall be sealed to prevent debris accumulation behind the dash and to prevent the operator’s feet from kicking or fouling wiring and other equipment. The front end shall be free of protrusions that are hazardous to passengers standing or walking in the front of the bus during rapid decelerations. Paneling across the front of the bus and any trim around the operator's compartment shall be formed metal or plastic material. Plastic dash panels shall be reinforced, as necessary, vandal-resistant, and replaceable. All colored, painted, and plated parts forward of the operator’s barrier shall be finished with a dull matte surface to reduce glare.

The rear bulkhead and rear interior surfaces shall be material suitable for exterior skin, painted and finished to exterior quality, or paneled with melamine-type material, and trimmed with stainless steel, aluminum, or plastic.

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

A suitable hanger shall be installed in a convenient approved location for the operator’s overcoat and shall not interfere with location of fire extinguisher or any other safety equipment. A rugged device shall be provided to securely hold the operator’s drink container, which may vary widely in diameter. It must be mounted within easy reach of the operator and must have sufficient vertical clearance for easy removal of the container. When the container is in the device, the operator’s view of the road must not be obstructed and leakage from the container must not fall on any switches, gauges or controls.

A barrier or bulkhead between the operator and the street-side front passenger seat shall be provided. The barrier shall minimize glare and reflections in the windshield directly in front of the barrier from interior lighting during night operation.

An optional Operator's Barrier shall extend continually from floor to ceiling and from the bus wall to first stanchion immediately behind the Operator to provide security to the Operator and limit passenger conversation. Location and shape must permit full seat travel possibilities and accommodate the shoulders of a 95th percentile male. The partition shall have a side return and stanchion to prevent passengers from standing behind the Operator’s seat; lower area between seat and panel must be accessible to the Operator. The partition must be strong enough in conjunction with entire partition
assembly for mounting of such equipment as flare kits, fire extinguishers (1.2kg), microcomputer, public
address amplifier, etc. The partition shall start 25mm (1") above floor and dark or black panels are
preferred. The panel should be attached with rubber grommets.

An enclosed Operator storage area shall be provided with a positive latching door and lock; minimum
approximate size: 355 mm x 355 mm x 355 mm (14" x 14" x 14").

Sturdy divider panels constructed of durable, unpainted, corrosion-resistant material complementing
the interior trim shall be provided to act as both a physical and visual barrier for seated passengers.
Modesty panels shall be located at doorways to protect passengers on adjacent seats, and along front
edge of rear upper level. Design and installation of modesty panels located in front of forward facing
seats shall include a handhold/grab handle along its top edge. These dividers shall be mounted on the
sidewall and shall project toward the aisle no farther than passenger knee projection in longitudinal
seats or the aisle side of the transverse seats. Modesty panels shall extend no higher than the lower
daylight opening of the side windows and those forward of transverse seats shall extend downward to a
level between 1-1/2 and 1 inches above the floor. Panels forward of longitudinal seats shall extend to
below the level of the seat cushion. Dividers positioned at the doorways shall provide no less than a 2-
1/2-inch clearance between the modesty panel and the opened door to protect passengers from being
pinched. Modesty panels installed at doorways shall be equipped with grab rails (see Section 5.4.5.2).
The modesty panel and its mounting shall withstand a static force of 250 pounds applied to a four-inch
by four-inch area in the center of the panel without permanent visible deformation. A clear Plexiglas
wind screen shall be provided on the modesty panel located in front of the curb side seats directly
behind the rear door.

The rear bulkhead paneling shall be hard surface, graffiti resistant, contoured to fit the ceiling, side
walls, and seat backs so that any litter, such as a cigarette package or newspaper, will tend to fall to the
floor or seating surface when the bus is on a level surface. Any air vents in this area shall be louvered to
reduce airflow noise and to reduce the probability of trash or litter being thrown or drawn through the
grille. If it is necessary to remove the panel to service components located on the rear bulkhead, the
panel shall be hinged or shall be able to be removed and replaced by a mechanic in 5 minutes. Grilles
where access to or adjustment of equipment is required shall be heavy duty and designed to minimize
damage. Rear bulkhead shall not be covered in carpeting or fabric material.

**TS 1.13 ENGINE**

The propulsion system and drive train shall provide power to enable the bus to meet the defined
acceleration, top speed, and grade requirements, and operate all propulsion-driven accessories. Power
requirements are based on heavy, heavy-duty diesel (HHDD) engines certified for use in all 50 states
using actual road test results or computerized vehicle performance data. The buses shall be capable of
achieving a top speed of 70 M.P.H. on a straight, level road at GVWR with all accessories operating.
Grade ability requirements shall be met on grades with a dry commercial asphalt or concrete pavement
at GVWR with all accessories operating. The propulsion system and drive train shall enable the bus to
achieve and maintain a speed of 55 mph on a 2-1/2 percent ascending grade and 30 mph on a 16
percent ascending grade.

An exhaust brake in lieu of a transmission retarder shall be provided. An exhaust brake is a valve which
effectively creates a back-pressure in the exhaust system, which applies enough force onto the engine’s
pistons to slow the engine. The exhaust brake should be so effective that it can slow a heavily-loaded
bus on a downgrade without ever applying the vehicle’s service brakes. Under these conditions, the
exhaust flow from the cylinders is bottlenecked and rapidly builds pressure in the exhaust system upstream from the exhaust brake. Depending on engine speed, this pressure can easily reach up to 60 PSI maximum working pressure. Maximum working pressure is limited as part of the design of an exhaust brake. In this example, that same 60 PSI also remains in the cylinder for the entire exhaust stroke (exhaust valve open) and exerts 60 PSI on the piston top to resist its upward movement. The produces a negative torque, slowing the engine for a braking effect. Thus, simply restricting the exhaust flow can generate substantial braking.

Standard Engine Warranty shall be provided by the Contractor for the engine and related components. The Contractor will provide an option for extended warranty for the engine and all related components.

The bus acceleration shall meet the requirements as listed in the APTA "Standard Bus Procurement Guidelines" and the FTA Altoona Bus Testing Standards. The operating range of each bus when run on the transit coach duty cycle shall be at least 350 miles.

The engine shall be tuned when delivered to provide optimized performance as specified above, including fuel economy. All related components and configuration that affect fuel economy, such as, fan control/operation, transmission, axle ratio, etc., shall be selected accordingly. The bus shall achieve a minimum average fuel economy of 4.00 miles per gallon when run on the Transit Coach Duty Cycle loaded to SLW. Reference SAE J1376, Fuel Economy Measurement Test (Engineering Type) for Trucks and Buses.

The HHDD engine shall be designed to operate for not less than 300,000 miles without major failure or significant deterioration. Components of the fuel injector and/or control system shall be designed to operate for not less than 150,000 miles without replacement or major service.

The engine shall be designed to be capable of operating without any damage on both Nos. 1 and 2 ultralow sulfur diesel fuels and up to 5% Biodiesel in accordance with ASTM D975. Or, as an option the engine shall be designed to be capable of operating without any damage on Compressed Natural Gas (CNG)

The engine shall be equipped with an electronically controlled management system. The engine control system shall have onboard diagnostic capabilities able to monitor vital engine functions; store and time stamp out of parameter conditions in memory, and communicate faults and vital conditions to service personnel. Diagnostic reader device connector ports, suitably protected against dirt and moisture, shall be provided in operator's area and near or inside engine compartment.

The engine starter system shall be protected by an interlock that prevents its engagement when the engine is running and of a design that forces its disengagement once the engine starts. The engine shall be equipped with an operator-controlled fast idle device. The fast idle control shall be a two-way toggle mounted on the dash or side console and shall activate only with the transmission in neutral and the parking brake applied.

The engine control system shall protect the engine against progressive damage. The system shall monitor conditions critical for safe operation and automatically de-rate power and/or speed and initiate engine shutdown as needed. The on-board diagnostic system shall trigger a visual and audible alarm to the operator when the engine control unit detects a malfunction and the engine protection system is activated.
Automatic shutdown shall only occur when the parameters established for the following functions below are exceeded: Coolant Level, Coolant Temperature, Oil Pressure, Oil Temperature and fire suppression.

The engine shall be cooled by a dedicated/isolated water-based, pressure type cooling system that does not interact or share coolant with the passenger compartment heating/defrosting system. The engine cooling system will be designed so as not to allow aeration or air pockets to form in any area of the engine or EGR system, nor shall it permit boiling or coolant loss during the operations described above.

The passenger heater/defroster system shall be controlled and supplied by a source that is not connected to the engine or dependent on engine temperature. This is necessary to eliminate damage to the engine and EGR cooler caused by aerated coolant returning from the heater cores. Engine thermostats shall be easily accessible for replacement. Shutoff valves shall allow filter replacement without coolant loss.

Valves shall permit complete shutoff of lines for the heating and defroster units, and water booster pumps. The water boost pump shall be a magnetically coupled, brushless and seal less design. All low points in the water-based cooling system shall be equipped with drain cocks. Air vent valves shall be fitted at high points in the cooling system unless it can be demonstrated that the system is self-purging.

A sight glass to determine satisfactory engine coolant level shall be provided and shall be accessible by opening the engine compartment door. A spring-loaded, push button type valve to safely release pressure or vacuum in the cooling system shall be provided with both it and the water filler no more than 48 inches above the ground and both shall be accessible through the same access door.

The engine shall meet all applicable emission standards. Exhaust gases and waste heat shall be discharged from the roadside rear corner of the roof. The exhaust pipe shall be of sufficient height to prevent exhaust gases and waste heat from discoloring or causing heat deformation to the bus roof. The entire exhaust system shall be adequately shielded to prevent heat damage to any bus component. The exhaust outlet shall be designed to minimize rain, snow or water generated from high-pressure washing systems from entering into the exhaust pipe and causing damage to the catalyst.

All wiring and hose clamps in high temperature areas shall be resistant to heat and mechanical fatigue.

The power plant shall be mounted in a compartment in the rear of the bus. All power plant mounting shall be mechanically isolated to minimize transfer of vibration to the body structure. Mounts shall control movement of the power plant so as not to affect performance of belt driven accessories or cause strain in piping and wiring connections to the power plant.

The power plant shall be arranged so that accessibility for all routine maintenance is assured. No special tools, other than dollies and hoists, shall be required to remove the power plant. Two mechanics shall be able to remove and replace the engine and transmission assembly in less than 12 total combined man-hours.

The muffler, exhaust system, air cleaner, air compressor, starter, alternator, radiator, all accessories, and any other component requiring service or replacement shall be easily removable and independent of the engine and transmission removal.
An engine oil pressure gauge and coolant temperature gauge shall be provided in the engine compartment. These gauges shall be easily read during service and mounted in an area where they shall not be damaged during minor or major repairs.

Engine oil and the radiator filler caps shall be hinged to the filler neck and closed with spring pressure or positive locks. All fluid fill locations shall be properly labeled to help ensure correct fluid is added and all fillers shall be easily accessible with standard funnels, pour spouts, and automatic dispensing equipment.

All lubricant sumps shall be fitted with magnetic-type, external, hex head, self-sealing drain plugs. All fluid fillers shall not be higher than 48 inches above the ground. The engine and transmission shall be equipped with sufficient heavy-duty fuel and oil filters for efficient operation and to protect the engine and transmission between scheduled filter changes.

To the extent practicable, the filters shall be of the spin-on, disposable type or integral with the engine and transmission. All filters shall be easily accessible and the filter bases shall be plumbed to assure correct reinstallation.

The engine shall be equipped with a fuel-priming pump or a check valve fitted in the fuel suction line to aid restarting after fuel filter changes.

A Spinner II Model 976 or equal centrifugal, non-disposable bypass engine oil filter shall be provided as an option only.

An air cleaner with a dry filter element and a graduated air filter restriction indicator shall be provided. The filter shall be removable by a mechanic in 10 minutes or less. The location of the air intake system shall be designed to minimize the entry of dust and debris and maximize the life of the air filter.

The engine air duct shall be designed to minimize the entry of water into the air intake system. Drainage provisions shall be included to allow any water/moisture to drain prior to entry into air filter. Engine-driven accessories shall be mounted for quick removal and repair. Accessory drive systems shall operate without unscheduled adjustment for not less than 50,000 miles on the design operating profile. These accessories shall be driven at speeds sufficient to assure adequate system performance during extended periods of idle operation and low route speed portion of the design operating profile. Belt guards shall be provided as required for safety and shall be sturdy in design and installation and readily removable and hinged design.

Any accessory may be driven hydraulically or electrically at contractor’s option. The hydraulic system shall demonstrate a mean time between repairs in excess of 50,000 miles. Hydraulic system service tasks shall be minimized and scheduled no more frequently than those of other major coach systems.

All elements of the hydraulic system shall be easily accessible for service or unit replacement. Critical points in the hydraulic system shall be fitted with service ports so that portable diagnostic equipment may be connected or sensors for an off-board diagnostic system permanently attached to monitor system operation.

A tamper-proof priority system shall prevent the loss of power steering during operation of the bus if other devices are also powered by the hydraulic system. Sensors in the hydraulic system, excluding
those in the power steering system, shall indicate on the operator's on-board diagnostic panel conditions of low hydraulic fluid level.

All fluid lines and air piping shall be rigidly supported and isolated to prevent chafing damage, vibration, fatigue failures, and tension strain. 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.

Flexible fuel and oil lines shall be kept at a minimum and shall be as short as practicable. Flexible lines shall be routed or shielded so that failure of a line shall not allow fuel or oil to spray or drain onto any component operable above the auto-ignition temperature of the fluid. Flexible lines shall be Teflon hoses with braided stainless steel jackets except in applications where premium hoses are required and shall have standard SAE or TIC brass or steel, swivel, end fittings.

Flexible hoses over 1 inch in diameter need not be Teflon with braided stainless steel jacket but shall be in conformance with SAE Standard J100R5. Flexible hoses and fluid lines shall not touch one another, or any part of the bus. Fuel lines shall have shut off valve for service and repair.

Lines shall have a maximum length of six (6) feet unless demonstrated inappropriate for a given application. Hoses/lines shall be secured with heavy-duty stainless steel, full silicone rubber clamps. Compression fittings shall be standardized as much as practicable to prevent the intermixing of components. Compression fitting components from more than one manufacturer shall not be mixed even if the components are known to be interchangeable.

The vehicle engine compartment shall be equipped with a Fogmaker high-pressure water mist system or approved equal. The system will be of adequate size and delivery to ensure rapid suppression. The system must be tailored to the fuel options discussed in this RFP. The system will have an automatic discharge with optional manual activation and must be able to be monitored from the operator’s work area.

The bus OEM (contractor) shall provide a written sign-off, including full documentation, photos, etc., supplied by the fire suppression equipment manufacturer, which confirms that all installation requirements have been met on the pilot bus fire suppression system.

Fuel lines shall be rated and sized to prevent freezing and plugging due to condensation and/or fuel gelling in extreme winter. The fuel lines forward of the engine bulkhead shall be in conformance with SAE Standard J1149 Type I for copper tubing, corrosion-resistant stainless steel tubing or SAE Standard J844 for nylon tubing color coded orange.

The fuel tank(s) shall be equipped with an external, hex head, brass drain plug. It shall be at least a 3/8-inch size and shall be located at the lowest point of the tank(s). The fuel tank(s) shall have an inspection plate or easily removable filler neck to permit cleaning and inspection of the tank(s) without removal from the bus. The capacity of the tank(s) whether diesel or CNG, must be able to achieve between 375 to 400 miles on a single fill. The diesel tank(s) shall be baffled internally to prevent fuel-sloshing regardless of fill level. The baffles or fuel pickup location shall assure continuous full power operation on a 6 percent upgrade for 15 minutes starting with no more than 25 gallons of fuel over the unusable amount in the tank(s). The bus shall operate at idle on a 6 percent downgrade for 30 minutes starting with no more than 10 gallons of fuel over the unusable amount in the tank(s).
The fuel tank(s) shall be made of corrosion resistant stainless steel or other durable and inert material and shall be securely mounted to the bus to prevent movement during bus maneuvers, but shall be capable of being removed and reinstalled by a mechanic for cleaning or replacement in 1.5 hours or less.

The capacity, date of manufacture, manufacturer name, location of manufacture, and certification of compliance to Federal Motor Carrier Safety Regulation shall be permanently marked on the fuel tank(s). The markings shall be readily visible and shall not be covered with an undercoating material.

The fuel filler shall be located 7 to 25 feet behind the centerline of the front door on the curbside of the bus. The filler cap shall be retained to prevent loss and shall be recessed into the body so that spilled fuel will not run onto the outside surface of the bus.

The fuel lines forward of the engine bulkhead shall be in conformance to the SAE Standards. Automatic and manual fuel shutoffs shall be provided.

The fuel filler shall be of a standard size that will accommodate traditional or standard fueling nozzles. The filler cap will be a vented, quarter turn cap and of a non-sparking material or not capable of transferring or generating an electrical discharge. “Diesel Fuel Only” shall be printed on the cap, inside of the fuel filler panel and outside of the fuel filler panel.

The DEF filler shall be accessible and located as to prevent spills on other bus components.

Oil and hydraulic lines shall be compatible with the fluid they carry. The lines shall be designed and intended for use in the environment which they are installed, i.e., high temperatures in engine compartment, road salts, oils, etc. Lines shall be capable of withstanding maximum system pressures.

Lines within the engine compartment shall be composed of steel tubing where practicable except in locations where flexible lines are specifically required. Hydraulic lines of the same size and with the same fittings as those on other piping systems of the bus, but not interchangeable, shall be tagged or marked for use on the hydraulic system only.

Engine shall be equipped with a standard block heater.

**TS 1.14 TRANSMISSION**

The transmission shall be cooled by a separate heat exchanger sized to maintain operating fluid within the transmission manufacturer's recommended parameters of flow, pressure and temperature. The transmission cooling system shall be matched to the engine cooling systems to ensure that all operating fluids remain within recommended temperature limits established by each component manufacturer.

The transmission shall be an Allison transmission that is appropriately rated for use in a fixed route, public transit and be properly rated for the horsepower (HP) and torque of the engine. All transmissions shall be factory filled with Castrol Transynd synthetic transmission fluid or equal fluid.

Standard Transmission Warranty shall be provided by the Contractor for the transmission and related components. The Contractor will provide an option for extended warranty for the transmission and all related components.
The transmission shall be multiple-speed, automatic shift with torque converter and electronic controls. Gross input power, gross input torque and rated input speed shall be compatible with the engine.

A mechanic, with optional assistance, shall be able to remove and replace the transmission assembly for service in less than 16 total combined man-hours. The transmission shall be designed to operate for not less than 300,000 miles on the design operating profile without replacement or major service. The electronic controls shall be capable of transmitting and receiving electronic inputs and data from other drivetrain components and broadcasting that data to other vehicle systems. Electronic controls shall be compatible with either 12 or 24 volt power distribution, provide consistent shift quality, and compensate for changing conditions such as variations in vehicle weight and engine power.

A brake pedal application of 15 to 20 psi shall be required by the operator to engage forward or reverse range from the neutral position to prevent sudden acceleration of the bus from a parked position.

The electronically controlled transmission shall have on-board diagnostic capabilities, be able to monitor functions, store and time stamp out-of-parameter conditions in memory, and communicate faults and vital conditions to service personnel.

The transmission shall contain built-in protection software to guard against severe damage.

A diagnostic reader device connector port, suitably protected against dirt and moisture, shall be provided in the operator’s area. The on-board diagnostic system shall trigger a visual alarm to the operator when the electronic control unit detects a malfunction.

An electronic transmission fluid level monitoring and protection system may be provided. This system shall allow a mechanic to accurately determine transmission fluid levels during checking or oil change and shall be in addition to the manual dipstick. This system shall also provide protection against any damage resulting from improper fluid level conditions.

The transmission shall have an auto neutral feature that shall cause it to automatically and immediately shift to "Neutral" whenever the transmission is left in gear and:
- the parking brake is applied,
- no bus operator is sitting in the operator’s seat, or
- both conditions (a) and (b) apply.

This system shall also automatically shift the transmission to "Neutral," after a 5-minute delay, whenever the exit door brake interlock is applied.

For purposes of ORT’s testing applications, the transmission must be able to be shifted into the driving position with the parking brake engaged to allow the person to “check the holding of the parking brake” in the event the bus was engaged into park.

TS 1.15 AXLE(s)

The front axle shall be a Meritor or equal solid beam, non-driving with a load rating sufficient for the bus loaded to GVWR and shall be equipped with oil lubricated front wheel bearings and seals. All friction points on the front axle shall be equipped with replaceable bushings or inserts and lubrication fittings easily accessible from a pit or hoist.
Fatigue life of all steering components shall exceed 1,000,000 miles. No element of the steering system shall sustain a Class I failure when one of the tires hits a curb or strikes a severe road hazard. Inadvertent alternations of steering as a result of striking road hazards are steering failures.

The bus shall be driven by a single heavy-duty Meritor or equal axle at the rear with a load rating sufficient for the bus loaded to GVWR. Transfer of gear noise to the bus interior shall be minimized. The drive axle shall be designed to operate for not less than 300,000 miles on the design operating profile without replacement or major repairs.

The lubricant drain plug shall be magnetic type, external hex head. If a planetary gear design is employed, the oil level in the planetary gears shall be easily checked through the plug or sight gauge.

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

**TS 1.16 SUSPENSION SYSTEM**

Both the front and rear suspensions shall be pneumatic type. The basic suspension system shall last the service life of the bus without major overhaul or replacement. Normal replacement items, such as suspension bushings, shock absorbers, or air springs shall be replaceable by a mechanic in 30 minutes or less. Adjustment points shall be minimized and shall not be subject to a loss of adjustment in service. Necessary adjustments shall be easily accomplished without removing or disconnecting the components.

The bus approach, departure and front break over angle shall be a minimum 9 degrees. The suspension system shall permit a minimum wheel travel of 3 inches jounce-upward travel of a wheel when the bus hits a bump (higher than street surface), and 3 inches rebound-downward travel when the bus comes off a bump and the wheels fall relative to the body. Elastomeric bumpers shall be provided at the limit of jounce travel. Rebound travel may be limited by elastomeric bumpers or hydraulically within the shock absorbers. Suspensions shall incorporate appropriate devices for automatic height control so that regardless of load the bus height relative to the centerline of the wheels does not change more than ± 1/2 inch at any point.

Vertical damping of the suspension system shall be accomplished by hydraulic shock absorbers mounted to the suspension arms or axles and attached to an appropriate location on the chassis. Damping shall be sufficient to control coach motion to 3 cycles or less after hitting road perturbations. Shock absorbers shall maintain their effectiveness for at least 50,000 miles. Each unit shall be replaceable by a mechanic in less than 15 minutes. The shock absorber bushing shall be made of elastomeric material that will last the life of the shock absorber.

All elements of steering, suspension, and drive systems requiring scheduled lubrication shall be provided with grease fittings conforming to SAE Standard 1534. These fittings shall be located for ease of inspection, and shall be accessible with a standard grease gun without flexible hose end from a pit or with the bus on a hoist. Each element requiring lubrication shall have its own grease fitting with a relief path. Lubricant specified shall be standard for all elements on the bus serviced by standard fittings.
A kneeling system shall lower the entrance(s) of the bus a minimum of 2.5 inches during loading or unloading operations regardless of load up to GVWR, measured at the longitudinal centerline of the entrance door(s), by the driver using a three position, spring loaded to center switch. Downward direction will lower the bus. Release of switch at any time will completely stop lowering motion and hold height of the bus at that position. Upward direction of the switch will allow the system to go to floor height without the driver having to hold the switch up. The kneeling system shall only function with doors in closed position.

An optional reverse kneeling feature shall be provided as an option that is capable of adjusting the exit heights of both front and rear doors to 15.5 inches. When a reverse kneeling feature is provided, the three-position, spring loaded to center switch shall be modified such that release of the switch will completely stop motion and hold the height of the bus whether the bus is being lowered or being raised.

Brake and Throttle interlock shall prevent movement when the bus is kneeled. The kneeling control shall be disabled when the bus is in motion. The bus shall kneel at a maximum rate of 1.25 inches per second at essentially a constant rate. After kneeling, the bus shall rise within 2 seconds to a height permitting the bus to resume service and shall rise to the correct operating height within 7 seconds regardless of load up to GVWR.

During the lowering and raising operation, the maximum acceleration shall not exceed 0.2g and the jerk shall not exceed 0.3g/sec. Brake and Throttle interlock will release in conjunction with application of service brake.

An indicator visible to the driver shall be illuminated until the bus is raised to a height adequate for safe street travel. An audible warning alarm will sound simultaneously with the operation of the kneeler to alert passengers and bystanders. A warning light mounted near the curbside of the front door, minimum 3" diameter, amber lens shall be provided that will blink when the kneel feature is activated. Kneeling shall not be operational while the wheelchair ramp or lift is deployed or in operation.

**TS 1.17 WHEELS AND TIRES**

Wheels and rims shall be hub-piloted, white powder coated painted steel and shall resist rim flange wear. All wheels shall be interchangeable and shall be removable without a puller. Wheels shall be compatible with tires in size and load-carrying capacity. Front wheels and tires shall be balanced as an assembly per SAEJ1986.

Tires shall be provided and installed by the contractor, and shall be suitable for the conditions of transit service and sustained operation at the maximum speed capability of the bus. Load on any tire at GVWR shall not exceed the tire supplier’s rating. A spare tire on a rim shall be provided with every bus.

The buses in this procurement shall be equipped with a standard hub odometer mounted at the curbside of the rear axle. The hub odometer shall have a capacity reading no less than 999,999 miles in full mile increments (no tenths of a mile).

**TS 1.18 STEERING**

Hydraulically assisted power steering shall be provided. Electric power steering shall be provided as an option.
The steering gear shall be an integral type with flexible lines eliminated or the number and length minimized. The torque required to turn the steering wheel 10 degrees shall be no less than 5 foot pounds and no more than 10 foot pounds. Steering torque may increase to 70 foot pounds when the wheels are approaching the steering stops, as the relief valve activates. Steering effort shall be measured with the bus at GVWR, stopped with the brakes released, the engine at normal idling speed on clean, dry, level, commercial asphalt pavement, the tires inflated to recommended pressure and the front wheels positioned straight ahead.

Power steering failure shall not result in loss of steering control. With the bus in operation the steering effort shall not exceed 55 pounds at the steering wheel rim and perceived free play in the steering system shall not materially increase as a result of power assist failure. Gearing shall require no more than seven turns of the steering wheel lock-to-lock.

Caster angle shall be selected to provide a tendency for the return of the front wheels to the straight position with minimal assistance from the driver.

The steering wheel diameter shall be no less than 18" and no more than 20"; the rim diameter shall be 7/8" to 1 1/4" and shaped for firm grip with comfort for long periods of time. The steering wheel shall be hard plastic with no foam, black in color and a rounded three spoke design.

Steering wheel spokes and wheel thickness should be such as to insure that visibility is within the range of a 95-percentile range as described in SAE 1050a, section 4.2.2 and 4.2.3. Placement of steering column must be as far forward as possible, but either in-line or behind the instrument cluster.

The steering column shall have full tilt and telescoping capability allowing the operator to easily adjust the location of the steering wheel. The steering wheel shall have a rearward tilt adjustment range of no less than 40 degrees as measured from the horizontal and upright position. The steering wheel shall be removable with a standard or universal puller, and shall be manufactured of hard plastic.

**TS 1.19 BRAKES**

Service brakes shall be controlled and actuated by a compressed air system. Force to activate the brake pedal control shall be an essentially linear function of the bus deceleration rate and shall not exceed 50 pounds at a point 7 inches above the heel point of the pedal to achieve maximum braking. The heel point is the location of the driver's heel when foot is rested flat on the pedal and the heel is touching the floor or heel pad of the pedal.

A microprocessor controlled Automatic Braking System (ABS) shall be provided. The microprocessor for the ABS system shall be protected yet in an accessible location to allow for ease of service. The total braking effort shall be distributed among all wheels in such a ratio as to ensure equal friction material wear rate at all wheel locations.

Microprocessor controlled Automatic Traction Control (ATC) shall be provided. Actuation of ABS and/or ATC shall override the operation of the brake retarder.

The entire service brake system, including friction material, shall have a minimum overhaul or replacement life of 50,000 miles with a brake retarder on the design operating profile. Brakes shall be self-adjusting throughout this period. Visible stroke indicators shall be provided to allow service
personnel to easily identify when the brakes are not in correct adjustment. The brake linings shall be made of non-asbestos material. In order to aid maintenance personnel in determining extent of wear, a provision such as a scribe line or chamfer indicating the thickness at which replacement becomes necessary, shall be provided on each brake lining.

Replaceable wheel bearing seals shall run on replaceable wear surfaces or be of an integral wear surface sealed design. Oil lubricated wheel bearings and hub seals shall not leak or weep lubricant for 100,000 miles when running on the design operating profile.

The bus shall be equipped with disc brakes. The manufacturer shall provide an electronic as well as a mechanical visible wear indicator on the disc brake calipers. The brake system material and design shall be selected to absorb and dissipate heat quickly so the heat generated during braking operation does not glaze brake linings. The heat generated shall not increase the temperature of tire beads and wheel contact area to more than that allowed by the tire manufacturer.

**MGM e-Stroke Electronic Brake Monitoring system for disc brakes shall be provided as an option.**

The parking brake shall be a spring-operated system, actuated by a valve that exhausts compressed air to apply the brakes. The parking brake may be manually enabled when the air pressure is at the operating level per FMVSS 121. An emergency brake release shall be provided to release the brakes in the event of automatic emergency brake application. The parking brake valve button will pop out when air pressure drops below requirements of FMVSS 121. The driver shall be able to manually depress and hold down the emergency brake release valve to release the brakes and maneuver the bus to safety.

Once the operator releases the emergency brake release valve, the brakes shall engage to hold the bus in place. For purposes of ORT’s testing applications, a low warning buzzer and signal light must give a continuous warning to a person in the normal driving position when the ignition in in the “on” position but not engine running position and the air pressure in the service reservoir system is below 60 psi.

**TS 1.20 COOLING**

The radiator, and charge air cooler shall be modular and of durable corrosion-resistant construction with bolted-on removable tanks. The radiator shall be designed so a mechanic can gain access to a substantial portion of the side facing the engine for the purpose of cleaning the radiator in five minutes or less.

Radiator with a fin density greater than 12 fins per inch, and louvered/slit designs, are more susceptible to clogging and deteriorating cooling performance over time and shall not be used.

No heat producing components or climate control system components shall be mounted between the engine cooling air intake aperture and the radiator. The radiator and charge air cooler shall be designed to withstand thermal fatigue and vibration associated with the installed configuration.

The engine cooling system shall be equipped with a properly sized water filter with a spin-on element and an automatic system for releasing supplemental coolant additives as needed to replenish and maintain protection properties.

The electronically actuated cooling fan shall be a hybrid cooling fan system such as the EMP or approved equal. The system shall allow the engine to reach operating temperature quickly. The temperature-
controlled fan system shall not be engine driven or driven when the coolant temperature falls below the minimum level recommended by the engine manufacturer.

The charge air cooling system also referred to as after-coolers or inter-coolers shall provide maximum air intake temperature reduction with minimal pressure loss. The charge air radiator shall be sized and positioned to meet engine manufacturer's requirements. The charge air radiator shall not be stacked ahead or behind the engine radiator and shall be positioned as close to the engine as possible unless integrated with the radiator. Air ducting and fittings shall be protected against heat sources, and shall be configured to minimize restrictions and maintain sealing integrity.

Radiator piping shall be stainless steel or brass tubing and, if practicable, hoses shall be eliminated. Necessary hoses shall be of a premium, silicone rubber type that is impervious to all bus fluids. All hoses shall be as short as practicable. All hoses shall be secured with premium, stainless steel clamps that provide a complete 360° degree seal. The clamps shall maintain a constant tension at all times, expanding and contracting with the hose in response to temperature changes and aging of the hose material.

**TS 1.21 PNEUMATIC SYSTEMS**

The bus air system shall operate the air-powered accessories and the braking system with reserve capacity. New buses shall not leak down more than 5psi as indicted on the instrument panel mounted air gauges, within 15 minutes from the point of governor cut-off.

Provision shall be made to supply shop air to the bus air systems using a standard tire inflation type valve. Lincoln Air Quick Disconnect #11659 or equal quick disconnect fittings, shall be easily accessible and shall be located in the engine compartment and near the front bumper area for towing. Retained caps shall be installed to protect fitting against dirt and moisture when not in use. Air for the compressor shall be filtered through the main engine air cleaner system. The air system shall be protected by a pressure relief valve set at 150psi and shall be equipped with check valve and pressure protection valves to assure partial operation in case of line failures.

The engine-driven air compressor shall be sized to charge the air system from 40psi to the governor cutoff pressure in less than 3 minutes while not exceeding the fast idle speed setting of the engine.

Air lines, except necessary flexible lines, shall conform to the installation and material requirements of SAE Standard J1149 for copper tubing with standard, brass, flared or ball sleeve fittings, or SAE Standard J844 for nylon tubing if not subject to temperatures over 300 degrees F. 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 accessories

Line supports shall prevent movement, flexing, tension strain, and vibration. Copper lines shall be supported to prevent the lines from touching one another or any component of the bus.
To the extent practicable and before installation, the lines shall be pre-bent on a fixture that prevents tube flattening or excessive local strain. Copper lines shall be bent only once at any point, including pre-bending and installation. Rigid lines shall be supported at no more than 5-foot intervals. Nylon lines may be grouped and shall be supported at 2-foot intervals or less. Service air ports shall be available at front and rear of vehicle.

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.

End fittings shall be standard SAE or JIC brass or steel, flanged, swivel type fittings. Flexible hoses shall be as short as practicable and individually supported. They shall not touch one another or any part of the bus except for the supporting grommets. Flexible lines shall be supported at 2-foot intervals or less.

Air lines shall be clean before installation and shall be installed to minimize air leaks. All air lines shall be sloped toward a reservoir and routed to prevent water traps. Grommets or insulated clamps shall protect the air lines at all points where they pass through understructure components.

All air reservoirs shall meet the requirements of FMVSS Standard 121 and SAE Standard J10 and shall be equipped with clean-out plugs and guarded or flush type drain valves. Major structural members shall protect these valves and any automatic moisture ejector valves from road hazards.

Reservoirs shall be sloped toward the drain valve. All air reservoirs shall have brass drain valves which discharge below floor level with lines routed to eliminate the possibility of water traps and/or freezing in the drain line.

An air dryer shall prevent accumulation of moisture and oil in the air system. The air dryer system shall include a replaceable desiccant bed, electrically heated drain, and activation device.

A mechanic shall be able to replace the desiccant in less than 15 minutes. An oil separator shall be provided between the compressor and dryer.

Charge air piping and fittings shall be designed to minimize air restrictions and leaks. Piping shall be as short as possible and the number of bends shall be minimized. Bend radii shall be maximized to meet the pressure drop and temperature rise requirements of the engine manufacturers.

The cross section of all charge air piping shall not be less than the cross section of the intake manifold inlet. Any change in pipe diameter shall be gradual to ensure a smooth passage of air and to minimize restrictions. Piping shall be routed away from exhaust manifolds and other heat sources, and shielded as required to meet the temperature rise requirements of the engine manufacturer.

Charge air piping shall be constructed of stainless steel, aluminized steel or anodized aluminum, except between the air filter and turbocharger inlet where piping may be constructed of fiberglass.

Connections between all charge air piping sections shall be sealed with a short section of reinforced hose and secured with stainless steel, constant tension clamps that provide a complete 360° seal.
**TS 1.22 INTERIOR LIGHTING**

The passenger interior lighting system shall be DINEX LED lighting system or equal. The interior lighting system shall provide a minimum 15 foot-candle illumination on a 1 square foot plane at an angle of 45 degree from horizontal, center 33 inches above the floor and 24 inches in front of the seat back at each seat position.

Allowable average light level for the rear bench seats shall be 7 foot-candles. Floor surface in the aisles shall be a minimum of 10 foot-candles, vestibule area a minimum of 4 foot-candles with the front doors open and minimum of 2 foot-candles with the front doors closed.

The front entrance area and curb lights shall illuminate when the front door is open and master run switch is in the "Lights" positions. Rear exit area and curb lights shall illuminate when rear door is unlocked.

If necessary, step lighting for the intermediate platform between lower and upper floor levels shall be provided and shall illuminate in all engine run positions. The step lighting shall be low-profile to minimize tripping and snagging hazard for passengers and shall be shielded as necessary to protect passengers' eyes from glare.

The light source shall be located to minimize windshield glare with distribution of the light focused primarily on the passengers' reading plane while casting sufficient light onto the advertising display.

High power solid state LED strip shall be in one-foot section increment with high power LED manufactured by either Nichia, Philips or equal with expectation to maintain on average 60-70% of original brightness after 60,000 hours of operation.

The brightness of each individual light fixture shall be software programmable to minimize glare. Photo sensor detects and adjusts light level automatically relative to ambient light for passenger comfort.

Lens material shall be clear polycarbonate. Lens shall be designed to effectively "mask" all individual LED's to make them invisible and there shall be no "hot spot" or "dark spot". Lens shall be sealed to inhibit incursion of dust and insects yet be easily removable for service. If threaded fasteners are used, they must be held captive in the lens. Access panels shall be provided to allow servicing of components located behind light panels.

Individual driver module shall be provided for each light fixture. Driver module shall have built-in self-protection of thermal shut-down and restart, PWM (Pulse Width Modulation) output to regulate light level, and shall be reverse polarity protected and have the capability of being rebuilt.

When the master switch is in the RUN or NITE/RUN mode, the first light module on each side of the coach shall slowly fade to darkness when the front door is in the closed position and light output shall gradually illuminate to reach maximum light level when the door is opened. Solid state LED lighting shall have unlimited on-off cycles.

Failure of any light fixture or driver module shall be broadcasted via telltale light panel or dashboard display. The system will look for supply current and lighting fixture temperature to be approximately the same for all of the driver modules, and will show which module(s) seem to have a problem.
The light system may be designed to form part of the entire air distribution duct.

Emergency backup system shall keep the light fixtures over the front and rear doors illuminated at minimum light output under a separated battery power for 10 to 15 minutes allowing passengers visibility and timely evacuation from the vehicle during emergency conditions.

A light fixture shall be mounted in the ceiling above the farebox location. The fixture shall be capable of projecting a concentrated beam of light on the farebox. This light will automatically come on whenever the front doors are opened and the run switch is in the "night run" or "night park" position.

Lighting shall be programmable to minimize windshield glare at night.

**TS 1.23 DOORS**

For 30' buses, one doorway shall be provided on the curbside of the bus for passenger ingress and egress. For 35' buses two doorways shall be provided in the curbside of the bus for passenger ingress and egress. The front doorway shall be forward of the front wheels and located so that the operator will be able to collect or monitor the collection of fares. Passenger doors and doorways shall comply with ADA requirements.

The rear doorway centerline shall be rearward of the point midway between the front door centerline and the rearmost seat back.

Structure of the doors, their attachments, inside and outside trim panels, and any mechanism exposed to the elements shall be corrosion-resistant. Door panel construction shall be of corrosion-resistant metal or reinforced non-metallic composite materials. The doors, when fully opened, shall provide a firm support and shall not be damaged if used as an assist by passengers during ingress or egress. The front leaves of the passenger doors shall overlap the rear leaves. The front door clear width shall be no less than 31.75 inches with the doors fully opened. The rear door clear width shall be no less than 24 inches with the doors fully opened. When open, the doors shall leave an opening no less than 76 inches in height.

Both front and rear low floor bus doors shall have grab rails and be a "Full Glass" glazing design to provide passengers and vehicle operators an unobstructed view.

The doors shall be A&M Systems door or equal.

The doors shall be tamper resistant but parts shall be designed for quick and easy replacement by a trained mechanic.

The front door panel glazing material shall have a nominal ¼ inch or 6 mm thick laminated safety glass conforming to the requirements of ANSI Z26.1 Test Grouping 2 and the Recommended Practices defined in SAE J673. Glazing material in the rear doorway door panels shall be the same material, thickness and color as the side windows defined in Section 5.4.7.4.2.

It shall be possible to open and close either passenger door without its contact with an 8-inch-high curb. This condition is to be met when

- the bus loaded to GVWR,
- is not knelt,
is parked with only the tires touching that curb, and
is on a street sloping toward the curb such that the street side wheels are 5 inches higher than the curb side wheels.

Closing door edge speed shall not exceed 19 inches per second. Power close rear doors shall be equipped with a sensitive edge or other obstruction sensing system such that if an obstruction is struck by a closing door edge, the doors will stop and/or reverse direction prior to imparting a 10-pound force on 1 square inch of that obstruction.

Actuators and the complex door mechanism shall be concealed from passengers but shall be easily accessible for servicing. The door actuators shall be have the capability of being rebuilt.

In the event of an emergency, it shall be possible to open the doors manually from inside the bus using a force of no more than 25 pounds after actuating an emergency unlocking device at each door. The unlocking devices shall be clearly marked as an emergency-only device and shall require two distinct actions to actuate. The respective door emergency unlocking device shall be accessible from the entrance and exit areas.

When the rear door emergency device is actuated, the door interlock throttle system shall return the engine to idle and the door interlock brake system shall apply to stop the bus.

When the front door emergency device is actuated, only the door interlock throttle system shall be actuated. Locked doors shall require a force of more than 100 pounds to open manually. When the locked doors are manually forced to open, damage shall be limited to the bending of minor door linkage with no resulting damage to the doors, engines, and complex mechanism.

Access doors for the door actuator compartments shall be secured with hand screws or thumb latches, and shall prevent entry of mechanism lubricant into the bus interior. All fasteners that retain access panels shall be captive in the cover.

**TS 1.24 FARE COLLECTION**

Space, as far forward as practicable and structural provisions, shall be made for installation of a farebox of the type designated by ORT for that type of bus.

Location of the fare collection device shall not restrict traffic in the vestibule, including wheelchairs if a front door loading device is used, and shall allow the operator to easily reach the farebox controls and to view the fare register.

The fare box shall not restrict access to the operator area, shall not restrict operation of operator controls and shall not, either by itself or in combination with stanchions, transfer mounting, cutting, and punching equipment and route destination signs, restrict operator's field of view per SAE Recommended Practice J1050 (See Section 5.4.7.2.)

Location and mounting of the fare collection device shall allow use, without restriction, by passengers.

Farebox location shall permit accessibility to the vault for easy manual removal or attachment of suction devices. Meters and counters on the fare box shall be readable on a daily basis. The floor under the
farebox shall be reinforced, as necessary, to provide a sturdy mounting platform and to prevent shaking of the farebox.

A switched circuit shall be available to power the lighting to the farebox. The switch is to be located conveniently for the driver to shut off farebox light (both overhead and integrated lighting). The farebox shall be a Diamond Model XV or equal. The contractor shall ensure that all fareboxes and vaults are keyed with an identical key, and a spare vault shall be provided with each farebox.

**TS 1.25 WINDOWS**

The windshield shall permit an operator's field of view as referenced in SAE Recommended Practice J1050. The vertically upward view shall be a minimum of 15 degrees, measured above the horizontal and excluding any shaded band. The vertically downward view shall permit detection of an object 3-1/2 feet high no more than 2 feet in front of the bus.

The horizontal view shall be a minimum of 90 degrees above the line of sight. Any binocular obscuration due to a center divider may be ignored when determining the 90-degree requirement, provided that the divider does not exceed a 3-degree angle in the operator's field of view. Windshield pillars shall not exceed 10 degrees of binocular obscuration. The windshield shall be designed and installed to minimize external glare as well as reflections from inside the bus.

The windshield shall be a one-piece windshield and easily replaceable by removing zip-locks from the windshield retaining moldings. Bonded-in-place windshield shall not be used. The windshield glazing material shall have a 1/4-inch or 6-mm nominal thickness laminated safety glass conforming to the requirements of ANSI Z26.1 Test Grouping 1A and the Recommended Practices defined in SAE J673. The glazing material shall have single density tint. The upper portion of the windshield above the operator's field of view shall have a dark, shaded band with a minimum luminous transmittance of 6 percent when tested in accordance to ASTM D-1003.

A two-piece windshield may be supplied as an option

Bonded windshield to be supplied as an option.

The operator's side window shall be the sliding type, requiring only the rear half of sash to latch upon closing and shall open sufficiently to permit the seated operator to easily adjust the street side outside rearview mirror. When in an open position, the window shall not rattle or close during braking. The entire assembly shall be hinged and have a single release for Emergency Egress. This window section shall slide in tracks or channels designed to last the service life of the bus. The operator's side window shall not be bonded in place and shall be easily replaceable. The glazing material shall have a single density tint.

Bonded operator's side window to be supplied as an option.

Design must prevent sections from freezing closed in the winter. Light transmittance shall be 75% on the glass area below 53" from the operator platform floor.

The operator's view, perpendicular through operator's side window glazing, should extend a minimum of 840 mm (33 inches) to the rear of the Heel Point on the accelerator, and in any case must accommodate a 95th percentile male operator. 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. Operator's window construction shall maximize ability for full opening of the window.

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

All side windows, except windows in passenger doors and those smaller than 500 square inches, shall have window panels that are openable by passengers. Openable window panels shall be equipped with latches that secure the window in the fully open and fully closed positions.

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

All side windows 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. The windows shall be designed and constructed to enable a mechanic to remove and replace two windows in less than 10 minutes.

Emergency exit and window operation instructions must be a metal plate and a fixed to the bus sidewall. The instruction must be in both English and Spanish and be mounted within six inches of the emergency handle.

Side windows glazing material shall have 1/4-inch nominal thickness laminated safety glass. The material shall conform to applicable requirements of ANSI Z26.1 and the Recommended Practices defined in SAE J673.

Windows on the bus sides and in the rear door shall be tinted gray in color, complementary to the bus exterior with a 76% light transmission. Windows over the destination signs shall not be tinted. The side window sash frames including the Driver's window frame will be made of black anodized aluminum.

Bonded side windows to be supplied as an option.

**TS 1.26 MIRRORS**
The bus shall be equipped with 8" x 15" 2/1 split view or equal corrosion-resistant, outside rearview mirror on each side of the bus. The upper part of the mirror is flat and the lower portion is convex.

Mirrors shall permit the operator to view the roadway along both sides of the bus, including the rear wheels.

The bus shall be equipped with 2 outside mirrors of unit magnification (flat), each with not less than 50 sq. in. of reflective surface. The mirrors shall be corrosion-resistant and be installed with stable supports on each side of the bus. The mirrors shall be located so as to provide the operator a view to the rear along both sides of the bus and shall be adjustable both in the horizontal and vertical directions to view the rearward scene. The rearview mirrors shall be mounted so that its lower edge is no less than 80 inches above the street surface and equipped with a permanent high quality weather resistant orange reflective decal.
The operator shall be able to adjust both mirrors remotely while seated in the driving position. The control for remote positioning of the mirror shall be a single switch or device.

Driver side and curbside mirrors shall have directional signals in the mirror head.

All exterior mirrors shall be electrically heated. The heaters shall be energized whenever the operator's heater and/or defroster are activated.

Mirrors shall be firmly attached to the bus to minimize vibration and prevent loss of adjustment, but not so firmly attached that the bus or its structure is damaged when the mirror is struck in an accident. Mirrors shall retract or fold sufficiently to allow bus washing operations.

Mirror stops shall be provided to prevent outside mirrors from striking side glass or windshield. Interior mirrors shall be provided for the operator to observe passengers throughout the bus without leaving his/her seat and without shoulder movement. The operator shall be able to observe passengers in the front/entrance and rear/exit areas, anywhere in the aisle, and in the rear seats.

**TS 1.27 SEATS**

The bus shall be designed and manufactured in accordance with all applicable fire safety and smoke emission regulations. These provisions shall include the use of fire-retardant / low-smoke materials, fire detection systems, firewalls, and facilitation of passenger evacuation.

Materials entirely enclosed from the passenger compartment, such as insulation within the sidewalls, need not comply. In addition, smaller components and items, such as seat grab rails, switch knobs and small light lenses, and shall be exempt from this requirement.

The passenger seating arrangement in the bus shall be such that seating capacity is maximized and in compliance with the following requirements. ORT recognizes that ramp location, foot room, hip-to-knee room, doorway type and width, seat construction, floor level type, seat spacing requirements, etc., ultimately affect seating capacity and layout.

Passenger seats may be arranged in a transverse, forward facing configuration, except at the wheel housings where aisle-facing seats may be arranged as appropriate with due regard for passenger access and comfort.

Other areas where aisle-facing seats may be provided are at wheelchair securement areas and platforms (such as for fuel tank storage space).

Passenger seating capacity options are to be provided to ORT that will maximize the number of seats available for ambulatory passengers, with a minimum of two wheelchair positions. Rearward facing seats are discouraged.

All passenger seats and driver’s seat must meet or exceed the requirements of all relevant Federal Motor Vehicle Safety Standards including FMVSS 302.

Passenger seats to be USSC Citipro model, or approved equal. For perimeter seating, automatic “flip-up” lowers are to be considered as standard to maximize the standee space when not in use.
Color of seat frame, seat bottom and seat back will be determined at the pre-build meeting. A provision, such as a small grommet hole, to allow drainage, shall be incorporated into seat bottom.

Hip-to-knee room measured from the front of one seat back horizontally across the highest part of the seat to the seat or panel immediately in front, shall be no less than 28 inches. At all seating positions in paired transverse seats immediately behind other seating positions hip-to-knee room shall be no less than 28 inches.

In order to maximize seating capacity without unduly affecting passenger comfort, minor variations in the required hip-to-knee room will be allowed in limited areas. All such areas shall be identified to ORT prior to bid for approval.

Foot room, measured at the floor forward from a point vertically below the front of the seat cushion, shall be no less than 14 inches. Seats immediately behind the wheel housings and modesty panels may have foot room reduced, provided the wheelhouse is shaped so that it may be used as a footrest or the design of modesty panel effectively allows for foot room.

Thickness of the transverse seat backs shall be minimized at the bottom to increase passenger knee room and passenger capacity. The area between the longitudinal seat backs and the attachment to the bus sidewalls shall be designed to prevent debris accumulation.

The aisle between the seats shall be no less than 20 inches wide at seated passenger hip height. Seat backs shall be shaped to increase this dimension to no less than 24 inches at standing passenger hip height.

All proposers shall submit a copy of their proposed seat layout(s) consistent with these specifications showing hip-to-knee and foot room dimensions, stanchion layout and wheelchair maneuverability layout with your proposal.

Armrests (where applicable) shall be padded with material that is the same as or similar to, the seat back padding and handhold. Seats, seat backs and seat bottoms shall be securely attached and shall be detachable by means of a simple release mechanism employing a special tool so that they are easily removable by maintenance personnel but not by passengers.

To the extent practicable, seat backs/bottoms shall be interchangeable throughout the bus. Materials shall have high resistance to tearing, flexing, and wetting. The seat colors shall be determined at the time of seating layout and design based upon the recommendation of the Contractor.

ORT encourages the proposer to provide a unique seating design to not only maximize the ambulatory passenger seats but to also maximize the wheel chair locations, standee room and provide maximum space available for in-bus bicycle use. The pre-proposal meeting will address this item, and proposers are urged to present a variety of seating arrangements.

Powered USB 2.0 ports in the passenger seating areas shall be provided as an option.
TS 1.28 PASSENGER ASSISTS

Passenger assists in the form of full grip, vertical stanchions or handholds shall be provided for the safety of standees and for ingress/egress.

Passenger assists shall be convenient in location, shape, and size for both the 95th-percentile male and the 5th-percentile female standee.

Starting from the entrance door and moving anywhere in the bus and out the exit door, a vertical assist shall be provided either as the vertical portion of seat back assist and as a separate item so that a 5th-percentile female passenger may easily move from one assist to another using one hand and the other without losing support. All handholds and stanchions at front doorway, around farebox, and at interior steps for bi-level designs shall be powder-coated in high contrast yellow color. The forward-most vertical stanchions on either side of the aisle immediately behind the operator's area shall be powder-coated yellow.

Excluding those mounted on the seats and doors, the assists shall have a cross-sectional diameter between 1-1/4 and 1-1/2 inches or shall provide an equivalent gripping surface with no corner radii less than 1/4 inch. All passenger assists shall permit a full hand grip with no less than 1-1/2 inches of knuckle clearance around the assist.

Passenger assists shall be designed to minimize catching or snagging of clothes or personal items and shall be capable of passing the NHTSA Drawstring Test.

Any joints in the assist structure shall be underneath supporting brackets and securely clamped to prevent passengers from moving or twisting the assists. Passenger assists shall be designed to minimize glare in the Operator's area to the extent possible. With the exception of seat and door handholds, all areas of the passenger assists that are handled by passengers including functional components used as passenger assists shall be of anodized aluminum or stainless steel.

Seat handholds shall be of the same construction and finish as the seat frame.

Door mounted passenger assists shall be of anodized aluminum, stainless steel, or powder coated metal.

Connecting tees and angles shall be powder coated metal castings. Assists shall withstand a force of 300 pounds applied over a 12-inch lineal dimension in any direction normal to the assist without permanent visible deformation.

All passenger assist components, including brackets, clamps, screw heads, and other fasteners used on the passenger assists shall be designed to eliminate pinching, snagging and cutting hazards and shall be free from burrs or rough edges.

Front and rear doors, or the entry area, shall be fitted with ADA compliant assists. Assists shall be as far outward as practicable, but shall be located no farther inboard than 6 inches from the outside edge of the entrance step and shall be easily grasped by a 5th-percentile female boarding from street level.

Door assists shall be functionally continuous with the horizontal front passenger assist and the vertical assist and the assists on the wheel housing or on the front modesty panel.
The aisle side of the operator's barrier, the wheel housings, and when applicable the modesty panels shall be fitted with vertical passenger assists that are functionally continuous with the overhead assist and that extend to within 36 inches of the floor. These assists shall have sufficient clearance from the barrier to prevent inadvertent wedging of a passenger's arm.

A horizontal passenger assist shall be located across the front of the bus and shall prevent passengers from sustaining injuries on the fare collection device or windshield in the event of a sudden deceleration.

Without restricting the vestibule space, the assist shall provide support for a boarding passenger from the front door through the fare collection procedure.

Passengers shall be able to lean against the assist for security while paying fares. The assist shall be no less than 36 inches above the floor.

The assists at the front of the bus shall be arranged to permit a 5th-percentile female passenger to easily reach from the door assist, to the front assist, to vertical assists on the operator's barrier, wheel housings, or front modesty panel.

Vertical assists that are functionally continuous with the overhead assist shall be provided at the aisle side of the transverse seat immediately forward of the rear door and on the aisle side of the rear door modesty panel(s).

Passenger assists shall be provided on modesty panels that are functionally continuous with the rear door assists.

Rear doors, or the exit area, shall be fitted with assists no less than 3/4 inch in width and shall provide at least 1-1/2 inches of knuckle clearance between the assists and their mounting. The assists shall be designed to permit a 5th-percentile female to easily move from one assist to another during the entire exiting process.

The assists shall be located no farther inboard than 6 inches from the outside edge of the rear doorway.

Except forward of the standee line and at the rear door, a continuous, full grip, overhead assist shall be provided. This assist shall be convenient to standees anywhere in the bus and shall be located over the center of the aisle seating position of the transverse seats. The assist shall be no less than 70 inches above the floor.

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.

Straps shall be provided in the front of the bus where the wheelchair securements are located and there is a large space between vertical assists.

Overhead assists shall simultaneously support 150 pounds on any 12-inch length. No more than 5 percent of the full grip feature shall be lost due to assist supports.

Longitudinal seats shall have vertical assists located between every other designated seating position, except for seats that fold/flip up to accommodate wheelchair securement.
Assists shall extend from near the leading edge of the seat and shall be functionally continuous with the overhead assist.

Assists shall be staggered across the aisle from each other where practicable and shall be no more than 52 inches apart or functionally continuous for a 5’’ percentile female passenger.

The contractor shall provide a safety barrier in front of the first row of front facing seats to protect the passengers from being ejected from their seats on a hard brake incident. Arm rests with handles and hand rails will be provided for Parlor Seating or in other open positions where no other form of barrier protection can be provided.

Unless passenger seating is provided on top of wheel housing, passenger assists shall be mounted around the exposed sides of the wheel housings (and propulsion compartments if applicable) which shall also be designed to prevent passengers from sitting on wheel housings. Such passenger assists shall also effectively retain items, such as bags and luggage, placed on top of wheel housing.

**TS 1.29 NOISE LEVELS**

The bus interior and exterior noise levels shall meet or exceed the requirements of the APTA "Standard Bus Procurement Guidelines." The combination of inner and outer panels and any material used between them shall provide sufficient sound insulation so that a sound source with a level of 80 dab measured at the outside skin of the bus shall have a sound level of 65 dab or less at any point inside the bus. These conditions shall prevail with all openings, including doors and windows, closed and with the engine and accessories switched off.

**TS 1.30 HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT (HVAC)**

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

Standard HVAC Warranty shall be provided by the Contractor for the HVAC system and related components. The Contractor will provide an option for extended warranty for the HVAC system and all related components.

With the bus running at the design operating profile with corresponding door opening cycle, and carrying a number of passengers equal to 150 percent of the seated load, the HVAC system shall maintain an average passenger compartment temperature within a range between 65° and 80°F, while controlling the relative humidity to a value of 50 percent or less.

The system shall maintain these conditions while subjected to any outside ambient temperatures within a range of -10° to +95° F and at any ambient relative humidity levels between 5 and 100 percent.

When the bus is operated in outside ambient temperatures of 95° to 115°F, the interior temperature of the bus shall be permitted to rise one degree for each degree of exterior temperature in excess of 95°F.

When bus is operated in outside ambient temperatures in the range of -10° to +10°F, the interior temperature of the bus shall not fall below 55°F while bus is running.
The air conditioning portion of the HVAC system shall be capable of reducing the passenger compartment temperature from 110 degrees to 90 degrees F in less than 20 minutes after engine start-up. Engine temperature shall be within the normal operating range at the time of start-up of the cool-down test and the engine speed shall be limited to fast idle that may be activated by an operator-controlled device.

During the cool-down period the refrigerant pressure shall not exceed safe high-side pressures and the condenser discharge air temperature, measured 6 inches from the surface of the coil, shall be less than 45°F above the condenser inlet air temperature.

The appropriate solar load as recommended in the APTA "Recommended Instrumentation and Performance Testing for Transit Bus Air Conditioning System," representing 4 P.M. on August 21, shall be used. There shall be no passengers on board, and the doors and windows shall be closed.

The air conditioning system shall meet performance requirements using: HFC R134a or a current EPA approved refrigerant of the buyer's choice.

The climate control blower motors and fan shall be designed such that their operation complies with the interior noise level requirements as specified.

The HVAC system excluding the operator's heater/defroster shall be centrally controlled with an advanced electronic/diagnostic control system with provisions for extracting/reading data.

After manual selection and/or activation of climate control system operation mode, all interior climate control system requirements for the selected mode shall be attained automatically to within ±2 degrees F of specified temperature control set-point.

The climate control system shall have the provision to allow operator to adjust the temperature control set-point at a minimum of between 68 degrees and 72 degrees F. From then on, all interior climate control system requirements shall be attained automatically, unless re-adjusted by operator.

The operator shall have full control over the defroster and operator's heater. The operator shall be able to adjust the temperature in the operator's area through air distribution and fans. The interior climate control system shall switch automatically to the ventilating mode if the refrigerant compressor or condenser fan fails.

Interior temperature distribution shall be uniform to the extent practicable to prevent hot and/or cold spots.

After stabilization with doors closed, the temperatures between any two points in the passenger compartment in the same vertical plane, and 6 inches to 72 inches above the floor, shall not vary by more than 5°F with doors closed. The interior temperatures, measured at the same height above the floor, shall not vary more than ± 5°F, from the front to the rear, from the average temperature determined in accordance to APTA Recommended Instrumentation and Performance Testing for Transit Bus Air Conditioning System.

Variations of greater than ± 5°F will be allowed for limited, localized areas provided the majority of the measured temperatures fall within the specified requirement.
The cooling mode of the interior climate control system shall introduce air into the bus at or near the ceiling height at a minimum rate of 25 cubic feet per minute (cfm) per passenger based on the standard configuration bus carrying a number of passengers equal to 150 percent of the seated load.

Airflow shall be evenly distributed throughout the bus with air velocity not exceeding 100 feet per minute on any passenger. The ventilating mode shall provide air at a minimum flow rate of 20 cfm per passenger.

Airflow may be reduced to 15 cfm per passenger (at 150 percent of seated load) when operating in the heating mode. The fans shall not activate until the heating element has warmed sufficiently to assure at least 70 degrees F air outlet temperature. The heating air outlet temperature shall not exceed 120 degrees F under any normal operating conditions.

The bus interior climate control system shall deliver at least 100 cfm of air to the operator's area when operating in the ventilating and cooling modes. Adjustable nozzles shall permit variable distribution or shutdown of the airflow.

Airflow in the heating mode shall be reduced proportionally to the reduction of airflow into the passenger area.

The windshield defroster unit shall meet the requirements of SAE Recommended Practice J382, Windshield Defrosting Systems Performance Requirements, and shall have the capability of diverting heated air to the operator's feet and legs. The defroster or interior climate control system shall maintain visibility through the operator's side window.

There shall be an operator control for the auxiliary heater in rear engine compartment. The auxiliary heater dash indicator lights shall include a green light for when system is operating and yellow light for system failure.

The controls for the operator's compartment for heating, ventilation, and cooling systems shall be integrated and shall meet the following requirements. The heat/defrost system fan shall be controlled by a separate switch that has an "Off" position and at least two positions for speed control. All switches and controls shall preclude the possibility of clothing becoming entangled.

A manually operated control valve shall control the coolant flow through the heater core.

If a cable operated manual control valve is used, the cable length shall be kept to a minimum to reduce cable seizing.

Heater water control valves shall be "positive" type, closed or open.

A separate heating, ventilation, and defroster system for the operator's area shall be provided and shall be controlled by the operator. The system shall meet the following 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 glasses in all operating conditions.
- Fan(s) shall be able to draw air from the bus body interior and/or the exterior through a control device and pass it through the heater core to the defroster system and over the operator's feet. A minimum capacity of 100cfm shall be provided.
- The operator shall have complete control of the heat and fresh airflow for their area.

The defroster supply outlets shall be located at the lower edge of the windshield. These outlets shall be unbreakable and shall be free of sharp edges that can catch clothes during normal daily cleaning.

The system shall be such that foreign objects such as coins or tickets cannot fall into the defroster air outlets.

Adjustable ball vents shall be provided at the left of the operator's position to allow direction of air onto the side windows. Two additional ball vents shall be located on the vertical front dash panel adjacent to the front door to allow direction of air onto the door windows and/or entrance area.

A ventilation system shall be provided to ensure operator comfort and shall be capable of providing fresh air in both the foot and 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.

Air shall be filtered before discharge into the passenger compartment. The filter shall meet the ANSI/ASHRAE 52.1 requirement for 5 percent or better atmospheric dust spot efficiency, 50 percent weight resistance, and a minimum dust holding capacity of 120 gram per 1,000 cfm cell. More efficient air filtration may be provided to maintain efficient heater and/or evaporator operation. Air filters shall be easily removable for service. Air filters shall be of the disposable type.

Two 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. A single roof ventilator is required for the 30' bus.

Each ventilator shall operate independently of the other.

The ventilators shall meet FMVSS217 requirements for non-school bus applications. When open with the bus in motion, the ventilators shall provide fresh air inside the bus. Each ventilator shall cover an opening area no less than 425 square inches and shall be capable of being positioned as a scoop with either the leading or trailing edge open no less than 4 inches, or with all four edges raised simultaneously to a height of no less than 3-1/2 inches.

An escape hatch shall be incorporated into the roof ventilator. Roof ventilator(s) shall be sealed to prevent entry of water when closed.

Manually controlled shutoff valves in the refrigerant lines shall allow isolation of the compressor and dehydrator filter for service. To the extent practicable, self-sealing couplings utilizing O-ring seals shall be used to break and seal the refrigerant lines during removal of major components, such as the refrigerant compressor. Shut-off valves may be provided in lieu of self-sealing couplings. The condenser shall be located to efficiently transfer heat to the atmosphere, and shall not ingest air warmed above the ambient temperature by the bus mechanical equipment, or to discharge air into any other system of
the bus. The location of the condenser shall preclude its obstruction by wheel splash, road dirt or debris.

HVAC components located within 6 inches of floor level shall be constructed to resist damage and corrosion.

Heat shall be supplied to the entrance and exit areas to prevent accumulation of snow, ice, or slush with bus operating under design operating profile and corresponding door opening cycle.

**TS 1.31 BUS INTERIOR**

Ceiling panels shall be white melamine-type material suitable for exterior skin painted and finished to exterior quality.

Headlining shall be supported to prevent buckling, drumming, or flexing and shall be secured without loose edges. Headlining materials shall be treated or insulated to prevent marks due to condensation where panels are in contact with metal members.

Moldings and trim strips, as required to make the edges tamperproof, shall be stainless steel, aluminum, or plastic, colored to complement the ceiling material. Headlining panels covering operational equipment that is mounted above the ceiling shall be on hinges for ease of service but retained to prevent inadvertent opening.

Interior panels shall be attached so that there are no exposed unfinished or rough edges or rough surfaces. Panels and fasteners shall not be easily removable by passengers. Interior trim fasteners, where required, shall be rivets or cross-recessed head screws.

A frame shall be provided along both sides of the bus near the juncture of the bus ceiling and sidewall to retain advertising media 11 inches high and 0.09 inches thick. The retainers may be concave and shall support the media without adhesives. The media shall be illuminated by the ambient fluorescent light system on the interior of the bus.

Any insulation material used between the inner and outer panels shall be sealed or self-sealing to minimize entry and/or retention of moisture. Insulation properties shall be unimpaired during the service life of the bus. Any insulation material used inside the engine compartment shall not absorb or retain oils or water and shall be designed to prevent casual damage that may occur during maintenance operations. All insulation materials shall comply with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993.

Access for maintenance and replacement of equipment shall be provided by panels and doors that appear to be an integral part of the interior. Access doors shall be hinged with gas props or over-center springs, where practical, to hold the doors out of the mechanic’s way.

Panel fasteners shall be standardized so that only one tool is required to service all special fasteners within the bus.

The bus body shall be thoroughly sealed so that the operator or passengers cannot feel drafts during normal operations with the passenger doors closed.
The floor covering shall have a non-skid walking surface that remains effective in all weather conditions and complies with all ADA requirements. The floor covering, as well as transitions of flooring material to the main floor and to the entrance and exit area, shall be smooth and present no tripping hazards.

The standee line shall be at least 2 inches wide and shall extend across the bus aisle. This line shall be the same color as the outboard edge of the entrance/exit areas.
The flooring shall be self-adhesive material in a color/pattern as further specified by ORT. The flooring is expected to last through the life of the bus without needing to be replaced.

Any areas on floor, which are not intended for standees, such as areas "swept" during passenger door operation, shall be clearly and permanently marked. The floor in the operator's compartment shall be easily cleaned and shall be arranged to minimize debris accumulation.

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 rear door, however, a separate strip as wide as the door shall extend from the center strip to the outboard edge of the rear/exit area. The floor under the seats shall be covered with smooth surface flooring material. The floor covering shall closely fit the sidewall cove or extend to the top of the cove.

Access openings in the floor shall be sealed to prevent entry of fumes and water into the bus interior.

Flooring material shall be flush with the floor and shall be edge-bound with stainless steel, or other material that is acceptable to ORT, to prevent the edges from coming loose. Access openings shall be asymmetrical so that reinstalled flooring shall be properly aligned. Fasteners shall tighten flush with the floor and not present themselves as a tripping hazard.

Interior access opening panels shall be provided for the driveshaft, the transmission, the engine and the suspension system.

Two 15 ¾" high by 10" wide by 14 ½" long black rubber waste baskets shall be provided in each bus. One will be secured on the curb side wheel well next to the schedule rack. The second one will be secured behind the curb side seat directly in front of the rear door.

Provisions shall be made on the rear of the operator's barrier for an “IT Cabinet”. This cabinet is to be sufficient enough to handle all of the ancillary IT equipment described in this specification. All ancillary IT equipment will originate from this cabinet. The cabinet will be lockable and keyed as such that the locking mechanism from one bus to the other is universal.

Provisions shall be made on the rear facing panel of the IT Cabinet for two frames to retain information that are sized 17 inches wide and 11 inches high posted by the transit system, such as notices and schedule changes. The frames shall be Transit Information Products MC TAB HOR or equal. Overall size is 18.490" by 11.875" by .25". The unit shall be fabricated from clear acrylic and display one 17" wide x 11" tall insert, and shall have openings at the bottom to reduce dust accumulation. All outside edges shall be flame polished. The unit installs with 9 flat head 4-40 screws.
A Transit Information Products OBIC-WW8-P metal or equal multi-pocket schedule holder shall be provided and secured on the bus front curb side wheel well.

A passenger "Stop Requested" signal system that complies with applicable ADA requirements defined in 49 CFR, Part 38.37 shall be provided. The system shall consist of a heavy-duty pull cable, chime, and interior sign message.

The interior sign message shall be integrated into the bus stop enunciator display(s) included in any intelligent transportation system (ITS) provided at the factory or installed soon after delivery.

The pull cable shall be located the full length of the bus on the sidewalls at the level where the transom is located. If no transom window is required, height of pull cable shall approximate this transom level and shall be no greater than 63 inches as measured from floor surface. It shall be easily accessible to all passengers, seated or standing.

Vertical pull cords shall also be provided between all windows in the front lower section of the bus. Pull cable(s) shall activate a solid state or magnetic proximity switch(es).

At each wheelchair parking position and priority seating positions additional provisions shall be included to allow a passenger in a mobility aid to easily activate "Stop Requested" signal.

Exit signals located in the wheelchair parking area shall be no higher than 4 feet above the floor. Instructions shall be provided to clearly indicate function and operation of these signals. No portion of the signal activator may be obstructed, and the activator shall be clearly visible to any passenger sitting in this area.

A single "Stop Requested" chime shall sound when the system is first activated. A double chime shall sound when the system is first activated from wheelchair passenger areas.

A "Stop Requested" message shall be illuminated when the passenger "Stop Requested" signal system is activated. The message shall remain visible until one or both passenger doors are opened. A message shall be visible to the seated operator and seated passengers.

The operator shall be able to deactivate the signal system from the operator's area. A green light shall be mounted above the rear door, approximately on center of the rear door actuator compartment access panel, to indicate when the rear doors have been unlocked.

**TS 1.32 PAINT AND DECALS**

The ORT buses shall be painted in white, paint to a dry-film thickness of between 3 and 4 mils, inclusive, measured at the extreme corners of the bus. This is a base coat/clear coat system. The clear coat contains an anti-graffiti additive. The paint and color scheme in this procurement will be determined at preproduction. The ORT logo and graphics may be painted, vinyl application or a combination of the two.

It will be the responsibility of the Contractor to provide ORT with scaled drawings of the paint design based off of the pictures attached. ORT requires that the Contractor match the current fleet vehicle logo and color scheme.
All decals, including reflecting stripes, shall be made from high quality 3M or equal cast vinyl material and screened using compatible inks. All decals shall be sealed with clear, waterproof sealant around all exposed edges if required by the decal supplier. A sample list of decals to be provided shall include all manufacturer safety related decals as well as the following:

**Exterior Decals**
- Handicapped Accessible Symbol
- Bus System Logo
- Bus System URL
- Bus System Telephone #
- ORT logo
- Stand Back When Flashing ... Wheelchair Ramp Arrow
- Bus number (Front, Back and two on each side and large number on the roof)
- Wide Right Turns ...
- For Your Safety ...
- Bike Rack (Standard safety and operating instruction decals on Bike Rack)

**Interior Decals**
- Wait for Light ... (English & Spanish)
- For your safety, ... (English & Spanish)
- No radios, smoking, etc... (English & Spanish)
- Video Camera ... " (English & Spanish)
- Make seats available ...
- Bus number to be provided at two locations on the interior as determined at preproduction
- "Watch Your Step" on stanchions and rear platform step
- Handicapped Accessible Symbol
- Pull Cord Signal
- A decal in the driver’s compartment, readily visible to the driver, indicating the exterior vehicle height.

All exterior surfaces shall be smooth and free of wrinkles and dents. Exterior surfaces to be painted shall be properly prepared as required by the paint system supplier, prior to application of paint to assure a proper bond between the basic surface and successive coats of original paint for the service life of the bus.

Drilled holes and cutouts in exterior surfaces shall be made prior to cleaning, priming and painting to prevent corrosion. The bus shall be completely painted prior to installation of exterior lights, windows, mirrors and other items that are applied to the exterior of the bus. Body filler materials may be used for surface dressing, but not for repair of damaged or improperly fitted panels.

Paint shall be applied smoothly and evenly with the finished surface free of dirt and the following other imperfections:
- A. Blisters, orange peel or bubbles appearing in the topcoat film.
- B. Chips, scratches, or gouges of the surface finish.
- C. Cracks in the paint film.
- D. Craters where paint failed to cover due to surface contamination.
- E. Overspray.
- F. Peeling
- G. Runs or sags from excessive flow and failure to adhere uniformly to the surface.
- H. Chemical stains and water spots.
To the degree consistent with industry standards for commercial vehicle finishes, painted surfaces shall have gloss and orange peel shall be minimized. All exterior finished surfaces shall be impervious to diesel fuel, gasoline and commercial cleaning agents. Finished surfaces shall resist damage by controlled applications of commonly used graffiti-removing chemicals.

**TS 1.33 WHEELCHAIR RAMP/LIFT SECUREMENT**

The design and construction of the bus shall be in accordance with all requirements defined in 49 CFR, Part 38, and Subpart B: ADA Accessibility Specifications for Transportation Vehicles - Buses, Vans and Systems.

A front door wheelchair ramp system shall be provided in the low floor buses. The ramp when deployed in the street shall conform to all provisions of the current ADA requirements. The Contractor shall provide a plan submitted with their proposal, including layout drawings for entry, maneuvering, parking, and exiting of wheelchair passengers, to show compliance with ADA regulations. An automatically-controlled, power-operated ramp system compliant to requirements defined in 49 CFR Part 38, Subpart B, §38.23c shall provide ingress and egress quickly, safely, and comfortably, both in forward and rearward directions, for a passenger in a wheelchair from a level street or curb into the low floor buses.

The ramp shall be a, simple hinged, fold over type design. The weight of the wheelchair loading system shall not exceed 200lb. The ramp shall be equipped with a finish flange that permits the installer to trim out the ramp to vehicle floor interface with a simple lap joint. The wheelchair loading system including all pumps, motors and hydraulics, must be completely self-contained and be replaceable within 60 minutes by a mechanic.

The unit shall be cam driven and all components shall be constructed of stainless steel including all exposed surfaces. When the system is not in use, the passageway shall appear normal.

In the stored position of the ramp, no tripping hazards shall be presented and any resulting gaps shall be minimized. The controls shall be simple to operate with no complex phasing operations required, and the loading system operation shall be under the surveillance and complete control of the operator.

The bus shall be prevented from moving during the loading or unloading cycle by a throttle and brake interlock system.

The wheelchair loading system shall not present a hazard, nor inconvenience customer passage.

The loading system shall be inhibited from retracting or folding when a passenger is on the ramp/platform.

A passenger departing or boarding via the ramp shall be able to easily obtain support by grasping the passenger assist located on the doors or other assists provided for this purpose.

The platform shall be designed to protect the ramp from damage and persons on the sidewalk from injury during the extension/retraction or lowering/raising phases of operation.

The loading platform shall be covered with a replaceable or renewable, nonskid material and shall be fitted with devices to prevent the wheelchair from rolling off the sides during loading or unloading.
The stowing and deploying speeds of the ramp shall be adjustable.

The device shall function without failure or adjustment for 500 cycles in all weather conditions on the design operating profile when activated once during the idle phase. A manual override system shall permit unloading a wheelchair and storing the device in the event of a primary power failure.

The ramp assembly components shall be replaceable within 30 minutes by a mechanic. The ramp shall be constructed to permit the bus vendor to provide a substantial structural connection at the front edge of the ramp, between the doorposts to minimize damage to the ramp system resulting from impacts to the lower, front right hand corner of the bus.

Fabrication and assembly of the wheelchair loading system shall be executed under the control of an ISO9001 registered quality assurance system. Installation must be approved by the ramp manufacturer prior to bus delivery.

Two forward-facing locations, as close to the wheelchair loading system as practical, shall provide parking space and securement system compliant with and exceeding ADA requirements for a passenger in a wheelchair.

Restraint devices will be provided at the two (2) Personnel Mobility Aid Devices (PMAD) seating positions to restrain the wheelchairs and their occupants.

Two Q-Straint Q-Pods or equal system will be provided on each bus. To maximize the number of wheelchair positions, additional positions beyond the initial two shall be the QRT MAX. This will include the Q'Straint Slide and Click anchors or equal system will be provided.

The ADA securement system shall be an integral part of the vehicle seating. The seating shall be designed by means of fold-up, convertible seating units to minimize the amount of ambulatory passenger seating losses, provide a safe securement for mobility aid users and allow for a quick, easy to use system for transit supplies.

The system shall include a three (3) point lap and shoulder occupant restraint belt and four (4) mobility aid securement belts optimally placed for stability and adaptable for the widest range of equipment.

This system shall comply with the strength and free movement criteria of the Americans with Disabilities Act (ADA) accessibility guidelines for transportation vehicles; final guidelines per regulation 36 CFR part 1192 and conforming to all applicable Federal Motor Vehicle Safety Standards. (Note: ADA measurements are from the raised seat to the aisle and not from the bus wall to the aisle).

The system's recommended minimum spacing is fifty-three (53") inches in the longitudinal direction and thirty-five (35") inches from the wall (raised seat). The minimum securement area, as specified by ADA, is for mobility aid parking area only and does not take in to account the maneuvering room required by various types of mobility aids.

Also, the area necessary for a driver or an assistant to access the tie-down equipment must be accounted for in the layout. ORT wants to provide maximum space for customer and operator access.
The proposed securement system, design and layout must be submitted with your proposal.

Maneuvering room inside the bus shall accommodate easy travel for a passenger in a wheelchair from the loading device through the bus to the designated parking area, and back out.

No portion of the wheelchair or its occupant shall protrude into the normal aisle of the bus when parked in the designated parking space(s).

As a guide, no width dimension should be less than 34 inches.

From the aisle to the raised seat areas requiring 90-degree turns of wheelchairs should have a clearance arc dimension no less than 45 inches and in the parking area where 180-degree turns are expected. Space should be clear in a full 60-inch diameter circle. A vertical clearance of 12 inches above the floor surface should be provided on the outside of turning areas for wheelchair footrest.

ADA priority seating signs as required and defined by 49 CFR, Part 38.27 shall be provided to identify the seats designated for passengers with disabilities.

Requirements for a public information system in accordance with 49 CFR, Part 38.35 shall be provided.

Requirements for a stop-request passenger signal in accordance with 49 CFR, Part 38.37 shall be provided.

Requirements for exterior destination signs in accordance with 49 CFR, Part 38.39 shall be provided.

**TS 1.34 EXTERNAL ROUTE DISPLAY SIGN SYSTEM**

A TranSign LED Destinator sign system, or equal, shall be furnished and installed in the bus by the vendor. The sign(s) shall be the largest display available for the opening provided.

The sign located near the front door shall not block the operator's critical horizontal line of sight. Display areas of destination signs shall be clearly visible in direct sunlight and/or at night.

Signs shall be installed to allow replacement by a mechanic within 30 minutes. Parts shall be commercially available.

All signs shall be controlled via a single Operator Control Unit. In the absence of a single Mobile Data Terminal (MDT), the OCU shall be conveniently located for the bus operator mounted in such a manner that will not pose any safety hazard.

Color of LED bulbs provided shall be amber, or as otherwise directed by ORT.

The system shall consist of:

- Front sign
- Curb-Side sign
- Rear sign
- Operator Control Unit (OCU)
- Cables and Accessories
The Front Sign shall be mounted on the front of the Bus, near the top edge of the body, behind windshield protection, and in an enclosed but accessible compartment provided by the Bus manufacturer.

The Side Sign shall be located on the right side of the Bus near the front door either mounted near the top of an existing window or in a separate enclosed but accessible weather-proof compartment provided by the Bus manufacturer.

The Rear Sign (external) shall be mounted on TranSign or equal supplied brackets on the rear of the vehicle on an appropriate sized cutout provided by the Bus Manufacturer.

The entire display area of all signs shall be readable in direct sunlight, at night, and in all lighting conditions between those two lighting extremes, with evenly distributed illumination appearance to the un-aided eye.

The system shall be microprocessor-based utilizing approved bi-directional serial communications, such as; S.A.E J1708 between system components, and shall utilize error detection techniques within the communication protocol.

The sign system shall be controlled by one primary controller located in the operator control unit. The system shall be capable of communicating with, and/or controlling additional information devices, such as interior information Signs, Voice Annunciation devices, etc., and must be able to be able to be controlled by any Intelligent Transportation System (ITS) otherwise provided on the bus the system shall provide for destination and/or Public Relations (P/R) message entry.

Flash memory integrated circuits shall be capable of storing and displaying up to 10,000 message lines.

Message memory shall be changeable by the use of a "USB Key" ("thumb drive") sized according to the message listing noted herein.

The System shall have the ability to sequentially display multi-line destination messages, with the route number portion remaining in a constant "on" mode at all times, if so programmed.

The various Signs shall be programmable to display independent messages or the same messages; up to two destination messages and one public relations message shall be pre-selectable.

The operator shall be able to quickly change between the pre-selected messages without re-entering a message code. Public relations messages shall be capable of being displayed alternately with the regular text and route messages or displayed separately.

An emergency message shall be activated by a push button or toggle switch in a location to be approved by ORT. The emergency message shall be displayed on signs facing outside the vehicle while signs inside the vehicle, including the OCU display, remain unchanged.

The emergency message shall be canceled by entering a new destination code, or power cycling (after removal of the emergency signal).
The programming software shall provide means of adjusting the length of time messages are displayed in 0.1 second increments up to twenty-five seconds.

Power to the Sign system shall be controlled by the Master Coach Run Switch. The signs shall operate in all positions of this switch except off. The signs shall be internally protected against voltage transients and RFI interference to ensure proper operation in the local environment.

All Sign displays shall consist of pixels utilizing High Intensity Light Emitting Diodes ("LED"), for superior outdoor environmental performance. LED should be superior UV resistant Epoxy lens and superior resistance to the effects of moisture.

The sign system shall have multi-level intensity changes, which adjust automatically as a function of ambient lighting conditions. There shall be no requirement for any fan or any specialized cooling or air circulation.

This LED shall be mounted such as to be visible directly to the observer positioned in the viewing cone, allowing for full readability 65 degrees either side of the destination sign centerline. The LEDs shall be the only means of illumination of the sign system. The LED illumination source shall have an operating life M.T.B.F. of not less than 100,000 hours. Each LED shall not consume more than 0.02 Watts. Readability and color contrast of all characters formed by the System shall meet the requirements of the Americans with Disabilities Act (ADA) of 1990 Reference 49 CFR Section 38.39.

All Signs shall be enclosed in a manner such as to inhibit entry of dirt, dust, water and other contaminants during normal operation or cleaning. The front, side and block number signs shall be a solid framed design with an integral metal louvered arrangement for optimal optical viewing and maximum thermal dispersion.

Access shall be provided to clean the inside of the Bus window(s) associated with the Sign and to remove or replace the Sign components. Access panels and display boards shall be mounted for ease of maintenance/replacement.

Any exterior Rear Sign enclosure used shall be made of Polycarbonate material containing fiberglass reinforcement.

The vehicle manufacturer shall comply with the Sign manufacturer’s recommended mounting, mounting configuration, and installation procedures to assure optimum visibility and service accessibility of the Sign System and System components.

All Sign System light board components shall be certified to have been subjected to a "burn-in" test of a minimum of twelve (12) hours operation in a temperature of 150 degrees F. prior to final inspection.

The Front Sign message shall be readable by a person with 20/20 vision from a distance not less than 350 feet for signs of display height greater than 8 inches and from a distance not less than 275 feet for display heights less than 8 inches. The Front Sign shall have a viewing cone of equal readability at 65 degrees on either side of a line perpendicular to the center of the mean plane of the display. The intensity of the illumination of the display pixels shall appear, to the naked eye, to be approximately uniform throughout the full viewing cone.
The Side Sign message shall be readable by a person with 20/20 vision, from a distance of not less than 110 feet. The Side Sign shall have a viewing cone of equal readability at 65 degrees on either side of a line perpendicular to the center of the mean plane of the display. The intensity of the illumination of the display pixels shall appear, to the naked eye, to be approximately uniform throughout the full viewing cone.

The Rear Sign shall be capable of independently displaying alpha-numeric characters. Its message shall be readable by a person with 20/20 vision, from a distance of not less than 225 feet. The Rear Sign shall have a viewing cone of equal readability at 65 degrees on either side of a line perpendicular to the center of the mean plane of the display.

The intensity of the illumination of the display pixels shall appear, to the naked eye, to be approximately uniform throughout the full viewing cone.

The OCU Unit shall be used to view and update display messages. It shall be recess mounted on the Bus vehicle front Sign compartment access cover or door. The OCU shall utilize a multi-key conductive rubber pad keyboard and be designed for transit operating conditions.

The OCU Unit shall contain a display of at least two-lines of 20-character capability. The OCU Unit shall contain an audio annunciator that beeps indicating that a key is depressed. The OCU Unit shall continuously display the message associated with the selected destination readings (except the emergency message feature as noted above).

An auxiliary J1939 port shall be made available on the OCU so that auxiliary J1939 commands may be provided to the Electronic Destination Sign System.

A WINDOWS® programming software package shall be supplied, under limited-use license, to generate message lists for the Sign system.

The program shall be designed for ease of deleting and adding messages to a destination Sign listing in a WINDOWS® 7 or later current Operating Environment.

The Programming Software shall be intuitive, of design to facilitate ease of training, and use context-sensitive help features. Reasonable on-site training support shall be provided with the software. This software will provide capability for both standard editing mode and freestyle editing mode. The software should be capable of entering one destination for all signs and automatically place the information in the correct positioning. It should also allow for creation of a custom displays by varying spacing between characters, words, or other message elements. This software also allows for creation of graphic displays with or without text: by selecting preprogrammed graphic sign images and by allowing use of multiple fonts within the same message and graphic symbols placed anywhere within the display area. The software should be backward compatible to support all other sign configurations within the fleet that were produced by the same manufacturer.

The Sign system shall be reprogrammable on the vehicle with the use of a USB Key. A key slot shall be provided on the OCU face for this purpose. The maximum reprogramming time for a 10,000 line listing shall be one minute.
**TS 1.35 OPERATOR’S WORK AREA**

The operator's work area shall be designed to minimize glare to the extent possible.

Objects within and adjacent to this area shall be matte black or dark gray in color wherever possible to reduce the reflection of light onto the windshield. The use of polished metal and light-colored surfaces within and adjacent to the operator's area shall be avoided.

Such objects include dash panels, switches and controls, cowlings, windshield wipers and arms, barriers and modesty panels, fare stanchions, access panels and doors, fasteners, flooring, ventilation and heating ducting, window and door frames, and visors. Interior lighting located ahead of the standee line shall be controlled by the operator.

An adjustable roller type sunscreen shall be provided over the operator's windshield and the operator's side window. The sunscreen shall be capable of being lowered to the midpoint of the operator's window. When deployed, the screen shall be secure, stable and shall not rattle, sway or intrude into the operator's field of view due to the motion of the coach or as a result of air movement. Once lowered, the screen shall remain in the lowered position until returned to the stowed position by the operator.

All switches and controls necessary for the safe operation of the bus shall be conveniently located in the operator’s area and shall provide for ease of operation.

Switches and controls shall be divided into basic groups and assigned to specific areas, in conformance with SAE Recommended Practice J680, revised 1988, Location and Operation of Instruments and Controls in Motor Truck Cabs, and be essentially within the hand reach envelope described in SAE Recommended Practice, J287, Driver Hand Control Reach.

Operational controls, instrumentation, switches, and other system controls shall not be mixed with ventilation diffusers and non-operational controls or readouts. Controls shall be located so that boarding passengers may not easily tamper with control settings.

The door control, kneel ramp control, windshield wiper/washer controls, and run switch shall be in the most convenient operator locations. They shall be identifiable by shape, touch, and permanent markings.

Doors shall be operated by a single control, conveniently located and operable in a horizontal plane by the operator's left hand. The kneeling ramp control shall also be located close to the door control so that it too can be operated by the Operator's left hand. The setting of these controls shall be easily determined by position and touch.

All panel-mounted switches and controls shall be marked with easily read identifiers. Text designating position (on/off) shall be a minimum of 9 points, identifying legends shall be a minimum of 11 points. Extremely condensed or italic type fonts shall not be used. Graphical symbols shall conform to SAE Recommended Practice J2402, Road Vehicles - symbols For Controls, Indicators, and Tell Tales, where available and applicable. Color of switches and controls shall be dark with contrasting typography or symbols. Red type on a black or gray field (or vice versa) shall not be used.
Mechanical switches and controls shall be replaceable, and the wiring at these controls shall be serviceable from the vestibule or the operator's seat. Switches, controls, and instruments shall be dust and water resistant consistent with the bus washing practice described previously.

Operator Controls - The following list for Normal Bus Operation identifies bus controls used to operate the bus safely and efficiently. These controls are frequently used or they are critical to the operation of the bus. They should be located within easy reach of the operator. The operator should not be required to stand or turn his/her body to view or to actuate these controls that include:

- Engine Start Switch or Button
- Transmission Shift Select
- Door
- Turn Signals
- Defroster
- Windshield Wiper
- Four Position Master Run Switch
- Parking Brake
- High Beam
- Hazard Lights
- Kneel & Ramp Controls
- Instrument Panel Lighting Intensity

Accelerator and brake pedals shall be designed for ankle motion. Foot surfaces of the pedals shall be faced with wear-resistant, nonskid, replaceable material.

The Master Run Switch shall be a four-position rotary switch with the following functions:

**OFF** All electrical systems off, except power available for the passenger interior lighting, stoplights, turn lights, hazard lights, radio, silent alarm, horn, fare box, fire detection equipment, engine compartment lights, auxiliary heater, if provided and electronic equipment that require continuous energizing. A timer circuit shall be provided to provide battery cut-off (except for the farebox) after two hours. Electrical loads resulting from the Procuring Agency's devices, such as, farebox, GPS, radio, etc., shall not exceed 1.5 amps with the master run switch in the OFF position.

**CL/ID** All electrical systems off, except those listed in OFF and power to destination signs, interior lights and marker lights.

**RUN** All electrical systems and engine on, except the headlights, parking lights and marker lights. Daytime running lights (DRL) shall be provided and shall be on. (Daytime running lights only on when the engine is on).

**NITE/RUN** All electrical systems and engine on. The door control shall be located on the street side of the operator's area within the hand reach envelope described in SAE Recommended Practice, J287, Driver Hand Control Reach. The front door shall remain in commanded state position even if power is removed or lost. The rear door shall stay open until the Operator control is activated.

Operation of, and power to, the passenger doors shall be completely controlled by the operator. Power to rear doors shall be controlled by the operator.
A control or valve in the operator's compartment shall shut off the power to, and/or dump the power from, the front door mechanism to permit manual operation of the front door with the bus shut down. A master door switch which is not within reach of the seated operator when set in the "Off" position shall close the doors, deactivate the door control system, release the interlocks, and permit only manual operation of the doors.

The operator's area shall have a light to provide general illumination and it shall illuminate the half of the steering wheel nearest the operator to a level of 10 to 15 foot-candles. This light shall be operator controlled by a toggle switch located on the operator's control panel or other approved location.

(1) A three-position toggle switch, labeled "Interior Lights; on (at top), Off, Normal" shall control the lights.
   • "On" turns on all lights in any Master Switch position
   • "Off" turns off lights except as noted in (2) and (3)
   • "Normal" turns on all lights in "Night Run" & "Night Park" except as noted in (2).

(2) The first light on each side (behind the Operator and the front door) is normally turned on only when the front door is opened, in "Night Run" and "Night Park." As soon as the door closes, these lights shall go out. These lights shall be turned on at any time if the toggle switch is in the "On" position.

(3) To help eliminate windshield reflection on suburban roads where street lighting is at a low level, the second light on each side, when "Night Run" or "Night Park" is selected, shall be controlled by the toggle switch; off in "Off" and on in "Normal." (These lights shall be turned on at any time if the toggle switch is in the "On" position.)

(4) All interior lighting shall be turned off whenever the transmission selector is in the reverse and engine run switch is in the "On" position.

Operator Controls - The following list of Special bus controls identifies the controls to initiate system diagnostics, aid the physically handicapped passenger, and control mirrors and speakers, etc. They are less often used than those in Normal Bus Operation. These controls should be within easy reach for viewing and actuation by the operator:

ABS Diagnostics  Test Engine Diagnostic Test
Stop Engine Override  Chime
Drivers Fan  Fast Idle
Mirror Heater (Opt.)  Public Address System
Drivers HVAC  Diagnostic Light Panel Test
Fire Suppression (Opt.)  Destination Sign On/Off (Opt.)
Hill Holder  Remote Mirror Control (Opt.)
Retarder  Kneel/Ramp Control
Heater Blower Interlock

Operator Controls - The following list of Passenger Comfort Controls identifies the bus controls for the interior bus temperature, lighting, air circulation, etc. The settings of these controls are changed infrequently. The operator should be able to see and actuate these controls with minimal effort.

Climate Control  Temperature Select  Aisle Lights
Interior HVAC  Blower
Interior Lights  Dome Lights
The Figure below is provided as an illustrative guide to the desired instrument and control grouping. This Figure is for general reference only and is not intended to be considered as required placement. ORT will take into consideration the Contractor’s recommendation for actual placement prior to contract signing:

Area 1: Operational gauges - speedometer, air pressure (primary and secondary), voltmeter(s), fuel and diagnostics shall be located immediately in front of the operator’s field of view.

Area 2: Operational controls and switches, including but not limited to emergency controls and flashers, transmission controls, and lighting switches, located adjacent the left side of the instruments.

Area 3: Operational controls and switches, including but not limited to washer controls, operator’s climate controls, located adjacent the right side of the instruments.

Area 4: Secondary operating controls including door, kneel and ramp switches, mirror and engine controls, located to the left of the operator ahead of the Seat Reference Point of the 5 percentile female.

Area 5: System function controls, including destination sign keypad, cabin climate controls, fire suppression, located on the operator’s centerline, above operator’s upper sight cutoff line.

Areas 1 & 2: Preferred location for all warning and visual indicator lights.

The angle of the accelerator pedal shall be determined from a horizontal plane regardless of the slope of the cab floor. The accelerator pedal shall be positioned at an angle of 27-35 degrees at the point of initiation of contact, and extend downward to an angle of 10-18 degrees at full throttle. The floor mounted accelerator pedal shall be 10" - 12" long and 3" - 4" wide. The force to depress the accelerator pedal shall be measured at the midpoint of the accelerator. The accelerator force shall be no less than 7 foot pounds and no more than 9 foot pounds.
To preclude movement of the bus, an accelerator interlock shall lock the accelerator in the closed position and a brake interlock shall engage the service brake system when the rear door control is activated. The braking effort shall be adjustable with hand tools. Rear doors shall not open unless the bus speed is below 2 m.p.h. An accelerator interlock shall lock the accelerator in the closed position whenever front doors are open.

The angle of the brake pedal shall be determined from a horizontal plane regardless of the slope of the cab floor. The brake pedal shall be positioned at an angle of 27-35 degrees at the point of initiation of contact, and extend downward to an angle of 20-28 degrees at full depression. The floor mounted brake pedal shall be 10" - 12" long and 3" - 4" wide. The force to depress the brake pedal shall be measured at the midpoint of the brake pedal. The brake pedal force shall be no less than 10-foot pounds and no more than 50-foot pounds.

The accelerator and brake pedals shall be positioned such that the spacing between them, measured at the heel of the pedals, is between 1" and 2". The location of the brake and accelerator pedals shall be determined by the manufacturer, based on space needs, visibility, lower edge of windshield, and vertical H-point. The brake pedal shall have a 0-degree lateral angle, and the accelerator shall have a 12-degree lateral angle to coincide with the position of the operator's leg as it moves outward to operate the accelerator pedal.

The angle of the turn signal platform shall be determined from a horizontal plane, regardless of the slope of the cab floor. The turn signal platform shall be angled at a minimum of 10 degrees and a maximum of 28 degrees. It shall be located no closer to the seat-front than the heel point of the accelerator pedal.

Turn signal controls shall be column mounted, waterproof, heavy-duty, contact switches. High Beam, Hazard, and PA Controls may be floor, column or dash mounted. ORT will rely on the discretion of the Contractor for the best placement of these additional controls.

ORT will rely on the contractor for final placement of all switches and controls and is open to technological advancements for the best visual and audio indicators of these switches and controls.

The speedometer, air pressure gauge(s), and certain indicator lights shall be located in Area 1 Instrument Panel immediately ahead of the steering wheel. The steering wheel spokes or rim shall not obstruct the operator's vision of the instruments when the steering wheel is in the straight-ahead position. Illumination of the instruments shall be simultaneous with the marker lamps. Glare or reflection from the windshield, side window, or front door windows from the instruments, indicators, or other controls shall be minimized. Instruments shall be easily readable in direct sunlight or shielded in such a manner that sunlight does not adversely affect legibility. Instrument covers shall be non-reflective, without electrostatic qualities that attract and hold dust, and shall be resistant to scratching or hazing as a result of cleaning. Text shall be a minimum of 11 points. Extremely condensed or italic type fonts shall not be used. The color of the display field shall be dark with contrasting typography. Indicator lights or illuminated symbols or typography immediately in front of the operator shall be restricted to those concerned with the operation of the vehicle, as identified in the following table.

<table>
<thead>
<tr>
<th>VISUAL INDICATOR</th>
<th>AUDIBLE ALARM</th>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-Up</td>
<td>Backup Alarm</td>
<td>Reverse Gear is Selected</td>
</tr>
<tr>
<td>Hazard</td>
<td>Click</td>
<td>Four-way Flashers Activated</td>
</tr>
</tbody>
</table>
The instrument panel shall include an electronic speedometer indicating no more than 80 mph and calibrated in maximum increments of 5 mph. The speedometer shall be a rotating pointer type, with a dial deflection of 220 to 270 degrees and 40 mph near the top of the dial. The speedometer shall be sized and accurate in accordance with SAE Recommended Practice J678. The speedometer shall be equipped with an odometer with a capacity reading no less than 999,999 miles.

The bus shall be equipped with visual and audible alarms linked to an on-board diagnostic system that will indicate conditions that require immediate action by the operator to avoid an unsafe condition or prevent further damage to the bus. The indicator panel shall be located in Area 1 of the Instrument Panel. The intensity of visual indicators shall permit easy determination of on/off status in bright sunlight or shielded in such a manner that sunlight does not adversely affect legibility. Indicator illumination shall not cause a visibility problem at night. All indicators shall have a method of momentarily testing their operation. 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 operator’s ear. Wherever possible, sensors shall be of the closed-circuit type, so that failure of the circuit and/or sensor shall activate the malfunction indicator.

To avoid unnecessary confusion and anxiety on the part of the operator, on-board displays visible to the operator should be limited to indicating the status of those functions described herein that are necessary for the safe operation of the bus and protection of assets. All other indicators needed for diagnostics and their related interface hardware shall be concealed and protected from unauthorized access. Malfunction and other indicators listed in the following table shall be supplied on all buses.

<table>
<thead>
<tr>
<th>VISUAL INDICATOR</th>
<th>AUDIBLE ALARM</th>
<th>CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>None</td>
<td>ABS System malfunction</td>
</tr>
<tr>
<td>A/C Stop</td>
<td>None</td>
<td>Compressor stopped due to high/low pressure</td>
</tr>
</tbody>
</table>
or loss of refrigerant

<table>
<thead>
<tr>
<th>Check Engine</th>
<th>None</th>
<th>Engine Electronic Control Unit detects a Malfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire</td>
<td>Bell</td>
<td>Over-temperature condition in engine area</td>
</tr>
<tr>
<td>Alternator Fail</td>
<td>None</td>
<td>Loss of alternator output</td>
</tr>
<tr>
<td>Hot Engine</td>
<td>Buzzer</td>
<td>Excessive engine coolant temperature</td>
</tr>
<tr>
<td>Low Air</td>
<td>Buzzer</td>
<td>Insufficient air pressure in primary or secondary Reservoir</td>
</tr>
<tr>
<td>Low Oil</td>
<td>Buzzer</td>
<td>Insufficient engine oil pressure</td>
</tr>
<tr>
<td>Low Coolant</td>
<td>Buzzer</td>
<td>Insufficient engine coolant level</td>
</tr>
<tr>
<td>Wheelchair Ramp</td>
<td>Beeper</td>
<td>Wheelchair ramp is not stowed and disabled</td>
</tr>
</tbody>
</table>

The bus shall be equipped with a variable speed electric windshield wiper for each half of the windshield. For non-synchronized wipers, separate controls for each side shall be supplied. A variable intermittent feature shall be provided to allow adjustment of wiper speed for each side, or a synchronized pair, ranging approximately 5 to 25 cycles per minute. No part of the windshield wiper mechanism shall be damaged by manual manipulation of the arms. At 60 mph, no more than 10 percent of the wiped area shall be lost due to windshield wiper lift. Both wipers shall park along the inner edges of the windshield glass.

Windshield wiper motors and mechanisms shall be easily accessible for repairs or service and shall be removable as complete units. The fastener that secures the wiper arm to the drive mechanism shall be corrosion resistant. The bus headlights shall come on automatically when windshield wipers are in on position.

The windshield washer system shall be a dry arm design to deposit washing fluid on the windshield and, when used with the wipers, shall evenly and completely wet the entire wiped area. If powered by compressed air, all fluid shall be purged from the lines after each use of the washers.

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

Reservoir pumps, lines, and fittings shall be corrosion resistant, and the reservoir itself shall be translucent for easy determination of fluid level.

**TS 1.36 BUS OPERATOR SEAT**

The Bus Operators seat shall be a USSC G2A-Series with 3-point Ready Reach belt or equal.

Three-point seat belts shall be provided across the operator’s lap and diagonally across the operator’s chest. The operator shall be able to use both belts by connecting a single buckle on the right side of the seat cushion.

The belts shall be fastened to the seat and/or the bus structure so that the operator may adjust the seat without resetting the seat belt. Seat belts shall be stored in automatic retractors. Seat belts shall be extended length to accommodate operators of all within the 5th% male/female.
The seat shall have an integrated adjustable D ring that allows for 3” of horizontal/vertical adjustment to the shoulder belt. The seat and seat belt assemblies as installed in the bus shall withstand static horizontal forces as required in FMVSS 207 and 210.

Seat belts shall be extended length to accommodate operators of all sizes and stored in a hard plastic housing. The seatbelt buckle shall have an easy top button design to provide the driver with quick and easy release.

The operator's seat shall be contoured to provide maximum comfort for extended period of time. Cushions shall be fully padded with at least 3 inches of closed-cell polyurethane foam or material with equal properties, in the seating areas at the bottom and back. The seat material shall be black high grade vinyl.

The standard features of the G2A Series must be met as a minimum.

**TS 1.37 ELECTRICAL**

The electrical system and its electronic components shall be capable of operating in the area of the vehicle in which they will be installed.

Electrical and electronic equipment shall not be located in an environment that will reduce the performance or shorten the life of the component or electrical system.

No vehicle component shall generate, or be affected by, electromagnetic interference or frequency Interference (EMI/RFI) that can disturb the performance of electrical/electronic equipment as defined in SAE J1113.

All electrical/electronic hardware shall be accessible and replaced by a mechanic in 60 minutes. Access to front electrical panel shall be unobstructed. It shall be mounted on an insulating panel to facilitate replacement. The mounting of the hardware shall not be used to provide the sole source ground, and all hardware shall be isolated from potential EMI/RFI. Static straps shall be mounted to the under frame of bus to discharge unwanted electro-static electricity to ground.

All electrical/electronic hardware mounted in the interior of the vehicle shall be inaccessible to passengers and hidden from view unless intended to be viewed. The hardware shall be mounted in such a manner as to protect it from splash or spray. All electrical/electronic hardware mounted on the exterior of the vehicle, that is not designed to be installed in an exposed environment, shall be mounted in a sealed enclosure. All electrical/electronic hardware and its mounting shall comply with the shock and vibration requirements of SAE J1455.

The system shall supply a nominal 12V and/or 24V of direct current (DC). Batteries, except those used for auxiliary power, shall be easily accessible for inspection and service from the outside of the vehicle only.

All electrical and battery compartments shall have wiring diagram and identification on panel door.

Two – 8D batteries, or approved equal shall be provided. Each battery shall have a minimum of 1150 cold cranking amps at 0° F. The batteries shall be designed and installed to withstand the operating environment. Batteries shall be tested not more than 3 days prior to bus shipment.
Battery manufacturing dates must be not more than 3 months prior to bus shipment dates, and shall be fully maintained prior to shipment to the Buyer.

The battery terminal ends and cables shall be color-coded with red for the primary positive, black for negative, and another color for any intermediate voltage cables. Battery cables shall be flexible and sufficiently long to reach the batteries with tray in the extended position without stretching or pulling on any connection and shall not lie directly on top of the batteries.

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

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

Ultra-capacitors shall deliver their storage electrical energy at a high crank rate in a variety of extreme temperatures to provide reliable and consistent starting. The ultra-capacitors shall be rated at a minimum of 120 kJ for cold climates and 75 kJ for warmer climates. The batteries and ultra-capacitors shall be designed and installed to withstand the operating environment.

A KBI EC501.2 KA Power Module super capacitor rated at 24Kw and 300 F or equal unit shall be installed in parallel with the batteries as an aid to engine start. The module shall be actuated upon engine start via the Multiplex system and through a solenoid. The solenoid shall be engaged for a period of one minute.

Electrical cables shall be 4/0 and shall not exceed 10 foot in length. The module shall be enclosed within a stainless steel box, and the solenoid shall not be exposed to environmental hazards. A decal shall be installed on the outside of the box to indicate danger of high amp equipment.

A jump-start connector shall be provided in the engine compartment equipped with dust cap and adequately protected from moisture, dirt and debris. A 110v ac to 12v dc unit with automatic battery disconnect may be built into the bus so that when the bus is plugged in from outside power it can provide internal electrical power to the vehicle. The system would be similar to providing a shore power hookup connection to a boat.

A single master switch shall be provided near the battery compartment for the disconnecting of all battery positives (12V & 24V) except for safety devices such as fire suppression system and other systems as specified. The location of the master battery switch shall be clearly identified on the exterior access panel, be accessible in less than 10 seconds for de-activation, and prevent corrosion from fumes and battery acid when the batteries are washed off or are in normal service. Turning the master switch "OFF", with the power plant operating, shall not damage any component of the electrical system. The master switch shall be capable of carrying and interrupting the total circuit load. The batteries may be equipped with a single switch for disconnecting both 12V & 24V power.

The power generating system shall maintain the charge on fully charged batteries, except when the vehicle is at standard idle with a total alternator load exceeding 70 percent of the alternator nameplate rating. Use of fast idle shall maintain a charge on fully charged batteries so long as the total alternator
load does not exceed 90 percent of the alternator nameplate rating. Alternator over-voltage output protection shall be provided.

Power distribution to all equipment requiring dedicated power and ground wiring to the batteries shall be accomplished by using power bus bars consisting of either a solid copper bar or heavy-duty terminal strip. One bus bar for each voltage potential, including ground, shall be located as close to the source of the potential as possible. Cabling from the bus bars to the equipment must be sized to supply the total current requirements with no greater than a five percent volt drop across the length of the cable.

All branch circuits, except battery-to-starting motor and battery-to-generator/alternator circuits, shall be protected by circuit breakers or fuses sized to the requirements of the load. Electronic circuit protection for the cranking system shall be provided to prevent engaging of the system for not more than 30 seconds at a time to prevent overheating. The circuit breakers or fuses shall be easily accessible for authorized personnel. Fuses shall be used only where it can be demonstrated that circuit breakers are not practicable. Any manually re-settable circuit breakers shall provide visible indication of open circuits.

Circuit breakers or fuses shall be sized to a minimum of 15 percent larger than the total circuit load current. The current rating for the wire used for each circuit must exceed the size of the circuit protection being used.

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 four ground connections shall be made per ground stud. Electronic equipment requiring an isolated ground to the battery (i.e., electronic ground) shall not be grounded to the chassis.

All power and ground wiring shall have double electrical insulation, shall be waterproof, and shall conform to specification requirements of SAE Recommended Practice J1127, J1128 and J1292. Double insulation shall be maintained as close to the junction box, electrical compartment, or terminals as possible.

Wiring shall be grouped, numbered, and color-coded. Wiring harnesses shall not contain wires of different voltage classes unless all wires within the harness are insulated for the highest voltage present in the harness. Kinking, grounding at multiple points, stretching, and exceeding minimum bend radius shall be prevented. Strain-relief fittings shall be provided at points where wiring enters all electrical compartments. Grommets or other protective material shall be installed at points where wiring penetrates metal structures outside of electrical enclosures.

Wiring supports shall be protective and non-conductive at areas of wire contact and shall not be damaged by heat, water, solvents, or chafing.

To the extent practicable, wiring shall not be located in environmentally exposed locations under the vehicle. Wiring and electrical equipment necessarily located under the vehicle shall be insulated from water, heat, corrosion, and mechanical damage. Where feasible, front to rear electrical harnesses should be installed above the window line of the vehicle.
All wiring harnesses over five feet long and containing at least five wires shall include 10 percent (minimum one (1)) excess wires for spares. This requirement for spare wires does not apply to data links and/or communication cables.

Wiring length shall allow end terminals to be replaced twice without pulling, stretching, or replacing the wire. Except for large wires such as battery cables, terminals shall be crimped according to connector manufacturer's recommendations for techniques and tools to the wiring and may be soldered only if the wire is not stiffened above the terminal and no flux residue remains on the terminal.

Battery cable connectors shall be crimped and soldered. All solder connections shall be made using noncorrosive rosin-core solder.

Terminals shall be crimped, corrosion-resistant and full ring type or interlocking lugs with insulating ferrules.

When using pressure type screw terminal strips, stranded wire only shall be used. Insulation clearance shall ensure wires have a minimum of visible clearance" and a maximum of two (2) times the conductor diameter or 1/16 ", whichever is less.

When using shielded or coaxial cable, upon stripping of the insulation, the metallic braid shall be free from frayed strands that can penetrate the insulation of the inner wires. Base nut shall be provided on all terminal binding posts and junction block studs where the terminal junction block has not been specifically designed to eliminate the need for a base nut.

Ultra-sonic and T-splices may be used with 7 AWG or smaller wire. When a T-splice is used it shall meet these additional requirements: include a mechanical clamp in addition to solder on the splice; the wire supports no mechanical load in the area of the splice; and the wire is supported to prevent flexing. All splicing shall be staggered in the harness so that no two splices are positioned in the same location within the harness.

For wiring harness connectors, pins shall be removable, crimp contact type of the correct size, and rated for the wire being terminated. All supply-side terminations shall end in a socket, not a pin. Unused pin positions shall be sealed with sealing plugs. Adjacent connectors shall either use opposing pin genders, different insert orientations, or different connectors to prevent incorrect connections. All cable connectors shall be placed to provide adequate space for ease of removal and disconnection. All electrical connectors subjected to environmental exposure outside the passenger compartment shall be corrosion resistant and splash proof.

All electrical components, including switches, relays, flashers, and circuit breakers, shall be heavy-duty designs with either a successful history of application to heavy-duty vehicles, or design specifications for an equivalent environment. These components shall be replaceable in less than 5 minutes by a mechanic.

All electric motors shall be of a heavy-duty brushless type. All electric motors shall be easily accessible for servicing.

All relays, controllers, flashers, circuit breakers, and other electrical components shall be mounted in easily accessible electrical compartments.
All compartments exposed to the outside environment shall be corrosion resistant and sealed. The components and circuits in each electrical compartment shall be identified and their location permanently recorded on a drawing attached to the inside of the access panel or door. The drawing shall be protected from oil, grease, fuel, and abrasion. The front compartment shall be completely serviceable from the operator's seat, vestibule, or from outside. A rear start and run control box shall be mounted in an accessible location in the engine compartment.

If an electronic component has an internal clock, it shall provide its own battery backup to monitor time when battery power is disconnected.

All electronic component suppliers shall ensure that their equipment is self-protecting in the event of shorts in the cabling, and also in over-voltage and reverse polarity conditions. If an electronic component is required to interface with other components, it shall not require external pull-up and/or pull-down resistors.

Kinking, grounding at multiple points, stretching, and exceeding minimum bend radius shall be prevented.

All wiring to I/O devices, either at the harness level or individual wires, shall be labeled, stamped or color-coded in a fashion that allows unique identification. Labels shall be resistant to rubbing (hot stamped tubing and protected printing are service-proven examples of acceptable labels). Wiring for each I/O device shall be bundled together. If the I/O terminals are the same voltages, then jumpers may be used to connect the common of each I/O terminal. All plug terminals and connections shall be compatible with dielectric grease.

All wiring that requires shielding shall meet the following minimum requirements. A shield shall be generated by connecting to a ground, which is sourced from a power distribution bus bar or chassis. A shield shall be connected at one location only, typically at one end of the cable. However, certain standards or special requirements, such as SAE J1939 or RF applications, have separate shielding techniques that shall also be used as applicable. Note: A shield grounded at both end forms a ground loop, which can cause intermittent control or faults. When using shielded or coaxial cable, upon stripping of the insulation, the metallic braid shall be free from frayed strands, which can penetrate the insulation of the inner wires. To prevent the introduction of noise, the shield shall not be connected to the common side of a logic circuit.

RF components, such as radios, video devices, cameras, global positioning systems (GPS), etc., shall use coaxial cable to carry the signal. All RF systems require special design consideration for losses along the cable. Connectors shall be minimized, since each connector and crimp has a loss, which will attribute to attenuation of the signal. Cabling should allow for the removal of antennas or attached electronics without removing the installed cable between them. The corresponding component vendors shall be consulted for proper application of equipment including installation of cables.

Cabling used for microphone level and line level signals shall be 22 AWG minimum with shielded twisted pair. Cabling used for amplifier level signals shall be 18 AWG minimum.

All vehicles shall be equipped with a multiplexing system. The primary purpose of the multiplexing system is control of components necessary to operate the vehicle. This is accomplished by processing
information from input devices and controlling output devices through the use of an internal logic program.

Versatility and future expansion shall be provided for by expandable system architecture. The multiplex system shall be capable of accepting new inputs and outputs through the addition of new modules and/or the utilization of existing spare inputs and outputs. All like components in the multiplex system shall be modular and interchangeable with self-diagnostic capabilities. The modules shall be easily accessible for troubleshooting electrical failures and performing system maintenance. Multiplex input/output modules shall use solid-state devices to provide extended service life and individual circuit protection.

Ten percent (10%) of the total number of inputs and outputs (or at least one each) at each zone location shall be designated as spares. Zone locations are:
(1) behind the rear bulkhead;
(2) forward of the bulkhead above the window line; and
(3) forward of the bulkhead below the window line.

The multiplex system shall have a proven method of determining its status (system health and input/output status) and detecting either active (Online) or inactive (Offline) faults through the use of onboard visual/audible indicators.

All sub-electrical systems including lighting, fare box, radio, and cameras shall shutdown when multiplex system goes into sleep mode. Parasitic loads shall be minimized so bus can be started on its own power after being in sleep mode for 80 hours.

In addition to the indicators, the system shall employ an advanced diagnostic and fault detection system, which shall be accessible via a notebook computer. The multiplex system shall have security provisions to protect its software from unwanted changes. This shall be achieved through any or all of the following procedures: password protection, limited distribution of the configuration software, limited access to the programming tools required to change the software, and hardware protection that prevents undesired changes to the software.

Provisions for programming the multiplex system shall be possible through a notebook computer. The multiplex system shall have proper revision control to insure that the hardware and software is identical on each vehicle equipped with the system.

Revision control shall be provided by all of the following:
• hardware component identification where labels are included on all multiplex hardware to identify components;
• hardware series identification where all multiplex hardware displays the current hardware serial number and firmware revision employed by the module;
• and software revision identification where all copies of the software in service displays the most recent revision number, and a method of determining which version of the software is currently in use in the multiplex system.

TS 1.38 ROUTE MATCH ITS SYSTEM

To maintain consistence with ORT’s current fleet and ITS software, vehicles shall include the provision and installation of the Route Match ITS system and all necessary prewiring for that system. A
complete list of products needed for a “turn-key” operational system may be obtained directly from Route Match.
The following are the minimum required for a complete system:
Tab E 9.6 (WiFi Enabled)
Docking Case
Docking System
Power Cables
Mounting System
Power Distribution Cables
Power Distribution Bracket
RM Velocity V2
Vehicle Logic Unit
Mobile Knowledge Java License
WiFi Antenna
PepLink PepWave MAX BR1
PepLink Power Cables
GPS/4G -2/WiFi Antenna
Annunciation System
Automated Passenger Counting System
All Necessary Cabling, Hardware and Software for a Complete Turn-Key System

TS 1.39 PUBLIC ADDRESS SYSTEM
In the absence or failure of an ITS System provided on the bus, the following will be provided as a backup.
A public address system shall be provided that complies with the ADA requirements of 49 CFR, Part 38.35 and enables the operator to address passengers either inside or outside the bus. Inside speakers shall broadcast, in a clear tone, announcements that are clearly perceived from all seat positions at approximately the same volume level. A speaker shall be provided so announcements can be clearly heard by passengers standing outside the bus near the front door. An operator-controlled switch shall select inside or outside announcements. A separate volume control shall be provided for the outside system if volume adjustment would otherwise be necessary when switching from inside to outside. The system shall be muted when not in use.

TS 1.40 VIDEO SECURITY SYSTEM
Ozark Regional Transit is seeking proposals from qualified Contractors for the purchase and installation of On-board Digital Video Surveillance Systems. Compatibility with ORT’s current AngelTrax system of video recording and playback is preferred.
Each system shall be equipped with the following components:
- One (1) Mobile Digital Video Recorder capable of recording twelve (12) channels of audio and video in 1080P simultaneously, at up to 30 fps, including up to eight (8) HD cameras capable of 1080P video and audio and up to four (4) IP HD cameras capable of up to 1080P (at 1920 x 1080).
- Hot Swappable SATA hard drive with a minimum storage of 1TB of high quality video.
- Eight (8) cameras
- One (1) 3-axis G-Force Sensor.
And to be included as an option are:

- One (1) Passive GPS for each DVR system
- One (1) laptop viewing station consisting of a personal laptop dedicated to playback and review of the DVR's recorded data.

The cameras shall record the following views:

**Interior:**

- Five (5) color IP cameras to be strategically located on the interior of the bus providing coverage of the following passenger areas. Camera shall support a resolution of 1080p or better. Cameras shall include integrated audio.
  - a. Front Passenger Door
  - b. Passenger area Front to Rear
  - c. Rear Passenger Door
  - d. Passenger Area Rear to Front
  - e. Fare box

- One (1) color IP camera to be mounted inside the bus facing forward through the front windshield to capture the road view. Camera shall support a resolution of 1080p or better. Camera shall include integrated audio.

**Exterior:**

- One (1) color IP camera external side view camera to be mounted on the curb side of the bus above the door facing rearward. Camera shall support a resolution of 1080p or better.
- One (1) color IP camera external side view camera to be mounted on the street side of the bus above the driver’s side window facing rearward. Camera shall support a resolution of 1080p or better

Minimum system requirements for the DVR, Cameras and laptop viewing station are included in this RFP

**ADDITIONAL INFORMATION**

**Installation**

- Installation will be performed at a single location.
- Installations can be performed Monday through Friday 8:00 AM to 5:00 PM.
- Removal of existing systems is not applicable to the project.

**Product Delivery**

- Ozark Regional Transit does not have the ability to store any product; therefore, the bidder will be required to make arrangements to provide off-site storage and arrangements to accept any delivery; if needed.
- Ozark Regional Transit does not have a pallet jack, forklift or dock available for use in the delivery of product.
**Prevailing Wages**
- Prevailing Wage requirement is not applicable for this project.

**Wireless Use**
Ozark Regional Transit does not utilize wireless features at this time. Any wireless minimum requirements will be for future use only.

**TS 1.41 BICYCLE RACK**
A two position SportWorks stainless steel or equivalent bicycle rack shall be provided and installed on the front of the bus using a quick release removal bracket. The standard safety and operating instruction decals are required on each bicycle rack. Depending on application a provision for interior or exterior bike rack is required. As an option, and only on the 35’ foot buses, an interior bicycle rack system accessible through the rear door shall be offered in conjunction with an exterior bicycle rack system.
TS 1.42 PROPOSERS VEHICLE TECHNICAL INFORMATION

The Proposer shall submit a completely filled in Technical Information form as part of their proposal submission. A separate form will be completed for each size of bus proposed and for each fueling source of bus proposed.

Example: If a proposer wishes to propose 30’ and 35’ buses both in diesel and CNG, then four separate Technical Information forms must be submitted.

MEASUREMENTS ARE TO BE IN INCHES UNLESS OTHERWISE INDICATED.

PROPOSER COMPANY NAME _______________________________________________________

BUS LENGTH ______________________
• 30/35foot

BUS POWER UNIT __________________________
• Diesel/CNG

BUS MANUFACTURER ____________________________ MODEL __________________________

BASIC BODY CONSTRUCTION
• TYPE ____________________________
• MATERIALS ____________________________

TUBING OR FRAME MEMBER THICKNESS
• OVERSTRUCTURE ____________________________
• UNDERSTRUCTURE ____________________________

SKIN THICKNESS AND MATERIAL
• ROOF ____________________________
• SIDEWALL ____________________________
• SKIRT PANEL ____________________________
• FRONT END ____________________________
• REAR END ____________________________

DIMENSIONS
• BODY LENGTH ____________________________
• OVERALL LENGTH INCLUDING BUMPERS ____________________________
• BODY WIDTH ____________________________
• OVERALL WIDTH INCLUDING MIRRORS ____________________________
• BODY HEIGHT ____________________________
• OVERALL HEIGHT FROM ROAD TO HIGHEST POINT ____________________________

DOORWAY DIMENSIONS
• WIDTH BETWEEN DOOR POSTS (FRONT) _____________ (REAR) _____________
• CLEAR DOOR WIDTH (FRONT) ____________ (REAR) ____________
• DOORWAY HEIGHT (FRONT) ____________ (REAR) ____________

STEP HEIGHT FROM GROUND LEVEL
• RUNNING HEIGHT (FRONT) ____________ (REAR) ____________
• KNEELING HEIGHT (FRONT) ____________ (REAR) ____________

RAMP ANGLE WHEN DEPLOYED
• RUNNING HEIGHT (FRONT) ____________ (REAR) ____________
• KNEELING HEIGHT (FRONT) ____________ (REAR) ____________

ISLE WIDTH ____________

FLOOR RIDE HEIGHT (AT CENTERLINE OF BUS)
• AT FRONT DOOR ____________
• AT FRONT AXLE ____________
• AT REAR DOOR ____________
• AT REAR AXLE ____________

GROUND CLEARANCE AT RUNNING HEIGHT
• FRONT AXLE ____________
• REAR AXLE ____________
• FRONT BUMPER ____________
• REAR BUMPER ____________

OVERHANG FROM AXLE DISTANCE
• CENTER OF FRONT AXLE TO LEADING EDGE OF FRONT BUMPER ____________
• CENTER OF REAR AXLE TO TRAILING EDGE OF REAR BUMPER ____________

HORIZONTAL TURNING ENVELOPE
• OUTSIDE BODY TURNING RADIUS ____________
• INSIDE BODY TURNING RADIUS ____________

WHEELBASE ____________

FLOOR
• INNER LENGTH ____________
• INNER WIDTH ____________

PASSENGER CAPACITY
• AMBULATORY SEAT POSTIONS ____________
• WHEELCHAIR POSTIIONS ____________
• TOTAL STANDEE AREA (SQUARE FOOT) ____________
• MINIMUM HIP TO KNEE DISTANCE ____________
• MINIMUM FOOT ROOM ____________
### WEIGHT OF BUS

<table>
<thead>
<tr>
<th></th>
<th>FRONT AXLE</th>
<th>REAR AXLE</th>
<th>TOTAL</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td></td>
<td>LEFT</td>
<td>RIGHT</td>
<td>TOTAL</td>
<td>LEFT</td>
</tr>
<tr>
<td>EMPTY BUS</td>
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<tr>
<td>FULL FUEL</td>
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<tr>
<td>FULL BUS</td>
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<tr>
<td>FULL FUEL</td>
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<tr>
<td>100% STANDEE LOAD</td>
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<tr>
<td>CRUSH LOAD (1.5XFULL LOADED)</td>
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</tbody>
</table>

### POWER PACK

- MANUFACTURER ___________________________
- MODEL NUMBER ___________________________
- TYPE ________________________________
- CYLINDER COUNT _______________________
- INJECTOR TYPE _________________________
- INJECTOR SIZE _________________________
- NET HORSEPOWER ________ HP @ ________RPM
- NET TORQUE __________FOOT/POUND @ ______RPM
- CRANKCASE OIL CAPACITY
  - NEW ENGINE DRY ______________
  - NEW ENGINE WET ______________
- TURBOCHARGER
  - MAKE_____________________
  - MODEL_____________________
- MAXIMUM SPEED – NO LOAD ___________ @ __________RPM
- MAXIMUM SPEED – FULL LOAD ___________ @ __________RPM
- IDLE RPM _________________________
- FAST IDLE RPM _____________________
- ENGINE INFORMATION/CHARTS/GRAPHS TO BE ATTACHED WITH THIS PROPOSAL
  - ENGINE SPEED VS ROAD SPEED
  - TORQUE VS ENGINE SPEED
  - HORSEPOWER VS ENGINE SPEED
  - FUEL CONSUMPTION VS ENGINE SPEED
  - VEHICLE SPEED VS TIME (LOADED AND UNLOADED)
  - VEHICLE SPEED VS GRADE (LOADED AND UNLOADED)
  - ACCELERATION VS TIME
**TRANSMISSION**
- MANUFACTURER______________________
- MODEL NUMBER_______________________
- TYPE______________________________
- SPEEDS____________________________
- GEAR RATIOS________________________
  - FORWARD__________________________
  - REVERSE__________________________
- SHIFT SPEEDS
  - 1ST TO 2ND_______________________
  - 2ND TO 3RD_______________________
  - 3RD TO 4TH_______________________
  - 4TH TO 5TH (IF APPLICABLE)_________
  - 5TH TO 6TH (IF APPLICABLE)_________
- FLUID CAPACITY (INCLUDING HEAT EXCHANGER AND FILTERS)_______________________
- VOLTAGE REGULATOR
  - MANUFACTURER____________________
  - MODEL NUMBER____________________
- VOLTAGE EQUALIZER
  - MANUFACTURER____________________
  - MODEL NUMBER____________________

**ALTERNATOR**
- MANUFACTURER____________________
- MODEL NUMBER_____________________
- TYPE____________________________
- OUTPUT @ IDLE______________________AMPS
- OUTPUT @ MAX SPEED_______________AMPS
- MAXIMUM SPEED____________________RPM
- SPEED AT IDLE____________________RPM
- DRIVE TYPE________________________

**STARTER MOTOR**
- MANUFACTURER____________________
- MODEL NUMBER____________________
- TYPE____________________________

**AIR COMPRESSOR**
- MANUFACTURER____________________
- MODEL____________________________
- DRIVE TYPE________________________
- RATED CAPACITY____________________CFM
- CAPACITY @ IDLE___________________CFM
- CAPACITY @ MAX SPEED______________CFM
  - GOVERNOR
  - CUT IN PRESSURE___________PSI
• CUT OUT PRESSURE ___________ PSI

FRONT AXLE
• MANUFACTURER__________________
• MODEL NUMBER __________________
• TYPE ___________________________
• GROSS AXLE WEIGHT RATING _______________
• AXLE LOAD ________________________

REAR AXLE
• MANUFACTURER__________________
• MODEL NUMBER __________________
• TYPE ___________________________
• GROSS AXLE WEIGHT RATING _______________
• AXLE LOAD ________________________
• AXLE RATIO ________________________

FRONT SUSPENSION SYSTEM
• MANUFACTURER__________________
• MODEL _______________________
• TYPE _________________________

REAR SUSPENSION SYSTEM
• MANUFACTURER__________________
• MODEL _______________________
• TYPE _________________________

WHEELS AND TIRES
• WHEELS
  • MAKE _________________________
  • SIZE _________________________
  • CAPACITY ____________ LBS
  • MATERIAL ____________________

• TIRES
  • MANUFACTURER__________________
  • TYPE _________________________
  • SIZE _________________________
  • LOAD RANGE/AIR PRESSURE ____________

POWER STEERING
• PUMP
  • MANUFACTURER__________________
  • MODEL NUMBER__________________
  • TYPE _________________________
  • RELIEF PRESSURE _______________ PSI
• BOOSTER/GEAR BOX
  • MANUFACTURER________________ 
  • MODEL NUMBER________________ 
  • TYPE_____________________
  • RATIO___________________

POWER STEERING FLUID CAPACITY ____________________ GALLONS
MAXIMUM EFFORT AT STEERING WHEEL ____________________ LBS
(UNLOADED/STATIONARY ON DRY ASPHALT/PAVEMENT)
STEERING WHEEL DIAMETER ______________________ INCH

BRAKES
• MAKE OF PRIMARY BRAKE SYSTEM_________________
• BRAKE CHAMBER VENDOR
  • FRONT SIZE________________ 
  • FRONT PART NUMBER____________ 
  • REAR SIZE ________________ 
  • REAR PART NUMBER____________
• BRAKE OPERATION EFFORT______________________
• SLACK ADJUSTER VENDOR
  • FRONT TYPE__________ 
  • FRONT PART NUMBER ____________ 
  • REAR TYPE ____________ 
  • REAR PART NUMBER ____________ 
  • FRONT TAKE-UP _____________ INCH 
  • REAR TAKE-UP _______________ INCH

BRAKE DRUM_______DISC________
• FRONT
  • MANUFACTURER________________ 
  • PART NUMBER ________________ 
  • DIAMETER____________________
• REAR
  • MANUFACTURER________________ 
  • PART NUMBER ________________ 
  • DIAMETER____________________

BRAKE LINING
• FRONT
  • MANUFACTURER________________ 
  • TYPE _____________________ 
  • PART NUMBER ______________
• REAR
  • MANUFACTURER________________ 
  • TYPE _____________________
• PART NUMBER

COOLING SYSTEM
• RADIATOR/CHARGE AIR COOLER
  • MANUFACTURER
  • MODEL
  • TYPE
  • FINS PER INCH
  • FIN THICKNESS
• TOTAL COOLING AND HEATING SYSTEM CAPACITY
• RADIATOR FAN SPEED CONTROL TYPE
• SURGE TANK CAPACITY

ENGINE THERMOSTAT TEMPERATURE SETTING
• INITIAL OPENING DEGREES C/F
• FULLY CLOSED DEGREES C/F
• OVERHEAT TEMP ALARM SETTING DEGREES C/F
• SHUTDOWN TEMPERATURE SETTING DEGREES C/F

AIR RESERVOIR CAPACITY
• SUPPLY RESERVOIR CU.IN.
• PRIMARY RESERVOIR CU.IN
• SECONDARY RESERVOIR CU.IN.
• PARKING RESERVOIR CU.IN.
• ACCESSORY RESERVOIR CU.IN.
• OTHER CU.IN.

HEATING/VENTILATING AND AIR CONDITIONING EQUIPMENT
MANUFACTURER
MODEL

HEATING SYSTEM CAPACITY BTU
A/C CAPACITY BTU
VENTILATION CAPACITY CFM

COMPRESSOR
• MANUFACTURER
• MODEL NUMBER
• # OF CYLINDERS
• DRIVE RATIO
• MAXIMUM SPEED RPM
• OPERATING SPEED RPM
• WEIGHT POUNDS
• OIL CAPACITY
  ▪ DRY
  ▪ WET
REFRIGERANT
• TYPE __________________
• CAPACITY ______________ POUNDS

CONDENSER
• MANUFACTURER ____________
• MODEL NUMBER ____________

CONDENSER FAN
• MANUFACTURER ____________
• MODEL NUMBER ____________
• FAN DIAMETER ____________ INCH
• SPEED MAXIMUM ____________ RPM
• FLOW RATE MAXIMUM ____________ RPM

CONDENSER FAN DRIVER MOTORS
• MANUFACTURER ____________
• MODEL NUMBER ____________
• TYPE ______________
• HORSE POWER ____________ HP
• OPERATING SPEED ____________ RPM

EVAPORATOR FAN DRIVE MOTORS
• MANUFACTURER ____________
• MODEL NUMBER ____________
• TYPE ______________
• HORSE POWER __________ HP
• OPERATING SPEED ____________ RPM

EVAPORATOR(S)
• MANUFACTURER ____________
• MODEL NUMBER ____________

FILTER-DRIER
• MANUFACTURER ____________
• MODEL NUMBER ____________

HEATER CORE(S)
• MANUFACTURER ____________
• MODEL NUMBER ____________
• CAPACITY ____________ BTU
• NUMBER OF HEATER CORES ____________

HEATER BLOWERS
• MANUFACTURER ____________
• MODEL NUMBER ____________
- HORSEPOWER__________ HP
- SPEED________________ RPM

HEATER BLOWER WHEEL
- MANUFACTURER_____________
- MODEL NUMBER_____________
- CAPACITY_________CFM

CONTROLS
- MANUFACTURE_____________
- MODEL___________________
- TYPE___________________

DRIVER’S HEAT
- MANUFACTURER_____________
- MODEL___________________
- CAPACITY_________ BTU

INTERIOR LIGHTING
- MANUFACTURER_____________
- TYPE___________________
- NUMBER OF FIXTURES_________________
- SIZE OF FIXTURES_________________

DOORS
- MANUFACTURER OF OPERATING EQUIPMENT_____________
- TYPE OF DOOR FRONT_________________
- TYPE OF DOOR REAR_________________

MIRRORS

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<tr>
<th></th>
<th>SIZE</th>
<th>TYPE</th>
<th>MANUFACTURER</th>
<th>MFG PART #</th>
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<td>CENTER REARVIEW</td>
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<td>FRONT ENTRANCE</td>
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<td>REAR EXIT</td>
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PASSENGER SEATING
- MANUFACTURER_________________
- MODEL_____________________
- FABRIC TYPE_______________
- FABRIC MODEL_______________
• FABRIC COLOR____________________

SEATING CONFIGURATION DIAGRAMS/DRAWINGS ARE TO BE PROVIDED UPON SUBMISSION OF PROPOSAL (MORE THAN ONE PER BUS LENGTH MAY BE SUBMITTED)

BUS OPERATOR SEAT
• MANUFACTURER____________________
• MODEL NUMBER____________________
• COVERING/FABRIC TYPE______________
• SUSPENSION_______________________

PAINT
• MANUFACTURER____________________
• TYPE____________________________
• MINIMUM TOTAL PAINT THICKNESS_______________________

APPLIED GRAPHICS MATERIAL (IF USED IN LIEU OF PAINTED GRAPHICS)
• MANUFACTURER____________________
• MODEL NUMBER____________________
• APPLICATION_______________________

WHEELCHAIR RAMP
• MANUFACTURER____________________
• MODEL NUMBER____________________
• TYPE____________________________
• CAPACITY______________________POUNDS
• WIDTH OF PLATFORM____________________
• LENGTH OF PLATFORM____________________
• SYSTEM FLUID CAPACITY____________________
• MANUAL OPERATION PULL ________________POUNDS

WHEELCHAIR SECUREMENT EQUIPMENT
• MANUFACTURER____________________
• MODEL NUMBER____________________

DESTINATION SIGNS
• MANUFACTURER____________________
• MODEL NUMBER____________________
• LIGHT TYPE_______________________
ELECTRICAL

MULTIPLEX SYSTEM
- MANUFACTURER________________________
- MODEL NUMBER_______________________

BATTERIES
- MANUFACTURER_____________________
- MODEL NUMBER_____________________
- TYPE__________________________

PUBLIC ADDRESS SYSTEM

AMPLIFIER
- MANUFACTURER_____________________
- MODEL NUMBER____________________

MICROPHONE
- MANUFACTURER_____________________
- MODEL NUMBER____________________

INTERNAL SPEAKERS
- MANUFACTURER_____________________
- MODEL NUMBER_____________________
- NUMBER OF SPEAKERS_________________

EXTERNAL SPEAKERS
- MANUFACTURER_____________________
- MODEL NUMBER_____________________
- NUMBER OF SPEAKERS_________________

VIDEO SECURITY SYSTEM
VIDEO SECURITY SYSTEM NAME_____________________
- HARD DRIVE TYPE_____________________
- MANUFACTURER_______________________
- MODEL NUMBER_______________________
- CAMERA TYPE_______________________
• NUMBER OF CAMERAS______________________
• CAMERA MANUFACTURER__________________
• CAMERA MODEL NUMBER_______________
• AUDIO INCLUDED - YES_______ NO________
• PLAYBACK VIEWING STATION YES_____ NO_______
• VIEWING STATION MAKE ________________
• VIEWING STATION MODEL ________________
• VIEWING STATION SCREEN SIZE ________________

BICYCLE RACK
• EXTERIOR
  • MANUFACTURER__________________
  • MODEL NUMBER__________________
  • NUMBER OF BICYCLE POSITIONS______________
• INTERIOR
  • MANUFACTURER__________________
  • MODEL NUMBER__________________
  • NUMBER OF BICYCLE POSITIONS______________

ENGINE FIRE SUPPRESSION SYSTEM
• MANUFACTURER__________________
• MODEL NUMBER__________________
• ACTUATION_____________________

BUS FLOORING
• SUBFLOOR
  • MANUFACTURER__________________
  • BRAND NAME__________________
  • THICKNESS__________________
  • MATERIAL TYPE__________________
• FLOORING
  • MANUFACTURER__________________
  • MODEL NUMBER__________________
  • ADHESION TO SUBFLOOR______________
  • COLOR__________________

COVERT EMERGENCY ALARM BUTTON
• MANUFACTURER__________________
• MODEL NUMBER__________________
• PLACEMENT__________________

ITS SYSTEM
• MANUFACTURER__________________
• COMPATABLE WITH EXISTING SYSTEM – YES____ NO_______
• TURN-KEY SYSTEM – YES____ NO_______
ADDITIONAL EQUIPMENT

• PRE-LOADED DIAGNOSTIC EQUIPMENT
  TECHNICAL INFORMATION TO INCLUDE ALL PROGRAMMING, MAKE, MODEL, REGISTRATIONS
  AND SUBSCRIPTIONS REGARDING DIAGNOSTIC EQUIPMENT IS TO BE PROVIDED WITH
  SUBMISSION OF PROPOSAL

• 3/4 INCH DRIVE HEAVY DUTY TORQUE WRENCH
  TECHNICAL INFORMATION REGARDING SPECIALTY TOOL INCLUDING; MAKE, MODEL AND
  MAXIMUM FT/LBS TO BE PROVIDED WITH SUBMISSION OF PROPOSAL

• A/C RECOVERY AND CHARGING EQUIPMENT
  TECHNICAL INFORMATION REGARDING SPECIALTY EQUIPMENT INCLUDING; MAKE, MODEL TO
  BE PROVIDED WITH SUBMISSION OF PROPOSAL
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28. Disadvantaged Business Enterprises (DBE)
29. [Reserved]
30. Incorporation of Federal Transit Administration (FTA) Terms
31. Prompt Payment
32. ADA Access

In addition to the certifications noted above, complete and return the following certifications with your Proposal:
• Certification to Federal Government Required Clauses (FTA)
• DBE Approval Certification
• Disadvantaged Business Enterprise & Equal Employment Opportunity Certifications
• Certification of Compliance with Federal Motor Vehicle Safety Standards (FMVSS)
• Compliance with the Americans with Disabilities Act

1. FLY AMERICA REQUIREMENTS
49 U.S.C. § 40118
41 CFR Part 301-10
The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and sub-recipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

2. BUY AMERICA REQUIREMENTS
The Contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. § 661.11. The bidder or offeror must submit to Recipient the appropriate Buy America certification below with its (bid or offer). Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

In accordance with 49 C.F.R. § 771.6, for the procurement of steel, iron or manufactured products, use the certifications below.
Certificate of Compliance with Buy America Requirements
The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 C.F.R. Part 661
Date ____________________________________________________________
Signature_________________________________________________________
Company_________________________________________________________
Name____________________________________________________________
Title _____________________________________________________________
Certificate of Non-Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in C.F.R. 661.7.

Date _________________________________________________________________

Signature _____________________________________________________________

Company _____________________________________________________________

Name ________________________________________________________________

Title _________________________________________________________________
In accordance with 49 C.F.R. § 661.12, for the procurement of rolling stock (including train control, communication, and traction power equipment) use the following certifications:

Certificate of Compliance with Buy America Rolling Stock Requirements
The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j), and the applicable regulations at 49 C.F.R. § 661.11.

Date ____________________________
Signature ____________________________
Company ____________________________
Name ____________________________
Title ____________________________

Certificate of Non-Compliance with Buy America Rolling Stock Requirements
The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but may qualify for an exception consistent with 49 U.S.C. 5323(j)(2)(C), and the applicable regulations in 49 C.F.R. § 661.7.

Date ____________________________
Signature ____________________________
Company ____________________________
Name ____________________________
Title ____________________________

3. [ RESERVED ]

4. CARGO PREFERENCE REQUIREMENTS
Contracts involving equipment, materials or commodities which may be transported by ocean vessels. These requirements do not apply to micro-purchases ($3,000 or less, except for construction contracts over $2,000).

The Contractor shall:

a. use privately owned US-Flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, material or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for US flag commercial vessels;

b. to furnish within 20 working days following the loading date of shipments originating within the US or within 30 working days following the loading date of shipments originating outside the US, a legible copy of a rated, "on-board" commercial bill-of-lading in English for each shipment of cargo described herein.
to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the recipient (through contractor in the case of a subcontractor's bill-of-lading); c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract involves the transport of equipment, material or commodities by ocean vessel.

5. [ RESERVED ]

6. ENERGY CONSERVATION REQUIREMENTS

42 U.S.C. 6321 et seq.
49 CFR Part 18

Energy Conservation - The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

7. CLEAN WATER REQUIREMENTS

Clean Water –
The Recipient agrees to include adequate provisions in each third party agreement exceeding $100,000 to ensure that each Third Party Participant will agree to the following:
(1) It will not use any violating facilities,
(2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA “List of Violating Facilities,”
(3) It will report violations of use of prohibited facilities to FTA and the Regional U.S. EPA Office, and

8. BUS TESTING

49 U.S.C. 5318(e) 49 CFR Part 665

Bus Testing - The Contractor [Manufacturer] agrees to comply with 49 U.S.C. A 5318(e) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following:
1) A Manufacturer of a new bus model or a bus produced with a major change in components or configuration shall provide a copy of the final test report to the recipient at a point in the procurement process specified by the recipient which will be prior to the recipient's final acceptance of the first vehicle.
2) A Manufacturer who releases a report under Paragraph 1 above shall provide notice to the operator of the testing facility that the report is available to the public.
3) If the Manufacturer represents that the vehicle was previously tested, the vehicle being sold should have the identical configuration and major components as the vehicle in the test report, which must be provided to the recipient prior to recipient's final acceptance of the first vehicle. If the configuration or components are not identical, the Manufacturer shall provide a description of the change and the Manufacturer's basis for concluding that it is not a major change requiring additional testing.
4) If the Manufacturer represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the Manufacturer shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.
CERTIFICATION OF COMPLIANCE WITH FTA'S BUS TESTING REQUIREMENTS
The undersigned [Contractor/Manufacturer] certifies that the vehicles offered in this procurement comply and will, when delivered, comply with 49 U.S.C. A 5318(e) and FTA's implementing regulation at 49 CFR Part 665.

The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation's regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a Manufacturer under the procedures in 49 CFR Part 29.

Date: _______________________________________________________________________

Signature: ____________________________________________________________________

Company Name: _______________________________________________________________

Title: _________________________________________________________________________

FEDERAL BUS TESTING NARRATIVE
1. Will Federal Bus Testing be required for the model, type and power train configuration of the buses and other equipment described in these specifications?
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

2. If the answer to Question #1 is “yes”, Please provide the following in narrative form below:
   a. The reasons why Federal Bus Testing will be required
   b. The expected schedule for the beginning and completion of such test
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Company Name: ____________________________

Authorized Representative: ____________

Title: ________________________________

Signature _________________________

Date: ________________
9. PRE-AWARD AND POST DELIVERY AUDITS REQUIREMENTS
49 U.S.C. 5323
49 CFR Part 663

Contractor shall comply with 49 USC 5323(l) and FTA's implementing regulation 49 CFR 663 and submit the following certifications:

1) Buy America Requirements: Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If contractor certifies compliance with Buy America, it shall submit documentation listing:
   A. Component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and
   B. The location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.

C. Solicitation Specification Requirements: Contractor shall submit evidence that it will be capable of meeting the bid specifications.

D. Federal Motor Vehicle Safety Standards (FMVSS): Contractor shall submit 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer's certified statement that the buses will not be subject to FMVSS regulations.
BUY AMERICA CERTIFICATE OF COMPLIANCE WITH FTA REQUIREMENTS FOR BUSES, OTHER ROLLING STOCK, OR ASSOCIATED EQUIPMENT

The Contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. § 661.11. The bidder or offeror must submit to Recipient the appropriate Buy America certification below with its (bid or offer). Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

In accordance with 49 C.F.R. § 661.12, for the procurement of rolling stock (including train control, communication, and traction power equipment) use the following certifications:

Certificate of Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j), and the applicable regulations at 49 C.F.R. § 661.11.

Date _________________________________________________________________

Signature _____________________________________________________________

Company _____________________________________________________________

Name ________________________________________________________________

Title _________________________________________________________________

Certificate of Non-Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but may qualify for an exception consistent with 49 U.S.C. 5323(j)(2)(C), and the applicable regulations in 49 C.F.R. § 661.7.

Date _________________________________________________________________

Signature _____________________________________________________________

Company _____________________________________________________________

Name ________________________________________________________________

Title _________________________________________________________________

10. LOBBYING


Contractors who apply or bid for an award of $100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements
(To be submitted with each bid or offer exceeding $100,000)

The Recipient agrees that neither it nor any Third Party Participant will use federal assistance to influence any officer or employee of a federal agency, member of Congress or an employee of a member of Congress, or officer or employee of Congress on matters that involve the Underlying Agreement, including any extension or modification, according to the following:

(1) Laws, Regulations, Requirements, and Guidance.
   (a) The Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352, as amended,
   (c) Other applicable federal laws, regulations, requirements, and guidance prohibiting the use of federal assistance for any activity concerning legislation or appropriations designed to influence the U.S. Congress or a state legislature, and

(2) Exception. If permitted by applicable federal law, regulations, or guidance, such lobbying activities described above may be undertaken through the Recipient’s or Subrecipient’s proper official channels.

The Recipient, __________________, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, et seq., apply to this certification and disclosure, if any.

__________________________ Signature of Contractor's Authorized Official

__________________________ Name and Title of Contractor's Authorized Official

__________________________ Date
11. ACCESS TO RECORDS AND REPORTS

Access to Records - The following access to records requirements apply to this Contract:
1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a sub-grantee of the FTA Recipient in accordance with 49 C.F.R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.
2. Where the Purchaser is a State and is the FTA Recipient or a sub-grantee of the FTA Recipient in accordance with 49 C.F.R. 633.17, Contractor agrees to provide the Purchaser, the FTA Administrator or his authorized representatives, including any PMO Contractor, access to the Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311. By definition, a major capital project excludes contracts of less than the simplified acquisition threshold currently set at $100,000.
3. Where the Purchaser enters into a negotiated contract for other than a small purchase or under the simplified acquisition threshold and is an institution of higher education, a hospital or other non-profit organization and is the FTA Recipient or a sub-grantee of the FTA Recipient in accordance with 49 C.F.R. 19.48, Contractor agrees to provide the Purchaser, FTA Administrator, the Comptroller General of the United States or any of their duly authorized representatives with access to any books, documents, papers and record of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
4. Where any Purchaser which is the FTA Recipient or a sub-grantee of the FTA Recipient in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined at 49 U.S.C. 5302(a)1) through other than competitive bidding, the Contractor shall make available records related to the contract to the Purchaser, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
5. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
6. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three (3) years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
7. FTA does not require the inclusion of these requirements in subcontracts.
12. FEDERAL CHANGES
49 CFR Part 18

Federal Changes - Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

13. [ RESERVED ]

14. CLEAN AIR

The Recipient agrees to include adequate provisions in each third party agreement exceeding $100,000 to ensure that each Third Party Participant will agree to the following:
(1) It will not use any violating facilities,
(2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA “List of Violating Facilities,”
(3) It will report violations of use of prohibited facilities to FTA and the Regional U.S. EPA Office, and (4) It will comply with the inspection and other requirements of section 306 of the Clean Air Act, as amended, 42 U.S.C. § 7606, and other requirements of the Clean Air Act, as amended, 42 U.S.C. §§ 7401 – 7671q.

15. Contract Work Hours & Safety Standards Act

Applicability – Contracts over $100,000
(1) Overtime requirements - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
(2) Violation; liability for unpaid wages; liquidated damages - In the event of any violation of the clause set forth in para. (1) of this section, contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in para. (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in para. (1) of this section.
(3) Withholding for unpaid wages and liquidated damages - the recipient shall upon its own action or upon written request of USDOL withhold or cause to be withheld, from any moneys payable on account of work performed by contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours & Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in para. (2) of this section.
(4) Subcontracts - Contractor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier
subcontracts. Prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

16. [ RESERVED ]

17. [ RESERVED ]

18. [ RESERVED ]

19. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

No Obligation by the Federal Government.
(1) The Purchaser and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
(2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

20. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

31 U.S.C. 3801 et seq.
49 U.S.C. 5307

Program Fraud and False or Fraudulent Statements or Related Acts.
(1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
(2) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.
(3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.
21. TERMINATION

a. Termination for Convenience (General Provision) the recipient may terminate this contract, in whole
or in part, at any time by written notice to contractor when it is in the recipient’s best interest.
Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to
the time of termination. Contractor shall promptly submit its termination claim to the recipient. If
contractor is in possession of any of the recipient’s property, contractor shall account for same, and
dispose of it as the recipient directs.
b. Termination for Default [Breach or Cause] (General Provision) If contractor does not deliver items in
accordance with the contract delivery schedule, or, if the contract is for services, and contractor fails to
perform in the manner called for in the contract, or if contractor fails to comply with any other
provisions of the contract, the recipient may terminate this contract for default. Termination shall be
effected by serving a notice of termination to contractor setting forth the manner in which contractor is
in default. Contractor shall only be paid the contract price for supplies delivered and accepted, or for
services performed in accordance with the manner of performance set forth in the contract.
If it is later determined by the recipient that contractor had an excusable reason for not performing,
such as a strike, fire, or flood, events which are not the fault of or are beyond the control of contractor,
the recipient, after setting up a new delivery or performance schedule, may allow contractor to continue
work, or treat the termination as a termination for convenience.
c. Opportunity to Cure (General Provision) the recipient in its sole discretion may, in the case of a
termination for breach or default, allow contractor an appropriately short period of time in which to
cure the defect. In such case, the notice of termination shall state the time period in which cure is
permitted and other appropriate conditions
If contractor fails to remedy to the recipient’s satisfaction the breach or default or any of the terms,
covenants, or conditions of this Contract within ten (10) days after receipt by contractor or written
notice from the recipient setting forth the nature of said breach or default, the recipient shall have the
right to terminate the Contract without any further obligation to contractor. Any such termination for
default shall not in any way operate to preclude the recipient from also pursuing all available remedies
against contractor and its sureties for said breach or default.
d. Waiver of Remedies for any Breach In the event that the recipient elects to waive its remedies for any
breach by contractor of any covenant, term or condition of this Contract, such waiver by the recipient
shall not limit its remedies for any succeeding breach of that or of any other term, covenant, or
condition of this Contract.
e. Termination for Convenience (Professional or Transit Service Contracts) the recipient, by written
notice, may terminate this contract, in whole or in part, when it is in the recipient’s interest. If the
contract is terminated, the recipient shall be liable only for payment under the payment provisions of
this contract for services rendered before the effective date of termination.
f. Termination for Default (Supplies and Service) If contractor fails to deliver supplies or to perform the
services within the time specified in this contract or any extension or if the contractor fails to comply
with any other provisions of this contract, the recipient may terminate this contract for default. The
recipient shall terminate by delivering to contractor a notice of termination specifying the nature of
default. Contractor shall only be paid the contract price for supplies delivered and accepted, or services
performed in accordance with the manner or performance set forth in this contract.
If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in
default, the rights and obligations of the parties shall be the same as if termination had been issued for
the recipient’s convenience.
g. Termination for Default (Transportation Services) If contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract or any extension or if contractor fails to comply with any other provisions of this contract, the recipient may terminate this contract for default. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature of default. Contractor shall only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract.

If this contract is terminated while contractor has possession of the recipient goods, contractor shall, as directed by the recipient, protect and preserve the goods until surrendered to the recipient or its agent. Contractor and the recipient shall agree on payment for the preservation and protection of goods. Failure to agree on an amount shall be resolved under the Dispute clause. If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in default, the rights and obligations of the parties shall be the same as if termination had been issued for the recipient’s convenience.

h. Termination for Default (Construction) If contractor refuses or fails to prosecute the work or any separable part, with the diligence that will insure its completion within the time specified, or any extension, or fails to complete the work within this time, or if contractor fails to comply with any other provisions of this contract, the recipient may terminate this contract for default. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature of default. In this event, the recipient may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. Contractor and its sureties shall be liable for any damage to the recipient resulting from contractor’s refusal or failure to complete the work within specified time, whether or not contractor’s right to proceed with the work is terminated. This liability includes any increased costs incurred by the recipient in completing the work.

Contractor’s right to proceed shall not be terminated nor shall contractor be charged with damages under this clause if:

1. Delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of contractor. Examples of such causes include: acts of God, acts of the recipient, acts of another contractor in the performance of a contract with the recipient, epidemics, quarantine restrictions, strikes, freight embargoes; and

2. Contractor, within 10 days from the beginning of any delay, notifies the recipient in writing of the causes of delay. If in the recipient’s judgment, delay is excusable, the time for completing the work shall be extended. The recipient’s judgment shall be final and conclusive on the parties, but subject to appeal under the Disputes clauses.

If, after termination of contractor’s right to proceed, it is determined that contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if termination had been issued for the recipient’s convenience.

i. Termination for Convenience or Default (Architect & Engineering) the recipient may terminate this contract i obligations. The recipient shall terminate by delivering to contractor a notice of termination specifying the nature, extent, and effective date of termination. Upon receipt of the notice, contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the recipient all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process. If termination is for the recipient’s convenience, it shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services. If termination is for contractor’s failure to fulfill contract obligations, the recipient may complete the work by contact or otherwise and contractor shall be liable for any additional cost incurred by the recipient.
If, after termination for failure to fulfill contract obligations, it is determined that contractor was not in default, the right and obligations of the parties shall be the same as if termination had been issued for the recipient’s convenience.

j. Termination for Convenience or Default (Cost-Type Contracts) the recipient may terminate this contract, or any portion of it, by serving a notice or termination on contractor. The notice shall state whether termination is for convenience of the recipient or for default of contractor. If termination is for default, the notice shall state the manner in which contractor has failed to perform the requirements of the contract. Contractor shall account for any property in its possession paid for from funds received from the recipient, or property supplied to contractor by the recipient. If termination is for default, the recipient may fix the fee, if the contract provides for a fee, to be paid to contractor in proportion to the value, if any, of work performed up to the time of termination. Contractor shall promptly submit its termination claim to the recipient and the parties shall negotiate the termination settlement to be paid to contractor. If termination is for the recipient’s convenience, contractor shall be paid its contract close-out costs, and a fee, if the contract provided for payment of a fee, in proportion to the work performed up to the time of termination.

If, after serving a notice of termination for default, the recipient determines that contractor has an excusable reason for not performing, such as strike, fire, flood, events which are not the fault of and are beyond the control of contractor, the recipient, after setting up a new work schedule, may allow contractor to continue work, or treat the termination as a termination for convenience.

22. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)
The Recipient agrees to the following:
(1) It will comply with the requirements of 2 C.F.R. part 180, subpart C, as adopted and supplemented by U.S. DOT regulations at 2 C.F.R. part 1200, which include the following:
(a) It will not enter into any arrangement to participate in the development or implementation of the Project with any Third Party Participant that is debarred or suspended except as authorized by: 1 U.S. DOT regulations, “Non-procurement Suspension and Debarment,” 2 C.F.R. part 1200, 2 U.S. OMB, “Guidelines to Agencies on Government-wide Debarment and Suspension (Non-procurement),” 2 C.F.R. part 180, including any amendments thereto, and 3 Executive Orders Nos. 12549 and 12689, “Debarment and Suspension,” 31 U.S.C. § 6101 note,
(b) It will review the U.S. GSA “System for Award Management,” https://www.sam.gov, if required by U.S. DOT regulations, 2 C.F.R. part 1200, and (c) It will include, and require each of its Third Party Participants to include, a similar provision in each lower tier covered transaction, ensuring that each lower tier Third Party Participant: 1 Will comply with Federal debarment and suspension requirements, and 2 Reviews the “System for Award Management” at https://www.sam.gov, if necessary to comply with U.S. DOT regulations, 2 C.F.R. part 1200, and
(2) If the Recipient suspends, debars, or takes any similar action against a Third Party Participant or individual, the Recipient will provide immediate written notice to the:
(a) FTA Regional Counsel for the Region in which the Recipient is located or implements the Project,
(b) FTA Project Manager if the Project is administered by an FTA Headquarters Office, or
(c) FTA Chief Counsel.

23. [ RESERVED ]

24. CIVIL RIGHTS REQUIREMENTS
The following requirements apply to the underlying contract:
a. The Recipient agrees that it must comply with applicable federal civil rights laws, regulations, requirements, and guidance, and follow applicable federal guidance, except as the Federal Government determines otherwise in writing. Therefore, unless a Recipient or a federal program, including the Tribal Transit Program or the Indian Tribe Recipient, is specifically exempted from a civil rights statute, FTA requires compliance with that civil rights statute, including compliance with equity in service.

b. Nondiscrimination in Federal Public Transportation Programs. The Recipient agrees to, and assures that it and each Third Party Participant, will: (1) Prohibit discrimination based on the basis of race, color, religion, national origin, sex, disability, or age. (2) Prohibit the: (a) Exclusion from participation in employment or a business opportunity for reasons identified in 49 U.S.C. § 5332, (b) Denial of program benefits in employment or a business opportunity identified in 49 U.S.C. § 5332, or (c) Discrimination, including discrimination in employment or a business opportunity identified in 49 U.S.C. § 5332. (3) Follow: (a) The most recent edition of FTA Circular 4702.1, “Title VI Requirements and Guidelines for Federal Transit Administration Recipients,” to the extent consistent with applicable federal laws, regulations, requirements, and guidance, and other applicable federal guidance that may be issued, but (b) FTA does not require an Indian Tribe to comply with FTA program-specific guidelines for Title VI when administering its Underlying Agreement supported with federal assistance under the Tribal Transit Program.

c. Nondiscrimination – Title VI of the Civil Rights Act. The Recipient agrees to, and assures that each Third Party Participant, will: (1) Prohibit discrimination based on race, color, or national origin, (2) Comply with: (a) Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d et seq., (b) U.S. DOT regulations, “Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964,” 49 C.F.R. part 21, and (c) Federal transit law, specifically 49 U.S.C. § 5332, and (3) Follow: (a) The most recent edition of FTA Circular 4702.1, “Title VI Requirements and Guidelines for Federal Transit Administration Recipients,” to the extent consistent with applicable federal laws, regulations, requirements, and guidance, (b) U.S. DOJ, “Guidelines for the enforcement of Title VI, Civil Rights Act of 1964,” 28 C.F.R. § 50.3, and (c) All other applicable federal guidance that may be issued.

d. Equal Employment Opportunity. (1) Federal Requirements and Guidance. The Recipient agrees to, and assures that each Third Party Participant will, prohibit, discrimination on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin, and: (a) Comply with Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e et seq., (b) Facilitate compliance with Executive Order No. 11246, “Equal Employment Opportunity” September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it in part and is applicable to federal assistance programs, (c) Comply with federal transit law, specifically 49 U.S.C. § 5332, as provided in section 12.a of this Master Agreement, (d) FTA Circular 4704.1, “Equal Employment Opportunity Program Guidelines for Grant Recipients,” July 26, 1988, and (e) Follow other federal guidance pertaining to Equal Employment Opportunity laws, regulations, and requirements, and prohibitions against discrimination on the basis of disability, (2) Specifics. The Recipient agrees to, and assures that each Third Party Participant will: (a) Prohibited Discrimination. As provided by Executive Order No. 11246, as amended by any later Executive Order that amends or supersedes it, and as specified by U.S. Department of Labor regulations, ensure that applicants for employment are employed and employees are treated during employment without discrimination on the basis of their race, color, religion, national origin, disability, age, sexual orientation, gender identity, or status as a parent, (b) Affirmative Action. Take affirmative action that includes, but is not limited to: 1. Recruitment advertising, recruitment, and employment, 2. Rates of pay and other forms of compensation, 3. Selection for training, including apprenticeship, and upgrading, and 4. Transfers, demotions, layoffs, and terminations, but (c) Indian Tribe. Recognize that Title VII of the Civil Rights Act of 1964, as amended, exempts Indian Tribes under the definition of “Employer,” and (3) Equal

e. Disadvantaged Business Enterprise. To the extent authorized by applicable federal laws and regulations, the Recipient agrees to facilitate, and assures that each Third Party Participant will facilitate, participation by small business concerns owned and controlled by socially and economically disadvantaged individuals, also referred to as “Disadvantaged Business Enterprises” (DBEs), in the Underlying Agreement as follows: (1) Statutory and Regulatory Requirements. The Recipient agrees to comply with: (a) Section 1101(b) of the FAST Act, 23 U.S.C. § 101 note, (b) U.S. DOT regulations, “Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs,” 49 C.F.R. part 26, and (c) Federal transit law, specifically 49 U.S.C. § 5332, as provided in section 12.a of this Master Agreement. (2) DBE Program Requirements. A Recipient that receives planning, capital and/or operating assistance and that will award prime third party contracts exceeding $250,000 in a federal fiscal year must have a DBE program meeting the requirements of 49 C.F.R. part 26; that is approved by FTA, and establish an annual DBE participation goal. (3) Special Requirements for a Transit Vehicle Manufacturer (TVM). The Recipient agrees that: (a) TVM Certification. Each TVM, as a condition of being authorized to bid or propose on FTA-assisted transit vehicle procurements, must certify that it has complied with the requirements of 49 C.F.R. part 26, and (b) Reporting TVM Awards. Within 30 days of any third party contract award for a vehicle purchase, the Recipient must submit to FTA the name of the TVM contractor and the total dollar value of the third party contract, and notify FTA that this information has been attached to FTA’s electronic award and management system, the Recipient must also submit subsequent notifications if options are exercised in subsequent years to ensure the TVM is still in good standing. (4) Assurance. As required by 49 C.F.R. § 26.13(a): (a) Recipient Assurance. The Recipient agrees and assures that: 1 It must not discriminate on the basis of race, color, national origin, or sex in the award and performance of any FTA or U.S. DOT-assisted contract, or in the administration of its DBE program or the requirements of 49 C.F.R. part 26, 2 It must take all necessary and reasonable steps under 49 C.F.R. part 26 to ensure nondiscrimination in the award and administration of U.S. DOT-assisted contracts, 3 Its DBE program, as required under 49 C.F.R. part 26 and as approved by U.S. DOT, is incorporated by reference and made part of the Underlying Agreement, and 4 Implementation of its DBE program approved by U.S. DOT is a legal obligation and failure to carry out its terms shall be treated as a violation of this Master Agreement. (b) Sub-recipient/Third Party Contractor/Third Party Subcontractor Assurance. The Recipient agrees and assures that it will include the following assurance in each sub-agreement and third party contract it signs with a Sub-recipient or Third Party Contractor and agrees to obtain the agreement of each of its Sub-recipients, Third Party Contractors, and Third Party Subcontractors to include the following assurance in every sub-agreement and third party contract it signs: 1 The Sub-recipient, each Third Party Contractor, and each Third Party Subcontractor must not discriminate on the basis of race, color, national origin, or sex in the award and performance of any FTA or U.S. DOT-assisted sub-agreement, third party contract, and third party subcontract, as applicable, and the administration of its DBE program or the requirements of 49 C.F.R. part 26, 2 The Sub-recipient, each Third Party Contractor, and each Third Party Subcontractor must take all necessary and reasonable steps under 49 C.F.R. part 26 to ensure nondiscrimination in the award and administration of U.S. DOT-assisted sub-agreements, third party contracts, and third party subcontracts, as applicable, 3 Failure by the Sub-recipient and any of its Third Party Contractors or Third Party Subcontractors to carry out the requirements of this subparagraph 13.d(4)(b) is a material breach of this sub-agreement, third party contract, or third party
subcontract, as applicable, and 4 The following remedies, or such other remedy as the Recipient deems appropriate, include, but are not limited to, withholding monthly progress payments; assessing sanctions; liquidated damages; and/or disqualifying the Sub-recipient, Third Party Contractor, or Third Party Subcontractor from future bidding as non-responsible. (5) Remedies. Upon notification to the Recipient of its failure to carry out its approved program, FTA or U.S. DOT may impose sanctions as provided for under 49 C.F.R. part 26, and, in appropriate cases, refer the matter for enforcement under either or both 18 U.S.C. § 1001, and/or the Program Fraud Civil Remedies Act of 1986, 31 U.S.C. § 3801 et seq.


h. Nondiscrimination on the Basis of Disability. The Recipient agrees to comply with the following federal prohibitions against discrimination on the basis of disability: (1) Federal laws, including: (a) section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination on the basis of disability in the administration of federally assisted Programs, Projects, or activities, (b) The Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. § 12101 et seq., which requires that accessible facilities and services be made available to individuals with disabilities: 1 For FTA Recipients generally, Titles I, II, and III of the ADA apply, but 2 For Indian Tribes, Titles II and III of the ADA apply, but Title I of the ADA does not apply because it exempts Indian Tribes from the definition of “employer,” (c) The Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., which requires that buildings and public accommodations be accessible to individuals with disabilities, (d) Federal transit law, specifically 49 U.S.C. § 5332, which now includes disability as a prohibited basis for discrimination, and (e) Other applicable federal laws, regulations and requirements pertaining to access for seniors or individuals with disabilities.


k. Other Nondiscrimination Laws, Regulations, Requirements, and Guidance. The Recipient agrees to comply with other applicable federal nondiscrimination laws, regulations, and requirements, and follow federal guidance prohibiting discrimination. l. Remedies. Remedies for failure to comply with applicable federal Civil Rights laws, regulations, requirements, and guidance may be enforced as provided in those federal laws, regulations, or requirements.

25. BREACHES AND DISPUTE RESOLUTION
49 CFR Part 18
FTA Circular 4220.1E

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of the Agency’s Representative. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Representative. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Representative of (Recipient) shall be binding upon the Contractor and the Contractor shall abide be the decision.

Performance During Dispute - Unless otherwise directed by the Agency, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the Agency and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the Agency is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by (Recipient) or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor
shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

26. [ RESERED ]

27. [ RESERV ED ]

28. DISADVANTAGED BUSINESS ENTERPRISE (DBE)
49 CFR Part 26
Disadvantaged Business Enterprises
a. This contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs. The national goal for participation of Disadvantaged Business Enterprises is 10%. The recipient’s overall goal for DBE participation is listed elsewhere. If a separate contract goal for DBE participation has been established for this procurement, it is listed elsewhere.
b. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Agency deems appropriate. Each subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).
c. The successful Contractor will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.
d. The Contractor is required to pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than thirty (30) days after the Contractor’s receipt of payment for that work from the Agency. In addition, the Contractor is required to return any retainage payments to those subcontractors within thirty (30) days after the subcontractor’s work related to this contract is satisfactorily completed.
e. The contractor must promptly notify the Agency, whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the Agency.

29. [ RESERV ED ]

30. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS
The preceding provisions include, in part, certain Standard Terms & Conditions required by USDOT, whether or not expressly stated in the preceding contract provisions. All USDOT-required contractual provisions, as stated in current FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The contractor shall not perform any act, fail to perform any act, or refuse to comply with any request that would cause the recipient to be in violation of FTA terms and conditions.

31. PROMPT PAYMENT
The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contract
receives from the Recipient. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractors work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Recipient. This clause applies to both DBE and non-DBE subcontracts.

32. ADA Access
Contractor shall comply with 49 USC 5301(d), stating Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation services and facilities and that special efforts shall be made in planning and designing those services and facilities to implement that policy. Contractor shall also comply with all applicable requirements of Sec. 504 of the Rehabilitation Act (1973), as amended, 29 USC 794, which prohibits discrimination on the basis of handicaps, and the Americans With Disabilities Act of 1990 (ADA), as amended, 42 USC 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments thereto.

CERTIFICATION TO FEDERAL GOVERNMENT REQUIRED CLAUSES (FTA)
AFFIRMATION OF THE BIDDER’S AUTHORIZED REPRESENTATIVE

Name of Proposer:_______________________________________________________

Name and Relationship of Authorized Representative:___________________________

BY SIGNING BELOW, on behalf of the Proposer, I declare that the Proposer has duly authorized me to make this certification and bind the Proposer’s compliance. Thus; the Proposer agrees to comply with all Federal statutes and regulations, and follow applicable Federal directives, and comply with the requirements of these clauses as indicated on the ensuing pages, Federal Government Required Clauses (FTA).
The Proposer affirms the truthfulness of this certification it has made, and acknowledges that the program Fraud Civil Remedies Act of 1986, 31 U.S.C. 3801 et. seq., and implementing U.S. DOT regulations, “Program Fraud Civil Remedies,” 49 CFR Part 31 apply to any certification, assurance or submission made to FTA. The criminal provisions of 18 U.S.C. 1001 apply to any certification, assurance, or submission made in connection with a Federal public transportation program authorized in 49 U.S.C. Chapter 53 or any other statute.
In signing this document, I declare that the foregoing certification and any other statements made by me on behalf of the Proposer are true and correct.

Signature:___________________________________ Date:___________________

Name (print)_________________________________________________
Authorized Representative of Applicant

____________________________________
(Signature of Notary & SEAL)
DISADVANTAGED BUSINESS ENTERPRISE & EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATIONS

I hereby certify that the Proposer has complied with the requirements of 49CFR 26.49, Participation by Disadvantaged Business Enterprises in Norwalk Transit District Programs, and that our goals have not been disapproved by the Federal Transit Administration.

________________________________________ Signature of the Proposer’s Authorized Official

________________________________________ Name and Title of the Proposer’s Authorized Official

________________________________________ Date

DISADVANTAGED BUSINESS ENTERPRISE & EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATIONS

(1) Transit Vehicle Manufacturer (TVM) Disadvantaged Business Enterprise

Pursuant to the provisions of Section 105(f) of the Surface Transportation Assistance Act of 1982, each Proposer for this contract must certify that it has complied with the requirements of 49 CFR Part 26.49, regarding the participation of disadvantaged business enterprises in FTA-assisted procurements of transit vehicles. Absent this certification, properly completed and signed, a Proposal shall be deemed non-responsive.

Certification: I hereby certify, for the Proposer named below, that it has complied with the provisions of 49 CFR Part 26.49 and that I am duly authorized by said proposer to make this certification.

________________________________________ Name of Proposer/Company Name

________________________________________ (Date of Signature) __________________________ (Signature of Representative)

________________________________________ (Signature of Notary & SEAL) __________________________ (Type or Print Name & Title of that Representative)

(2) Equal Employment Opportunity

The Proposer, and any and all subcontractors of the Proposer, are required to comply with Executive Order 11246, entitled “Equal Employment Opportunity”, as amended by Executive Order 11375, and supplemented in U.S. Department of Labor regulation (41 CFR Part 60).

Certification: I hereby certify, for the Proposer named above, that it has complied with the provisions of Executive Order 11246, as amended by Executive Order 11375, and supplemented on U.S. Dept. of Labor Regulation (41 CFR Part 60) and that I am duly authorized by said Proposer to make this certification.

________________________________________ (Date of Signature) __________________________ (Signature of Representative)

________________________________________ (Signature of Notary & SEAL) __________________________ (Type or Print Name & Title of that Representative)
CERTIFICATION OF COMPLIANCE WITH FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS)
The Proposer hereby certifies that vehicles to be provided under the resultant contract award comply with all stipulated and relevant Federal Motor Vehicle Safety Standards (FMVSS). In accordance with the Federal Government Required Clauses (FTA) of this contract, the Proposer shall ensure that all vehicles will be affixed with a bus “manufacturer’s FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS”.

Name of Proposer/Company Name

_________________________________
Signature of authorized representative type or print name

_____________________________________
(Signature of Notary & SEAL)

REGULATIONS:
The Proposer understands through this certification that all vehicles provided under this contract shall conform to Federal and State regulations in effect at time of vehicle delivery.
COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT

The undersigned [Contractor/Manufacturer] certifies that all vehicles manufactured and delivered to the Agency are in full compliance with the Americans with Disabilities Act. 49 CFR 38.

Company Name: __________________________________________________________

Authorized Representative: ________________________________________________

Title: ____________________________________________________________________

Signature: ________________________________________________________________

Date: ____________________________________________________________________
TS 1.1 ACKNOWLEDGEMENT OF ADDENDA

The following form shall be completed and included in the Proposal.

Failure to acknowledge receipt of all addenda may cause bid to be considered non-responsive or incomplete in submission. Acknowledged receipt of each addendum must be clearly established and included with the proposal.

ACKNOWLEDGEMENT OF ADDENDA

The undersigned acknowledges receipt of the following addenda to the documents:

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Addendum Number___________________________ Dated___________________________

Proposer:

Name

Street Address

City, State, Zip

Signature of Authorized Signer

Title

Phone
## TS 1.2 PRICING SCHEDULES

### PRICE SCHEDULE RFP 2018-02

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Date of Delivery After Receipt of Order</th>
<th>Unit of Measure</th>
<th>Per Unit Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>30' Low Floor Diesel</td>
<td>_____ Days ARO</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>30' Low Floor CNG</td>
<td>_____ Days ARO</td>
<td>Each</td>
<td></td>
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<tr>
<td>30' Low Floor Electric</td>
<td>_____ Days ARO</td>
<td>Each</td>
<td></td>
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<tr>
<td>35' Low Floor Diesel</td>
<td>_____ Days ARO</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>35' Low Floor CNG</td>
<td>_____ Days ARO</td>
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</tr>
<tr>
<td>35' Low Floor Electric</td>
<td>_____ Days ARO</td>
<td>Each</td>
<td></td>
</tr>
</tbody>
</table>

Payments are 90 days from receipt and acceptance of the complete vehicle order. Any deviation may result in RFP rejection. RFP pricing shall include all transportation charges. FOB; Springdale, Arkansas

PROPOSER:

FEIN:
Payments are 90 days from receipt and acceptance of the complete vehicle order. Any deviation may result in RFP rejection. RFP pricing shall include all transportation charges. FOB; Springdale, Arkansas

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>Price Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Equipment</td>
<td></td>
</tr>
<tr>
<td>Torque Wrench</td>
<td></td>
</tr>
<tr>
<td>A/C Recovery and Charging Equipment</td>
<td></td>
</tr>
</tbody>
</table>
**OPTIONS PRICE SCHEDULE RFP 2018-01**

**PROPOSER:**

**FEIN:**

Payments are 90 days from receipt and acceptance of the complete vehicle order. Any deviation may result in RFP rejection. RFP pricing shall include all transportation charges. FOB; Springdale, Arkansas

<table>
<thead>
<tr>
<th>Description of Item</th>
<th>Price Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed Natural Gas Option per Bus</td>
<td></td>
</tr>
<tr>
<td>Major Parts and Subcomponents List</td>
<td></td>
</tr>
<tr>
<td>Operator's Barrier</td>
<td></td>
</tr>
<tr>
<td>Engine Extended Warranty</td>
<td></td>
</tr>
<tr>
<td>Non-Disposable Bypass Engine Oil Filter</td>
<td></td>
</tr>
<tr>
<td>Transmission Extended Warranty</td>
<td></td>
</tr>
<tr>
<td>Reverse Kneeling Feature</td>
<td></td>
</tr>
<tr>
<td>Electric Power Steering</td>
<td></td>
</tr>
<tr>
<td>MGM e-Stroke Brake Monitoring System</td>
<td></td>
</tr>
<tr>
<td>Two-Piece Windshield</td>
<td></td>
</tr>
<tr>
<td>Bonded Windshield</td>
<td></td>
</tr>
<tr>
<td>Bonded Operator's Side Window</td>
<td></td>
</tr>
<tr>
<td>Bonded Side Windows</td>
<td></td>
</tr>
<tr>
<td>Power USB 2.0 Ports in Passenger Area</td>
<td></td>
</tr>
<tr>
<td>HVAC System Extended Warranty</td>
<td></td>
</tr>
<tr>
<td>Video Security Desktop Viewing Station</td>
<td></td>
</tr>
<tr>
<td>Interior Bicycle Rack on 35' Buses</td>
<td></td>
</tr>
</tbody>
</table>
TS 1.3 AFFIDAVIT OF NON-COLLUSION/CONFLICT OF INTEREST

Woods/Neal Full Disclosure Statement

I hereby swear (or affirm) under penalty for perjury:

1. That I am Offeror (if the Offeror is an individual), a partner in the offer (if the Offeror is a partnership), or an officer or employee of the Offeror corporation having the authority to sign on behalf (if the Offeror is a corporation);

2. That the attached offer has been arrived at by the Offeror independently, and has been submitted without collusion, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in this procurement document, designed to limit independent bidding or competition;

3. That the contents of the offer have not been communicated by the offeror or its employees or agents to any person not an employee or agent of the offer or it’s surety or any bond furnished with the offer, and will not be communicated to any such person prior to the official awarding of this procurement; and

4. The Contractor shall not offer or provide gifts, gratuities, favors, entertainment or any other gratuities of monetary value to any official, employee or agent of Ozark Regional Transit during the period of this contract or for one year thereafter.

5. Personal/Organizational conflict arises when (1) an employee, officer, agent or board member, (2) any member of his/her immediate family, (3) his/her partner, or (4) an organization that employs, or intends to employ any of the listed, participate in selection, award or administration of federally funded contracts and have financial or other interest in a firm competing for or selected for award. To the best of my knowledge and belief no affiliation exists relevant to possible organizational or personal conflicts of interest.

6. The Offeror shall disclose, to the best of his/her knowledge, any Local, State or Federal employee, Ozark Regional Transit employee, or member of the State legislature, Elected County or City officials within the service area of Ozark Regional Transit, or any relative of such who is an officer or director of, or has a material interest in, the Offeror’s business, who is in a position to influence this procurement.

<table>
<thead>
<tr>
<th>Name</th>
<th>Relationships</th>
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<tbody>
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</tr>
</tbody>
</table>
That I have fully informed myself regarding the accuracy of the statement made in the affidavit.

Firm Name: ______________________________________________________

Address: ______________________________________________________

Authorized by: ______________________________________________________

Signature: ______________________________________________________

Title: ______________________________________________________

Date: ______________________________________________________

Subscribed and sworn to me this _____________day of ___________, 20______.

Notary Public ______________________________________________________

My commission expires________________________, 20_______.

If the Offeror is unable to complete this form then it needs to disclose and attach to this form a detailed statement fully disclosing any exceptions and why it believes, in light of the interest(s) identified that performance of the proposed contract can be accomplished in an impartial and objective manner. Ozark Regional Transit reserves the right to request more information, to disqualify the Offeror, to contract with the Offeror if it is in Ozark Regional Transit’s best interest and include appropriate provision to mitigate or avoid such conflict in the contract awarded. Refusal to provide the disclosure or representation or any additional information required, may result in disqualification of the Offeror for award. If nondisclosure or misrepresentation is discovered after award, the resulting contract may be terminated. If after award the Contractor discovers a conflict of interest with respect to the contract awarded as a result of this solicitation, which could not reasonably have been know prior to award, an immediate and full disclosure shall be made in writing to Ozark Regional Transit. The disclosure shall include a full description of the conflict, a description of the action the contractor has taken, or proposes to take, to avoid or mitigate such conflict. Ozark Regional Transit may, however, terminate the contract for convenience if he or she deems that termination is in the best interest of Ozark Regional Transit.

(Failure to complete this form and to submit it with your offer may render this offer non-responsive)
Suspended or debarred Contractors, consulting engineers, suppliers, materialmen, lessors or other vendors may not submit proposals for a State contract or subcontract during the period of suspension or debarment regardless of their anticipated status at the time of contract award or commencement of work. The Ozark Regional Transit, as a part of its obligation to determine if a Vendor meets the responsibility criteria for federal and state contract award, will check prior to the System for Award Management (SAM).

SAM is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at: https://www.sam.gov/portal/SAM/##11.

User guides and webinars are available under the Help tab.

a. The signature on the Agreement by the Second Party shall constitute certification that to the best of its knowledge and belief the Second Party or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor or any position involving the administration of State and Federal funds:

(1) Is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any State department or agency; and

(2) Has not within the prescribed statutory time period preceding this agreement, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(3) Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Has not within a five-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, the Second Party shall attach an explanation to this agreement.
The Second Party agrees to insure that the following certification be included in each subcontract Agreement to which it is a party, and further, to require said certification to be included in any subcontracts, sub-contracts and purchase orders resulting directly from this contract.

(1) The prospective subcontractors, sub-subcontractors participants certifies, by submission of it/their proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal or State department or agency; and

(2) Where the prospective subcontractors, sub-subcontractors participants are unable to certify to any of the statements in this certification, such prospective participants shall attach an explanation to this proposal.

I have fully informed myself regarding the accuracy of the statement made in this affidavit.

Firm Name: _____________________________________________
Address: _____________________________________________
Authorized by: _____________________________________________
Signature: _____________________________________________
Title: _____________________________________________
Date: _____________________________________________

Please note: Proposers must be registered with SAM which requires a DUNS number. Please carefully review this section under the state and federal suspension and debarment requirements contained in the procurement documents. We reserve the right to determine the Proposer non-responsive if it fails to be registered with SAM at the time of the proposal submittal.
TS 1.5 DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION

No contractor, sub-recipient, or subcontractor shall discriminate on the basis of race, color, national origin, or sex in the performance on any Federally assisted contract. Contractors shall carry out the applicable requirements of 49 CFR Part 26 in the award and administration of Federally assisted contracts. Failure by the contractor to carry out these requirements will result in a material breach of the contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of the agreement. ORT may take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, against any participant in the DBE Program whose conduct is subject to such action. ORT may refer to the United States Department of Justice, for prosecution under 18 United States Code (USC) 1001 or other applicable provisions of law, any person who makes a false or fraudulent statement in connection with participation of a DBE in any Federally assisted program or otherwise violates applicable federal statutes.

The Chief Finance and Administration Officer of Ozark Regional Transit is the DBE Liaison Officer. In that capacity, he/she is responsible for implementing all aspects of the DBE Program.

Federal Overview
It is the policy of ORT and the United States Department of Transportation (“DOT”) that Disadvantaged Business Enterprises (“DBE’s”), as defined herein and in the Federal regulations published at 49 C.F.R. part 26, shall have an equal opportunity to participate in DOT-assisted contracts. It is also the policy of the AGENCY to:

1. Ensure nondiscrimination in the award and administration of DOT-assisted contracts;
2. Create a level playing field on which DBE’s can compete fairly for DOT-assisted contracts;
3. Ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. Ensure that only firms that fully meet 49 C.F.R. part 26 eligibility standards are permitted to participate as DBE’s;
5. Help remove barriers to the participation of DBEs in DOT assisted contracts;
6. To promote the use of DBEs in all types of federally assisted contracts and procurement activities; and
7. Assist in the development of firms that can compete successfully in the marketplace outside the DBE program.

This Contract is subject to 49 C.F.R. part 26. Therefore, the Contractor must satisfy the requirements for DBE participation as set forth herein. These requirements are in addition to all other equal opportunity employment requirements of this Contract. The AGENCY shall make all determinations with regard to whether or not a Bidder/Offeror is in compliance with the requirements stated herein. In assessing compliance, the AGENCY may consider during its review of the Bidder/Offeror’s submission package, the Bidder/Offeror’s documented history of non-compliance with DBE requirements on previous contracts with the AGENCY.
Contract Assurance
The Contractor, sub-recipient or sub-contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 C.F.R. part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the AGENCY deems appropriate.

DBE Participation
For the purpose of this Contract, the AGENCY will accept only DBE’s who are:

1. Certified, at the time of bid opening or proposal evaluation, by the [certifying agency or the Unified Certification Program (UCP)]; or

2. An out-of-state firm who has been certified by either a local government, state government or Federal government entity authorized to certify DBE status or an agency whose DBE certification process has received FTA approval; or

3. Certified by another agency approved by the AGENCY.

DBE Participation Goal
The DBE participation goal for this Contract is set at 0%. This goal represents those elements of work under this Contract performed by qualified Disadvantaged Business Enterprises for amounts totaling not less than 0% of the total Contract price. Failure to meet the stated goal at the time of proposal submission may render the Bidder/Offeror non-responsive.

Proposed Submission
Each Bidder/Offeror, as part of its submission, shall supply the following information:

1. A completed DBE Utilization Form (see below) that indicates the percentage and dollar value of the total bid/contract amount to be supplied by Disadvantaged Business Enterprises under this Contract.

2. A list of those qualified DBE’s with whom the Bidder/Offeror intends to contract for the performance of portions of the work under the Contract, the agreed price to be paid to each DBE for work, the Contract items or parts to be performed by each DBE, a proposed timetable for the performance or delivery of the Contract item, and other information as required by the DBE Participation Schedule (see below). No work shall be included in the Schedule that the Bidder/Offeror has reason to believe the listed DBE will subcontract, at any tier, to other than another DBE. If awarded the Contract, the Bidder/Offeror may not deviate from the DBE Participation Schedule submitted in response to the bid. Any subsequent changes and/or substitutions of DBE firms will require review and written approval by the AGENCY.

3. An original DBE Letter of Intent (see below) from each DBE listed in the DBE Participation Schedule.

4. An original DBE Affidavit (see below) from each DBE stating that there has not been any change in its status since the date of its last certification.
**Good Faith Efforts**
If the Bidder/Offeror is unable to meet the goal set forth above (DBE Participation Goal), the AGENCY will consider the Bidder/Offeror’s documented good faith efforts to meet the goal in determining responsiveness. The types of actions that the AGENCY will consider as part of the Bidder/Offeror’s good faith efforts include, but are not limited to, the following:

1. Documented communication with the AGENCY’s DBE Coordinator (questions of IFB or RFP requirements, subcontracting opportunities, appropriate certification, will be addressed in a timely fashion);

2. Pre-bid meeting attendance. At the pre-bid meeting, the AGENCY generally informs potential Bidder/Offeror’s of DBE subcontracting opportunities;

3. The Bidder/Offeror’s own solicitations to obtain DBE involvement in general circulation media, trade association publication, minority-focus media and other reasonable and available means within sufficient time to allow DBEs to respond to the solicitation;

4. Written notification to DBE’s encouraging participation in the proposed Contract; and

5. Efforts made to identify specific portions of the work that might be performed by DBE’s.

The Bidder/Offeror shall provide the following details, at a minimum, of the specific efforts it made to negotiate in good faith with DBE’s for elements of the Contract:

1. The names, addresses, and telephone numbers of DBE’s that were contacted;

2. A description of the information provided to targeted DBE’s regarding the specifications and bid proposals for portions of the work;

3. Efforts made to assist DBE’s contacted in obtaining bonding or insurance required by the Bidder or the Authority.

Further, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted when a non-DBE subcontractor was selected over a DBE for work on the contract. 49 C.F.R. § 26.53(b) (2) (VI). In determining whether a Bidder has made good faith efforts, the Authority may take into account the performance of other Bidders in meeting the Contract goals. For example, if the apparent successful Bidder failed to meet the goal, but meets or exceeds the average DBE participation obtained by other Bidders, the Authority may view this as evidence of the Bidder having made good faith efforts.

**Administrative Reconsideration**
Within five (5) business days of being informed by the AGENCY that it is not responsive or responsible because it has not documented sufficient good faith efforts, the Bidder/Offeror may request administrative reconsideration. The Bidder should make this request in writing to the AGENCY’s procurement officer. The procurement officer will forward the Bidder/Offeror’s request to a reconsideration official who will not have played any role in the original determination that the Bidder/Offeror did not document sufficient good faith efforts.
As part of this reconsideration, the Bidder/Offeror will have the opportunity to provide written
documentation or argument concerning the issue of whether it met the goal or made adequate good
faith efforts to do so. The Bidder/Offeror will have the opportunity to meet in person with the assigned
reconsideration official to discuss the issue of whether it met the goal or made adequate good faith
efforts to do so. The AGENCY will send the Bidder/Offeror a written decision on its reconsideration,
explaining the basis for finding that the Bidder/Offeror did or did not meet the goal or make adequate
good faith efforts to do so. The result of the reconsideration process is not administratively appealable
to the Department of Transportation.

Termination of DBE Subcontractor
The Contractor shall not terminate the DBE subcontractor(s) listed in the DBE Participation Schedule
(see below) without the AGENCY’s prior written consent. The AGENCY may provide such written consent
only if the Contractor has good cause to terminate the DBE firm. Before transmitting a request to
terminate, the Contractor shall give notice in writing to the DBE subcontractor of its intent to terminate
and the reason for the request. The Contractor shall give the DBE five days to respond to the notice and
advise of the reasons why it objects to the proposed termination. When a DBE subcontractor is
terminated or fails to complete its work on the Contract for any reason, the Contractor shall make good
faith efforts to find another DBE subcontractor to substitute for the original DBE and immediately notify
the AGENCY in writing of its efforts to replace the original DBE. These good faith efforts shall be directed
at finding another DBE to perform at least the same amount of work under the Contract as the DBE that
was terminated, to the extent needed to meet the Contract goal established for this procurement.
Failure to comply with these requirements will be in accordance with Section 8 below (Sanctions for
Violations).

Continued Compliance
The AGENCY shall monitor the Contractor’s DBE compliance during the life of the Contract. In the event
this procurement exceeds ninety (90) days, it will be the responsibility of the Contractor to
submit quarterly written reports to the AGENCY that summarize the total DBE value for this Contract.
These reports shall provide the following details:
1. DBE utilization established for the Contract;
2. Total value of expenditures with DBE firms for the quarter;
3. The value of expenditures with each DBE firm for the quarter by race and gender;
4. Total value of expenditures with DBE firms from inception of the Contract; and
5. The value of expenditures with each DBE firm from the inception of the Contract by race and
gender.

Reports and other correspondence must be submitted to the DBE Coordinator with copies provided to
the [Agency Name1] and [Agency Name2]. Reports shall continue to be submitted quarterly until final
payment is issued or until DBE participation is completed.
The successful Bidder/Offeror shall permit:

• The AGENCY to have access to necessary records to examine information as the AGENCY
deems appropriate for the purpose of investigating and determining compliance with this
provision, including, but not limited to, records of expenditures, invoices, and contract between
the successful Bidder/Offeror and other DBE parties entered into during the life of the Contract.

• The authorized representative(s) of the AGENCY, the U.S. Department of Transportation, the
Comptroller General of the United States, to inspect and audit all data and record of the
Contractor relating to its performance under the Disadvantaged Business Enterprise Participation provision of this Contract.

- All data/record(s) pertaining to DBE shall be maintained as stated in Section [insert reference to record keeping requirements for the Project.]

**Sanctions for Violations**

If at any time the AGENCY has reason to believe that the Contractor is in violation of its obligations under this Agreement or has otherwise failed to comply with terms of this Section, the AGENCY may, in addition to pursuing any other available legal remedy, commence proceedings, which may include but are not limited to, the following:

a. Suspension of any payment or part due the Contractor until such time as the issues concerning the Contractor’s compliance are resolved; and

b. Termination or cancellation of the Contract, in whole or in part, unless the successful Contractor is able to demonstrate within a reasonable time that it is in compliance with the DBE terms stated herein.

**DBE Certification**

The contractor hereby agrees to subcontract a minimum of 0% of the contract to disadvantaged business enterprises. **Note: There is no DBE minimum goal for this project.**

The Bidder/Offer is committed to a minimum of ________% DBE utilization on this contract.

The Bidder/Offeror (if unable to meet the DBE goal of ____0_____) and is committed to a minimum of _____________% DBE utilization on this contract and submits documentation demonstrating good faith efforts.

The Bidder/Offeror shall provide the following information for all DBE’s participating in the contract that comprises the DBE Utilization percent stated in the DBE Utilization Form. The Bidder/Offeror shall also furnish the name and telephone number of the appropriate contact person should ORT have any questions in relation to the information furnished herein.

**DBE Information to provide:**

- Name and Address of DBE
- Contact Name and Telephone Number
- Participation Percentage (of total contract value)
- Description of Work to be Performed
- Race and Gender of Firm

The information above will be submitted with the proposal. If there is no participation, then a statement of “no participation” must be submitted. All DBE information provided must be executed by the Contractor’s representative. Failure to provide this information with the proposal may render the proposal non-responsive.
TS 1.6 TRANSIT VEHICLE MANUFACTURER’S (TVM) CERTIFICATION OF COMPLIANCE WITH 49CFR 26.49(a)

This procurement is subject to the provisions of 49 CFR §26.49(a). Accordingly, as a condition of permission to bid, the following certification must be completed and submitted with the bid. A bid which does not include such certification will not be considered.

TRANSIT VEHICLE MANUFACTURER’S CERTIFICATION

(Name of Firm)_______________________________________, a TVM, hereby certifies that it has complied with the requirements of 49 CFR §26.49(a) by submitting a current annual DBE goal to FTA. The goal applies to Federal Fiscal Year October 1, _____, to September 30, _______, and _____ has been approved or _________ not disapproved by FTA.

(Name of Firm) ____________________________________, hereby certifies that

(Name of Firm)_____________________________________, manufacturer of the transit vehicle to be supplied by (Name of Manufacturer) has complied with the above-referenced requirement of 49 CFR §26.49(a)

SIGNATURE:  ___________________________________________________

NAME:   ___________________________________________________

FIRM:   ___________________________________________________

TITLE:   ___________________________________________________

DATE: __________/__________/___________

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TS 1.7 SUBCONTRACTOR/DBE FORM

1. Is your firm a registered Disadvantaged Business Enterprise (DBE)?
   Yes _________ No _________

   If the answer is “Yes”, please fill in your DBE Certification Number: ____________________

2. Does your firm plan to subcontract any of the work or services required under this contract to any subcontractors or subcontractors, or procure items from suppliers?
   Yes _________________________ No ______________________________

   If the answer is “Yes”, please continue with completing this questionnaire.

   If the answer is “No”, you may stop here and you do not need to continue to Question 3. Please sign and submit this page.

3. Describe briefly how your firm solicited small businesses, including DBEs, to participate on this contract.

4. Identify the portion(s) of the work or service that were selected for subcontracting and explain why these portions of work were selected:

5. Explain the reasons for rejecting bids and accepting the bids from the selected subcontractor, subcontractor or supplier:

6. Describe any efforts your firm made to assist small businesses, including DBEs, in obtaining (1) adequate information about this solicitation, and (2) necessary equipment, supplies, bonding, or insurance, among other requirements, to perform this contract:

7. Describe any other steps your firm used to encourage or select small businesses, including DBEs:

The undersigned certifies that the above narrative is true and accurate and may be relied upon by Ozark Regional Transit in evaluating the Proposer’s compliance with the proposal requirements.

Signature of Owner or Authorized Representative _________________________________

Title _______________________________    Date ____________________
The bidder hereby certifies that vehicles to be provided under the resultant contract award comply with all stipulated and relevant Federal Motor Vehicle Safety Standards (FMVSS). In accordance with the Federal Government Required Clauses (FTA) of this contract, the bidder shall ensure that all vehicles will be affixed with a bus “manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS”.

SIGNATURE: ______________________________________

NAME: __________________________________________

FIRM: __________________________________________

TITLE: __________________________________________

DATE: ______/_______/_______
The undersigned proposer hereby certifies the following:

1. The horsepower of the vehicle is adequate for the speed, range and terrain in which it will be required to operate and also to meet the demands of the auxiliary power equipment.

2. All gases and vapors emanating from the crankcase of a spark-ignition engine are controlled to minimize their escape into the atmosphere.

3. Visible emission from the exhaust will not exceed #1 on the Ringlemann Scale when measured six inches from the tailpipe with the vehicle in steady operation.

4. When the vehicle has been idled for three minutes and then accelerated to 80% of rated speed under load, the opacity of the exhaust will not exceed #2 on the Ringlemann Scale for more than five seconds and not more than #1 on the Ringlemann Scale thereafter.

5. The vehicle engine furnished meets the Federal and State regulations for year of manufacture. Certificate to include the values of the H.C. + NO and Co and PM grams per BHP-HR.

6. The vehicles shall comply with the Federal Motor Vehicle Safety Standards as established by the United States Department of Transportation in effect on the date of manufacture.

7. That the vehicle shall comply with all requirements of the laws of the State of Arkansas, including all regulations set forth by the Arkansas Department of Transportation in effect on the date of manufacture.

SIGNATURE: ______________________________

NAME: ________________________________

FIRM: ________________________________

TITLE: ________________________________

DATE: _______/_______/_______

TS 1.9 FEDERAL MOTOR VEHICLE SAFETY STANDARDS AND POLLUTION CERTIFICATE
Applicability to Contracts
The Bus Testing requirements pertain only to the purchase or lease of any new bus model, or any bus model with a major change in configuration or components to be acquired or leased with funds obligated by FTA. Recipients are responsible for determining whether a vehicle to be acquired requires full or partial testing or has already satisfied the bus testing requirements by achieving a passing test score in accordance with 49 C.F.R. part 665. Recipients must certify compliance with FTA’s bus testing requirements in all grant applications for FTA funding for bus procurements.

Flow Down
There is no flow down requirement for Bus Testing.

Model Clause/Language
The operator of the bus testing facility is required to provide the resulting test report to the entity that submits the bus for testing. The manufacturer or dealer of a new bus model or a bus produced with a major change in component or configuration is required to provide a copy of the corresponding full bus testing report and any applicable partial testing report(s) to NTD along with the proposal submittal and attached hereto. The complete bus testing reporting requirements are provided in 49 C.F.R. § 665.11.

Bus Testing
The Contractor agrees to comply with the Bus Testing requirements under 49 U.S.C. § 5318(e) and FTA’s implementing regulation at 49 C.F.R. part 665 to ensure that the requisite testing is performed for all new bus models or any bus model with a major change in configuration or components, and that the bus model has achieved a passing score. Upon completion of the testing, the contractor shall obtain a copy of the bus testing reports from the operator of the testing facility and make that report(s) publicly available prior to final acceptance of the first vehicle by the recipient.

The Contractor agrees to comply with 49 U.S.C. A 5323(c) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following:

- A manufacturer of a new bus model or a bus produced with a major change in components or configuration shall provide a copy of the final test report to the recipient at a point in the procurement process specified by the recipient which will be prior to the recipient's final acceptance of the first vehicle.
- A manufacturer who releases a report under paragraph 1 above shall provide notice to the operator of the testing facility that the report is available to the public.
- If the manufacturer represents that the vehicle was previously tested, the vehicle being sold should have the identical configuration and major components as the vehicle in the test report, which must be provided to the recipient prior to recipient's final acceptance of the first vehicle. If the configuration or components are not identical, the manufacturer shall provide a description of the change and the manufacturer's basis for concluding that it is not a major change requiring additional testing.
- If the manufacturer represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the manufacturer shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major
TS 1.11 CERTIFICATION OF COMPLIANCE WITH FTA’S BUS TESTING REQUIREMENTS

The undersigned (Contractor/Manufacturer) certifies that the vehicle offered in this procurement complies with 49 U.S.C. A 5323(c) and FTA’s implementing regulation at 49 CFR Part 665. The undersigned understands that misrepresenting the testing status of a vehicle acquired with Federal financial assistance may subject the undersigned to civil penalties as outlined in the Department of Transportation’s regulation on Program Fraud Civil Remedies, 49 CFR Part 31. In addition, the undersigned understands that FTA may suspend or debar a manufacturer under the procedures in 49 CFR Part 29.

Date

__________________________________________________________

Signature

__________________________________________________________

Company Name

__________________________________________________________

Title

__________________________________________________________

Check one that applies:

 Copy of Altoona Test Report (STURRA) for vehicle model bid is attached (initial)__________.

STURRA Test Report #: ____________________________

 Copy of Altoona Test Report (STURRA) for vehicle model bid is not attached (initial) _______
The Contractor agrees to comply with 49 U.S.C. § 5323(l) and FTA’s implementing regulation at 49 C.F.R. Part 663 and to submit the following certifications:

- Buy America Requirements: The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Bidder/Offeror certifies compliance with Buy America, it shall submit documentation which lists 1) component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.
- Solicitation Specification Requirements: The Contractor shall submit evidence that it will be capable of meeting the bid specifications.
- Federal Motor Vehicle Safety Standards (FMVSS): The Contractor shall submit 1) manufacturer’s FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer’s certified statement that the contracted buses will not be subject to FMVSS regulations.

In accordance with 49 C.F.R. § 661.12, for the procurement of rolling stock (including train control, communication, and traction power equipment) use the following certifications:

Certificate of Compliance with Buy America Rolling Stock Requirements
The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j), and the applicable regulations at 49 C.F.R. § 661.11.

Date ____________________________
Signature _____________________________________________________________
Company ______________________________________________________________
Name _________________________________________________________________
Title _________________________________________________________________

Certificate of Non-Compliance with Buy America Rolling Stock Requirements
The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but may qualify for an exception consistent with 49 U.S.C. 5323(j),(2),(C), and the applicable regulations in 49 C.F.R. § 661.7.

Date ____________________________
Signature _____________________________________________________________
Company ______________________________________________________________
Name _________________________________________________________________
Title _________________________________________________________________
Applicability to Contracts
The Fly America requirements apply to the transportation of persons or property, by air, between a place in the U.S. and a place outside the U.S., or between places outside the U.S., when the FTA will participate in the costs of such air transportation. Transportation on a foreign air carrier is permissible when provided by a foreign air carrier under a code share agreement when the ticket identifies the U.S. air carrier’s designator code and flight number. Transportation by a foreign air carrier is also permissible if there is a bilateral or multilateral air transportation agreement to which the U.S. Government and a foreign government are parties and which the U.S. DOT has determined meets the requirements of the Fly America Act.

Flow Down Requirements
The Fly America requirements flow down from FTA recipients and sub-recipients to first tier contractors who are responsible for ensuring that lower tier contractors and subcontractors are in compliance.

Model Clause/Language
A sample clause is provided for Federal contracts at 48 C.F.R. 52.247-63. FTA proposes the following language, modified from the Federal clause.

Fly America Requirements
- **Definitions.** As used in this clause—“International air transportation” means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.

  “United States” means the 50 States, the District of Columbia, and outlying areas.

  “U.S.-flag air carrier” means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

- When Federal funds are used to fund travel, Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118) (Fly America Act) requires contractors, recipients, and others use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.

- If available, the Contractor, in performing work under this contract, shall use U.S.-flag carriers for international air transportation of personnel (and their personal effects) or property.

- In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:
TS 1.14 STATEMENT OF UNAVAILABILITY OF US-FLAG AIR CARRIER

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons. See FAR § 47.403. [State reasons]:

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

The Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract or purchase under this contract that may involve international air transportation.

Date ___________________________________________________

Signature _______________________________________________

Company Name __________________________________________

Title ___________________________________________________
Applicability to Contracts
The lobbying requirements apply to all contracts and subcontracts of $100,000 or more at any tier under a Federal grant. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this agreement, the payor must complete and submit the Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

Flow Down
The lobbying requirements mandate the maximum flow down pursuant to Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352(b)(5).

Model Clause/Language
49 C.F.R. part 20, Appendices A and B provide specific language for inclusion in FTA funded third party contracts as follows:

Lobbying Restrictions
The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.
This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Contractor’s Authorized Official _________________________________

Name and Title of Contractor’s Authorized Official _____________________________

Date ___________________________
TS 1.16 BID PROTEST PROCEDURES

Protest Procedures

1. The procedures established hereunder shall be available to contractors for the purpose of handling and resolving disputes relating to procurements hereunder. A protestor must exhaust all administrative remedies hereunder before pursuing a protest in any court of law. Where applicable, any information received under such procedures shall be disclosed to the Federal Transit Authority (“FTA”) and a protestor must exhaust all administrative remedies before pursuing a protest with the FTA.

2. The term “contractor” means any person, firm, or corporation, which has contracted or seeks to contract (bidder or proposer) with Ozark Regional Transit.

3. The term “hearing officer” shall mean a person, appointed by the ORT Board Chair, to hear and decide allegations made by any contractor relating to procurements hereunder.

Hearing Procedure

1. Any contractor may file a written protest of the procurement procedures involved herein, with ORT’s Purchasing Agent, within ten (10) days of the date of ORT’s Decision regarding a selection of a contractor with respect to a Bid/RFP/RFQ.

2. A hearing shall be conducted with the hearing officer. The hearing officer shall issue a written decision within ninety (90) days of the last date of such hearing and state in the decision the reasons for the action taken.

3. Where applicable, review of protests by FTA will be limited to ORT’s failure to have or follow its procedures, or its failure to review a complaint or protest. An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protestor knew or should have known of the violation.

WRITTEN PROTEST PROCEDURES

A. GENERAL - DEFINITIONS

1. The procedures established hereunder shall be available to contractors for the purpose of handling and resolving disputes relating to procurements hereunder. A protestor must exhaust all administrative remedies hereunder before pursuing a protest in any court of law. Where applicable, any information received under such procedures shall be disclosed to the Federal Transit Authority (“FTA”) and a protestor must exhaust all administrative remedies before pursuing a protest with the FTA.

2. The term “contractor” means any person, firm, or corporation, which has contracted or seeks to contract with Ozark Regional Transit (ORT).

3. The term “hearing officer” shall mean a person, appointed by the ORT Board Chair, to hear and decide allegations made by any contractor relating to procurements hereunder.
4. A “pre-bid or solicitation phase protest” is a written protest received prior to the bid opening or proposal due date.

5. A “pre-award protest” is a protest against making an award and is received after receipt of proposals or bids, but before award of a contract.

6. A “post-award protest” is a protest received after award of a contract.

B. FILING OF PROTESTS

1. Pre-Bid Protest
Any Contractor may file a written protest of the procurement procedures involved herein, with ORT’s Purchasing Agent at least five (5) working days before the bid opening or proposal due date.

2. Pre-Award Protest
Any Contractor may file a written protest against ORT’s making of an award after ORT’s receipt of bids or proposals, but at least five (5) working days before the conditional award of a contract by ORT.

3. Post-Award Protest
Any contractor may file a written protest of the procurement procedures involved herein, with ORT’s Purchasing Agent, at least five (5) working days after the date of ORT’s Decision regarding a selection of a contractor with respect to any Bid/RFP/RFQ.

4. Each protest must clearly state:
   a. The name, address, and telephone number of the protester;
   b. The solicitation/contract number or description thereof.
   c. A statement of all of the grounds upon which the protest is made.

5. Protests are to be filed by certified mail, return receipt requested or by personal delivery by 4:30pm on or before the due date at:

   Purchasing Department
   Ozark Regional Transit
   2423 E. Robinson Avenue
   Springdale, Arkansas 72764

   If protests are filed by personal delivery, the protestor must obtain a time-stamped copy of the protest from the Purchasing Department as proof of the date and time of the filing of the protest. It is the Protesting party’s sole responsibility to provide said copy at the time of filing.

C. HEARING PROCEDURE

1. A hearing shall be conducted at a time that is mutually convenient for the protesting party and the hearing officer. The location of the hearing will be within the Washington County, Arkansas area at a facility to be determined. The hearing officer shall issue a written decision within ten (10) days of the last date of such hearing and state in the decision the reasons for the action taken. The Hearing Officer, shall respond in detail, to each substantive issue raised in the protest.
2. The Hearing Officer shall be the responsible official who has the authority to make the final determination of the protest.

3. The Hearing Officer shall address, in his/her determination, each material issue raised in the protest.

4. The Hearing Officer’s determination shall be final and binding upon all parties upon issuance.

5. Within (5) working days from its receipt of the decision of the Hearing Officer, a protester may request reconsideration of the decision, using the same procedure described in Section B.5 above. The request for reconsideration shall be addressed to the Hearing Officer, in care of:

   Hearing Officer RFP 2018-02  
   Ozark Regional Transit  
   2423 E. Robinson Avenue  
   Springdale, Arkansas 72764

The request for reconsideration shall set forth all of the grounds upon which the request is made.

6. The Hearing Officer shall issue a written decision on the request for recommendation within ten (10) days of receipt thereof and state in the decision the reasons for the granting or denial of the request.

D. REVIEW OF PROTEST BY FTA

1. Where applicable, review of protests by FTA will be limited to ORT’s failure to have or follow its protest procedures, or its failure to review a complaint or protest. An appeal to FTA must be received by the cognizant FTA Regional or Headquarters Office within five (5) working days of the date the protestor knew or should have known of the violation and/or five (5) days after the protestor knows or has reason to know that ORT has failed to render a final decision. Such appeal must be filed in accordance with all FTA rules and regulations, and Section 7(1) of FTA Circular 4220.1D., as periodically updated. The FTA may allow a request for reconsideration if data becomes available that was not previously known, or if there has been an error of law or regulation. Violations of Federal law or regulation will be handled by the complaint process stated within that law or regulation. Violations of state or local or regulations will be under the jurisdiction of state or local authorities.

2. Post-determination protests may include allegations that ORT failed to have or follow written protest procedures.
SAMPLE CONTRACT BETWEEN

OZARK REGIONAL TRANSIT
AND

FOR:

30' LOW FLOOR DIESEL BUSES
30' LOW FLOOR CNG BUSES
30' LOW FLOOR ELECTRIC BUSES

35' LOW FLOOR DIESEL BUSES
35' LOW FLOOR CNG BUSES
35' LOW FLOOR ELECTRIC BUSES

______________________________, 2018
Contract Award Date

STANDARD FORM OF CONTRACT

THIS CONTRACT, hereinafter, referred to as the Agreement is dated as of the _____ day of _________________ in the year 20____ by and between the Ozark Regional Transit, 2423 E. Robinson
Avenue, Springdale, Arkansas hereinafter, referred to as the DISTRICT and
______________________________________hereinafter, referred to as the CONTRACTOR.

The purpose of this Agreement is to purchase transit vehicles in accordance with the scope of work
(attached). Therefore, the DISTRICT and the CONTRACTOR, in consideration of the mutual covenants
hereinafter set forth, agree as follows:

Article 1. SERVICE

The CONTRACTOR shall provide services as outlined in the Scope of Work as specified in the Request for
Proposals which are a part hereof. The work is generally described as the purchase of 30’, 35’ and 40’
low floor heavy duty clean fuel diesel buses.

The DISTRICT reserves the right to change or otherwise alter the services outlined in the Scope of Work
upon fifteen (15) days written notice to the CONTRACTOR. The CONTRACTOR agrees to implement
those specified changes within a reasonable timeframe but in no case later than fifteen (15) days after
receipt of notice. The CONTRACTOR reserves the right to reject any change or service alteration
proposed by the DISTRICT for good and compelling reasons and will notify the DISTRICT of said rejection
within ten (10) days of receipt of notice.

Article 2. SUBCONTRACTING

The CONTRACTOR agrees not to subcontract for any of the services it is obligated to perform under this
Agreement without the prior consent of the DISTRICT.

Article 3. CONTRACT TIME

3.1 The work shall be completed within ______ consecutive calendar days of receipt of Notice to
Proceed.

3.2 Extension of Time. If the CONTRACTOR is delayed in the prosecution or completion of the work by or
account of any act or omission of the DISTRICT, or by strikes or causes beyond the control of the
CONTRACTOR, he shall be entitled to such reasonable extension of time for completion of the work as
may be decided upon by the DISTRICT, however, that no claim for an extension of time for any reason
shall be allowed unless, within three days after such delay occurs, notice in writing of the fact said delay,
its causes, and the extension claimed, shall be given by the CONTRACTOR to the DISTRICT.

Article 4. CONTRACT PRICE

4.1 The DISTRICT shall pay the CONTRACTOR, for the performance of all services and delivery of all
goods in accordance with the Scope of Work, the sum of money computed at the price stated in the
proposal submitted by the CONTRACTOR to the DISTRICT. A copy of the CONTRACTOR’s proposal is
made a part of this Agreement.

4.2 The DISTRICT shall process CONTRACTOR invoices and make payments as defined in the proposal
documents. Final payment will be made when the final report has been accepted by the DISTRICT. In the
event of a dispute between the DISTRICT and the CONTRACTOR over charges, the DISTRICT will notify
the CONTRACTOR after review of the CONTRACTOR invoice. The DISTRICT shall be empowered to
withhold compensation as stated in the proposal.
Article 5. INSURANCE

5.1 COMMERCIAL GENERAL LIABILITY (as applicable)
The Proposer shall carry Commercial General Liability Insurance, including premises/operations; contractual liability; personal injury; products/completed operations; property damage, providing for a per occurrence limit of Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries to or death of all persons in anyone accident or occurrence, and for all damages arising out of injury to or destruction of property in anyone accident or occurrence, and, subject to that limit per accident, a total (or aggregate) limit of Five Million Dollars ($5,000,000) for all damages arising out of bodily injuries or death of all persons in all accidents or occurrences and out of injury to or destruction of property for a period of five (5) years after acceptance of the last bus delivered under this Contract for a period of Product liability. Such coverage will be provided on an occurrence basis and will be primary and shall not contribute in any way to any insurance or self-insured retention carried by the Norwalk Transit District. Such coverage shall contain a broad form contractual liability endorsement or wording within the policy form. Such coverage shall not exclude sexual abuse or molestation.

5.2 AUTOMOBILE LIABILITY

The operation of all motor vehicles, including those owned, hired or borrowed, used in connection with the Contract shall be covered by Automobile Liability Insurance providing a total of FIVE MILLION DOLLARS ($5,000,000.00) Combined Single Limit per occurrence for all damages arising out of bodily injury to or death of all persons in any one accident or occurrence, and for all damages arising out of injury to or destruction of property in any one accident or occurrence. Coverage extends to owned, hired and non-owned automobiles. If the Vendor/contractor does not own an automobile, but one is used in the execution of the contract, then only hired and non-owned coverage is required.

5.3 WORKERS' COMPENSATION

With respect to all operations the contractor performs and all those performed for the contractor by subcontractor(s), the contractor, and subcontractor(s) if used, shall carry Workers Compensation Insurance at statutory coverage limits and/or, as applicable, insurance required in accordance with the U. S. Longshoremen’s and Harbor Workers Compensation Act, the Federal Employers Liability Act, all in accordance with the requirements of the laws of the State of Connecticut, and the laws of the United States respectively.

5.4 UMBRELLA LIABILITY

In the event the contractor secures excess/umbrella liability insurance to meet the minimum requirements specified and (if required) the Norwalk Transit District and the State of Connecticut must be named as Additional Insured.

5.5 INDEMNIFICATION AND HOLD HARMLESS

To the fullest extent permitted by law, the Proposer shall indemnify, defend and hold harmless the District and its respective officers, directors, employees and agents (“Indemnified Parties”) from and against all claims, damages, demands, losses, expenses, fines, causes of action, suits or other liabilities
(including all costs of reasonable attorneys’ fees, consequential damages, and punitive damages), arising out of or resulting from, or alleged to arise out of or arise from, the performance of Proposer’s Work under the Contract whether such claim, damage, demand, loss or expense is attributable to bodily injury, personal injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting there from; but only to the extent attributable to the negligence of the Proposer or any entity for which it is legally responsible or vicariously liable and; regardless whether the claim is presented by an employee of Proposer. Such indemnity obligation shall not be in derogation or limitation of any other obligation or liability of the Proposer or the rights of the District contained in this Contract or otherwise. This indemnification shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Proposer under any workers’ compensation acts, disability benefit acts or other employee benefits acts and includes any loss or injury suffered by an employee of Proposer. This indemnification shall survive the completion of the Work or the termination of the Contract.

Article 6. PROJECT MANAGER

Both the CONTRACTOR and the DISTRICT shall designate Project Managers for services provided under this Agreement. The Project Managers shall be responsible for overseeing the proper performance of the service.

Article 7. CONTRACTOR RESPONSIBILITIES, DUTIES, AND LIABILITIES

7.1 The CONTRACTOR shall be responsible for the entire work until its final acceptance, and any unfaithful or imperfect work that may be discovered at any time before said final acceptance shall be immediately corrected by said CONTRACTOR on requirements of the DISTRICT.

7.2 The CONTRACTOR shall comply with all local, state, and federal laws and regulations.

7.3 The CONTRACTOR shall indemnify, save harmless and defend the DISTRICT, and all of its officers, agents and employees against and from all damages, costs and expenses which they or any of them may suffer by, from or out of any and all claims for payment for materials or labor used or employed in the execution of this contract, and also for injuries or damages received or sustained to person or property, or both, in consequence of or resulting from any work performed by said CONTRACTOR, or from any negligence in guarding said work, or from any act or omission of said CONTRACTOR, and said CONTRACTOR shall also indemnify and save harmless the DISTRICT from all claims under the Workmen’s Compensation Act arising under or out of this contract.

Article 8. CONTRACTOR’S REPRESENTATIONS

In order to induce the DISTRICT to enter into this Agreement, the CONTRACTOR makes the following representations:
8.1 The CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, and federal, state and local laws, ordinances rules and regulations that in any manner may affect cost, progress or performance of the work.

8.2 The CONTRACTOR has given the DISTRICT written notice of all conflicts, errors, discrepancies that he has discovered in the Contract Documents and the written resolution thereof by DISTRICT is acceptable to the CONTRACTOR.
Article 9. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between the DISTRICT and the CONTRACTOR are attached to this Agreement, made a part hereof and consists of the contents of the following:

- The Complete Request for Proposals (RFP)
- The Proposal
- Requirements of the Federal Transit Administration
- Required Certifications
- Proposal Forms
- Certificate of Insurance

Article 10. MISCELLANEOUS

10.1 The parties agree and understand that the CONTRACTOR is neither an employee nor agent of the DISTRICT and is an independent CONTRACTOR in the performance of its duties hereunder.

10.2 The failure of the DISTRICT to enforce at any time any of the provisions of this Agreement, or to exercise any option which is herein provided, or to require at any time performance by the CONTRACTOR of any of the provisions herein, shall in no way be construed to be a waiver of such provisions, nor in any way affect the validity of this Agreement or any part thereof, or the right of the DISTRICT to thereafter enforce each and every such provision.

10.3 No member of or delegates to the Congress of the United States shall be admitted to any share or part of this Agreement, or to any benefit arising therefrom. The above also applies to the State of Arkansas Department of Transportation.

10.4 No member, officer or employee of the DISTRICT or a local public body during his tenure or one year thereafter have any interest, direct or indirect, in this Agreement, or the proceeds thereof.

10.5 The CONTRACTOR warrants that no person or selling agency has been retained to solicit or secure the Agreement for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide commercial or selling agencies maintained by the CONTRACTOR to secure business. For breach or violation, the DISTRICT shall have the right to annul or terminate the Agreement without liability.

10.6 No assignment by a party hereto of any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically and without limitations, funds that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.7 The DISTRICT and CONTRACTOR each bind himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
IN WITNESS WHEREOF the parties to these present have hereunto set their hands and seals, the
DISTRICT on the day and year hereinbefore first written and who hereby certifies under penalties of
perjury that this CONTRACT is executed in accordance with all applicable municipal, state and federal
laws having jurisdiction.

____________________________________ ____________________________________
Signature     Signature
Ozark Regional Transit    (CONTRACTOR NAME)

____________________________________ ____________________________________
Name and Title     Name and Title
Ozark Regional Transit    (CONTRACTOR NAME)