**Standard**

**Bus Procurement**

**Guidelines**

**A Standardized**

**Request for Proposal Contract Form**

**for the Transit Industry**

Request for Proposal

«agency»

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«procurement\_title»

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SECTION 1: NOTICE OF REQUEST FOR PROPOSALS

1. Description of the Work To Be Done

The Agency requests Proposals for the manufacture and delivery of «procurement\_title» in accordance with the terms and conditions set forth in RFP «proposal\_number». The Contract shall be a firm-fixed-price Contract.

Specifically, the Agency is requesting the following types of buses: «bus\_types\_summary».

1. Obtaining Proposal Documents

Proposal documents may be obtained from «procurement\_officer», in person at «procurement\_physical\_location» or electronically, if available, at «procurement\_website». Documents requested by mail will be packaged and sent postage paid.

1. Proposal Due Date and Submittal Requirements

Proposals must be received by «procurement\_due\_by».

1. Sealed Proposals shall be submitted to either of the following addresses:
   1. For courier delivery or hand delivery: «procurement\_mailing\_addr»
   2. By U.S. mail: «procurement\_courier\_addr»
2. Envelopes or boxes containing Proposals shall be sealed and clearly labeled with the Agency’s Proposal number and the solicitation title: «proposal\_number» - «procurement\_title»
3. Proposers are requested to submit to the Agency one hard copy marked “Original,” two additional printed copies, and three CDs, each containing an electronic PDF copy of the Proposal. In case of any discrepancies, the hard copy will be considered by the Agency in evaluating the Proposal, and the electronic version is provided for the Agency’s administrative convenience only. A Proposal is deemed to be late if it is received by the Agency after the deadline stated above. Proposals received after the submission deadline may be rejected.
4. Validity of Proposals

Proposals and subsequent offers shall be valid for a period of «proposals\_valid\_days».

1. Pre-Proposal Meeting Information (Optional)

A Pre-Proposal Meeting will be held on «pre\_proposal\_meeting\_date». The meeting will convene at «pre\_proposal\_meeting\_time» in the Agency’s «pre\_proposal\_meeting\_room», located at «pre\_proposal\_meeting\_location». Proposers may also participate via conference call. The call-in number and instructions are as follows: «pre\_proposal\_conference\_call».

Prospective Proposers are requested to submit written questions to the Contract administrator, identified below, in advance of the Pre-Proposal Meeting. In addition, questions may be submitted up to the date specified in “Proposed Schedule for the Procurement.” Responses will be shared with all prospective Proposers. Prospective Proposers are reminded that any changes to the RFP will be by written addenda only, and that nothing stated at the Pre-Proposal Meeting shall change or qualify in any way any of the provisions in the RFP and shall not be binding on the Agency.

Contracting Officer’s Contact Information:

Name: «contracting\_officer\_name»

Title: «contracting\_officer\_title»

Address: «contracting\_officer\_addr»

Phone number: «contracting\_officer\_phone»

Email: «contracting\_officer\_email»

Fax number: «contracting\_officer\_fax»

Additional contact: «contracting\_officer\_additional»

Identification of Source of Funding

Financial support of this project is provided through financial assistance grants from the Federal Transit Administration (FTA), State of «agency\_state», «agency» and «other\_funding\_sources» .

NOTE: Insert any other locally required notice provisions, including how to obtain the solicitation documents.

Signed and Dated for Posting

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Signature/Title Date

SECTION 2: INSTRUCTIONS TO PROPOSERS

1. Quantities

The Work under these Contract documents consists of the manufacture and delivery of a base order of «order\_number\_and\_bus\_types» and «order\_assoicated\_goods».

There will be «num\_optional\_veh» options for «type\_optional\_veh» and «goods\_optional\_veh».

1. Proposed Schedule for the Procurement

The following is the solicitation schedule for Proposers:

* Pre-Proposal Meeting/teleconference: «pre\_proposal\_meeting\_date»
* Proposer communications and requests: «proposer\_communication\_date»

nOTE: Due date should be at least 20 business days before Proposal Due Date.

* Responses to the Proposer’s communications and/or Agency addenda: «response\_to\_proposer\_date»

NOTE: Due date should be at least 10 business days before Proposal Due Date.

* Proposal Due Date: «proposal\_due»

NOTE: The above are recommended dates based upon industry review.

1. Obtaining Proposal Documents

Proposal documents may be obtained from «obtain\_proposal\_from\_name», in person at «obtain\_proposal\_from\_location» or electronically at «obtain\_proposal\_from\_electronical». Documents requested by mail will be packaged and sent postage paid. Documents requested by courier will be packaged and sent only at the Proposers’ expense.

1. Proposal Security Requirements (Reserved)

«proposal\_security\_requirements»

NOTE: Reserved provision. Common industry practice is not to require a Proposal bond for RFPs.

1. Pre-Proposal Meeting/Information for Proposers

A Pre-Proposal Meeting will be held on «pre\_proposal\_meeting\_date». The meeting will convene at «pre\_proposal\_meeting\_time» in the Agency’s «pre\_proposal\_meeting\_room», located at «pre\_proposal\_meeting\_location». Proposers can also participate via conference call. The call-in number and instructions are as follows: «pre\_proposal\_conference\_call». Prospective Proposers are urged to make every effort to attend this meeting.

NOTE: A universal call-in number (either for North American or international participants, as appropriate) should be used so that Proposers outside the United States can participate in the conference call.

Prospective Proposers are requested to submit written questions to the Contracting Officer, identified above, in advance of the Pre-Proposal Meeting. In addition, questions may be submitted up to the date specified in “Proposed Schedule for the Procurement.” Responses will be shared with all prospective Proposers. Prospective Proposers are reminded that any changes to the RFP will be by written addenda only, and nothing stated at the Pre-Proposal Meeting shall change or qualify in any way any of the provisions in the RFP and shall not be binding on the Agency.

1. Questions, Clarifications and Omissions

All correspondence, communication and contact in regard to any aspect of this solicitation or offers shall be only with the Contracting Officer identified above, «contracting\_officer\_name». Unless otherwise instructed by the Contracting Officer, Proposers and their representatives shall not make any contact with or communicate with any member of the Agency, or its employees and consultants, other than the designated Contracting Officer, in regard to any aspect of this solicitation or offers.

At any time during this procurement up to the time specified in “Proposed Schedule for the Procurement,” Proposers may request, in writing, a clarification or interpretation of any aspect, a change to any requirement of the RFP, or any addenda to the RFP. Requests may include suggested substitutes for specified items and for any brand names, which whenever used in this solicitation shall mean the brand name or approved equal. Such written requests shall be made to the Contracting Officer. The Proposer making the request shall be responsible for its proper delivery to the Agency as identified on the form Request for Pre-Offer Change or Approved Equal. Any request for a change to any requirement of the Contract documents must be fully supported with technical data, test results or other pertinent information showing evidence that the exception will result in a condition equal to or better than that required by the RFP, without a substantial increase in cost or time requirements.

All responses to Request for Pre-Offer Change or Approved Equal shall be provided to all Proposers. Any response that is not confirmed by a written addendum shall not be official or binding on the Agency.

NOTE: It is recommended that an Agency issue a separate addendum incorporating all approved changes that result from the Request for Pre-Offer Change or Approved Equal process in order to avoid conflicting documents. Furthermore, the Agency should answer all questions in a timely manner.

If it should appear to a prospective Proposer that the performance of the Work under the Contract, or any of the matters relating thereto, is not sufficiently described or explained in the RFP or Contract documents, or that any conflict or discrepancy exists between different parts of the Contract or with any federal, state, local or Agency law, ordinance, rule, regulation, or other standard or requirement, then the Proposer shall submit a written request for clarification to the Agency within the time period specified above.

1. Addenda to RFP

The Agency reserves the right to amend the RFP at any time in accordance with “Proposed Schedule for the Procurement.” Any amendments to the RFP shall be described in written addenda. Notification of or the addenda also will be distributed to all such prospective Proposers officially known to have received the RFP. Failure of any prospective Proposer to receive the notification or addenda shall not relieve the Proposer from any obligation under the RFP therein. All addenda issued shall become part of the RFP. Prospective Proposers shall acknowledge the receipt of each individual addendum in their Proposals on the form Acknowledgment of Addenda. Failure to acknowledge in the Proposal receipt of addenda may at the Agency’s sole option disqualify the Proposal.

If the Agency determines that the addenda may require significant changes in the preparation of Proposals, the deadline for submitting the Proposals may be postponed no fewer than ten (10) days from the date of issuance of addenda or by the number of days that the Agency determines will allow Proposers sufficient time to revise their Proposals. Any new Due Date shall be included in the addenda.

1. DBE Requirements for Transit Vehicle Manufacturers

NOTE: Retain title and add “Reserved” if the procurement is not federally funded.

Pursuant to Title 49, Code of Federal Regulations, Part 26.49, a Proposer, as a condition of being authorized to respond to this solicitation, must certify by completing the form DBE Approval Certification that it has on file with the Federal Transit Administration (FTA) an approved or not disapproved annual disadvantaged business enterprise (DBE) subcontracting participation goal.

1. Buy America Certification

Note: The following language should be used in those instances when federal funds are used in the Contract. If non-federal funds are used, then the Agency should insert any appropriate language. If neither applies, then keep the clause title and add the term “Reserved.”

This Contract is subject to the “Buy America” requirements of 49 United States Code (USC) §5323(j) and 49 Code of Federal Regulations (CFR) Part 661, as may be amended from time to time, and applicable federal regulations. Prospective Proposers’ attention is directed to 49 CFR §661.11, “Rolling Stock Procurements.” Prospective Proposers have the responsibility to comply with the cited and any governing statutes and regulations, including official interpretations.

A Proposer shall submit to the Agency the appropriate Buy America certification, included in this document, with all offers on FTA-funded contracts. Proposals that are not accompanied by a properly completed Buy America certification are subject to the provisions of 49 CFR 661.13 and will be rejected as nonresponsive.

The two signature blocks on the Buy America certificate are mutually exclusive. Proposers shall sign only one signature block on the certificate. Signing both signature blocks will make the Proposal nonresponsive. A false certification is a criminal act in violation of 18 USC §1001.

A Proposer who has submitted an incomplete Buy America certificate or an incorrect certificate of noncompliance through inadvertent or clerical error (but not including failure to sign the certificate, submission of certificates of both compliance and noncompliance, or failure to submit any certification), may submit to the FTA Chief Counsel within ten (10) days of Proposal opening a written explanation of the circumstances surrounding the submission of the incomplete or incorrect certification in accordance with 28 USC §1746, sworn under penalty of perjury, stating that the submission resulted from inadvertent or clerical error. The Proposer will also submit evidence of intent, such as information about the origin of the product, invoices or other working documents. The Proposer will simultaneously send a copy of this information to the Agency.

The FTA Chief Counsel may request additional information from the Proposer, if necessary. The Agency may not make Contract award until the FTA Chief Counsel issues their determination, except as provided in 49 CFR Part 661.15(m).

Certification based on ignorance of proper application of the Buy America requirements is not an inadvertent or clerical error.

A waiver from the Buy America provisions will be sought by the Agency from the FTA for the proposed awardee, if the grounds for a waiver exist. All Proposers seeking a waiver must submit to the Agency a timely request in writing, which shall include the facts and justification to support the granting of the waiver. Such waiver from the Buy America provisions may be granted if the FTA determines the following:

1. Their application would be inconsistent with the public interest;
2. Materials are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of domestic material will increase the cost of the overall Contract by more than 25%.

Any party may petition the FTA to investigate a successful Proposer’s compliance with the Buy America certification. The procedures are set out in 49 CFR Part 661.15. If the FTA determines that the evidence indicates noncompliance, the FTA will require the Agency to initiate an investigation. The successful Proposer has the burden of proof to establish compliance with its certification. If the successful Proposer fails to so demonstrate compliance, then the successful Proposer will be required to substitute sufficient domestic materials without revision of the original Contract terms. Failure to do so will be a breach of the Contract and may lead to the initiation of debarment proceedings under 49 CFR Part 29.

1. Conditions, Exceptions, Reservations or Understandings

Proposers are cautioned to limit exceptions, conditions and limitations to the provisions of this RFP, as they may be determined to be so fundamental as to cause rejection of the Proposal for not responding to the requirements of the RFP.

Any and all Deviations must be explicitly, fully and separately stated in the Proposal by completing the Form for Proposal Deviation, setting forth at a minimum the specific reasons for each Deviation so that it can be fully considered and, if appropriate, evaluated by the Agency. All Deviations shall be evaluated in accordance with the appropriate evaluation criteria and procedures and may result in the Proposer receiving a less favorable evaluation than without the Deviation.

The Form for Proposal Deviation shall be included in the Technical package.

1. Protest Procedures

All protests must be in writing, stating the name and address of the protestor, a contact person, Contract number and title. Protests shall specify in detail the grounds of the protest and the facts supporting the protest.

* 1. Address

All protests must be addressed as follows:

* Agency contact: «protest\_name\_contact»
* For special delivery or hand delivery: «protest\_special\_delivery\_address»
* For U.S. mail: «protest\_mail\_address»

Protests not properly addressed to the address shown above may not be considered by the Agency.

Copies of the Agency’s protest procedures and the protest provisions of FTA Circular 4220.1G or its successor may be obtained from «protest\_copy\_from». Proposals will be opened, and a Notice of Award will be issued by the Agency in accordance with the Agency’s protest procedures and the protest provisions of FTA Circular 4220.1G or its successor.

* 1. Pre-Proposal Protests

Pre-Proposal protests are protests based upon the content of the solicitation documents. Three copies of Pre-Proposal protests must be received by the Agency’s office no later than fifteen (15) calendar days prior to the Due Date. Protests will be considered and either denied or sustained in part or in whole, in writing, in a manner that provides verification of receipt, prior to the Due Date for Proposals. A written decision specifying the grounds for sustaining all or part of or denying the protest will be transmitted to the protestor prior to the Due Date for Proposals in a manner that provides verification of receipt prior to the Due Date for Proposals. If the protest is sustained, then the Proposal Due Date may be postponed and an addendum issued to the solicitation documents or, at the sole discretion of the Agency, the solicitation may be canceled. If the protest is denied, then Proposals will be received and opened on the scheduled date unless a protest is filed with the FTA. See “FTA Review,” below.

* 1. Protests on the Recommended Award

All Proposers will be notified of the recommended award. This notice will be transmitted to each Proposer at the address contained in its Proposal form in a manner that provides verification of receipt. Any Proposer whose Proposal has not lapsed may protest the recommended award on any ground not specified in “Pre-Proposal Protests,” above. Three (3) copies of a full and complete written statement specifying in detail the grounds of the protest and the facts supporting the protest must be received by the Agency at the appropriate address in “Address,” above, no later than fifteen (15) calendar days after the date such notification is received. Prior to the issuing of the Notice of Award, a written decision stating the grounds for allowing or denying the protest will be transmitted to the protestor and the Proposer recommended for award in a manner that provides verification of receipt.

* 1. FTA Review

After such administrative remedies have been exhausted, an interested party may file a protest with the Federal Transit Administration of the U.S. Department of Transportation pursuant to the procedures provided in FTA C 4220.1F or its successor. FTA review is limited to the alleged failure of the Agency to have written protest procedures, the alleged failure of the Agency to follow those procedures, the alleged failure of the Agency to review a protest, or the alleged violation of federal law or regulation.

1. Preparation of Proposals
   1. Use of Proposal Forms

Proposers are advised that the forms contained in this RFP are required to be used for submission of a Proposal.

NOTE: Agencies should use a submission format that can be completed electronically.

* 1. Alternate and Multiple Proposals (Reserved)

«alternate\_proposals»

* 1. Proposal Format Requirements

Proposals shall be submitted in four separately sealed packages identified below. Each package shall be marked as specified below and shall contain all the Proposal documents for which the package is required to be marked and shall include no other documents. These same requirements shall apply to any best and final offers (BAFOs) that may be requested.

Proposers shall submit one original (marked clearly as such), «proposal\_num\_hard\_copies» hard copies, and «proposal\_num\_cd» CDs, each containing an electronic PDF copy of the Proposal to the Agency. In case of any discrepancies, the original will be considered by the Agency in evaluating the Proposal, and the electronic version is provided for the Agency’s administrative convenience only.

The hard-copy Proposals shall be prepared double-sided on 8½ × 11 in. paper in at least 11-point font. The hard copies shall be contained in three-ring binders, the contents of which are identified on the outside. Use of 11 × 17 in. foldout sheets for large tables, charts or diagrams is permissible but should be limited. Elaborate formatting is not necessary. Do not provide promotional or advertising information, unless this information is requested and/or is necessary to support the technical submittal.

Package 1: Technical Proposal Requirements

NOTE: The Agency should develop and insert instructions to Proposers specifying the format and content of the Technical Proposal. These instructions will fully define the requirements for the organization and contents of the Technical Proposal.

1. Letter of Transmittal
2. Technical Proposal
3. Acknowledgment of Addenda
4. Contractor Service and Parts Support Data
5. Form for Proposal Deviation (without price data)
6. Vehicle Questionnaire
7. References and Non-Priced Information
8. Engineering organization chart, engineering change control procedure, field modification process
9. Manufacturing facilities plant layout, other contracts, staffing
10. Production and delivery schedule and other Contract commitments for the duration of this Contract
11. Management Plan

NOTE: The Agency may want to specify the information required for any Management Plan that is to be included in the Proposal, consistent with any specific management requirements and any evaluation criteria detailed in “Proposal Selection Process.”

Package 2: Price Proposal Requirements

Each Price Proposal shall be on the prescribed Proposal form(s) and shall be for the entire Contract, including all Proposal items.

NOTE: The Agency is to specify the specific pricing data required and include the appropriate forms where prices are to be proposed. The Agency should also specify if Proposers must propose on all or some of the line items in the RFP. The Agency shall furnish to all prospective Proposers a list of applicable state and local taxes imposed by the Agency’s state or local governments. The Agency shall be liable for any such state and local taxes applicable to the complete bus as delivered that are promulgated and become effective between the Due Date and the delivery date.

1. Letter of Transmittal
2. Pricing Schedule, (including but not limited to such pricing elements as option buses, spare parts package, manuals, training, special tools and test equipment)

The Proposer is required to complete and execute the Agency’s Pricing Schedule, contained as part of the Proposal documents, and provide same in the Price Proposal. The Contractor shall be liable for payment of all local taxes applicable to the complete bus as delivered and should add these amounts to the Proposal price.

Package 3: Qualification Package Requirements

1. Pre-Award Evaluation Data Form
2. A copy of the three (3) most recent financial statements audited by an independent third party or a statement from the Proposer regarding how financial information may be reviewed by the Agency
3. Letter for insurance, indicating the Contractor’s ability to obtain the insurance coverage in accordance with the RFP requirements
4. Letter from a surety for a Performance Guarantee, if required, indicating the Contractor’s ability to obtain financial guarantees in accordance with the RFP requirements
5. Form for Proposal Deviation, if applicable (without price data)
6. Proposal Form
7. All federal certifications: Buy America Certification, Debarment and Suspension Certification for Prospective Contractor, Debarment and Suspension Certification (Lower-Tier Covered Transaction), Non-Collusion Affidavit, Lobbying Certification, Certificate of Compliance with Bus Testing Requirement, DBE Approval Certification, and Federal Motor Vehicle Safety Standards

NOTE: In lieu of #4 above, an Agency may allow the submission of a Letter from Parent Company, indicating the willingness of the parent company to provide the financial guarantee upon award for a possible cost reduction. See also “Qualification Requirements,” below.

Package 4: Proprietary/Confidential Information Package Requirements

The Proposer is directed to collect and submit any information it deems to be proprietary or confidential in nature in a separate marked and sealed package. If there is no confidential information, then the Proposer should include a statement to that effect. Subject package shall be submitted in accordance with the terms and conditions governing the submittal of the Proposer’s Proposal to this RFP. Blanket-type identification by designating whole pages or sections as containing proprietary information, trade secrets, or confidential commercial and financial information will not ensure confidentiality. The specific proprietary information, trade secrets, or confidential commercial and financial information must be clearly identified as such.

The Proposer is advised that the Agency is public and as such may be subject to certain state and/or local Public Records Act provisions regarding the release of information concerning this RFP. If a request is received by the Agency for the release of the Proposer’s proprietary/confidential information, then subject request will be referred to the Proposer for review and consideration. If the Proposer chooses to declare the information proprietary/confidential and withhold it from release, then it shall defend and hold harmless the Agency from any legal action arising from such a declaration.

* 1. Agency Treatment of Proprietary/Confidential Information

NOTE: The following provision should be considered a guideline for drafting a clause consistent with local laws.

Access to government records is governed by the «open\_records\_law». Except as otherwise required to be disclosed by applicable «optional\_open\_records\_law», the Agency will exempt from disclosure proprietary information identified in Package 4.

Upon a request for records from a third party regarding this Proposal, the Agency will notify the Proposer in writing. The Proposer must respond within «proposer\_respond\_days» business days with the identification of any and all “proprietary, trade secret, or confidential commercial or financial” information. Failure to respond within the allowed period shall be deemed an approval to release. The Proposer shall indemnify the Agency’s defense costs associated with its refusal to produce such identified information; otherwise, the requested information may be released.

The Agency shall employ sound business practices no less diligent than those used for the Agency’s own confidential information to protect the confidence of all licensed technology, software, documentation, drawings, schematics, manuals, data and other information and material provided by Proposers and the Contractor pursuant to the Contract that contain confidential commercial or financial information, trade secrets or proprietary information as defined in or pursuant to the «open\_records\_law» against disclosure of such information and material to third parties, except as permitted by the Contract. The Contractor shall be responsible for ensuring that confidential commercial or financial information, trade secrets, or proprietary information—with such determinations to be made by the Agency at its sole discretion—bears appropriate notices relating to its confidential character.

* 1. Signing of Proposal Forms

Proposals shall include firm name (and, in the event that the Proposer is a joint venture, the names of the individual firms comprising the joint venture); business address; and the name, title, business address, telephone number, facsimile (fax) number and email address of the responsible individual(s) who may be contacted during the Proposal evaluation period for scheduling oral presentations and for receiving notices from the Agency. The Proposer shall submit with its Proposal a copy of the joint venture agreement.

Proposals shall be signed by those individual(s) authorized to bind the Proposer. The Proposer shall submit evidence of the official’s authority to act for and bind the Proposer in all matters relating to the Proposal. (In the event that the Proposer is a joint venture or consortium, a representative of each of the members of the joint venture or consortium shall execute the Proposal. Each joint venture or consortium member is jointly and severally liable for the joint venture or consortium.)

NOTE: The Agency should check applicable state law for any specific requirements.

* 1. Modification or Withdrawal of Proposals

A modification of a Proposal already received will be accepted by the Agency only if the modification is received prior to the Proposal Due Date, is specifically requested by the Agency or is made with a requested BAFO. All modifications shall be made in writing and executed and submitted in the same form and manner as the original Proposal.

A Proposer may withdraw a Proposal already received prior to the Proposal Due Date by submitting to the Agency, in the same manner as the original Proposal, a written request for withdrawal executed by the Proposer’s authorized representative. After the Proposal Due Date, a Proposal may be withdrawn only if the Agency fails to award the Contract within the Proposal validity period prescribed in “Duration of the Validity of Proposals,” or any agreed-upon extension thereof. The withdrawal of a Proposal does not prejudice the right of a Proposer to submit another Proposal within the time set for receipt of Proposals.

* 1. Ownership and Cost of Proposal Development

All proposals will become the property of the Agency.

This RFP does not commit the Agency to enter into a Contract, to pay any costs incurred in the preparation or presentation of a Proposal, nor to procure or contract for the equipment.

Note: An Agency needs to be mindful of the significant costs that Proposers incur in proposal development activities and that cancellation of a procurement after receipt of proposals can end up raising prices for the entire industry.

1. Proposal Evaluation, Negotiation and Selection

Proposals will be evaluated, negotiated, selected and any award made in accordance with the criteria and procedures described below. The approach and procedures are those applicable to a competitive negotiated procurement whereby Proposals are evaluated to determine which Proposals are within a Competitive Range. Discussions and negotiations may then be carried out with Proposers within the Competitive Range, after which BAFOs may be requested.

However, the Agency may select a Proposal for award without any discussions or negotiations or request for any BAFOs. Subject to the Agency’s right to reject any or all Proposals, the Proposer whose Proposal is found to be most advantageous to the Agency will be selected, based upon consideration of the criteria of “Proposal Selection Process,” below.

* 1. Confidentiality of Proposals

Proposals will not be publicly opened. All Proposals and evaluations will be kept strictly confidential throughout the evaluation, negotiation and selection process, except as otherwise required by applicable law. Only the members of the Selection Committee and Evaluation Team and other Agency officials, employees and agents having a legitimate interest will be provided access to the Proposals and evaluation results during this period.

* 1. Duration of the Validity of Proposals

Proposals and subsequent offers shall be valid for the period stated in Section 1, “Notice of Request for Proposals.” The Agency may request Proposers to extend the period of time specified herein by written agreement between the Agency and the Proposer(s) concerned.

* 1. Evaluation Committee

NOTE: The Agency should specify how it will organize the evaluation and appropriately title this section. The following is provided as an example. In some instances, a Selection Committee may be established to receive and review the results of the Evaluation Committee.

An Evaluation Committee, which will include officers, employees and agents of the Agency, will be established. The Evaluation Committee will carry out the detailed evaluations, including establishing the Competitive Range, carrying out negotiations, and making the selection of the Proposer, if any, that may be awarded the Contract.

The Evaluation Committee may report its recommendations and findings to the appropriate Agency individual or body responsible for awarding the Contract.

* 1. Review of Proposals for Responsiveness and Proposers for Responsibility

Each Proposal will be reviewed to determine if the Proposal is responsive to the submission requirements outlined in this RFP and if the Proposer is responsible.

A responsive Proposal is one that follows the requirements of this RFP, includes all documentation, is submitted in the format outlined in this RFP, is of timely submission, and has the appropriate signatures as required on each document. Failure to comply with these requirements may result in the Proposal being deemed nonresponsive.

A responsible Proposer is one that demonstrates the capability to satisfy the commercial and technical requirements set forth in the Solicitation. A Proposer’s failure to demonstrate that it is responsible may result in the proposal being rejected.

Any Proposal found to be nonresponsive or Proposer found to be non-responsible will not be considered further for award. Proposals that do not comply with the RFP instructions and requirements or do not include the required information may be rejected as insufficient and may not be further considered. The Agency reserves the right to request that a Proposer provide additional information and/or clarify information. The Agency’s determination regarding the responsiveness of a Proposal and the responsibility of a Proposer shall be final.

* 1. Proposal Selection Process

The following describes the process by which Proposals will be evaluated and a selection made for a potential award. Any such selection of a Proposal shall be made by consideration of only the criteria set forth below.

“Qualification Requirements” specifies the requirements for determining responsible Proposers, all of which must be met by a Proposer for it to be found qualified. Final determination of a Proposer’s qualification will be made based upon all information received during the evaluation process and as a condition for award.

“Proposal Evaluation Criteria” contains all the evaluation criteria, and their relative order of importance, by which a Proposal from a qualified Proposer will be considered for selection. An award, if made, will be to a responsible Proposer for a Proposal that is found to be in the Agency’s best interests, based on price and other evaluation criteria considered. The procedures to be followed for these evaluations are provided in “Evaluation Procedures,” below.

Qualification Requirements

The following are the requirements for qualifying responsible Proposers. All of these requirements should be met; therefore, they are not listed in any particular order of importance. Any Proposal that the Evaluation Committee finds does not meet these requirements, and cannot be made to meet these requirements, may be determined by the Evaluation Committee to be not responsible and the Proposal rejected. The requirements are as follows:

NOTE: Requirements shown below are examples to serve as guidelines. The Agency is to choose and specify the appropriate requirements.

1. Sufficient financial strength, resources and capability to finance the Work to be performed and to complete the Contract in a satisfactory manner, as measured by the following:

* The Proposer’s financial statements prepared in accordance with generally accepted accounting principles of the jurisdiction in which the Proposer is located, and audited by an independent certified public accountant; oral statement from the Proposer regarding how financial information may be reviewed by the Agency.

NOTE: It is important only to determine if the Proposer will have sufficient financial strength to pay its bills on time, fund the cash flow and meet obligations to Subcontractors. The evaluation of financial strength should take into account the Proposer’s other contractual commitments.

* The Proposer’s ability to secure financial guarantees, if required, as evidenced by a letter of commitment from an underwriter, surety or other guarantor confirming that the Proposer can provide the required guarantee.

NOTE: Willingness of any parent company to provide the financial guarantee if required, in lieu of a bank guarantee, can be evidenced by a letter of commitment signed by an officer of the parent company having the authority to execute the parent company guarantee.

* The Proposer’s ability to obtain required insurance with coverage values that meet minimum requirements, evidenced by a letter from an underwriter confirming that the Proposer can be insured for the required amount.

1. Evidence that the human and physical resources are sufficient to perform the Contract as specified and to ensure delivery of all equipment within the time specified in the Contract, to include the following:

* Engineering, management and service organizations with sufficient personnel and requisite disciplines, licenses, skills, experience and equipment to complete the Contract as required and to satisfy any engineering or service problems that may arise during the warranty period.
* Adequate manufacturing facilities sufficient to produce and factory-test equipment on schedule.
* 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.

1. Evidence that the Proposer is qualified in accordance with the provisions of Section 8, “Quality Assurance.”
2. Evidence of satisfactory performance and integrity on contracts in making deliveries on time, meeting specifications and warranty provisions, parts availability, and steps the Proposer took to resolve any judgments, liens, Fleet Defects history or warranty claims. Evidence shall be by client references.

Proposal Evaluation Criteria

The following are the complete criteria, listed in their relative order of importance, by which Proposals from responsible Proposers will be evaluated and ranked for the purposes of determining any Competitive Range and to make any selection of a Proposal for a potential award. Any exceptions, conditions, reservations or understandings explicitly, fully and separately stated on the Form for Proposal Deviation, which do not cause the Agency to consider a Proposal to be outside the Competitive Range, will be evaluated according to the respective evaluation criteria and sub-criteria that they affect.

The criteria are listed numerically by their relative order of importance. However, certain criteria may have sub-criteria identified that are listed by their relative order of importance within the criterion they comprise. Also, certain sub-criteria may have sub-criteria that are listed by their relative degree of importance within the specific sub-criterion they comprise.

NOTE: The Agency must define and insert the evaluation criteria to be used. At the option of the Agency, weights could be assigned to each criterion and sub-criterion and be shown in the document. At a minimum, the criteria must be listed by their order of importance in the evaluation. The following are suggested categories of evaluation criteria for Agency consideration, but they are not listed in a suggested order of importance:

* Technical
* Qualifications (resources, management, engineering, etc.)
* Price
* Delivery
* Other financial impacts

Example evaluation criteria are presented in Appendix C at the end of this document.

* 1. Evaluation Procedures

Proposals will be analyzed for conformance with the instructions and requirements of the RFP and Contract documents. Proposals that do not comply with these instructions and do not include the required information may be rejected as insufficient or not be considered for the Competitive Range. The Agency reserves the right to request that a Proposer provide any missing information and make corrections. Proposers are advised that the detailed evaluation forms and procedures will follow the same Proposal format and organization specified in “Preparation of Proposals.” Therefore, Proposers should pay close attention to and strictly follow all instructions. Submittal of a Proposal will signify that the Proposer has accepted the whole of the Contract documents, except such conditions, exceptions, reservations or understandings explicitly, fully and separately stated on the forms and according to the instructions of the Form for Proposal Deviation. Any such conditions, exceptions, reservations or understandings that do not result in the rejection of the Proposal are subject to evaluation under the criteria set forth in “Proposal Selection Process.”

Evaluations will be made in strict accordance with all the evaluation criteria specified in “Proposal Selection Process,” above. The Agency will choose the Proposal that it finds to be most advantageous to the Agency, based upon the evaluation criteria.

* 1. Evaluations of Competitive Proposals

1. Qualification of responsible Proposers. Proposals will be evaluated to determine the responsibility of Proposers. A final determination of a Proposer’s responsibility will be made upon the basis of initial information submitted in the Proposal, any information submitted upon request by the Agency, information submitted in a BAFO, and information resulting from Agency inquiry of the Proposer’s references and its own knowledge of the Proposer.
2. Detailed evaluation of Proposals and determination of Competitive Range. The Agency will carry out and document its evaluations in accordance with the criteria and procedures set forth in “Proposal Selection Process.” Any Proposal deficiencies that may render a Proposal unacceptable will be documented. The Agency will make specific note of questions, issues, concerns and areas requiring clarification by Proposers and to be discussed in any meetings with Proposers that the Agency finds to be within the Competitive Range.

Rankings of the Proposals against the evaluation will then be made for determining which Proposals are within the Competitive Range, or may reasonably be made to be within the Competitive Range.

1. Proposals not within the Competitive Range. Proposers of any Proposals that have been determined by the Agency as not in the Competitive Range, and that cannot be reasonably made to be within the Competitive Range, will be notified in accordance with the Agency’s policies.
2. Discussions with Proposers in the Competitive Range. The Proposers whose Proposals are found by the Agency to be within the Competitive Range, or that may be reasonably made to be within the Competitive Range, will be notified and any questions or requests for clarifications provided to them in writing. Each such Proposer may be invited for an interview and discussions with the Agency to discuss answers to written or oral questions, clarifications and any facet of its Proposal.

In the event that a Proposal that has been included in the Competitive Range contains conditions, exceptions, reservations or understandings to any Contract requirements as provided in the Form for Proposal Deviation, said conditions, exceptions, reservations or understandings may be negotiated during these meetings. However, the Agency shall have the right to reject any and all such conditions and exceptions, and instruct the Proposer to amend its Proposal and remove said conditions and exceptions; and any Proposer failing to do so may cause the Agency to find such Proposal to be outside the Competitive Range.

No information, financial or otherwise, will be provided to any Proposer about any of the Proposals from other Proposers, to the extent permitted by applicable law. Proposers will not be given a specific price or specific financial requirements they must meet to gain further consideration, except that proposed prices may be considered to be too high with respect to the marketplace or unacceptable. Proposers will not be told of their rankings among the other Proposers prior to Contract award.

1. Factory and site visits. The Agency reserves the right to conduct factory visits of the Proposer’s facilities and/or the facilities of major sub-suppliers included in the Proposal.
2. Best and final offers. After all interviews have been completed, the Proposers in the Competitive Range may be afforded the opportunity to amend their Proposals and make their BAFOs. The Request for BAFOs shall include the following:

NOTE: The items shown below are for illustrative purposes only; the Agency will make the determination on what to include in its request for BAFOs.

* Notice that discussions and negotiations are concluded.
* A complete listing of the conditions, exceptions, reservations or understandings that have been approved.
* A common date and time for submission of written BAFOs, allowing a reasonable opportunity for preparation of the written BAFOs.
* Notice that if any modification to a BAFO is submitted, it must be received by the date and time specified for the receipt of BAFOs.
* Notice to Proposers that do not submit a notice of withdrawal or a BAFO that their immediately previous Proposal will be construed as their BAFO.

Any modification to the initial Proposal made by a Proposer in its BAFO shall be identified in its BAFO. BAFOs will be evaluated by the Agency according to the same requirements and criteria as the initial Proposals (“Proposal Selection Process”). The Agency will make appropriate adjustments to the initial scores for any sub-criteria and criteria that have been affected by any Proposal modifications made by the BAFOs. These final scores and rankings within each criterion will again be arrayed by the Agency and considered according to the relative degrees of importance of the criteria defined in “Proposal Selection Process.”

The Agency will then choose the Proposal that it finds to be most advantageous to the Agency, based upon the evaluation criteria. The results of the evaluations and the selection of a Proposal for any award will be documented.

The Agency reserves the right to make an award to a Proposer whose Proposal it judges to be most advantageous to the Agency based upon the evaluation criteria, without conducting any written or oral discussions with any Proposers or solicitation of any BAFOs.

1. Debriefing. Subsequent to the award, the unsuccessful Proposers will be notified and may request a debriefing. Proposers will be debriefed in accordance with Agency policies, including information regarding the shortcomings of their Proposal.
2. Response to Proposals
   1. Single Proposal Response

If only one Proposal is received in response to this RFP and it is found by the Agency to be acceptable, then a price or cost analysis, or both, possibly including an audit, may be performed by or for the Agency. The Proposer has agreed to such analysis by submitting a Proposal in response to this RFP.

NOTE: The use of a third-party auditor is recommended to ensure confidentiality of cost and pricing data. The Proposer may require a nondisclosure agreement.

* 1. Availability of Funds

This procurement is subject to the availability of funding. «available\_funds»

* 1. Agency Contract Approval Process

«contract\_approval\_process»

* 1. Agency Rights

The Agency reserves the right to cancel the procurement in whole or in part, at its sole discretion, at any time before the Contract is fully executed and approved on behalf of the Agency.

The Agency reserves the right to reject any or all Proposals, to undertake discussions with one or more Proposers, and to accept that Proposal or modified Proposal which, in its judgment, will be most advantageous to the Agency, considering price and other evaluation criteria. The Agency reserves the right to determine any specific Proposal that is conditional or not prepared in accordance with the instructions and requirements of this RFP to be nonresponsive. The Agency reserves the right to waive any Defects, or minor informalities or irregularities in any Proposal that do not materially affect the Proposal or prejudice other Proposers.

If there is any evidence indicating that two or more Proposers are in collusion to restrict competition or are otherwise engaged in anti-competitive practices, the Proposals of all such Proposers shall be rejected, and such evidence may be a cause for disqualification of the participants in any future solicitations undertaken by the Agency.

The Agency may reject a Proposal that includes unacceptable Deviations as provided in the Form for Proposal Deviation.

* 1. Execution of Contract

The acceptance of a Proposal for award, if made, shall be evidenced in writing by a notice of award of Contract delivered to the Proposer whose Proposal is accepted. Upon notice of award of the Contract to a Proposer, the Proposer shall commence performance under the Contract by furnishing any required bonds, and by furnishing copies of the certificates of insurance required to be procured by the Contractor pursuant to the Contract documents within «days\_after\_notice\_bonds» calendar days after the date of receipt of the notice of award. Failure to fulfill these requirements within the specified time is cause for termination of the Contract under “Termination for Default” in Section 3.

1. Conflicts of Interests and Gratuities

Proposers are prohibited from engaging in any practice that may be considered a conflict of interest under existing Agency policies and/or state law, and to refrain from participating in any gifts, favors or other forms of compensation that may be viewed as a gratuity in accordance with existing policies and laws.

1. Agency-Specific Provisions

«agency\_specific\_provisions\_sec2»

SECTION 3: GENERAL CONDITIONS

1. Definitions

The following are definitions of special terms used in this document:

Agency: «agency»

Authorized Signer: The person who is executing this Contract on behalf of the Contractor, and who is authorized to bind the Contractor.

Best and Final Offer (BAFO): The last revised Proposal made by a Proposer. If a BAFO is not specifically requested by the Agency, or if the Proposer does not promptly respond to a request for a BAFO, then the most recent, current Proposal is the BAFO.

Class 1 Failure (Physical Safety): A failure that could lead directly to passenger or operator injury and represents a severe crash situation.

Class 2 Failure (Road Call): A failure resulting in an en route interruption of revenue service. Service is discontinued until the bus is replaced or repaired at the point of failure.

Competitive Range: The range of proposals that are identified as the most highly rated, unless the range is further reduced for purposes of efficiency.

Contract: The Proposal and its acceptance by the Agency, as manifested by the Contract documents specified in Section 10, “Contract.”

Contracting Officer: The person who is executing this Contract on behalf of the Agency and who has complete and final authority, except as limited herein.

Contractor: The successful Proposer who is awarded a Contract for providing all buses and equipment described in the Contract documents.

Days: Calendar days, unless otherwise stated.

Defect: Patent or latent malfunction or failure in manufacture, installation or design of any component or subsystem.

Deviation: [Variance](http://www.businessdictionary.com/definition/variance.html) from a requirement or [specification](http://www.businessdictionary.com/definition/specification-spec.html) that does not alter the basis of a Contract or adversely affect its [performance](http://www.businessdictionary.com/definition/performance.html).

Due Date: The date and time by which Proposals must be received by the Agency as specified in Section 1, “Notice of Request for Proposals.”

Extended Warranty: An additional warranty available for purchase above the standard warranty offered.

Fatigue Failure (Corrosion Fatigue): The mechanical degradation of a material under the joint action of corrosion and cyclic loading.

Pass-Through Warranty: A warranty provided by the Contractor but administered directly with the component Supplier.

Proposal: A promise, if accepted, to deliver equipment and services according to the underlying solicitation of the Agency and documented using the prescribed form in the solicitation, including any Proposal or BAFO.

Proposer: A legal entity that makes a Proposal.

Related Defect: Damage inflicted on any component or subsystem as a direct result of a separate Defect.

Solicitation: An Agency’s Request for Proposals.

Subcontractor: Any manufacturer, company or Agency that provides services (such as component installation or testing) and that may also provide units, components or subassemblies for inclusion in the bus. Subcontractor items provided shall require qualification by type and acceptance tests in accordance with the requirements defined in Section 8, “Quality Assurance” and the technical specifications.

Superior Warranty: A warranty still in effect after all contractually required warranties have expired. The remaining warranty is administered directly between the Supplier or Subcontractor and the Agency.

Supplier: Any manufacturer, company or Agency providing units, components or subcomponents for inclusion in the bus that are installed by the Contractor. Supplier items shall require qualification by type and acceptance tests in accordance with requirements defined in Section 8, “Quality Assurance” and the technical specifications.

Work: Any and all labor, supervision, services, materials, machinery, equipment, tools, supplies and/or facilities called for by the Contract and necessary to the completion thereof.

1. Materials and Workmanship

The Contractor shall be responsible for all materials and workmanship in the construction of the bus and all accessories used, whether the same are manufactured by the Contractor or purchased from a Supplier. This provision excludes any equipment leased or supplied by the Agency, except insofar as such equipment has been damaged by the failure of a part or component for which the Contractor is responsible, or except insofar as the damage to such equipment was caused by the Contractor during the manufacture of the bus.

1. Conformance with Specifications and Drawings

Materials furnished and work performed by the Contractor shall conform to the requirements of the technical specifications and other Contract documents. Notwithstanding the provision of drawings, technical specifications or other data by the Agency, the Contractor shall have the responsibility of supplying all parts and details required to make the bus complete and ready for service, even if such details are not specifically mentioned in the drawings and specifications. Items that are installed by the Agency shall not be the responsibility of the Contractor unless they are included in this Contract.

Addition of any Third-Party equipment requested by the Agency, to be added to the base bus, shall require written technical specifications for the equipment. This includes, but is not limited to, a detailed description of the equipment’s functionality, installation instructions and unit cost at the time of order. This requirement shall be clearly communicated, outlined and agreed upon in writing prior to the placement of an Order with the Contractor.

Omissions from the Contract specifications, or the inaccurate description of details of Work that are manifestly necessary to carry out the intent of the Contract specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted Work or inaccurately described details of the Work, and they shall be performed as if fully and correctly set forth and described.

1. Inspection, Testing and Acceptance
   1. General

The Agency’s Representative shall at all times have access to the Work, the Contractor and (through the Contractor) its Suppliers. The Contractor and its Suppliers shall furnish every reasonable facility for ascertaining that materials and workmanship are in accordance with the requirements of the Contract Documents. All Work done shall be subject to the Agency Representative’s inspection and approval, in accordance with the approved Work products developed as a result of the Contract Documents.

The pre-delivery tests and inspections shall be performed at the Contractor’s plant; they shall be performed in accordance with the procedures defined in Section 8 subsection entitled “Pre-Delivery Tests,” and they may be witnessed by the resident inspector. Once a bus passes these tests and inspections, the resident inspector shall authorize the release of the bus.

Within fifteen (15) calendar days after arrival at the designated point of delivery, the bus shall undergo the Agency tests defined in Section 8 subsection entitled “Post-Delivery Tests.” If the bus passes these tests, or if the Agency does not notify the Contractor of nonacceptance within 15 calendar days after delivery, then acceptance of the bus by the Agency occurs on the 15th day after delivery. If these post-delivery tests have not been completed for the bus because of infrastructure or other delays that are not the responsibility of the Contractor, then the Agency may issue a change to the Contract to modify the delivery schedule or extend the post-delivery test period. The equitable compensation provision in Section 8 subsection entitled “Suspension of Work” for suspensions and delays shall apply. If the bus fails these tests, it shall not be accepted until the repair procedures defined in Section 4 subsection entitled “Repairs After Nonacceptance” have been carried out and the bus retested until it passes. Acceptance occurs earlier if the Agency notifies the Contractor of early acceptance or places the bus in revenue service.

NOTE: Under federal requirements (49 CFR 663.37), no resident inspector is required for orders of 10 or fewer buses, or 20 or fewer vehicles, serving rural or urbanized areas of 200,000 people or fewer.

* 1. Risk of Loss

The Agency shall assume risk of loss of the bus upon delivery, as defined in “Bus Delivery.” Prior to this delivery, the Contractor shall have risk of loss of the bus, including any damages sustained during the delivery, regardless of the status of title or any payments related to the bus. Drivers shall keep a maintenance log en route, and it shall be delivered to the Agency with the bus. If the bus is released back to the Contractor for any reason, then the Contractor has the risk of loss upon such release.

1. Title and Warranty of Title

Adequate documents for registering each bus in «agency\_jurisdiction» shall be provided to the Agency not fewer than ten (10) business days before delivery to the Agency. Regardless of the documents provided, title shall not pass from the Contractor to the agency until the Buy America Post Delivery Audit required by 49 CFR Part 663 is complete, and the Agency accepts the bus. Upon acceptance of each bus, the Contractor warrants that the title shall pass to the Agency free and clear of all encumbrances.

1. Intellectual Property Warranty

The Agency shall advise the Contractor of any impending patent suit related to this Contract against the Agency and provide all information available. The Contractor shall defend any suit or proceeding brought against the Agency based on a claim that any equipment, or any part thereof, furnished under this Contract constitutes an infringement of any patent, and the Contractor shall pay all damages and costs awarded therein, excluding incidental and consequential damages against the Agency. In case said equipment, or any part thereof, is in such suit held to constitute infringement, and use of said equipment or parts is enjoined, the Contractor shall, at its own expense and at its option, either procure for the Agency the right to continue using said equipment or part, replace same with non-infringing equipment, or modify it so that it becomes non-infringing.

The Contractor’s obligations under this section are discharged and the Agency shall hold the Contractor harmless with respect to the equipment (or part) if it was specified by the Agency and all requests for substitutes were rejected, and the Contractor advised the Agency under “Questions, Clarifications and Omissions” of a potential infringement, in which case the Contractor shall be held harmless.

1. Data Rights
   1. Proprietary Rights/Rights in Data

The term “Subject Data” used in this clause means recorded information, whether or not copyrighted, and includes:

* Contractor-created specifications, engineering drawings (including shop drawings and working drawings);
* Technical data, including manuals or instruction materials, and computer or microprocessor software delivered or specified to be delivered under the Contract;
* Patented materials, equipment, devices or processes;
* License requirements necessary or desirable for operation or maintenance of the equipment;
* Records and reports delivered, or specified to be delivered, under the Contract; and
* Any rights of copyright to which the Contractor, Subcontractor or Supplier purchases ownership for the purpose of performance of the Contract, and which are specifically paid for as such under the Contract.

The Subject Data shall remain the property of the Contractor; the Agency, however, shall have a perpetual, royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use (and authorize others to use) the Subject Data for the purposes of operating and maintaining the buses.

The Contractor agrees to include the requirements of this clause, modified as necessary to identify the affected parties, in each subcontract and supply Order placed under the Contract.

The Agency shall protect from disclosure the Contractor’s proprietary information included in the Subject Data provided by the Contractor to the fullest extent of the law. In the event that the Contractor no longer supports the Subject Data, the Agency has the right to reverse-engineer the Subject Data and associated hardware.

* 1. Access to Onboard Operational Data

The Agency grants to the Contractor the right to inspect, examine, download and otherwise obtain any information or data available from components provided by the Contractor, including but not limited to electronic control modules, video or audio devices or software, and/or other data-collection devices (collectively, “Onboard Operational Data”). This will be to the extent necessary to enable the Contractor to perform reliability maintenance analysis, corrective action and/or other engineering-type Work for the bus, the fleet or, more generally, for similar analysis across agencies. This right expressly excludes access to information or data collected on any equipment not provided and installed by the Contractor. The Contractor shall treat all Onboard Operational Data as confidential and protect it to the same or greater extent that it does its own confidential information. The Contractor shall not disclose Onboard Operational Data to any person or entity without the express written consent of the Agency. The Contractor shall not access, download, utilize or retain any personally identifiable information, as defined in 49 CFR Part 1520. The Contractor shall promptly notify the Agency upon learning of any unauthorized disclosure of the Onboard Operational Data.

1. Changes
   1. Contractor Changes

Any proposed change in this Contract shall be submitted to the Agency for its prior approval. Oral change orders are not permitted. No change in this Contract shall be made without the prior written approval of the Contracting Officer. The Contractor shall be liable for all costs resulting from, and/or for satisfactorily correcting, any specification change not properly ordered by written modification to the Contract and signed by the Contracting Officer.

* 1. Agency Changes

The Agency may initiate changes to the Contract by notifying the Contractor in writing, and the notification shall indicate the Agency approval necessary to change the contract. The Agency and the Contractor shall work together to accomplish the change with as little delay and additional cost as possible. The Agency and the Contractor will avoid any actions and any omissions that would unnecessarily increase the cost of the change. As soon as reasonably possible, but no later than thirty (30) calendar days after receipt of the notification of change, the Contractor shall submit to the Contracting Officer a detailed price and schedule Proposal for the Work to be performed. This Proposal shall be accepted or modified by negotiations between the Contractor and the Contracting Officer with the objective of reaching a bilateral agreement on price and other terms as soon as possible.

The parties may reach agreement on elements but not all of the initiated changes. The parties may execute a detailed modification of the contract, including those elements of the change on which they have reached agreement; the modification shall include any changes in time and price. The Contractor shall begin work on those changes and the Agency may request a detailed proposal on the remaining changes on which agreement has not yet been reached.

When the negotiations are successful, a detailed modification shall be executed in writing by both parties. If at any time the Contracting Officer determines it is necessary to proceed even though complete agreement has not been reached, the Contracting Officer may issue a change order requiring the Contractor to proceed, stating an equitable change in compensation, and binding both parties to the changed contract. Disagreements that cannot be resolved within negotiations shall be resolved in accordance with “Disputes,” below. Regardless of any disputes, the Contractor shall proceed with the Work ordered.

1. Legal Clauses
   1. Indemnification

GC 9.1.1 The Contractor shall, to the extent permitted by law: (1) protect, indemnify, and hold the Agency and its officers, employees and agents (including consultants) harmless from and against any and all liabilities, damages, claims, demands, liens, encumbrances, judgments, awards, losses, costs, expenses, and suits/actions/proceedings (including reasonable expenses, costs and attorneys’ fees incurred by the Agency and its officers, employees and/or agents [including consultants]) in the defense, settlement or satisfaction thereof, of any injury, death, loss or damage to persons or property of any kind whatsoever, resulting from the misconduct or negligent acts, errors or omissions of the Contractor in the performance of the Contract (including misconduct, negligent acts and errors or omissions of its officers, employees, servants, agents, Subcontractors and Suppliers); (2) upon receipt of notice, and if given authority, the Contractor shall settle or undertake at its own expense the defense of any such suit, action or proceeding, including appeals, against the Agency and its officers, employees and agents (including consultants), relating to such injury, death, loss or damage. Each party shall promptly notify the other in writing of the notice or assertion of such claim, demand, lien, encumbrance, judgment, award, suit, action or other proceeding hereunder. The Contractor shall have sole charge and direction of the defense of such suit, action or proceeding. The Agency shall not make any admission that might be materially prejudicial to the Contractor unless the Contractor has failed to take over the conduct of any negotiations or defense within a reasonable time after receipt of the notice and authority above provided. The Agency shall, at the request of the Contractor, furnish to the Contractor all reasonable assistance that may be necessary for the purpose of defending such suit, action or proceeding; and shall be repaid all reasonable costs incurred in doing so. The Agency shall have the right to be represented therein by an advisory council of its own selection at its own expense.

GC 9.1.2 The obligations of the Contractor under the above paragraph shall not extend to circumstances where the injury, death or damages are caused solely by the negligent acts, errors or omissions of the Agency, its officers, employees, agents or consultants. This includes, without limitation, negligence in: (1) the preparation of the Contract documents, or (2) the giving of directions or instructions with respect to the requirements of the Contract by written order. The obligations of the Contractor shall not extend to circumstances where the injury, death or damages were caused, in whole or in part, by the negligence of any third-party operator, not including an assignee or Subcontractor of the Contractor, subject to the right of contribution. In case of joint or concurrent negligence of the parties giving rise to a claim or loss against either one or both, each shall have full rights of contribution from the other.

* 1. Suspension of Work

GC 9.2.1 The Agency may at any time, and for any reason, within its sole discretion issue a written order to the Contractor suspending, delaying or interrupting all or any part of the Work for a specified period of time.

GC 9.2.2 The Contractor shall comply immediately with any such written order and take all reasonable steps to minimize costs allocable to the Work covered by the suspension during the period of work stoppage. The Contractor shall continue the Work that is not included in the suspension and shall continue such ancillary activities as are not suspended. The Contractor shall resume performance of the suspended Work upon expiration of the notice of suspension, or upon direction from the Agency.

GC 9.2.3 The Contractor shall be allowed an equitable adjustment in the Contract price and/or an extension of the Contract time, to the extent that cost or delays are shown by the Contractor to be directly attributable to any suspension. However, no adjustment shall be made under this section for any suspension, delay or interruption due to the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of the Contract. As soon as reasonably possible, but no later than forty-five (45) calendar days (or the period of time agreed to by the parties) after receipt of the written suspension of work notice, the Contractor shall submit to the Contracting Officer a detailed price and schedule Proposal for the suspension, delay or interruption.

* 1. Excusable Delays/Force Majeure

GC 9.3.1 If the Contractor is delayed at any time during the progress of the Work by the neglect or failure of the Agency, or by a cause as described below, then the time for completion and/or affected delivery date(s) shall be extended by the Agency subject to the following cumulative conditions:

1. The cause of the delay arises after the Notice of Award and neither was, nor could have been, anticipated by the Contractor by reasonable investigation before such award. Such cause may also include force majeure events such as any event or circumstance beyond the reasonable control of the Contractor—including but not limited to an act of God; earthquake, flood and any other natural disaster; civil disturbance, strike or labor dispute; fire or explosion; war or other hostilities; embargo; or a delay caused by a failure of a Supplier or Subcontractor to provide supplies or services necessary to continue or complete the Work, where the failure was beyond the control of both the Contractor and Supplier or Subcontractor and without fault or negligence of either, and the supplies or services were not reasonably available from another source;
2. The Contractor demonstrates that the completion of the Work and/or any affected deliveries will be actually and necessarily delayed;
3. The Contractor has taken measures to avoid and/or mitigate the delay by the exercise of all reasonable precautions, efforts and measures, whether before or after the occurrence of the cause of delay; and
4. The Contractor makes written request and provides other information to the Agency as described in paragraph GC 9.3.4 below.

A delay in meeting all of the conditions of this section shall be deemed an excusable delay. Any concurrent delay that does not constitute an excusable delay will not be the sole basis for denying a request hereunder. A delay that would have occurred even in the absence of the force majeure event shall not be excusable.

GC 9.3.2 None of the above shall relieve the Contractor of any liability for the payment of any liquidated damages owing from a failure to complete the Work by the time for completion that the Contractor is required to pay pursuant to “Liquidated Damages for Late Delivery of the Bus” for delays occurring prior to the beginning of, or subsequent to the ending of, the occurrence of an excusable delay.

GC 9.3.3 The Agency reserves the right to rescind or shorten any extension previously granted, if subsequently the Agency determines that any information provided by the Contractor in support of a request for an extension of time was erroneous; provided, however, that such information or facts, if known, would have resulted in a denial of the request for an excusable delay. Notwithstanding the above, the Agency will not rescind or shorten any extension previously granted if the Contractor acted in reliance upon the granting of such extension; and such extension was based on information that, although later found to have been erroneous, was submitted in good faith by the Contractor.

GC 9.3.4 No extension or adjustment of time shall be granted unless: (1) written notice of the delay is filed with the Agency within fourteen (14) calendar days after the commencement of the delay; and (2) a written application therefore, stating in reasonable detail the causes, the effect to date, the probable future effect on the performance of the Contractor under the Contract, and the portion or portions of the Work affected, is filed by the Contractor with the Agency within thirty (30) calendar days after the commencement of the delay. No such extension or adjustment shall be deemed a waiver of the rights of either party under this Contract. The Agency shall make its determination within «determination\_day» calendar days after receipt of the application.

* 1. Termination

Termination for Convenience

«termination\_for\_convenience»

* + 1. Termination for Default

The Agency may, by written notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor fails to make delivery of the supplies, or perform the services, within the time specified herein or any extension thereof. The Agency may also do so if the Contractor fails to perform any of the other material provisions of the Contract, or fails to make progress as to endanger performance of this Contract in accordance with its terms; and if, in either of these two circumstances, does not cure such failure within a period of ten (10) business days, or such longer period as the Contracting Officer may authorize in writing after receipt of notice from the Contracting Officer specifying such failure.

If the Contract is terminated in whole or in part for default, the Agency may procure, upon such terms and in such manner as the Contracting Officer may deem appropriate, supplies or services similar to those so terminated. The Contractor shall be liable to the Agency for any excess costs for such similar supplies or services and shall continue the performance of this Contract to the extent not terminated under the provisions of this clause.

Except with respect to defaults of Subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform the Contract arises out of a cause beyond the control, and without the fault or negligence, of the Contractor. If the failure to perform is caused by the default of a Subcontractor, and if such default arises out of causes beyond the control of both the Contractor and Subcontractor, and without the fault or negligence of either of them, then the Contractor shall not be liable for any excess costs for failure to perform, unless the supplies or services to be furnished by the Subcontractor were obtainable from other sources and in sufficient time to permit the Contractor to meet the required delivery schedule.

Payment for completed supplies delivered to and accepted by the Agency shall be at the Contract price. The Agency may withhold from amounts otherwise due the Contractor for such completed supplies, such sum as the Contracting Officer determines to be necessary to protect the Agency against loss because of outstanding liens or claims of former lienholders.

If, after notice of termination of this Contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the default was excusable under the provisions of this clause, then the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to termination for convenience of the Agency.

* 1. Compliance with Laws and Regulations

The Contractor shall at all times comply with all applicable laws, regulations, policies, procedures and directives (together, the “Law”), including without limitation FTA regulations, policies, procedures, and directives, including those listed directly or by reference in the agreement between the Agency and FTA that funds any part of this Contract, 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.

* 1. Changes of Law

Changes of Law that become effective after the Proposal due date may result in price changes. If a price adjustment is indicated, either upward or downward, it shall be negotiated between the Agency and the Contractor, and the final Contract price will be adjusted upward or downward to reflect such changes in the Law. Such price adjustment may be audited, where required.

* 1. Governing Law and Choice of Forum

This Contract shall be governed by the laws of «agency\_state» without regard to conflict of law rules. The Contractor consents to the jurisdiction of «agency\_state», County of «agency\_county».

* 1. Disputes

NOTE: The following section deals with disputes arising after Contract award and not during the procurement process. The latter are “protests” that should be dealt with under the Agency’s procurement procedures as outlined in “Protest Procedures.”

Outlined below are example provisions and recommendations for drafting a dispute resolution clause to be included in the Contract. Included are stepped negotiations, submission for Agency executive decision and alternative dispute resolution. However, by mutual agreement, the matter may be taken immediately to any higher step in the resolution process, or a mutually agreed-to alternative dispute resolution process (which may include structured negotiations, mediation or arbitration) or litigation.

Except as otherwise provided in this Contract, any dispute concerning a question of fact arising under or related to this Contract, that is not disposed of by agreement, shall be decided in accordance with the following steps. However, by mutual agreement the matter may be taken immediately to any higher step in the dispute resolution process, or through a mutually agreed-upon alternative dispute resolution process (which may include structured negotiations, mediation or arbitration) or litigation. Pending final resolution of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract, and in accordance with the contracting officer’s or chief executive officer’s decision, as the case may be.

1. Notice of dispute. All disputes shall be initiated through a written dispute notice submitted by either party to the other party within ten (10) calendar days of the determination of the dispute.
2. Negotiation between Contracting Officers. The parties shall attempt in good faith to resolve any dispute arising out of, or relating to, this Contract promptly by negotiation between executives who have the authority to settle the controversy, and who are at a higher level of management than the people with direct responsibility for administration of this Contract. Any party may give the other party written notice of any dispute not resolved in the normal course of business as provided in paragraph 1 above. Within fourteen (14) calendar days after delivery of the dispute notice, the receiving party shall submit to the other party a written response. The dispute notice and written response shall include (a) a statement of the party’s position and a summary of the arguments supporting that position, (b) any evidence supporting the party’s position, and (c) the name of the executive who will represent that party and of any others who will accompany the executive in negotiations. Within twenty-eight (28) calendar days after delivery of the dispute notice, the Contracting Officer of both parties shall meet at a mutually acceptable time and place, and thereafter as they reasonably deem necessary to attempt to resolve the dispute. All reasonable requests for information by one party to the other shall be honored.

If the matter has not been resolved by these people within forty-two (42) calendar days of the dispute notice, then the dispute may be referred to more senior executives of both parties who have authority to settle the dispute and who shall likewise meet to attempt to resolve the dispute.

1. Chief executive officer’s decision. Should the dispute not be resolved by negotiation between Contracting Officers, as provided in paragraph 2 above, the Agency’s Contracting Officer shall submit a written request for decision to the Agency’s chief executive officer along with all documentation and minutes from the negotiations. The CEO shall issue a written decision within fourteen (14) days of receipt of a request.
2. For disputes involving $50,000 or less, the decision of the CEO shall be administratively final and conclusive. For disputes involving $50,000 or less, it is the intent of the parties that such administratively final and conclusive decision pursuant to either this paragraph or paragraph 4 shall be overturned only if determined by a court of competent jurisdiction to be fraudulent, arbitrary, capricious, unsupported by the evidence or so grossly erroneous as to imply bad faith. For disputes greater than $50,000, the decision of the CEO shall be administratively final and conclusive unless, within thirty (30) days from the date of delivery of the written decision, the Contractor appeals the decision in writing to the Agency’s CEO or designee, who shall render a written decision within fourteen (14) days of delivery of such written appeal. Such decision by the CEO or their designee shall be administratively final and conclusive.
3. Within thirty (30) days of the issuance of any administratively final and conclusive decision under this paragraph, the Contractor shall notify the Agency in writing of the Contractor’s agreement with the final decision. Failure to provide such written notice of agreement shall indicate an intent by the Contractor to litigate the claim.
4. Any dispute that is not resolved by the parties through the operation of the provisions of this paragraph, or any mutually agreed-upon alternative dispute resolution process pursuant to paragraph 4, may be submitted to any court in «agency\_state».
5. Pending final resolution of a dispute hereunder, the Contractor shall proceed diligently with the performance of its obligations under the Contract, in accordance with the written directions of the Agency.
6. Alternative dispute resolution. If agreed upon by both parties, disputes may be resolved by a mutually agreed-upon alternative dispute resolution process that may include structured negotiations different from paragraph 2 above, mediation or arbitration.

NOTE: If arbitration is not to be included, then the following clause is to be deleted. It is only an example of an arbitration clause that may be included. It is not intended as a recommendation but provided for the purpose of illustration.

1. Arbitration. Disputes appealed to arbitration involving more than $50,000, but less than $250,000, shall be decided by a qualified and disinterested arbitrator, selected through the American Arbitration Association and mutually agreed upon by both parties. The arbitrator shall conduct all proceedings in accordance with the rules of the American Arbitration Association, and shall consider the Contract, equity, prevailing law and established commercial practices in rendering a decision.

Disputes appealed to arbitration involving $250,000 or more shall be decided by three (3) qualified and disinterested arbitrators selected through the American Arbitration Association. One arbitrator shall be selected by each of the parties, and the two selected arbitrators shall select a third arbitrator within ten (10) calendar days of their selection. The arbitrators shall conduct all proceedings in accordance with the rules of the American Arbitration Association and shall consider the Contract, equity, the prevailing law and established commercial practice in rendering a decision.

«arbitration»

* 1. Maintenance of Records; Access by Agency; Right to Audit Records

In accordance with 49 CFR §18.36(i), 49 CFR §19.48(d) and 49 USC §5325(a), provided that the Agency is the FTA recipient or a sub-grantee of the FTA recipient, the Contractor agrees to provide the Agency, the FTA, the Comptroller General of the United States, the Secretary of the U.S. Department of Transportation (USDOT), the State of «agency\_state», or any of their duly authorized representatives, access to any books, documents, papers and/or records of the Contractor that are directly pertinent to, or relate to, this Contract (1) for the purpose of making audits, examinations, excerpts and transcriptions; and (2) when conducting an audit and inspection.

1. In the event of a sole-source Contract, single Proposal, single responsive Proposal, or competitive negotiated procurement, the Contractor shall maintain—and the Contracting Officer, the USDOT (if applicable) or representatives thereof shall have the right to examine—all books, records, documents, and other cost and pricing data related to the Contract price, unless such pricing is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the public, or prices set by law or regulation, or combinations thereof. Data related to the negotiation or performance of the Contract shall be made available for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data. This right of examination shall extend to all documents necessary for adequate evaluation of the cost or pricing data, along with the computations and projections used therein, including review of accounting principles and practices that properly reflect all direct and indirect costs anticipated for the performance of the Contract.
2. For Contract modifications or change orders, the Contracting Officer, the USDOT, if applicable*,* or their representatives, shall have the right to examine all books, records, documents, and other cost and pricing data related to a Contract modification, unless such pricing is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the public, prices set by law or regulation, or combinations thereof. Data related to the negotiation or performance of the Contract modification or change order shall be made available for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data. The right of examination shall extend to all documents necessary for adequate evaluation of the cost or pricing data, along with the computations and projections used therein, either before or after execution of the Contract modification or change order, for the purpose of conducting a cost analysis. If an examination made after execution of the Contract modification or change order reveals inaccurate, incomplete or out-of-date data, the Contracting Officer may renegotiate the Contract modification or change order price adjustment, and the Agency shall be entitled to any reductions in the price that would have resulted from the application of accurate, complete or up-to-date data.

The requirements of this section are in addition to other audit, inspection and record-keeping provisions specified elsewhere in the Contract documents.

NOTE: The FTA does not require Contractors to flow these requirements down to Subcontractors.

* 1. Confidential Information

Access to government records is governed by the «open\_records\_law». Except as otherwise required by the «optional\_open\_records\_law», the Agency will exempt from disclosure proprietary information, trade secrets, and confidential commercial and financial information submitted or disclosed during the Contract period. Any such proprietary information, trade secrets, or confidential commercial and financial information that a Contractor believes should be exempted from disclosure shall be specifically identified and marked as such. Blanket-type identification by designating whole pages or sections as containing proprietary information, trade secrets, or confidential commercial and financial information will not ensure confidentiality. The specific proprietary information, trade secrets, or confidential commercial and financial information must be clearly identified as such.

Upon a request for records from a third party regarding the Contract, the Agency will notify the Contractor in writing. The Contractor must respond within twenty (20) days with the identification of any and all proprietary, trade secret, or confidential commercial or financial information, and the Contractor shall indemnify the Agency’s defense costs associated with its refusal to produce such identified information; otherwise, the requested information may be released.

The Agency shall employ sound business practices no less diligent than those used for the Agency’s own confidential information to protect the confidence of all licensed technology, software, documentation, drawings, schematics, manuals, data, and other information and material provided by the Contractor pursuant to the Contract that contains confidential commercial or financial information, trade secrets or proprietary information as defined in or pursuant to the «open\_records\_law» against disclosure of such information and material to third parties, except as permitted by the Contract. The Contractor shall be responsible for ensuring that all confidential commercial or financial information, trade secrets or proprietary information, with such determinations to be made by the Agency at its sole discretion, bears appropriate notice relating to its confidential character.

During the performance of the Work under the Contract, it may be necessary for either party (the “Discloser”) to make confidential information available to the other party (the “Recipient”). The Recipient agrees to use all such information solely for the performance of the Work under the Contract, to hold all such information in confidence, and to not disclose same to any third party without the prior written consent of the Discloser. Likewise, the Recipient agrees that all information developed in connection with the Work under the Contract shall be used solely for the performance of the Work under the Contract and shall be held in confidence and not disclosed to any third party without the prior written consent of the Discloser.

This Confidentiality section shall survive the termination or expiration of the Contract.

* 1. Conflicts of Interest, Gratuities

No member, officer or employee of the Agency or of a local public body during their tenure, or one year thereafter, shall have any interest, direct or indirect, in this Contract or the proceeds thereof.   
«conflicts\_of\_interests\_requirements»

* 1. General Nondiscrimination Clause

In connection with the performance of Work provided for under this Contract, the Contractor agrees that it will not, on the grounds of race, religious creed, color, national origin, ancestry, physical disability, medical condition, marital status, sex, sexual orientation or age, discriminate or permit discrimination against any person or group of people in any manner prohibited by federal, state or local laws.

* 1. Amendment and Waiver
     1. Amendment

Any modification or amendment of any provisions of any of the Contract documents shall be effective only if in writing, signed by authorized representatives of both the Agency and Contractor, and specifically referencing this Contract.

* + 1. Waiver

In the event that either party elects to waive its remedies for any breach by the other party of any covenant, term or condition of this Contract, such waiver shall not limit the waiving party’s remedies for any succeeding breach of that, or of any other, term, covenant or condition of this Contract.

* 1. Remedies Not Exclusive

The rights and remedies of the Agency provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

* 1. Counterparts

This Contract may be executed in any number of counterparts. All such counterparts shall be deemed to constitute one and the same instrument, and each of said counterparts shall be deemed an original thereof.

* 1. Severability

Whenever possible, each provision of the Contract shall be interpreted in a manner as to be effective and valid under applicable law. However, if any provision, or part of any provision, should be prohibited or invalid under applicable law, then such provision, or part of such provision, shall be ineffective to the extent of such prohibition or invalidity without invalidating the remainder of such provision or the remaining provisions of the Contract.

* 1. Third-Party Beneficiaries

No provisions of the Contract shall in any way inure to the benefit of any third party, including the public at large, so as to constitute such person a third-party beneficiary of the Contract, or of any one or more of the terms and conditions of the Contract, or otherwise give rise to any cause of action in any person not a party to the Contract, except as expressly provided elsewhere in the Contract.

* 1. Assignment of Contract

Neither party will assign or subcontract its rights or obligations under the Contract without prior written permission of the other party, and no such assignment or subcontract will be effective until approved in writing by the other party.

* 1. Independent Parties

The Contractor is an independent contractor with respect to the performance of all Work hereunder, retaining control over the detail of its own operations; and the Contractor shall not be considered the agent, employee, partner, fiduciary, or trustee of the Agency.

* 1. Survival

The following sections shall survive the nominal expiration or discharge of other Contract obligations, and the Agency may obtain any remedy under law, Contract or equity to enforce the obligations of the Contractor that survive the manufacturing, warranty, and final payment periods:

* GC 6. Intellectual Property Warranty
* GC 7. Data Rights
* GC 9.1 Indemnification
* GC 9.7 Governing Law and Choice of Forum
* GC 9.8 Disputes
* GC 9.10 Confidential Information
* SP 7.3 Parts Availability Guarantee
* FR 1. Access to Records
* TS 5.6 Training

1. Agency-Specific Provisions

«agency\_specific\_provisions\_sec3»

SECTION 4: SPECIAL PROVISIONS

NOTE: This section should be customized to meet the Agency’s specific requirements for each individual project or Contract, as well as local and state requirements. The Special Provisions are intended to amend and supplement the General Conditions to meet the individual requirements of each project. These Provisions should be considered as guidance; and can be modified, added to or deleted by the Agency as appropriate.

1. Inspection, Tests and Repairs
   1. Repair Performance
      1. Repairs by Contractor

After nonacceptance of a bus, the Contractor must begin Work within five (5) working days after receiving notification from the Agency of failure of acceptance tests. The Agency shall make the bus available to complete repairs timely with the Contractor’s repair schedule.

The Contractor shall be responsible for completing the required repairs. In its “notification of failure” of acceptance tests, the Agency may specify that space is available with the dates of availability for the Contractor to perform repairs, provided that this space will not generally include utilizing hoists, lifts or pits. The Contractor shall provide, at its own expense, all spare parts and tools required to complete the repairs. At the Agency’s option, the Contractor may be required to remove the bus from the Agency’s property while repairs are being made. If the bus is removed from the Agency’s property, then repair procedures must be diligently pursued by the Contractor’s representatives, and the Contractor shall assume risk of loss while the bus is under its control.

* + 1. Repairs by the Agency

The Agency will not take responsibility for correcting Defects, except to replace defective parts as instructed by the Contractor.

1. Parts used. If the Agency performs the repairs after nonacceptance of the bus, it shall 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. Reports of all repairs covered by this procedure shall be submitted by the Agency to the Contractor for reimbursement or replacement of parts monthly, or at a period to be mutually agreed upon. The Contractor shall provide forms for these reports.
2. Contractor-supplied parts. If the Contractor supplies parts for repairs being performed by the Agency after nonacceptance of the bus, then these parts shall be shipped prepaid to the Agency.
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 shall be paid by the Contractor.
4. Reimbursement for labor. The Agency shall be reimbursed by the Contractor for labor. The amount shall be determined by the Agency for a qualified mechanic at a straight time wage rate of «wage\_rate\_reimbursement», which includes fringe benefits and overhead, adjusted for the Agency’s most recently published rate in effect at the time the Work is performed, plus the cost of towing in the bus, if such action was necessary. These wage and fringe benefits rates shall not exceed the rates in effect in the Agency’s service garage at the time the Defect correction is made.
5. Reimbursement for parts. The Agency shall be reimbursed by the Contractor for defective parts that must be replaced to correct the Defect. The reimbursement shall include taxes where applicable and 15% handling costs.
   1. Pilot Bus

The Contractor shall produce one pilot vehicle for each type of vehicle with respect to the base order. This vehicle shall be one of the ultimate quantities of the base vehicle order. The pilot vehicle shall demonstrate that the vehicles fully meet all requirements of the Contract. The pilot vehicle shall be produced and delivered to the Agency for a minimum of thirty (30) days prior to initiation of any production activities for the remaining vehicles, unless otherwise authorized in writing by the Agency. In the event that noncompliance is identified, the Agency shall, to the extent practicable, notify the Contractor of said noncompliance. No later than seven (7) days after the end of the 30-day test, the Agency shall issue a written report to the Contractor that advises the Contractor of any noncompliance issues and/or any proposed modifications or changes required to the remaining vehicles.

In the event that the pilot vehicle does not initially comply with all performance criteria contained in the Technical Specifications, a compromise has not been reached, and progress payment has been established, the Agency shall have the right to retain a portion of any progress payment that may have been established for the pilot vehicle. The amount to be withheld shall be based on the lack of compliance and may equal up to the entire progress payment amount for the pilot vehicle. This amount shall be withheld until compliance is demonstrated. In the event that compliance is subsequently determined to be impossible to achieve, the Agency may require all or a portion of the progress payment for the pilot vehicle to be forfeited as damages agreed to by the parties for the noncompliance. The amount of the damages shall be negotiated by the parties.

* 1. Configuration and Performance Approval

In order to assess the Contractor’s compliance with the Technical Specifications, the Agency and the Contractor shall, at the pre-production meeting, jointly develop a configuration and Performance Review Document for review of the pilot vehicle. This document shall include appropriate performance standards for each test that is required, and the document shall become part of the official record of the pre-production meeting.

* 1. First Article Inspection – Production

The purpose of a first article inspection is to confirm that any components, systems, subsystems, major assemblies, subassemblies, products, parts, apparatuses, articles and other materials comply with the Technical Specifications and other Contract documents.

Where required by the Contract documents or requested by the Agency, the Contractor shall cause first article inspections to be conducted. A first article inspection may include both a physical configuration inspection and a functional demonstration. First article inspections shall be conducted at the Contractor’s or Subcontractor’s facility. The Contractor shall furnish to the Agency, prior to each first article inspection, a written inspection and demonstration plan for each item for review. The Agency’s inspectors will attend each first article inspection unless the Agency provides a written waiver of its right to attend any such inspection. The results of each first article inspection shall be documented by the Contractor in a format deemed acceptable by the Agency, and all documents relating to the inspection shall be forwarded to the Agency.

* 1. Post-Delivery Tests

The Agency will conduct acceptance tests as set out in Section 8 subsection entitled “Post Delivery Tests” on each delivered bus. These tests shall be 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 the Agency. 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 nonacceptance. The Agency shall record details of all Defects on the appropriate test forms and shall notify the Contractor of acceptance or nonacceptance of each bus according to “Inspection, Testing and Acceptance” after completion of the tests. The Defects detected during these tests shall be repaired according to the procedures defined in Special Provisions subsection entitled “Repairs After Nonacceptance.”

* 1. Repairs After Nonacceptance

The Contractor, or its designated representative, shall perform necessary repairs after nonacceptance. If the Contractor fails, or refuses to begin, the repairs within five (5) days, then the Work may be done by the Agency’s personnel with reimbursement by the Contractor.

1. Deliveries
   1. Bus Delivery

Delivery of buses shall be determined by signed receipt of the Agency’s designated agent(s): «bus\_delivery\_agent\_name\_address», at the following point(s) of delivery, and may be preceded by a cursory inspection of the bus: «bus\_delivery\_point\_of\_address».

* 1. Delivery Schedule

The buses shall be delivered at a rate not to exceed «bus\_delivery\_max\_num\_per\_week» buses per week. Delivery shall be completed within «bus\_delivery\_complete\_week» weeks after delivery of the executed Contract documents. Hours of delivery shall be «bus\_delivery\_time\_range» on the following days of the week: «bus\_delivery\_day\_of\_week».

* 1. Contract Deliverables

Contract deliverables associated with this Contract are set forth in Table 1, along with other pertinent information. Contract deliverables shall be submitted in accordance with Section 6, “Technical Specifications.” Due dates shown note the last acceptable date for receipt of Contract deliverables. The Agency will consider early receipt of Contract deliverables on a case-by-case basis. The reference section designates the appropriate specification section(s) where the requirement is referenced.

NOTE: Table 1 provides a sample list of Contract deliverables. This list should be adapted by the Agency to reflect the Contract deliverables required by the Contract specifications.

| TABLE 1  Contract Deliverables | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Deliverable** | | **Agency Action** | **Reference Section** | **Due Date** | **Format** | **Quantity Due** |
| 1. | Bus Testing— Altoona Test Report | Review |  | Prior to pilot bus delivery | Hard copy | 1 |
| 2. | List of serialized units installed on each bus | Review |  | With each delivered bus | Electronic media | 1 per bus |
| 3. | Copy of Manufacturers’ formal Quality Assurance Program | Review |  | Pre-award site visit | Hard copy | 1 |
| 4. | QA manufacturing certificate | Review |  | With each delivered bus | Hard copy | 1 per bus |
| 5. | QA purchasing certifications acknowledging receipt of applicable specification | Review |  | 30 days following first pre-production meeting | Hard copy | 1 per major Supplier |
| 6. | Pre-Delivery Bus Documentation Package | Review |  | With each delivered bus | Hard copy | 1 per bus |
| 7. | Motor Vehicle Pollution Requirements Certificate | Review |  | With each bus | Hard copy | 1 |
| 8. | Engine Emissions Certificate— NOx levels | Review |  | Prior to completion of pilot bus | Hard copy | 1 |
| 9. | Pre-production meeting minutes | Approval |  | 30 days after each meeting | Hard copy | 2 originals |
| 10. | Driver’s log and incident report | Review |  | With each bus delivery if drive-away service is used | Hard copy | 1 per bus |
| 11. | Title documentation | Review |  | 10 days prior to bus delivery | Hard copy | 1 per bus |
| 12. | Performance bond | Review |  | 30 days following execution of Contract | Hard copy | 1 |
| 13. | Insurance certificates | Approval |  | Before Work commences | Hard copy | 1 |
| 14. | Engineering support | Review |  | During pre-production meeting | Contracts | 1 |
| 15. | Training instructor information | Approval |  | 30 days prior to delivery of pilot bus |  |  |
| 16. | Training curriculum | Approval |  | 30 days prior to delivery of pilot bus | Electronic media |  |
| 17. | Teaching materials | Review |  | During classroom instruction | Hard copy | 1 |
| 18. | Professionally prepared mechanics’ “Bus Orientation” training video | Review |  | 30 days prior to first production bus | Electronic media | 20 each |
| 19. | Final preventative maintenance manuals | Review |  | 90 days after Agency written approval | Hard copy  Electronic media | 10/100 buses  20 |
| 20. | Final diagnostic procedures manuals | Review |  | 90 days after Agency written approval | Hard copy  Electronic media | 10/100 buses  20 |
| 21. | Final parts manuals | Approval |  | 90 days after Agency written approval | Hard copy  Electronic media | 10/100 buses  20 |
| 22. | Component repair manuals (Agency approval/review period of 90 days from date of receipt) | Approval |  | 90 days after Agency written approval of OEM component repair list | Hard copy  Electronic media | 2  2 |
| 23. | Draft preventative maintenance manuals (Agency approval/review period of 90 days from date of receipt) | Approval |  | With pilot bus | Hard copy | 10 |
| 24. | Draft diagnostic procedures manuals (Agency approval/review period of 90 days from date of receipt) | Approval |  | With pilot bus | Hard copy | 10 |
| 25. | Draft parts manuals (Agency approval/review period of 90 days from date of receipt) | Approval |  | With pilot bus | Hard copy | 10 |
| 26. | List of OEM component repair manuals | Approval |  | With pilot bus | Hard copy | 10 |
| 27. | Draft operators’ manuals (Agency approval/review period of 90 days from date of receipt) | Approval |  | With pilot bus or maximum of 30 days prior to start of production | Hard copy | 10 |
| 28. | Final operators’ manuals | Review |  | 30 days following Agency approval of draft manual | Hard copy | 1 per bus |
| 29. | Recommended spare parts list, including bill of materials | Review |  | 60 days prior to shipment of first bus | Hard copy | 1 |
| 30. | Part number index | Approval |  | 60 days prior to shipment of first bus | Hard copy  Spreadsheet | 1  1 |
| 31. | Current price list | Review |  | 90 days after Agency written approval of draft parts manual | Hard copy | 20 |
| 32. | In-process drawings | Review |  | 30 days prior to production | Scale drawings | 1 |
| 33. | Electrical and air schematics | Review |  | 30 days prior to production | Hard copy | 1 |
| 34. | As-built drawings | Review |  | Within 60 days after final bus delivery | Electronic media | 1 |
| 35. | Material samples | Review |  | By conclusion of pre-production meetings |  | 1 |
| 36. | Undercoating system program | Approval |  | First pre-production meeting | Hard copy | 1 |
| 37. | Flooring certificate | Review |  | First pre-production meeting | Certificate/ copy of purchase order | 1 |
| 38. | Interior features – fire-resistance certificates | Review |  | Prior to pilot bus completion | Certificates | 1 |
| 39. | Crashworthiness | Review |  | Pre-award audit | Certificate | 1 |
| 40. | Technical review of electronic functionality | Approval |  | Prior to production | Hard copy | 1 |
| 41. | Interior security camera layout | Approval |  | Prior to pilot bus completion | Copies of interior views | 1 each |
| 42. | Technical review of powerplant |  |  | Prior to production |  |  |
| 43. | Powerplant certifications | Review |  | Prior to pilot bus completion | Hard copy | 1 each |
| 44. | Striping layout | Approval |  | Prior to production | Hard copy | 1 |
| 45. | Resolution of issues “subject to Agency approval” | Approval |  | Prior to production | Hard copy | 1 |

1. Vehicle Options and Option Pricing

The Contractor hereby grants the Agency and any permissible assignee options (“Options”) to purchase up to «num\_additional\_veh» additional vehicles (“Option Vehicles”). These Options shall be valid for a period of «period\_of\_time\_option\_valid» from the effective date of the Contract. There shall be no minimum order quantity for any permissible assignee. Subject to the Agency’s right to order modifications, the Option Vehicles shall have the same specifications as the vehicles purchased under this Contract. The Agency may exercise the Options by written notice to the Contractor (“Notice of Exercise of Option”) at any time on or before «period\_of\_time\_exercise\_option» following the effective date of the Contract (“Option Date”).

Within thirty (30) days after delivery of an intent to exercise an Option to the Contractor, the Contractor shall submit a proposed delivery schedule. Along with the proposed delivery schedule, the Contractor will provide the Agency with access to its production capacity forecast for the purpose of the parties verifying available production capacity. The production capacity forecast shall include reasonable time for mobilization and for coordinating with other vehicle orders, and it shall be based upon a production rate at least equal to the production rate actually realized with respect to the base order vehicles. The production capacity forecast need not disclose specific order or customer information and shall contain a representation that the gross capacity, committed quantities and available net production capacity in the production capacity forecast are a reasonable basis for obligating the Option Vehicle delivery dates under the terms of the Contract. If the parties are unable to agree on a production schedule, then the maximum term for the production of the Option Vehicles shall not exceed a total of «num\_month\_produce\_option\_veh» after the date of the Notice of Exercise of Option. The Agency, or any permissible assignee, may issue a Notice of Exercise of Option at any time after the Contractor submits its proposed delivery schedule. The Contractor shall not commence production of Option Vehicles prior to the issuance of the Notice of Exercise of Option by either the Agency or any permissible assignee of the Agency for the Option Vehicles. The Notice of Exercise of Option shall incorporate the agreed production delivery schedule or the «num\_month\_max\_production\_term» maximum term, and shall constitute a notice to proceed with Option Vehicle production.

Except as otherwise specially provided in this Contract, all other terms of the Contract shall apply to the Option Vehicles.

The price of each Option Vehicle shall be the unit price of the base order vehicles (“Base Order Price”) adjusted as required by the terms of this Contract, including escalation as required under “Escalation.”

1. Assignability of Options

If the Agency does not exercise the option(s) as listed in “Options and Option Pricing,” then the Agency reserves the right to assign the Option(s) to other grantees of FTA funds in accordance with FTA Circular 4220.1F or its successors.

NOTE: If the Agency chooses to assign Options, it is recommended that it be done in conjunction with a formal written agreement, a sample of which is included as Appendix F.

1. Payment

The Agency shall pay and the Contractor shall accept the amounts set forth in the price schedule as full compensation for all costs and expenses of completing the Work in accordance with the Contract, including but not limited to all labor, equipment and material required; overhead; expenses; storage and shipping; risks and obligations; taxes (as applicable); fees and profit; and any unforeseen costs.

* 1. Payment Terms

NOTE: Four options for payment are provided: (1) DEFAULT: Progress Payments at the Time of Major Component Installation, (2) ALTERNATIVE: Advance Payments at Issuance, (3) ALTERNATIVE: Progress Payments upon Approval for Shipping, and (4) ALTERNATIVE: Payments upon Acceptance. All four involve final payment of the vehicle purchase price upon acceptance. The Agency may select from these options or develop its own payment provision. It should be noted that restrictive payment requirements will increase the cost of the Contract. The provisions below should be reconciled to comply with any applicable prompt payment law or regulation.

The following four alternatives are model clauses that the Agency can use as a guideline in preparing any progress payment provisions. Progress payments are payments of a part of the contract value for contractor costs incurred or work done before completion of a bus; advance payments are payments made to a contractor before the contractor incurs contract costs. If progress or advance payments are to be included, then security for initial payments to the Contractor may be required of the Contractor through a performance bond, letter of credit, Uniform Commercial Code recording of a lien, or other acceptable form of security. The security amount should not be less than the Agency’s financial exposure for cumulative payments relative to value received and in the control of the Agency. If FTA funding is being used, security may be required and will be required in the case of the payment upon issuance. If FTA funding is used, then FTA advance approval of the contract may be required in the case of advance payment (payment upon issuance).

All payments shall be made as provided herein, less any amounts for liquidated damages in accordance with Section 6 subsection entitled “Liquidated Damages for Late Delivery of the Bus.”

The Agency shall make payments to the Contractor for buses at the times and in the manner set forth below.

Title to material included in any progress payment request shall pass to the Agency upon payment by the Agency. Said title shall be free of all encumbrances. However, such transfer of title shall not relieve the Contractor of its responsibility for the furnishing, installation, fabrication or inclusion of said materials as a deliverable element of buses procured in accordance with the requirements of the Contract. If FTA funds are being used, a post-delivery review must be completed before a bus title is transferred to the recipient, or before a bus is placed into revenue service, whichever is first.

The performance milestones and payment limits shall be as follows:

**«performance\_milestone\_payment\_title»**

1. «performance\_milestone\_payment»

* 1. Performance Guarantee (Optional)

«performance\_guarantee»

* 1. Escalation

**«escalation\_title»**

«escalation»

* 1. Payment of Taxes

Unless otherwise provided in this Contract, the Contractor shall pay all federal, state and local taxes, as well as duties applicable to and assessable against any Work, goods, services, processes and operations incidental to or involved in the Contract; this includes but is not limited to retail sales and use, transportation, export, import, business and special taxes. The Contractor is responsible for ascertaining and paying the taxes when due. The total Contract price shall include compensation for all taxes the Contractor is required to pay by laws in effect on the Proposal Due Date. At the present time, the Agency asserts that the taxes applicable to this Contract are «current\_applicable\_taxes\_list». The Contractor will maintain auditable records, subject to Agency reviews, confirming that tax payments are current at all times.

1. Liquidated Damages for Late Delivery of the Bus

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 deliver the buses within the time specified in “Delivery Schedule,” except for any excusable delays as provided in “Excusable Delays/Force Majeure” or any extension thereof, the Agency will be damaged thereby. As the amount of said damages would be difficult, if not impossible, to be definitively ascertained and proven, it is hereby agreed that the amount of such damages due to the Agency shall be fixed at «dollar\_amount\_fix\_rate» per calendar day, per bus, not delivered in substantially good condition, as inspected by the Agency at the time released for shipment.

NOTE: See Appendix A, “Guidelines for Calculating Liquidated Damages.” If the Agency does not accept buses seven days per week, then it may consider basing damage calculations on “business days.”

The total amount of such liquidated damages shall not exceed 10% of the total Contract amount. If the total amount of the liquidated damages has reached this maximum, the Contractor shall not be relieved of any obligations under this Contract but shall continue to carry out and complete the work without delay.

The Contractor hereby agrees to pay the aforementioned amounts as fixed, agreed and liquidated damages, and not by way of penalty, to the Agency, and further authorizes the Agency to deduct the amount of the damages from money due the Contractor under the Contract, computed as aforesaid. If the money due the Contractor is insufficient, or no money is due the Contractor, then the Contractor shall pay the Agency the difference or the entire amount, whichever may be the case, within thirty (30) days after receipt of a written demand by the Contracting Officer.

The payment of aforesaid fixed, agreed and liquidated damages 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 losses or damages of any kind whatsoever that may be suffered by the Agency and arising at any time from the failure of the Contractor to fulfill the obligations referenced in this clause in a timely manner.

NOTE: In order to balance the risk in the Contract, which adds to the cost of the bus, the Agency may want to consider capping liquidated damages at an amount between 10% and 20% of the total Contract amount or negotiate an amount with the Contractor. In that case, the following language should be inserted: “The total amount of such liquidated damages shall not exceed «liquidated\_damage\_cap» of the total Contract amount.”

The following may be considered for inclusion if early delivery will create savings for the Agency. The Agency may wish to modify “Excusable Delays” to determine the delivery date for the purposes of this incentive option: “In the event that the Contractor completes the Work earlier than required in ‘Delivery Schedule,’ the Contractor shall be paid an incentive of «early\_delivery\_incentive\_rate» per calendar day, per bus, that is delivered and accepted early. The total amount of such incentive payments shall not exceed «early\_delivery\_incentive\_cap» of the total Contract amount.”

See Appendix B, “Guidelines for Calculating Early Delivery Incentives.”

1. Service and Parts
   1. Contractor Service and Parts Support

The Contractor shall state on the form “Contractor Service and Parts Support Data” which representatives are responsible for assisting the Agency.

All prices quoted for parts and parts cost computations in the proposal shall be free on board (FOB) destination prices, and parts shall be furnished to the Agency FOB destination.

* 1. Documentation

The Contractor shall provide an electronic copy and «num\_printed\_maintenance\_manual» printed current maintenance manual(s)—to include preventative maintenance procedures; diagnostic procedures or troubleshooting guides; major component service manuals; an electronic copy and «num\_printed\_parts\_manual» printed current parts manual(s); and an electronic copy and «num\_printed\_operator\_manual» printed standard operator’s manual(s)—as part of this Contract. The Contractor also shall exert its best efforts to keep maintenance manuals, operator’s manuals, and parts books up to date for a period of fifteen (15) years. The supplied manuals shall incorporate all equipment ordered on the buses covered by this procurement. In instances where copyright restrictions or other considerations prevent the Contractor from incorporating major components information into the bus parts and service manuals, separate manual sets as published by the subcomponent Supplier will be provided.

* 1. Parts Availability Guarantee

The Agency and Contractor agree that the vehicles shall be designed and constructed to remain in service for twelve years.

**«parts\_available\_guarantee\_title»**

«parts\_available\_guarantee»

* 1. Agency-Furnished Property

In the event that equipment or other goods or materials are specified in the Technical Specifications to be furnished by the Agency to the Contractor for incorporation in the Work, the following provisions shall apply:

* The Agency shall furnish the equipment, goods or materials in a timely manner so as not to delay Contract delivery or performance dates. If Agency-furnished property is received in a condition not suitable for the intended use, then the Contractor shall promptly notify the Agency, detailing the facts, and at the Agency’s expense repair, modify, return or take such other action as directed by the Agency. The parties may conduct a joint inspection of the property before the Contractor takes possession to document its condition.
* The Agency retains title to all Agency-furnished property. Upon receipt of the Agency-furnished property, the Contractor assumes the charge and care of the property and bears the risk of loss or damage due to action of the elements or from any other cause. The Contractor shall provide appropriate protection for all such property during the progress of the Work. Should any Agency-furnished equipment or materials be damaged, such property shall be repaired or replaced at the Contractor’s expense to the satisfaction of the Agency. No extension of time will be allowed for repair or replacement of such damaged items. Should the Contractor not repair or replace such damaged items, the Agency shall have the right to take corrective measures itself and deduct the cost from any sums owed to the Contractor.

Warranty administration and enforcement for Agency-furnished equipment are the responsibility of the Agency, unless the parties agree to transfer warranty responsibility to the Contractor. In the event that equipment or other goods or materials are specified in the Technical Specifications to be furnished by the Agency to the Contractor for incorporation in the Work, the following provisions shall apply:

1. The Agency shall furnish the equipment, goods or materials in a timely manner so as not to delay Contract delivery or performance dates. If Agency-furnished property is received in a condition not suitable for the intended use, then the Contractor shall promptly notify the Agency, detailing the facts, and at the Agency’s expense repair, modify, return or take such other action as directed by the Agency. The parties may conduct a joint inspection of the property before the Contractor takes possession to document its condition.
2. The Agency retains title to all Agency-furnished property. Upon receipt of the Agency-furnished property, the Contractor assumes the charge and care of the property and bears the risk of loss or damage due to action of the elements or from any other cause. The Contractor shall provide appropriate protection for all such property during the progress of the Work. Should any Agency-furnished equipment or materials be damaged, such property shall be repaired or replaced at the Contractor’s expense to the satisfaction of the Agency. No extension of time will be allowed for repair or replacement of such damaged items. Should the Contractor not repair or replace such damaged items, the Agency shall have the right to take corrective measures itself and deduct the cost from any sums owed to the Contractor.
3. Warranty administration and enforcement for Agency-furnished equipment are the responsibility of the Agency, unless the parties agree to transfer warranty responsibility to the Contractor.
4. Federal Motor Vehicle Safety Standards

The Contractor shall submit a manufacturer’s Federal Motor Vehicles Safety Standards (FMVSS) self-certification that the vehicle complies with relevant FMVSS, or two manufacturer’s certified statements that the contracted buses will not be subject to FMVSS regulations.

1. Insurance

NOTE: Excessive or unnecessary insurance requirements can cost substantial sums and provide little or no benefit to the Agency. Conversely, inadequate insurance requirements can present an excessive risk to the Agency because of the potential that a loss will exceed the limits of coverage. The numbers identified below are examples and reflect current industry practice.

The Contractor shall maintain in effect during the term of this Contract, including any warranty period, at its own expense, at least the following coverage and limits of insurance:

* Statutory Workers Compensation and Employers Liability insurance and/or qualified self-insurance program covering Supplier’s employees while on Agency property.
* Commercial General Liability Insurance:
* Bodily Injury and Property Damage, including Contractual Liability covering the indemnification contained herein, $10,000,000 combined single limits per occurrence, $10,000,000 aggregate, where applicable.
* Product Liability: $5,000,000 per occurrence, for a period of five (5) years after acceptance of the last bus delivered under this Contract (product liability coverage may be effected through one or more excess liability policies).
* Automobile Liability Insurance: Bodily Injury and Property Damage, $1,000,000 combined single limits per occurrence.

The Contractor shall deliver to the Agency, within ten (10) days after receiving Notice of Award of this Contract, evidence of the above. Prior to the expiration of any insurance during the time required, the Supplier shall furnish evidence of renewal to the Agency’s Contract Administrator.

1. Sustainability

NOTE: If the Agency has its own sustainability policy that includes the responsibility to make sure that all of its Contractors are informed of this policy, then the following language is recommended.

The Agency recognizes that being sustainable (environmentally, economically and in terms of social responsibility) involves everyone, both internal and external to the Agency. The Agency expects its Contractors to have their own sustainability policies and programs in place and to provide services in line with the principles established therein. Implementation of sustainable practices may include maximizing the use of environmentally and socially responsible materials and services; using energy-efficient and non-polluting vehicles, equipment, and processes; and/or ensuring employee awareness of sustainability initiatives.

The Agency has a sustainability policy that includes a responsibility to make sure that all of its Contractors are informed of this policy. The Contractor will provide the Agency with a statement indicating that responsible parties have read and understand the Agency’s sustainability policies and that it agrees to use reasonable efforts to conduct its work and operations in a manner that is consistent with them. In addition, the Contractor will provide the Agency with a copy of its corporate sustainability policy.

1. Agency-Specific Provisions

«agency\_specific\_provisions\_sec4»

SECTION 5: FEDERAL REQUIREMENTS

1. Access to Records

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 the Contractor agrees to maintain same until the Agency, the FTA Administrator, the Comptroller General of the United States or any of their duly authorized representatives have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 2 CFR 200.337 (a).

The following access-to-records requirements apply to this Contract.

* 1. Local Governments

In accordance with 2 CFR 200.337 (a), the Contractor agrees to provide the Agency, the FTA Administrator, the Comptroller General of the United States, or any of their authorized representatives, access to any books, documents, papers and/or records of the Contractor that are directly pertinent to this Contract, for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 CFR 633.17, to provide the FTA Administrator or their authorized representatives, including any review PMO Contractor, access to the Contractor’s records and construction sites pertaining to any major capital project (defined at 49 USC 5302(a)1), that is receiving federal financial assistance through the programs described at 49 USC 5307, 5309 or 5311.

* 1. State Governments

In accordance with 49 CFR 633.17, the Contractor agrees to provide the Agency, the FTA Administrator or their authorized representatives, including any PMO Contractor, access to the Contractor’s records and construction sites pertaining to a major capital project (defined at 49 USC 5302(a)1) that is receiving federal financial assistance through the programs described at 49 USC 5307, 5309 or 5311. By definition, a major capital project excludes contracts of less than the simplified acquisition threshold currently set at $250,000.

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.

1. Federal Funding, Incorporation of FTA Terms and Federal Changes

The preceding provisions include, in part, certain standard terms and conditions required by the U.S. Department of Transportation (USDOT), whether or not expressly set forth in the preceding Contract provisions. All contractual provisions required by the USDOT, as set forth in FTA Circular 4220.1G or its successors, 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 Agency requests that would cause the Agency to be in violation of FTA terms and conditions.

The 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 the Agency and the 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.

1. Federal Energy Conservation Requirements

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

1. Civil Rights Requirements

The following requirements apply to the underlying Contract:

* 1. Nondiscrimination: In accordance with Title VI of the Civil Rights Act, as amended, 42 USC§ 2000d; section 303 of the Age Discrimination Act of 1975, as amended, 42 USC § 6102; section 202 of the Americans with Disabilities Act of 1990, 42 USC § 12132; and federal transit law at 49 USC § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age or disability. In addition, the Contractor agrees to comply with applicable federal implementing regulations and other implementing requirements that the FTA may issue.
  2. Equal Employment Opportunity: The following equal employment opportunity requirements apply to the underlying Contract:

1. Race, Color, Creed, National Origin, Sex: In accordance with Title VII of the Civil Rights Act, as amended, 42 USC § 2000e, and federal transit laws at 49 USC § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor,” 41 CFR Parts 60 *et seq.*, (which implement Executive Order No. 11246, “Equal Employment Opportunity,” as amended by Executive Order No. 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” 42 USC § 2000e note), and with any applicable federal statutes, executive orders, regulations and federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex or age. Such action shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements that the FTA may issue.
2. Age: In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 USC § 623 and federal transit law at 49 USC § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements that the FTA may issue.
3. Disabilities: In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 USC § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, “Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act,” 29 CFR Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements that the FTA may issue.
   1. The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with federal assistance provided by the FTA, modified only if necessary to identify the affected parties.
4. No Government Obligation to Third Parties
5. The Agency 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 Agency, Contractor or any other party (whether or not a party to that Contract) pertaining to any matter resulting from the underlying Contract.
6. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the Subcontractor who will be subject to its provisions.
7. Program Fraud and False or Fraudulent Statements or Related Acts
8. The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 USC §§ 3801 *et seq*. and U.S. DOT regulations, “Program Fraud Civil Remedies,” 49 CFR 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 it 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 that the federal government deems appropriate.
9. 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 USC § 5307, the government reserves the right to impose the penalties of 18 USC § 1001 and 49 USC § 5307(n)(1) on the Contractor, to the extent the federal government deems appropriate.
10. The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with federal assistance provided by the FTA. It is further agreed that the clauses shall not be modified, except to identify the Subcontractor who will be subject to the provisions.
11. Suspension and Debarment

This Contract is a covered transaction for purposes of 2 CFR Part 1200. As such, the Contractor is required to verify that none among the Contractor, its principals (as defined at 2 CFR 180.995) or its affiliates (as defined at 2 CFR 180.905) are excluded or disqualified (as defined at 2 CFR 180.935 and 180.940).

The Contractor is required to comply with 2 CFR Part 1200, Subpart C, and must include the requirement to comply with 2 CFR Part 1200, Subpart C, in any lower-tier covered transaction that it enters into.

By signing and submitting its bid or Proposal, the Bidder or Proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the Agency. If it is later determined that the Bidder or Proposer knowingly rendered an erroneous certification, in addition to remedies available to the Agency, the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The Bidder or Proposer agrees to comply with the requirements of 2 CFR Part 1200, Subpart C, while this Proposal is valid and throughout the period of any Contract that may arise from this Proposal. The Bidder or Proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

1. Disadvantaged Business Enterprise (DBE)

This Contract is subject to the requirements of 49 CFR Part 26, “Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*.*”

The Contractor shall maintain compliance with “DBE Approval Certification” throughout the period of Contract performance.

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 49CFR 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)).

1. Clean Water Requirements
2. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 USC 1251 *et seq.* The Contractor agrees to report each violation to the Agency and understands and agrees that the Agency will, in turn, report each violation as required to ensure notification to the FTA and the appropriate EPA Regional Office.
3. The Contractor also agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with federal assistance provided by the FTA.
4. Clean Air Requirements
5. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 USC §§ 7401 *et seq*. The Contractor agrees to report each violation to the Agency and understands and agrees that the Agency will, in turn, report each violation as required to ensure notification to the FTA and the appropriate EPA Regional Office.
6. The Contractor also agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with federal assistance provided by the FTA.
7. Compliance with Federal Lobbying Policy

Contractors who apply or bid for an award of $100,000 or more shall file the certification required by 49CFR Part 20, “New Restrictions on Lobbying.” Each tier certifies to the tier above that it will not use, and has not used, federal appropriated funds to pay any person or organization 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 obtaining any federal Contract, grant or any other award covered by 31 USC 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-federal funds with respect to that federal Contract, grant or award covered by 31 USC 1352. Such disclosures are forwarded from tier to tier up to the recipient.

1. Buy America

The Contractor agrees to comply with 49 USC 5323(j) and 49 CFR Part 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 the FTA or the product is subject to a general waiver. General waivers are listed in 49 CFR 661.7.

A general public interest waiver from the Buy America requirements applies to microprocessors, computers, microcomputers, software or other such devices, which are used solely for the purpose of processing or storing data. This general waiver does not extend to a product or device that merely contains a microprocessor or microcomputer and is not used solely for the purpose of processing or storing data.

Separate requirements for rolling stock are set out at 49 USC 5323(j)(2)(C) and 49 CFR 661.11. Rolling stock must be final assembled in the United States and have 70% domestic content.

A Bidder or Proposer must submit to the Agency the appropriate Buy America Certification with all offers on FTA-funded contracts, except those subject to a general waiver. Proposals not accompanied by a properly completed Buy America certification are subject to the provisions of 49 CFR 661.13 and may be rejected as nonresponsive.

1. Testing of New Bus Models

The Contractor agrees to comply with 49 USC 5323(c) 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 the 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” (i.e., 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.

1. Pre-Award and Post-Delivery Audits

The Contractor agrees to comply with 49 USC §5323(l) and FTA’s implementing regulation at 49 CFR Part 663 and to submit the following certifications:

1. Buy America requirements: The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the recommended Bidder/Proposer certifies compliance with Buy America, it shall submit documentation that lists (1) the component and subcomponent parts of the rolling stock to be purchased identified by the manufacturer of the parts, their country of origin and their percentage of 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.
2. Solicitation specification requirements: The Contractor shall submit evidence that it will be capable of meeting the bid specifications.
3. Federal Motor Vehicle Safety Standards: The Contractor shall submit (1) a manufacturer’s Federal Motor Vehicle Safety Standards (FMVSS) self-certification that the vehicle complies with relevant FMVSS, or (2) a manufacturer’s certified statement that the contracted buses will not be subject to FMVSS regulations.
4. Cargo Preference

The Contractor agrees to the following:

* To use privately owned U.S.-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 commodity pursuant to the underlying Contract, to the extent that such vessels are available at fair and reasonable rates for U.S.-flag commercial vessels;
* To furnish within twenty (20) working days following the date of loading for shipments originating within the United States, or within thirty (30) working days following the date of leading for shipments originating outside the United States, a legible copy of a rated, “onboard” commercial ocean bill of lading in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, D.C. 20590, and to the FTA recipient (through the Contractor in the case of a Subcontractor’s bill of lading.)
* To include these requirements in all subcontracts issued pursuant to this Contract when the subcontract may involve the transport of equipment, material or commodities by ocean vessel.

1. Fly America

The Contractor agrees to comply with 49 USC 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 that 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.

1. Contract Work Hours and Safety Standards Act
2. Overtime requirements: No Contractor or Subcontractor contracting for any part of the Contract Work that may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, in any workweek in which they are 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 a workweek.
3. Violation; liability for unpaid wages; liquidated damages: In the event of any violation of the clause set forth in paragraph 1 of this section, the Contractor and any Subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States 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 paragraph 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 as required by the clause set forth in paragraph 1 of this section.
4. Withholding for unpaid wages and liquidated damages: The Agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the 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 and 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 paragraph 2 of this section.
5. Subcontracts: The Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the Subcontractors to include these clauses in any lower-tier subcontracts. The Prime Contractor shall be responsible for compliance by any Subcontractor or lower-tier Subcontractor with the clauses set forth in paragraphs 1 through 4 of this section.

SECTION 7: WARRANTY REQUIREMENTS

1. Basic Provisions
   1. Warranty Requirements
      1. Contractor Warranty

Warranties in this document are in addition to any statutory remedies or warranties imposed on the Contractor. Consistent with this requirement, the Contractor warrants and guarantees to the Agency each complete bus and specific subsystems and components as follows. Performance requirements based on design criteria shall not be deemed a warranty item.

* + 1. Complete Bus (Diesel, CNG, Hybrid)

«warranty\_requirements\_complete\_bus\_diese»

* + 1. Complete Bus (Battery Electric)

«warranty\_requirements\_complete\_bus\_all\_e»

* + 1. Body and Chassis Structure

Body, body structure, and structural elements of the suspension and engine cradle are warranted to be free from Defects and Related Defects for three years or 150,000 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 12 years or 500,000 miles, whichever comes first.

* + 1. Propulsion System (Diesel, CNG, Hybrid)

«warranty\_requirements\_propulsion\_system\_»

* + 1. Propulsion System (Battery Electric)

«warranty\_requirements\_propulsion\_system1»

* + 1. Energy Storage System (Hybrid or Battery Electric)

«warranty\_requirements\_energy\_storage\_sys»

* + 1. Emission Control System (ECS)

The Contractor warrants the emission control system (ECS) for five years or 100,000 miles, whichever comes first. The ECS shall include, but is not limited to, the following components:

* complete exhaust system, including catalytic converter (if required)
* aftertreatment device
* components identified as emission control devices
  + 1. Subsystems

The following subsystems shall be warranted to be free from Defects and Related Defects for two (2) years or 100,000 miles, whichever comes first:

* Brake system: Foundation brake components, including advancing mechanisms, as supplied with the axles, excluding friction surfaces
* Destination signs: All destination sign equipment for the front, side and rear signs, power modules and operator control
* Heating, ventilating: Roof and/or rear main unit only, excluding floor heaters and front defroster
* AC unit and compressor: Roof and/or rear main unit only, excluding floor heaters and front defroster
* Door systems: Door operating actuators and linkages
* Air compressor
* Air dryer
* Wheeled mobility device lift and ramp system: Lift and/or ramp parts and mechanical only
* Starter
* Alternator: Alternator only; does not include the drive system
* Charge air cooler: Charge air cooler, including core and tanks, and including related surrounding framework and fittings
* Fire suppression: Fire suppression system, including tank and extinguishing agent dispensing system
* Hydraulic systems, including radiator fan drive and power steering as applicable
* Propulsion system cooling systems: Radiator, including core, tanks and related framework, surge tank and transmission cooler
* Power electronics: DC/DC converters, inverters, if supplied
* Passenger seating: Excluding upholstery
* Fuel storage and delivery system
* Surveillance system: Including cameras and video recorders

The following subsystems shall be warranted to be free from Defects and Related Defects for twelve (12) years or 500,000 miles, whichever comes first:

* Low-voltage and high-voltage electrical wiring and harnesses (12 years)
  + 1. Extended Warranty

The Agency requires the following additional subsystems to be warranted to be free from Defects and Related Defects for two (2) years or 100,000 miles, whichever comes first.

* «warranty\_requirements\_extended\_warranty»
  + 1. 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. If supplied with the bus, the list shall include, but not be limited to, the following:

* Engine or traction motor(s)
* Propulsion system controller/inverter(s)
* Energy storage pack(s) or module(s)
* Power electronics: DC/DC converters, inverters
* Transmission
* Alternator
* Starter
* HVAC system and major components
* Drive axle
* Power steering unit
* Fuel cylinders (if applicable)
* Air compressor
* Wheeled mobility device ramp (if applicable)

The Contractor shall provide updated serial numbers resulting from warranty campaigns. The format of the list shall be approved by the Agency prior to delivery of the first production bus.

* + 1. Extension of Warranty

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

* 1. Voiding of Warranty

The warranty 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 Contractor-provided maintenance manuals and workmanship performed by adequately trained personnel (in accordance with recognized standards of the industry). The warranty also shall be void if the Agency fails to conduct normal inspections and scheduled preventive maintenance procedures as recommended in the Contractor’s maintenance manuals, and if that omission causes the part or component failure. The Agency shall maintain documentation, auditable by the Contractor, verifying service activities in conformance with the Contractor’s maintenance manuals.

* 1. Exceptions and Additions to Warranty

The warranty shall not apply to the following items:

* scheduled maintenance items
* normal wear-out items
* items furnished by the Agency

Should the Agency require the use of a specific product, and has rejected the Contractor’s request for an alternate product, then the standard Supplier warranty for that product shall be the only warranty provided to the Agency. This product will not be eligible under the subsection entitled “Fleet Defects.”

The Contractor shall not be required to provide warranty information for any warranty that is less than or equal to the warranty periods listed.

* + 1. Pass-Through Warranty

Agency and Contractor agree that the warranty terms of this Contract apply in general to systems, components, and parts supplied by suppliers and subcontractors, and that the Contractor will generally be the exclusive point of contact and administer the Agency’s warranty claims under this Contract. The Contractor hereby guarantees to provide, within reasonable periods of time, the completed warranty work or reimbursement required by this Contract for all systems, components and parts, software, and all equipment necessary to maintain and repair the buses supplied under this Contract.

Should the Contractor elect to not administer warranty claims on certain components, and wish to transfer this responsibility to the sub-suppliers or to others, the Contractor shall request this waiver.

**«warranty\_pass\_through\_header»**

«warranty\_pass\_through»

If the Agency approves the transfer of administration for warranty claim responsibility from the Contractor to a Supplier or Subcontractor, then:

1. The Contractor shall supply adequate documentation that the component Supplier affirmatively accepts responsibility for warranty service;
2. The Contractor shall state in writing that the Agency’s warranty reimbursements will not be impacted. The Contractor also shall state in writing any exceptions and reimbursement, including all costs incurred in transport of vehicles and/or components. The Contractor shall supply all information necessary to enforce the warranty;
3. The Contractor shall agree to assist the Agency in any actions to enforce the warranty; and
4. The Agency shall agree to accept this pass-through warranty and relieve the Contractor of further responsibility for that warranty, except as detailed herein.
   * 1. Superior Warranty

The Contractor shall pass on to the Agency any warranty offered by a component Supplier that is superior to that required herein. The Contractor shall provide a list to the Agency noting the conditions and limitations of the Superior Warranty no later than the start of production. The Superior Warranty shall not be administered by the Contractor.

* 1. Fleet Defects
     1. Occurrence and Remedy

A Fleet Defect is defined as “cumulative failures of 25% of the same components in the same or similar application in a minimum fleet size of twenty (20) or more buses, where such items are covered by warranty.” A Fleet Defect shall apply only to the base warranty period in sections entitled “Complete Bus,” “Propulsion System” and “Major Subsystems.” When a Fleet Defect is declared, the remaining warranty on that item/component stops. The warranty period does not restart until the Fleet Defect is corrected.

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 Defects.

The Contractor shall correct a Fleet Defect under the warranty provisions defined in “Repair Procedures.” After correcting the Defect, the Agency 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 the buses in the fleet via a mutually agreed-to arrangement. The Contractor shall update, as necessary, technical support information (parts, service and operator’s manuals) due to changes resulting from warranty repairs. The Agency may immediately declare a Defect in design resulting in a safety hazard to be a Fleet Defect. The Contractor shall be responsible for furnishing, installing and replacing all defective units.

* + 1. Exceptions to Fleet Defect Provisions

The Fleet Defect warranty provisions shall not apply to Agency-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.

1. Repair Procedures
   1. Repair Performance

The Contractor is responsible for all warranty-covered Repair Work. To the extent practicable, the Agency will allow the Contractor, or its designated representative, to perform such Work. At its discretion, the Agency 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.

* 1. Repairs by the Contractor

If the Agency detects a Defect within the warranty periods defined in this section, it shall, within thirty (30) days, notify the Contractor’s designated representative. The Contractor or its designated representative shall, if requested, begin Work on warranty-covered repairs within five (5) calendar days after receiving notification of a Defect from the Agency. The Agency 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 Agency’s option, the Contractor may be required to remove the bus from the Agency’s property while repairs are being effected. If the bus is removed from the Agency’s property, then repair procedures must be diligently pursued by the Contractor’s representative.

* 1. Repairs by the Agency
     1. Parts Used

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

* + 1. Contractor-Supplied Parts

The Agency may require that the Contractor supply parts for warranty-covered repairs being performed by the Agency. Those parts may be remanufactured but shall have the same form, fit and function, and warranty. The parts shall be shipped prepaid to the Agency from any source selected by the Contractor within fourteen (14) days of receipt of the request for said parts, and shall not be subject to an Agency handling charge.

* + 1. Defective Component Return

The Contractor may request that parts covered by the warranty be returned to the manufacturing plant. The freight costs for this action shall be paid by the Contractor. Materials should be returned in accordance with the procedures outlined in “Warranty Processing Procedures.”

* + 1. Failure Analysis

The Contractor shall, upon specific request of the Agency, provide a 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.

* + 1. Reimbursement for Labor and Other Related Costs

The Agency shall be reimbursed by the Contractor for labor. The amount shall be determined by the Agency for a qualified mechanic at a straight time wage rate of «wage\_rate\_reimbursement» per hour, which includes fringe benefits and overhead, adjusted for the Agency’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 the Agency’s service garage at the time the Defect correction is made.

* + 1. Reimbursement for Parts

The Agency shall be reimbursed by the Contractor for defective parts and parts that must be replaced to correct the Defect. The reimbursement shall be at the current price at the time of repair and shall include taxes where applicable, plus 15% handling costs. Handling costs shall not be paid if parts are supplied by the Contractor and shipped to the Agency.

* + 1. Reimbursement Requirements

The Contractor shall respond to the warranty claim with an accept/reject decision, including necessary failure analysis, no later than sixty (60) days after the Agency submits the claim and defective part(s), when requested. Reimbursement for all accepted claims shall occur no later than sixty (60) days from the date of acceptance of a valid claim. The Agency may dispute rejected claims or claims for which the Contractor did not reimburse the full amount. The parties agree to review disputed warranty claims during the following quarter to reach an equitable decision to permit the disputed claim to be resolved and closed. The parties also agree to review all claims at least once per quarter throughout the entire warranty period to ensure that open claims are being tracked and properly dispositioned.

* 1. Warranty After Replacement/Repairs

If any component, unit or subsystem is repaired, rebuilt or replaced by the Contractor, or by the Agency with the concurrence of the Contractor, then that 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) days, in accordance with “Repairs by the Contractor.”

If an item is declared to be a Fleet Defect, then the warranty stops with the declaration of the Fleet Defect. Once the Fleet Defect is corrected, the item(s) shall have three (3) months or the remaining time and/or miles of the original warranty, whichever is greater. 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 that the Contractor provides all parts to the Agency.

* + 1. Warranty Processing Procedures

The following list represents requirements by the Contractor to the Agency for processing warranty claims. One failure per bus per claim is allowed.

* Bus number and VIN
* Total vehicle life mileage at time of repair
* Date of failure/repair
* Acceptance/in-service date
* Contractor part number and description
* Component serial number
* Description of failure
* All costs associated with each failure/repair (invoices may be required for third-party costs), such as for:
* labor
* materials
* parts
* handling
* Association with component failure eligible for warranty for costs claimed, such as:
* towing
* road calls
* troubleshooting time
  1. Forms

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

* 1. Return of Parts

When returning defective parts to the Contractor, the Agency shall tag each part with the following:

* bus number and VIN
* claim number
* part number
* serial number (if available)
  1. Timeframe

Each claim must be submitted no more than thirty (30) 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 the date of repair.

* 1. Reimbursements

Reimbursements are to be transmitted to the following address:

«repair\_procedures\_reimbursements\_»

**SECTION 8: QUALITY ASSURANCE**

1. **Contractor’s In-Plant Quality Assurance Requirements**
   1. **Quality Assurance Organization**
      1. **Organization Establishment**

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.

* + 1. **Authority and Responsibility**

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

* 1. Quality Assurance Organization Functions
     1. Minimum Functions

The quality assurance organization 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 this data shall be available for review by the resident inspectors. Inspection and test records for this procurement shall be available for a minimum of one year after inspections and tests are completed.
* Corrective action: 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.
  + 1. 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 and testing 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.
  + 1. Maintenance of Control

The Contractor shall maintain quality control of purchases:

* Supplier control: The Contractor shall require that each Supplier maintains 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 with 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.
* 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.
  + 1. 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 documented Work instructions, adequate production equipment, and special working environments if necessary.
* Completed items: A system for final inspection and testing 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 analyses, tests and other quality control procedures may be used when appropriate in the quality assurance process.
* 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.
  + 1. 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. At 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 a 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 resident 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 Agency 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 the Agency.

1. **Inspection**
   1. **Inspection Stations**

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, propulsion system installation completion, underbody dress-up and completion, bus prior to final paint touchup, bus prior to road test, and bus final road test completion.

* 1. **Resident Inspectors**
     1. **Resident Inspector’s Role**

The Agency shall be represented at the Contractor’s plant by resident inspectors. Resident inspectors may be Agency employees or outside contractors. The Agency shall provide the identity of each inspector and shall also identify their level of authority in writing. They shall monitor, in the Contractor’s plant, the manufacture of transit buses built under this procurement. The presence of these resident inspectors in the plant shall not relieve the Contractor of its responsibility to meet all the requirements of this procurement. The Agency shall designate a primary resident inspector, whose duties and responsibilities are delineated in “Pre-Production Meetings,” “Authority,” and “Pre-Delivery Tests.” Contractor and resident inspector relations shall be governed by the guidelines included as Attachment A to this section.

* + 1. **Pre-Production Meetings**

The primary resident inspector may participate in design review and pre-production meetings with the Agency. At these meetings, the configuration of the buses and the manufacturing processes shall be finalized, and all Contract documentation provided to the inspector. If the final configuration includes any changes, the Agency and the Contractor shall work together to accomplish the change with as little delay as possible. These changes cannot be done within thirty (30) calendar days before production.

No less than thirty (30) calendar days prior to the beginning of bus manufacture, the primary resident 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 resident inspectors may begin monitoring bus construction activities two weeks prior to the start of bus fabrication.

* + 1. **Authority**

Records and data maintained by the quality assurance organization shall be available for review by the resident 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 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.

Discrepancies noted by the resident 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 Agency shall approve the modification, repair or method of correction to the extent that the Contract specifications were affected.

The primary resident inspector shall remain in the Contractor’s plant for the duration of bus assembly Work under this Contract. Only the primary resident inspector or designee shall be authorized to release the buses for delivery. The resident inspectors shall be authorized to approve pre-delivery acceptance tests. Upon request to the quality assurance supervisors, the resident 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.

* + 1. **Support Provisions**

The Contractor shall provide office space for the resident inspectors in close proximity to the final assembly area. This office space shall be equipped with desks, outside and inter-plant telephones, internet access, file cabinet(s) and chairs.

* + 1. **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 Agency’s inspector(s) and any other Agency representatives during the course of the Contract.

1. **Acceptance Tests**
   1. **Responsibility**

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

* 1. **Pre-Delivery Tests**

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

Additional tests may be conducted at the Contractor’s discretion to ensure that completed buses have attained the required quality and have met the requirements in Section 6, “Technical Specifications.” The Agency 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 a Contractor 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 configurations. 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 resident 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 resident 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.

* + 1. **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 dimensions 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.

* + 1. **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 or electronic files showing the performance of each bus shall be produced and provided to the Agency. 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.

* + 1. **Pre-Delivery Tests Required**

The Agency and Contractor shall complete the following tests prior to delivery of each bus:

«quality\_assurance\_pre\_delivery\_tests\_req»

* 1. **Post-Delivery Tests**

The Agency and Contractor shall conduct post-delivery tests within the required time after the delivery of each bus to the designated point of delivery, as set out in sections GC 4 and GC 5. The Agency and Contractor shall complete the following post-delivery tests:

«quality\_assurance\_post\_delivery\_tests\_»

1. **Agency-Specific Requirements**

«quality\_assurance\_agency\_specific\_requir»

**Attachment A: New Bus Manufacturing Inspection Guidelines**

Pre-Production Meeting Responsibilities

Agency

* Provides conformed copy of technical requirements.
* Recommended staff to be involved may include the following:
* project manager
* technical engineer
* contract administrator
* quality assurance administrator
* warranty administrator
* Process for inspector’s role (to deal with Agency) for negotiated changes after freeze date.
* Contractual requirements:
* milestones
* documentation
* title requirements
* deliverables
* payments
* reliability tracking

Manufacturer

* Identifies any open issues.
* Recommended staff to be involved may include the following:
* project manager
* technical engineer(s)
* contract administrator
* quality assurance administrator
* warranty administrator
* Production flow (buses/week, shifts).
* Delivery schedule and off-site component build-up schedule.
* Bus QA documentation (including supplier application approvals and/or any certifications required for the specific production).
* Communication flow/decision-making.

Inspector

* Agrees on decisions inspectors can and cannot make.
* Primary contact for problems, etc.
* Production flow process (description of manufacturing by station).
* Factory hours (manage inspection schedule based on production hours).
* Plant rules.
* Safety requirements.
* Orientation requirements.
* Work environment.
* Inspector’s office space (per contract).

Note: As a result of this meeting, documentation should be produced detailing final production requirements and the planned configuration of the bus.

Build Schedule

The bus manufacturer’s contract administrator shall supply a fleet build production schedule based on the dates in the Notice to Proceed, and a description of the manufacturer’s schedule for plant operations.

The production schedule should contain specific milestone dates, such as the following:

* First vehicle on production line (date on which any work will begin)
* First vehicle off production line
* First vehicle through manufacturer’s quality assurance inspections
* First vehicle shipped to the Agency
* Last vehicle on production line
* Last vehicle off production line
* Last vehicle shipped to the Agency

**Plant Tour (if Meeting at Manufacturer’s Location)**

The Agency will review the entire process from start to finish and review the work completed at each line station, including quality control measures.

**Prototype/Pilot Vehicle Production**

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

Additional tests may be conducted at the Agency’s discretion to ensure that the completed buses have attained the required quality and have met the requirements in Section 6, “Technical Specifications.” The Agency 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 30 days’ notice so that they may be witnessed by the resident 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.

**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.

**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 15 miles during the road tests. If requested, computerized diagnostic printouts showing the performance of each bus shall be produced and provided to the Agency. 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.

**Post-Delivery Tests**

The Agency shall conduct acceptance tests on each delivered bus. These tests shall be completed within 15 days after bus delivery and shall be conducted in accordance with the Agency’s 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 the Agency. The post-delivery tests shall include visual inspection and bus operations. No post-delivery test shall apply new criteria that are different from criteria applied in a pre-delivery test.

Buses that fail to pass the post-delivery tests are subject to nonacceptance. The Agency shall record details of all defects on the appropriate test forms and shall notify the Contractor of acceptance or nonacceptance of each bus after completion of the tests. The defects detected during these tests shall be repaired according to procedures defined in the contract.

Prototype/Pilot Vehicle Acceptance

In order to assess the Contractor’s compliance with the Technical Specifications, the Agency and the Contractor shall, at the pre-production meeting, jointly develop a Configuration and Performance Review document for review of the pilot vehicle. This document shall become part of the official record of the pre-production meeting.

Potential dimensional/performance tests that may be included in the Configuration and Performance Review include the following:

* complete electrical system audit
* dimensional requirements audit
* seating capacity
* water test
* water runoff test
* function test of systems/subsystems and components
* sound/noise level tests
* vehicle top speed
* acceleration tests
* brake stop tests
* airflow tests
* PA function tests
* air/brake system audit
* individual axle weight
* standee capacity
* body deflection tests
* silent alarm function test
* interior lighting
* exterior lighting
* gradeability test
* kneeling system function
* HVAC pull-down/heat
* speedometer
* outside air infiltration (smoke)
* wheeled mobility device ramps
* propulsion system performance qualification
* This test shall be jointly conducted by the Contractor and the propulsion system manufacturer (including, but not limited to, charge air cooler performance, air to boil test, loss of coolant, fuel system, electrical inputs and protection systems).
* transmission performance qualifications
* This test shall be jointly conducted by the Contractor and the transmission manufacturer (including, but not limited to, retarder operation, heat exchanger, interface with ABS and electrical inputs).

Buy America Audit

A post-delivery Buy America audit is required for federally funded bus procurements (see 49 CFR Part 663 for additional information). The on-site resident inspectors are to monitor the production processes to verify compliance with final assembly requirements identified by the Buy America pre-award audit. This audit is to verify compliance with final assembly requirements and final documentation of Buy America compliance, and must be completed prior to title transfer.

Note: If there is not a pilot/prototype bus, then the Buy America post-delivery audit should be performed following completion of the first serial production bus. In addition to monitoring of the production processes, the Agency must verify compliance with the stipulation that more than 70% of the costs of all components were produced in the United States. Finally, the Agency must execute the required certificates.

Resident Inspection Process for Serial Production

At the discretion of the Agency, a decision will be made to perform resident inspection using the Agency’s personnel, a contract inspector or a combination of both. This decision is based on factors such as the availability of personnel, knowledge/expertise in bus build project management, the size of the bus order, etc.

Note: The decision to have the resident inspection performed by Agency personnel results in a firm understanding and knowledge of the bus and affords the opportunity to identify parts that will be needed for general maintenance down the road.

Inspector Responsibilities

The resident inspection process for the serial production of the buses begins following the completion and acceptance of the prototype or pilot vehicle if required, or according to the serial bus production schedule. Resident inspectors should represent the Agency for all build-related issues (quality, conformance, etc.). Resident inspectors can also address contractual-type issues but should only do so under the consult of the Agency’s contracts administrator.

Resident inspectors are sent to the manufacturer’s facility according to a Resident Inspection Schedule. Typically, one or two inspectors arrive on-site at the manufacturing facility about one week prior to actual production to setup the resident inspection process and to begin preliminary quality assurance inspections for items such as powerplant build-up and wire harness production; as well as to inspect incoming parts, fasteners, fluids, etc., that will be used in the production of the buses. During the serial production of the buses, the resident inspectors should monitor the production of each bus, verifying the quality of materials, components, subassemblies and manufacturing standards. In addition, the configuration of each vehicle should be audited using the vehicle manufacturer’s build specification and other documents to ensure contract compliance and uniformity.

Inspector Rotation/Scheduling

During the resident inspection phase, a single inspector or multiple inspectors can be used. If it is decided to use multiple inspectors, then the inspectors can be rotated on a biweekly-to-monthly basis as required. During the rotation of inspectors, a sufficient period of overlap should be provided to guarantee the consistency of the resident inspection process.

Resident Inspector Orientation

A resident inspector orientation by the bus manufacturer should take place upon the arrival of the initial inspection team. The orientation should include expectations for the use of personal protective equipment (safety shoes, safety glasses, etc.), daily check-in and check-out requirements, lines of communication, use of production documents (such as speed memos and line movement charts), inspector/production meetings, inspector office arrangements, and anything else pertinent to the inspection team’s involvement during the build. Many of the above items should already have been formalized during the pre-production meeting.

Audits, Inspections and Tests

The resident inspection process monitors the production of each vehicle. Inspection stations should be strategically placed to test or inspect components or other installations before they are concealed by subsequent fabrication or assembly operations. These locations are typically placed for the inspection of underbody structure, body framing, electrical panels and harnesses, air and hydraulic line routings, installation of insulation, powerplant build-up and installation, rust inhibitor/undercoating application, floor installation, front suspension alignment, and other critical areas.

Vehicle Inspections

Each bus is subjected to a series of inspections after it reaches the point of final completion on the assembly line. Typically, the vehicle manufacturer performs its own quality assurance inspections following assembly line completion before releasing each bus to the resident inspectors. The inspections for each vehicle are documented, signed off upon passing and included in the vehicle record.

These are the typical inspections performed on each bus by the resident inspectors:

* water test inspection
* road test inspection
* interior inspection (including functionality)
* hoist/undercarriage inspection
* exterior inspection (including roof)
* electrical inspection
* wheeled mobility device ramp/lift inspection

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.

Road Test Inspection

The road test inspection checks all the vehicle’s systems and subsystems while the vehicle is in operation. Typically, the road test inspection is performed immediately following the water test inspection to reveal any standing water that may be present due to a leak, but was not noticed during the “static” water test. Objectionable vibrations, air leakage and other factors that affect ride quality are recorded and reported to the vehicle manufacturer for resolution. Vehicle stability, performance, braking and interlock systems, HVAC, and other critical areas are checked to ensure that the vehicle is complete and ready to provide safe and reliable service.

The following tests may be performed and recorded during the road test:

* acceleration test
* top speed test
* gradeability test
* service brake test
* parking brake test
* turning effort test
* turning radius test
* shift quality
* quality of retarder or regenerative braking action

During the road test, a vehicle may be taken to a weigh station to record the vehicle’s front axle weight, rear axle weight and total vehicle (curb) weight.

Interior Inspection

The interior inspection checks the fit and finish of the interior installations. In addition, the inspection also verifies the installation and function of systems and subsystems according to the build specification. All systems and functions accessed from the interior are inspected for functionality, appearance and safety.

Examples of systems/functions inspected include the following:

* interior and exterior lighting controls
* front and rear door systems
* flooring installation
* passenger and operator’s seat systems
* wheelchair securement and ramp systems
* fire suppression system
* electrical installations (multiplex, telltale wiring, panels, etc.)
* window systems and emergency escape portals
* operator dash/side panel controls/indicators

Hoist/Undercarriage Inspection

The hoist/undercarriage inspection checks the installation of components, wiring, air lines, presence of fluid leaks, etc., located under the vehicle. Typically, this inspection is performed following the road test. The vehicle is lifted onto a hoist or pulled over a pit for the inspection. Areas inspected are the front suspension, air bags, air line routings, electrical connections and routings, drivetrain components, linkages, and any other system or component that may be prone to early failure due to inadequate installation techniques. All lines, cables, hoses, etc., are inspected for proper securement and protection to prevent rubbing, chafing or any other condition that could result in a failure. The engine/powerplant and HVAC compartments are also inspected during this time.

Exterior Inspection

The exterior inspection checks the fit and finish of components installed on the exterior of the vehicle. Access panels are opened and accessories are inspected for proper installation. In addition, vehicle paint, graphics and proper decals are also inspected. Acceptable paint finish quality (orange peel, adhesion, etc.) should be agreed on with the vehicle manufacturer prior to production to ensure consistency of inspections.

Electrical Inspection

The vehicle’s main electrical panels and other subpanels are inspected for proper components, to include relays, fuses, modules, terminal strips, decals, etc. In addition, electrical harnesses are inspected for proper wiring and termination techniques, bulkhead protection, looming, and other items that could result in future electrical failure. Onboard vehicle compartment schematics are verified for accuracy.

Wheeled Mobility Device Ramp Inspection

The wheeled mobility device ramp assembly is inspected for proper installation and performance. Clearances critical to the operation of the ramp are verified, and the ramp’s electrical systems are inspected to ensure appropriate wire routings and protection. The successful integration of the ramp assembly into the vehicle is verified, and the vehicle interlocks are checked during automatic and manual ramp operation.

Audits

During serial production of the bus’s quality assurance inspection, tests may be performed to ensure that the manufacturer’s quality standards are being followed. These inspection audits could be on items such as torque wrench calibrations, proper techniques for fastener installations, proper use and type of adhesives, use of correct installation drawings on the production line, etc.

Communication

The lines of communication, formal and informal, should be discussed and outlined in the pre-production meeting. As previously discussed, resident inspectors should represent the Agency for all bus-build related issues (quality, conformance, etc.). Resident inspectors can relay communications addressing contractual type issues but should do so only under the consult of the Agency’s contract administrator. Actual personnel contacts for the manufacturing facility should be established during resident inspector orientation. These contacts could include quality assurance, production, material handling, engineering and buy-off area personnel.

Documentation

The following documents/reports are typically generated during the bus build process:

* Vehicle build specification
* Sales order
* Pre-production meeting notes
* Prototype and production correspondence (vehicle build file)
* Manufacturer’s vehicle record (warranty file):
* Vehicle line documents
* Serialization documents (warranty file)
* Alignment verification
* Brake testing
* HVAC testing and checkout
* Manufacturer’s QA checklist and sign-off
* Weight slip (prototype and warranty file)
* Prototype performance tests document (vehicle build file):
* Acceleration Test
* Top Speed Test
* Gradeability Test
* Interior Noise Test A – Stationary
* Interior Noise Test B – Dynamic
* Exterior Noise Test A – Pull Away
* Exterior Noise Test B – Pass-By
* Exterior Noise Test C – Curb Idle
* Turning Radius Test
* Turning Effort Test
* Parking Brake Test
* Service Brake Test
* Vehicle acceptance inspections – production (warranty file)
* Water Test Inspection Report
* Road Test Inspection Report
* Interior Inspection Report
* Hoist/Undercarriage Inspection Report
* Exterior Inspection Report
* Electrical Inspection Report
* Wheeled Mobility Device Inspection Report
* Speed memos (warranty file)
* Agency vehicle inspection record (warranty file)
* Release for delivery documentation (warranty file)
* Post-production acceptance – Certificate of Acceptance (accounting)
* Post-Delivery Inspection Report – (fleet management and warranty files)

Vehicle Release for Delivery

Upon satisfactory completion of all inspection, audit and test criteria, and resolution of any outstanding issues affecting the purchase of any or all buses, proper documentation (the Release for Delivery) is signed by the designated resident inspector authorizing the bus manufacturer to deliver the vehicle to the Agency’s facility, where it will undergo a post-delivery inspection process and final acceptance. The satisfactory sign-off of the Release for Delivery should complete the resident inspector’s duties for each bus. In final preparation for delivery, the bus manufacturer may request the resident inspector to do a final walk-through of the bus after it has been cleaned and prepped for shipping.

Post-Delivery and Final Acceptance

The Agency shall conduct acceptance tests on each delivered bus. These tests shall be completed within 15 days after bus delivery and shall be conducted in accordance with the Agency’s 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 the Agency. The post-delivery tests shall include visual inspection, along with a verification of system(s) functionality and overall bus operations. No post-delivery test shall apply new criteria that are different from criteria applied in a pre-delivery test.

Buses that fail to pass the post-delivery tests are subject to nonacceptance. The Agency shall record details of all defects on the appropriate test forms and shall notify the Contractor of acceptance or nonacceptance of each bus within five days after completion of the tests. The defects detected during these tests shall be repaired according to procedures defined in the contract after nonacceptance.

Certificate of Acceptance

* Accepted
* Not accepted: In the event that the bus does not meet all requirements for acceptance, the Agency must identify reasons for nonacceptance and work with the OEM to develop a timeline of addressing the problem for satisfactory resolution and redelivery.
* Conditional acceptance: In the event that the bus does not meet all requirements for acceptance, the Agency may conditionally accept the bus and place it into revenue service pending receipt of Contractor furnished materials and/or labor necessary to address the identified issue(s).

**SECTION 9: FORMS AND CERTIFICATIONS**

1. **Proposer’s Checklist**

|  |  |
| --- | --- |
| **RFP** «proposer\_checklist\_name\_of\_procurement\_» | |
| **Package 1: Technical Proposal** | |
| □ | 1. Letter of Transmittal |
| □ | 2. Technical Proposal |
| □ | 3. Acknowledgment of Addenda |
| □ | 4. Form for Proposal Deviation |
| □ | 5. Vehicle Questionnaire |
| □ | 6. References and non-priced information (if provided by the Proposer) |
| □ | 7. Engineering organization chart, engineering change control procedure, field modification process |
| □ | 8. Manufacturing facility plant layout, other contracts, staffing |
| □ | 9. Production schedule and other Contract commitments for the duration of this Contract |
| □ | 10. Quality Assurance Program |
| **Package 2: Price Proposal** | |
| □ | 1. Letter of Transmittal |
| □ | 2. Pricing Schedule (including option buses, spare parts package, engineering, manuals, training, special tools and test equipment) |
| **Package 3: Qualifications Package** | |
| □ | 1. Pre-Award Evaluation Data Form |
| □ | 2. A copy of the three (3) most recent audited financial statements or a statement from the Proposer regarding how financial information may be reviewed by the Agency |
| □ | 3. Letter for insurance |
| □ | 4. Letter for performance bond (if applicable) |
| □ | 5. Letter of commitment for parental financial guarantee (if applicable) |
| □ | 6. Proposal Form |
| **Package 4: Proprietary/Confidential Information** | |
| □ | 1. Proprietary/Confidential Information |
| There may be items in the first three packages that are included in Package 4 because they are considered to be proprietary/confidential information. When this occurs, the Proposer must note that fact in packages 1 through 3. | |

1. **Request for Pre-Offer Change or Approved Equal**

This form must be used for requested clarifications, changes, substitutes or approval of items equal to items specified with a brand name and must be submitted as far in advance of the Due Date, as specified in “Questions, Clarifications and Omissions.”

«agency»

«proposal\_number» «procurement\_title»

|  |  |  |
| --- | --- | --- |
| **Request #:**  **Proposer:**  **RFP Section:**  **Page:** | | |
| Questions/clarification or approved equal: | | |
| Agency action: | □ Approved  □ See addendum | □ Denied  □ See response below |
| Agency response: | | |

1. **Acknowledgment of Addenda**

Failure to acknowledge receipt of all addenda may cause the Proposal to be considered nonresponsive to the Solicitation. Acknowledged receipt of each addendum must be clearly established and included with the Proposal.

|  |  |
| --- | --- |
| The undersigned acknowledges receipt of the following addenda to the documents: | |
| Addendum No.: | Dated: |
| Addendum No.: | Dated: |
| Addendum No.: | Dated: |
| Addendum No.: | Dated: |
| **Proposer:**  **Name:**  **Title:**  **Phone:**  **Street address:**  **City, state, ZIP:** | |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date | |

1. **Contractor Service and Parts Support Data**

|  |
| --- |
| **Location of nearest Technical Service Representative to Agency** |
| Name:  Address:  Telephone:  Describe technical services readily available from said representative: |
| **Location of nearest Parts Distribution Center to Agency:** |
| Name:  Address:  Telephone:  Describe the extent of parts available at said center: |
| **Policy for delivery of parts and components to be purchased for service and maintenance:** |
| Regular method of shipment:  Cost to Agency: |

1. **Form for Proposal Deviation**

This form shall be completed for each condition, exception, reservation or understanding (i.e., Deviation) in the Proposal according to “Conditions, Exceptions, Reservations or Understandings.” One copy without any price/cost information is to be placed in the Technical Proposal as specified in “Technical Proposal Requirements,” and a separate copy with any price/cost information placed in the Price Proposal as specified in “Price Proposal Requirements.”

«agency»

«proposal\_number» «procurement\_title»

|  |  |  |  |
| --- | --- | --- | --- |
| **Deviation No.:** | **Contractor:** | **RFP section:** | **Page:** |
| **Complete description of Deviation:** | | | |
| **Rationale (pros and cons):** | | | |

1. **Pricing Schedule**

**NOTE:** The following is an example of what a pricing schedule might look like and should be customized by the Agency to reflect the costs for its procurement.

«agency»

«proposal\_number» «procurement\_title»

|  |  |  |
| --- | --- | --- |
|  | **All prices are to be in United States dollars** | |
|  | **Unit Price** | **Extension** |
| «pricing\_schedule\_quantity\_size\_type\_desc» buses |  |  |
| Manuals | Lump Sum |  |
| Training | Lump Sum |  |
| Spare parts package |  |  |
| Test equipment and special tools |  |  |
| Extended Warranty «pricing\_schedule\_subsystems1» |  |  |
| Extended Warranty «pricing\_schedule\_subsystems2» |  |  |
| Extended Warranty«pricing\_schedule\_subsystems3» |  |  |
| Extended Warranty «pricing\_schedule\_subsystems4» |  |  |
| Other «pricing\_schedule\_other» |  |  |
| Sales tax (if applicable) |  |  |
| Delivery charges |  |  |
| **TOTAL PROPOSED PRICE** |  |  |
| ADA equipment (included in above unit prices) |  |  |
| This form is to be completed and included in the Price Package. | | |

1. **Pre-Award Evaluation Data Form**

**NOTE:** This form is to be completed and included in the Qualification Package. Attach additional pages if required.

«agency»

«proposal\_number» «procurement\_title»

|  |
| --- |
| **Name of firm:** |
| **Address:** |
| **□ Individual □ Partnership □ Corporation □ Joint Venture** |
| **Date organized:**  **State in which incorporated:** |
| **Names of officers or partners:**  a.  b.  c.  d.  e. |
| **6. How long has your firm been in business under its present name?** |
| 7. Attach as **SCHEDULE ONE** a list of similar current contracts that demonstrate your available capacity, including the quantity and type of bus, name of contracting party, percentage completed and expected completion date. |
| 8. Attach as **SCHEDULE TWO** a list of at least three similar contracts that demonstrate your technical proficiency, each with the name of the contracting party and number and they type of buses completed within the past five years. |
| **9. Have you been terminated or defaulted, in the past five years, on any Contract you were awarded?**  □ Yes □ No  If yes, then attach as **SCHEDULE THREE** the full particulars regarding each occurrence. |
| 10. Attach as **SCHEDULE FOUR** the Proposer’s last three (3) financial statements prepared in accordance with generally accepted accounting principles of the jurisdiction in which the Proposer is located, and audited by an independent certified public accountant; or a statement from the Proposer regarding how financial information may be reviewed by the Agency (This may require execution of an acceptable nondisclosure agreement between the Agency and the Proposer.) |
| 11. Attach as **SCHEDULE FIVE** a list of all principal Subcontractors and the percentage and character of Work (Contract amount) that each will perform on this Contract. |
| 12. If the Contractor or Subcontractor is a joint venture, submit **PRE-AWARD EVALUATION DATA** forms for each member of the joint venture. |
| The above information is confidential and will not be divulged to any unauthorized personnel. |
| The undersigned certifies to the accuracy of all information:  **Name and title:**  **Company:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date |

1. **Federal Certifications**
   1. **Buy America Certification**

This form is to be submitted with an offer exceeding the small purchase threshold for federal assistance programs, currently set at $100,000.

|  |
| --- |
| **Certificate of Compliance** |
| The Proposer hereby certifies that it will comply with the requirements of 49 USC Section 5323(j)(2)(C), Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, and the regulations of 49 CFR 661.11: |
| **Name and title:**  **Company:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date |

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| **Certificate of Non-Compliance** |
| The Proposer hereby certifies that it cannot comply with the requirements of 49 USC Section 5323(j)(2)(C) and Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended, but may qualify for an exception to the requirements consistent with 49 USC Sections 5323(j)(2)(B) or (j)(2)(D), Sections 165(b)(2) or (b)(4) of the Surface Transportation Assistance Act, as amended, and regulations in 49 CFR 661.7. |
| **Name and title:**  **Company:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date |

* 1. **Debarment and Suspension Certification for Prospective Contractor**

Primary covered transactions must be completed by the Proposer for contract value over $25,000.

|  |  |
| --- | --- |
| Choose one alternative: | |
| □ | The Proposer, «debarment\_suspension\_certification\_propo», certifies to the best of its knowledge and belief that it and its principals:  1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;  2. Have not within a three-year period preceding this Proposal 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 or embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;  3. Are 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 2 of this certification; and  4. Have not within a three-year period preceding this Proposal had one or more public transactions (federal, state or local) terminated for cause or default.  **OR** |
| □ | The Proposer is unable to certify to all of the statements in this certification, and attaches its explanation to this certification. (In explanation, certify to those statements that can be certified to and explain those that cannot.)  The Proposer certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification and understands that the provisions of Title 31 USC § Sections 3801 are applicable thereto. |
| **Executed in** «debarment\_suspension\_certification\_city\_»**.**  **Name:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date | |

* 1. **Debarment and Suspension Certification (Lower-Tier Covered Transaction)**

This form is to be submitted by each Subcontractor receiving an amount exceeding $25,000.

|  |
| --- |
| The prospective lower-tier participant (Proposer) certifies, by submission of this Proposal, that neither it nor its principals as defined at 49 CFR § 29.105(p) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.  If the prospective Proposer is unable to certify to the statement above, it shall attach an explanation, and indicate that it has done so by placing an “X” in the following space: \_\_\_\_\_\_  **THE PROPOSER, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF EACH STATEMENT OF ITS CERTIFICATION AND EXPLANATION, IF ANY. IN ADDITION, THE PROPOSER UNDERSTANDS AND AGREES THAT THE PROVISIONS OF 31 USC §§ 3801 *ET SEQ*. APPLY TO THIS CERTIFICATION AND EXPLANATION, IF ANY.** |
| **Name and title of the Proposer’s authorized official:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date |

* 1. **Non-Collusion Affidavit**

This affidavit is to be filled out and executed by the Proposer; if a corporation makes the bid, then by its properly executed agent. The name of the individual swearing to the affidavit should appear on the line marked “Name of Affiant.” The affiant’s capacity, when a partner or officer of a corporation, should be inserted on the line marked “Capacity.” The representative of the Proposer should sign their individual name at the end, not a partnership or corporation name, and swear to this affidavit before a notary public, who must attach their seal.

|  |  |
| --- | --- |
| State of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, County of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, being first duly sworn, do hereby state that  (Name of Affiant)  I am \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Capacity) (Name of Firm, Partnership or Corporation)  whose business is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  and who resides at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  and that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (Give names of all persons, firms or corporations interested in the bid)  is/are the only person(s) with me in the profits of the herein contained Contract; that the Contract is made without any connection or interest in the profits thereof with any persons making any bid or Proposal for said Work; that the said Contract is on my part, in all respects, fair and without collusion or fraud, and also that no members of the Board of Trustees, head of any department or bureau, or employee therein, or any employee of the Authority, is directly or indirectly interested therein.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature of Affiant Date | |
| Sworn to before me this \_\_\_\_\_\_\_\_\_\_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 20\_\_\_\_\_\_\_\_.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Notary public My commission expires | Seal |

* 1. **Lobbying Certification**

This form is to be submitted with an offer exceeding $100,000.

|  |
| --- |
| The Proposer certifies, to the best of its 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 a federal department or agency, a member of the U.S. Congress, an officer or employee of the U.S. Congress, or an employee of a member of the U.S. 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 thereof.  2. If any funds other than federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to 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 instruction, as amended by “Government-wide Guidance for New Restrictions on Lobbying,” 61 Fed. Reg. 1413 (1/19/96).    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 31, USC §1352 (as amended by the Lobbying Disclosure Act of 1995). 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.  **THE PROPOSER,** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF EACH STATEMENT OF ITS CERTIFICATION AND DISCLOSURE, IF ANY. IN ADDITION, THE PROPOSER UNDERSTANDS AND AGREES THAT THE PROVISIONS OF 31 USC §§ 3801 ET SEQ. APPLY TO THIS CERTIFICATION AND DISCLOSURE, IF ANY.**  Name of the Bidder or Proposer’s authorized official: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature Date |

Per paragraph 2 of the included form Lobbying Certification, add Standard Form LLL, “Disclosure Form to Report Lobbying,” if applicable.

* 1. **Certificate of Compliance with Bus Testing Requirement**

|  |
| --- |
| The undersigned certifies that the vehicle offered in this procurement complies and will, when delivered, comply with 49 USC §5323(c) and FTA’s implementing regulation at 49 CFR Part 665 according to the indicated one of the following three alternatives.  Mark one and only one of the three blank spaces with an “X.”  1. \_\_\_\_\_ The buses offered herewith have been tested in accordance with 49 CFR Part 665 on \_\_\_\_\_\_\_\_\_\_\_\_\_ (date). If multiple buses are being proposed, provide additional bus testing information below or on attached sheet. The vehicles being sold should have the identical configuration and major components as the vehicle in the test report, which must be submitted with this Proposal. If the configuration or components are not identical, then the manufacturer shall provide with its Proposal a description of the change and the manufacturer’s basis for concluding that it is not a major change requiring additional testing. If multiple buses are being proposed, testing data on additional buses shall be listed on the bottom of this page.  2. \_\_\_\_\_ 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), and submits with this Proposal the name and address of the recipient of such a vehicle and the details of that vehicle’s configuration and major components.  3. \_\_\_\_\_ The vehicle is a new model and will be tested and the results will be submitted to the Agency prior to acceptance of the first bus.  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.  **Company name:**  **Name and title of the Proposer’s authorized official:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Authorized signature Date |

* 1. **DBE Approval Certification**

I hereby certify that the Proposer has complied with the requirements of 49 CFR 26, Participation by Disadvantaged Business Enterprises in USDOT Programs, and that its goals have not been disapproved by the Federal Transit Administration.

**Name and title of the Proposer’s authorized official:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized signature Date

* 1. **Federal Motor Vehicle Safety Standards**

The Proposer and (if selected) 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.

**Company name:**

**Name of signer:**

**Title:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized signature Date

1. **Other Certifications**
   1. **Proposal Form**

**NOTE:** The following is an example of a Proposal form to be modified as appropriate by the Agency and included in the RFP.

The Proposer shall complete the following form and include it in the price Proposal.

**PROPOSAL**

By execution below by duly authorized representative(s) of the Proposer, the Proposer hereby offers to furnish equipment and services as specified in its Proposal submitted to «agency» in response to Request for Proposal No. «proposal\_number» in its entirety.

Proposer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Street address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

City, state, ZIP: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name and title of Authorized Signer(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name and title of Authorized Signer(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Authorized signature Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized signature Date

* 1. **Notice of Award**

**NOTE:** This form is included as an example. Standard industry practice is to execute a separate Contract as provided as an example in Appendix D.

By execution below, «agency» accepts Proposal as indicated above.

Contracting officer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorized signature Date

* 1. **Certification of Compliance with Standards, Certifications and Regulations**

CER 9.3 identifies the specifications, standards, regulations, and references used within this RFP. This form must be completed and included in the Technical Proposal and requires an indication of the state of compliance and an opportunity for listing other pertinent references. Please indicate compliance as “Full,” “Partial” or “N/A” (not applicable). If “Partial” or “N/A,” please describe.

| **Standard** | **Title** | **Compliance** | **If “Partial” or “N/A,” Please Describe** |
| --- | --- | --- | --- |
| SAE J10 | Automotive and Off-Highway Air Brake Reservoir Performance and Identification Requirements - Truck and Bus J10\_201312 |  |  |
| SAE J211a | Instrumentation for Impact Test J211A\_197112 |  |  |
| SAE J287 | Driver Hand Control Reach J287\_201603 |  |  |
| SAE J366 | Exterior Sound Level for Heavy Trucks and Buses (stabilized September 2011) J366\_201109 |  |  |
| SAE J382 | Windshield Defrosting Systems Performance Requirements--Trucks, Buses, and Multipurpose Vehicles (canceled September 2000) J382\_200009 |  |  |
| SAE J534 | Lubrication Fittings J534\_201508 |  |  |
| SAE J537 | Storage Batteries J537\_201604 |  |  |
| SAE J541 | Voltage Drop for Starting Motor Circuits (canceled July 2013) J541\_201307 |  |  |
| SAE J587 | License Plate Illumination Devices (Rear Registration Plate Illumination Devices) J587\_201711 |  |  |
| SAE J593 | Backup Lamp (Reversing Lamp) J593\_201606 |  |  |
| SAE J673 | Automotive Safety Glazing Materials J673\_201506 |  |  |
| SAE J680 | Location and Operation of Air Brake Controls in Motor Truck Cabs J680\_201508 |  |  |
| SAE J686 | Motor Vehicle License Plates (stabilized July 2012) J686\_201207 |  |  |
| SAE J689 | Curbstone Clearance, Approach, Departure, and Ramp Breakover Angles—Passenger Car and Light Truck (canceled Aug 2009) J689\_200908 |  |  |
| SAE J833 | Human Physical Dimensions |  |  |
| SAE J844 | Nonmetallic Air Brake System Tubing (stabilized December 2012) J844\_201212 |  |  |
| SAE J941 | Motor Vehicle Drivers’ Eye Locations J941\_201003 |  |  |
| SAE J994 | Alarm—Backup—Electric Laboratory Performance Testing J994\_201409 |  |  |
| SAE J1050 | Describing and Measuring the Driver’s Field of View J1050\_200902 |  |  |
| SAE J1113 | Electromagnetic Compatibility Measurement Procedures and Limits for Components of Vehicles, Boats (up to 15 m), and Machines (Except Aircraft) (16.6 Hz to 18 GHz) J1113/1\_201810 |  |  |
| SAE J1127 | Low Voltage Battery Cable J1127\_201512 |  |  |
| SAE J1128 | Low Voltage Primary Cable J1128\_201512 |  |  |
| SAE J1149 | Metallic Air Brake System Tubing and Pipe (stabilized October 2015) J1149\_201510 |  |  |
| SAE J1292 | Automobile and Motor Coach Wiring (stabilized April 2016) J1292\_201604 |  |  |
| SAE J1308 | Fan Guard for Off-Road Machines J1308\_201312 |  |  |
| SAE J1455 | Recommended Environmental Practices for Electronic Equipment Design in Heavy-Duty Vehicle Applications J1455\_201703 |  |  |
| SAE J1587 | Electronic Data Interchange Between Microcomputer Systems in Heavy-Duty Vehicle Applications (stabilized January 2013) J1587\_201301 |  |  |
| SAE J1654 | Unshielded High Voltage Primary Cable J1654\_201609 |  |  |
| SAE J1708 | Serial Data Communications Between Microcomputer Systems in Heavy-Duty Vehicle Applications (stabilized September 2016) J1708\_201609 |  |  |
| SAE J1763 | A Conceptual Its Architecture: An Atis Perspective (canceled May 2003) J1763\_200304 |  |  |
| SAE J1772 | SAE Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charge Coupler J1772\_201710 |  |  |
| SAE J1939 | Serial Control and Communications Heavy Duty Vehicle Network - Top Level Document J1939\_201808 |  |  |
| SAE J1986 | Balance Weight and Rim Flange Design Specifications, Test Procedures, and Performance Recommendations J1986\_201603 |  |  |
| SAE J1995 | Engine Power Test Code - Spark Ignition and Compression Ignition - Gross Power and Torque Rating J1995\_201401 |  |  |
| SAE J2344 | Guidelines for Electric Vehicle Safety J2344\_201003 |  |  |
| SAE J2402 | Road Vehicles—Symbols for Controls, Indicators, and Tell-tales J2402\_201001 |  |  |
| SAE J2464 | Electric and Hybrid Electric Vehicle Rechargeable Energy Storage System (RESS) Safety and Abuse Testing J2464\_200911 |  |  |
| SAE J2711 | Recommended Practice for Measuring Fuel Economy and Emissions of Hybrid-Electric and Conventional Heavy-Duty Vehicles (stabilized July 2018) J2711\_201807 |  |  |
| SAE J2910 | Recommended Practice for the Design and Test of Hybrid Electric and Electric Trucks and Buses for Electrical Safety J2910\_201404 |  |  |
| SAE J3068 | Electric Vehicle Power Transfer System Using a Three-Phase Capable Coupler J3068\_201804 |  |  |
| FMVSS 105 | Hydraulic and Electric Brake Systems |  |  |
| FMVSS 121 | Air Brake Systems |  |  |
| FMVSS 207 | Seating Systems |  |  |
| FMVSS 210 | Seat Belt Assembly Anchorages |  |  |
| FMVSS 217 | Bus Emergency Exits and Window Retention and Release |  |  |
| FMVSS 301 | Fuel System Integrity |  |  |
| FMVSS 302 | Flammability of Interior Materials |  |  |
| FMVSS 403 | Platform Lift Systems for Motor Vehicles |  |  |
| FMVSS 404 | Platform Lift Installations in Motor Vehicles |  |  |
| ANSI/IAS NGV2 (1998) | Basic Requirements for Compressed Natural Gas Vehicle (NGV) Fuel Containers |  |  |
| ANSI/IAS PRD1 (1998) | Pressure Relief Devices For Natural Gas Vehicle (NGV) Fuel Containers |  |  |
| ANSI Z26.1 | Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard |  |  |
| ANSI/ASHRAE 52.1 | Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size |  |  |
| ASTM A240 | Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications |  |  |
| ASTM A269 | Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service |  |  |
| ASTM B117 | Standard Practice for Operating Salt Spray (Fog) Apparatus |  |  |
| ASTM D1003 | Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics |  |  |
| ASTM D4541-85 | Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers |  |  |
| ASTM E162-90 | Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source |  |  |
| ASTM E424 | Standard Test Methods for Solar Energy Transmittance and Reflectance (Terrestrial) of Sheet Materials |  |  |
| ECE R100 Rev 2 | Uniform provisions concerning the approval of vehicles with regard to specific requirements for the electric power train |  |  |
| FTA Docket 90A | Recommended Fire Safety Practices for Transit Bus and Van Materials Selection |  |  |
| CGA C-6.4 | Methods for External Visual Inspection of Natural Gas Vehicle (NGV) Fuel Containers and Their Installation |  |  |
| NGV-3.1/ CGA-12.3 | Fuel system components for compressed natural gas powered vehicles |  |  |
| CARB 2292.5 | Specifications for Compressed Natural Gas |  |  |
| UL 935 | Standard for Fluorescent-Lamp Ballasts |  |  |
| ISO 5128 | Acoustics – Measurement of noise inside motor vehicles |  |  |
| ISO 26262 | Road Vehicles – Functional Safety |  |  |
| NFPA-52 | Vehicular Natural Gas Fuel Systems Code |  |  |
| PS 1-95 | Construction and Industrial Plywood |  |  |
| UN/DOT 38.3 | UN Transportation Testing for Lithium Batteries |  |  |
| UNECE Council Directive 95/54 (R10) | Adapting to technical progress Council Directive 72/245/EEC on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers |  |  |

1. **Vehicle Technical Information**

**NOTE:** This is a sample form. The Agency should customize it to comply with its proposed requirements.

This form must be completed and included in the Technical Proposal.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GENERAL COACH DATA SHEET**  «vehicle\_technical\_information\_bus\_type» | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Bus manufacturer:** | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bus model: | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Understructure manufacturer:** | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number: | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Basic Body Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type: | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Tubing or frame member thickness and dimensions** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Overstructure | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Understructure | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Skin thickness and material** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roof | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sidewall | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skirt panel | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front end | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear end | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Dimensions** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Overall length** | | | | Over bumpers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| Over body | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| **Overall width** | | | | Over body excluding mirrors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| Over body including mirrors–driving position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| Over tires front axles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| Over tires center axle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| Over tires rear axles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Overall height (maximum)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
| **Overall height (main roof line)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | ft | | | | | | |  | in. | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Angle of approach** | | | | | | |  | | | | | deg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Breakover angle** | | | | | | |  | | | | | deg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Breakover angle (rear)** | | | | | | |  | | | | | deg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Angle of departure** | | | | | | |  | | | | | deg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Doorway Dimensions** | | | | | | | | | | | | **Front** | | | | | | |  | | | | **Rear** | | | | | | |  | | | | | | | | | | | | | | | | | | | | |
| Width between door posts | | | | | | | | | | | |  | | | | | | | in. | | | |  | | | | | | | in. | | | | | | | | | | | | | | | | | | | | |
| Door width between panels | | | | | | | | | | | |  | | | | | | | in. | | | |  | | | | | | | in. | | | | | | | | | | | | | | | | | | | | |
| Clear door width | | | | | | | | | | | |  | | | | | | | in. | | | |  | | | | | | | in. | | | | | | | | | | | | | | | | | | | | |
| Doorway height | | | | | | | | | | | |  | | | | | | | in. | | | |  | | | | | | | in. | | | | | | | | | | | | | | | | | | | | |
| Knuckle clearance | | | | | | | | | | | |  | | | | | | | in. | | | |  | | | | | | | in. | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Step height from ground measured at center of doorway | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A diagram of a curved line  AI-generated content may be incorrect. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | **Front doorway, empty** | | | | | | | | | | | | | | | | | | **Ramp angle** | | | | | | | | | | | | | | | | **Rear Doorway, empty** | | | | | | | | | | | |
| Kneeled | | | | | a. | |  | | | | | in. | | | | | | | | | | | R1 | | | | | |  | | | | | | deg | | | | a. | |  | in. | | | | | | | | |
| Unkneeled | | | | | b. | |  | | | | | in. | | | | | | | | | | | R2 | | | | | |  | | | | | | deg | | | | b. | |  | in. | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Interior headroom (center of aisle)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front axle location | | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Center axle location | | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear axle location | | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aisle width between transverse seats | | | | | | | | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Floor height above ground (centerline of bus)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| At front door | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| At front axle | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| At drive axle | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| At rear door | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Minimum ground clearance (between bus and ground, with bus unkneeled)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excluding axles | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Including axles | | | |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Horizontal turning envelope** (see diagram below) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outside body turning radius, TR0 (including bumper) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | ft | | |  | in. | | | | | | | | |
| Front inner corner radius, TR1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | ft | | |  | in. | | | | | | | | |
| Front wheel inner turning radius, TR2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | ft | | |  | in. | | | | | | | | |
| Front wheel outer turning radius, TR3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | ft | | |  | in. | | | | | | | | |
| Inside Body Turning Radius innermost point, TR4 (including bumper) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | ft | | |  | in. | | | | | | | | |
| A diagram of a rectangular object with lines and text  AI-generated content may be incorrect. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Wheel base** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Overhang, centerline of axle over bumper** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear |  | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Floor** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interior length | | | | | | | | | | | | | | | | | | |  | | | | | ft | | | | |  | | | | | in. | | | | | | | | | | | | | | | | |
| Interior width (excluding coving) | | | | | | | | | | | | | | | | | | |  | | | | | ft | | | | |  | | | | | in. | | | | | | | | | | | | | | | | |
| Total standee area (approximately) | | | | | | | | | | | | | | | | | | |  | | | | | ft2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum distance between wheelhouses: | | | | | | | | | | | | | | | | | | | Front | | | | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | Rear | | | | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | Center | | | | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | |
| Maximum interior floor slope (from horizontal) | | | | | | | | | | | | | | | | | | |  | | | | | deg | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Passenger capacity provided** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total maximum seating | | | | | | | |  | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Standee capacity | | | | | | | |  | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum hip to knee room | | | | | | | |  | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum foot room | | | | | | | |  | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Weight** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | **No. of people** | | | | **Front axle** | | | | | | | | | | | | | | | | | **Center axle** | | | | | | | | | | | | | | **Rear axle** | | | | | | | **Total bus** | | | |
| Left | | | | Right | | | | | | Total | | | | | | | Left | | | | | Right | | | | | Total | | | | Left | | | Right | | | Total |
| Empty bus, full fuel and farebox | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| Fully seated, full fuel and farebox | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| Fully loaded standee and fully seated, full fuel and farebox | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| Crush load (1.5x fully loaded) | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| GVWR | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| GAWR | | | | |  | | | |  | | | |  | | | | | |  | | | | | | |  | | | | |  | | | | |  | | | |  | | |  | | |  |  | | | |
| **Engine, main** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type and weight rating | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bore | | | | | | | | | | | |  | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stroke | | | | | | | | | | | |  | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Displacement | | | | | | | | | | | |  | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compression ratio | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Injector type and size | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Net SAE horsepower | | | | | | | | | | | |  | | | | hp | | | | at | | | | |  | | | | | | | | | | RPM | | | | | | | | | | | | | | | |
| Net SAE torque | | | | | | | | | | | |  | | | | lb/ft | | | | at | | | | |  | | | | | | | | | | RPM | | | | | | | | | | | | | | | |
| Crankcase oil capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| New engine, dry | | | | | | | | | | | |  | | | | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| New engine, wet | | | | | | | | | | | |  | | | | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turbocharger make and model | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum speed, no load | | | | | | | | | | | |  | | | | RPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum speed, full load | | | | | | | | | | | |  | | | | RPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed at idle | | | | | | | | | | | |  | | | | RPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed at fast idle | | | | | | | | | | | |  | | | | RPM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Engine information/graphs to be attached with this form:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engine speed vs. road speed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Torque vs. engine speed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horsepower vs. engine speed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel consumption vs. engine speed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicle speed vs. time (both loaded and unloaded) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicle speed vs. grade (both loaded and unloaded) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acceleration vs. time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Change of acceleration vs. time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Traction Motor** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| Model number | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| Max power at speed | | | | | | |  | | | | | | | | | | kW @ rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max torque at speed | | | | | | |  | | | | | | | | | | N-m @ rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Continuous rated power | | | | | | |  | | | | | | | | | | kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average efficiency | | | | | | |  | | | | | | | | | | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max motor speed | | | | | | |  | | | | | | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| *Attach torque-speed curve and efficiency maps* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Hybrid drive or transmission** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speeds | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gear ratios | | | | | | | Forward: | | | | | | | |  | | | | | | | | | | Reverse: | | | | | | | | | |  | | | | | | | | |  | | | | | | |
| Shift speeds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1st–2nd | | | | | | |  | | | | | mph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2nd–3rd | | | | | | |  | | | | | mph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3rd–4th | | | | | | |  | | | | | mph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4th–5th (if applicable) | | | | | | |  | | | | | mph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5th–6th (if applicable) | | | | | | |  | | | | | mph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel capacity (including heat exchanger and filters) | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Voltage regulator** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Voltage equalizer** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Alternator** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output at idle | | | | | | | | | | | |  | | | | | amps | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output at maximum speed | | | | | | | | | | | |  | | | | | amps | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum warranted speed | | | | | | | | | | | |  | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed at idle (approximately) | | | | | | | | | | | |  | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drive type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Auxiliary Inverter(s)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model Number(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output voltage(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DC-DC Converter(s)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model Number(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output voltage(s) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Auxiliary (Hotel) Loads as Installed** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| List of Accessories, excluding HVAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Accessory** | | | | | | | | | | | | | | | | | | | | | | | | **Average Power Consumption on Agency Design Operating Profile (kW)** | | | | | | | | | | | | | | | | | | | | **Max Power Consumption (kW)** | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | |
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|  | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | |
| **Starter motor** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Air compressor** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated capacity | | | | | | | | | | | | | |  | | | | | CFM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity at idle (approximately) | | | | | | | | | | | | | |  | | | | | CFM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity at maximum speed (engine) | | | | | | | | | | | | | |  | | | | | CFM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum warranted speed | | | | | | | | | | | | | |  | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed idle | | | | | | | | | | | | | |  | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drive type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Governor: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cut-in pressure | | | | |  | | | | | | | psi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cut-out pressure | | | | |  | | | | | | | psi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Axles** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **First** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gross axle weight rating | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle load | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Second** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gross axle weight rating | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle load | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Third** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gross axle weight rating | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle load | | | | | | |  | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle ratio | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
| **Suspension system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type: | | | First: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | Second: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | Third: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Springs: | | | First: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | Second: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | Third: | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Joint** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Wheels and tires** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Wheels** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Tires** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Load range/air pressure | | | | | | |  | | | | | psi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Steering, power** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Pump** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer and model number | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relief pressure | | | | | | | | | | | |  | | | | | | | psi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Booster/gear box** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer and model number | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ratio | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power steering fluid capacity | | | | | | | | | | | |  | | | | | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum effort at steering wheel | | | | | | | | | | | |  | | | | | lb (unloaded stationary coach on dry asphalt pavement) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Steering wheel diameter | | | | | | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brakes** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make of fundamental brake system | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brake chambers vendor size and part number: | | | | | | | | | | | | | | | | | | | First: | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | Second: | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | Third: | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | |
| Brake operation effort | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Slack adjuster’s vendor’s type and part numbers** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First: | | Right: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Left: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second: | | Right: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Left: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third: | | Right: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Left: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length: | | First take-up: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Second take-up: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Third take-up: | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake drums/discs** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First: | | Manufacturer | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Part number | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Diameter | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | in. | | | | | | | | | | | | | |
| Second: | | Manufacturer | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Part number | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Diameter | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | in. | | | | | | | | | | | | | |
| Third: | | Manufacturer | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Part number | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Diameter | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | in. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brake lining manufacturer | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake lining identification** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First: | | Forward | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Reverse | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second: | | Forward | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Reverse | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third: | | Forward | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | Reverse | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake linings per shoe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First | |  | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second | |  | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third | |  | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake lining widths** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake lining lengths** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brake lining thickness | | | | | |  | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Brake lining per axle** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First | |  | | | | | in.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second | |  | | | | | in.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Third | |  | | | | | in.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Cooling system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Radiator/charge air cooler** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of tubes | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tubes outer diameter | | | | | | |  | | | | | in. | | | | | | |  | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fins per inch | | |  | | | | | | fins | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fin thickness | | |  | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total cooling and heating system capacity | | | | | | | | | | | | | | | | | | |  | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radiator fan speed control | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Surge tank capacity | | | | | | |  | | | | | qt | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engine thermostat temperature setting: | | | | | | | | | | | | | | Initial opening (fully closed) | | | | | | | | | | | | | | | | | | | | |  | | | | °F | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | Fully open | | | | | | | | | | | | | | | | | | | | |  | | | | °F | | | | | | | | | | | | |
| Overheat alarm temperature sending unit setting | | | | | | | | | | | | | | | | | | | |  | | | | | | | °F | | | | | | | | | | | | | | | | | | | | | | | | |
| Shutdown temperature setting | | | | | | | | |  | | | | | °F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Air reservoir capacity** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Supply reservoir | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary reservoir | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Secondary reservoir | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Packing reservoir | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessory reservoir | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other reservoir type | | | | | | |  | | | | | | | in.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Heating, ventilation and air conditioning equipment** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heating system capacity | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | BTU/hr | | | | | | | | | | | | | | | | | | | |
| Electrical load at maximum heating capacity | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | kW | | | | | | | | | | | | | | | | | | | |
| Air conditioning capacity | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | BTU | | | | | | | | | | | | | | | | | | | |
| Electrical load at maximum cooling capacity | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | kW | | | | | | | | | | | | | | | | | | | |
| Ventilating capacity | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | CFM | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Compressor** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of cylinders | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drive ratio | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum warranted speed | | | | | | | | |  | | | | | | | | | | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating speed | | | | | | | | |  | | | | | | | | | | | | | | rpm (recommended) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | | | | | | | | |  | | | | | | | | | | | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil capacity | | | | Dry | | |  | | | | | | | | | | | | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Wet | | |  | | | | | | | | | | | | gal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refrigerant: | | | | Type | | | | | | |  | | | | | | | | | |  | | | | | |  | | | | | | | lb | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Condenser** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of fins/in. | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outer diameter of tube | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fin thickness | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Condenser fan** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fan diameter | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Speed maximum | | | | | | | |  | | | | | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flow rate (maximum) | | | | | | | |  | | | | | | | | | CFM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Receiver** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | | |  | | | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Condenser fan drive motors** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horsepower | | | | | | | |  | | | | | | | | | hp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating speed | | | | | | | |  | | | | | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Evaporator fan drive motors** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Horsepower | | | | | | | |  | | | | | | | | | hp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating speed | | | | | | | |  | | | | | | | | | rpm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Evaporator(s)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of rows | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of fins/in. | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outer diameter of tube | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fin thickness | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of evaporators | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Expansion valve** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Filter-drier** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Heater cores** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | | | | | | |  | | | | | | | | | Btu/hr | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of rows | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of fins/in. | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outer diameter of tube | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fin thickness | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of heater cores | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Floor heater blowers** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Controls** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Driver’s heater** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | | |  | | | | | | | | | | | | | | | | | | | | | | | | Btu/hr | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Ventilation system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Coolant heater** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Make | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | | |  | | | | | | | | | | | | | | | | | | | | | | | | Btu | | | | | | | | | | | | | | | | | | | | | | | |
| **Interior lighting** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of fixtures | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | |
| Size of fixtures | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power pack | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Doors** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Front** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer of operating equipment | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of door | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of operating equipment | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Rear** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer of operating equipment | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of door | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of operating equipment | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Passenger windows** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Front** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number: | | | | Side | | | |  | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Rear | | | |  | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sizes: | | | |  | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | |
|  | | | |  | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | | |
| Glazing: | | | | Type | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Thickness | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Color of tint | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | Light transmission | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mirrors** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | **Size** | | | | | | | | | | | | **Type** | | | | | | | | | | | | | | **Manufacturer** | | | | | | | | **Part no.** | | | | | | **Model no.** | | | |
| Right side exterior | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| Left side exterior | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| Center rearview | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| Front entrance area | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| Upper-right corner | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| Rear exit area | | | | | | | |  | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | |  | | | | | |  | | | |
| **Seats** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Passenger** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Operator** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model and part number | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Paint** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Wheeled mobility device ramp equipment** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity | | | | | | | | |  | | | | | | | | lb | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Width of platform | | | | | | | | |  | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length of platform | | | | | | | | |  | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| System fluid capacity | | | | | | | | |  | | | | | | | | qt | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of fluid used | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating hydraulic pressure | | | | | | | | |  | | | | | | | | psi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydraulic cylinders: | | | | | | | | Size | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | |
|  | | | | | | | | Number | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | |
| **Wheeled mobility device securement equipment** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Destination signs** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Character length** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Curbside destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Character height** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Curbside destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Number of characters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front destination | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front route | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Curbside destination | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear route | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Message width** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Curbside destination | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear route | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Electrical** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Multiplex system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Energy Storage** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Voltage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cold cranking amps | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Voltage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type/chemistry | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Manufacturer (cell) | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Model (cell) | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Nominal cell voltage | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Minimum cell voltage | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Maximum cell voltage | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Cell capacity (Ah) | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Manufacturer/supplier (pack or smallest removable unit) | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Model name (pack or smallest removable unit) | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Weight of pack (smallest removable unit) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | lb | | | | | | | | | | |
| Gross energy capacity of each pack (smallest removable unit) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | kWh | | | | | | | | | | |
| Total number of packs in ESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | | | |
| Gross energy capacity of ESS when new | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | kWh | | | | | | | | | | |
| Usable energy capacity of ESS when new | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | kWh | | | | | | | | | | |
| Gross energy capacity of ESS at warrantable end of life | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | kWh | | | | | | | | | | |
| Usable energy capacity of ESS at warrantable end of life | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | kWh | | | | | | | | | | |
| Nominal voltage of ESS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | V | | | | | | | | | | |
| Minimum allowable operating SoC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | % | | | | | | | | | | |
| Maximum allowable operating SoC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | % | | | | | | | | | | |
| Tested cycle until warrantable end of life | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | | | |
| Average ESS operating efficiency | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | % | | | | | | | | | | |
| Operating temperature range | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | °F | | | | | | | | | | |
| Energy storage cooling system | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Manufacturer | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Model number | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Type (e.g., forced air, liquid) | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Average power consumption | | | | | | | | | | | |  | | | | | | | | | | | | kW | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max power consumption | | | | | | | | | | | |  | | | | | | | | | | | | kW | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Battery management system | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Manufacturer | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| Model number | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
|  | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| **Charging Compatibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Charger inlet type | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Charging standards/compatibility | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Communication System** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GPS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PA system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | **Manufacturer** | | | | | | | | | | | | | | | | | | | | | **Model number** | | | | | | | | | | | | | | **Number** | | | | | | | | | |
| Amplifier | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | |
| Microphone | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | |
| Internal speakers | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | |
| External speaker | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | |
|  | | | | | | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | |  | | | | | | | | | |
| **Security camera system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of cameras | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |
| Storage capacity | | | | | | |  | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |
| **Bike racks** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Fire detection system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fire detectors | | | | | | | |  | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |
| Type (thermal or optical) | | | | | | | |  | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of detectors | | | | | | | |  | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |
| **Automatic voice annunciator system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model and part number | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Annunciator LED sign** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of signs | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Housing dimensions | | | | | | | |  | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Character length | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Character height | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Character width | | | | | | | |  | | | | | | | | | in. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GPS antenna** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model and part number | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Automatic passenger counter** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model and part number | | | | | | | a. | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | b. | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | c. | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sensor type | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Real-time bus arrival prediction system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | **Manufacturer** | | | | | | | | | | | | | | | | | | | | | | | | | **Model number** | | | | | | | | | | |
| Router | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | |
| Cellular modem | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | |
| Charge protection | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | |
| **Electronic tire pressure monitoring system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Electronic brake stroke/wear indicator system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model number | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All information above is accurate to the time frame upon submission. The Agency reserves the right to update above data if changes occur, upon consultation with the customer. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SECTION 10: CONTRACT

[Agency to insert its Form of Contract. A sample Contract is provided in Appendix D.]

SECTION 11: APPENDIXES

Appendix A: Guidelines for Calculating Liquidated Damages

Calculation of Liquidated Damages

Prior to its Solicitation, the Agency should document and file for the record its derivation of the amount of liquidated damage that is entered in “Liquidated Damages for Late Delivery of the Bus.” The following identifies some suggested areas for consideration by which an Agency may be damaged if buses are not delivered as contracted.

For determining amounts for liquidated damages, the following guidance is provided:

1. The liquidated damage amount must not be punitive but shall be based upon damages that the Agency would incur as a result of the delay.
2. The liquidated damage amount must be calculated on the basis of damages that the Agency would incur and be substantiated by experience data.
3. A definition of days and any exempted days for delay should be included.

Cost to Retain Old Fleet

If the purpose of the procurement is to replace older buses that are being retired, there can be two areas of damage that are additive: extra cost of maintenance and cost of purchasing or renting additional buses to meet fleet availability requirements.

1. Extra cost of maintenance. The *difference* in maintenance costs, old buses minus new ones, is a realistic damage, assuming that older buses will be continued in service for the duration and not replaced with alternative leased buses.
2. Cost to obtain additional buses to meet fleet availability. Reliability of the older buses is not expected to be as good as for new ones, and they can be expected to be out of service for maintenance or repair for longer periods than new ones. Therefore, additional buses may be needed to ensure that required service on routes is met.

Cost to Obtain Alternative Fleet

The damage may be attributed to requirements to obtain an alternative fleet for the duration of the delay. Such may be precipitated because a sales agreement on the old buses being replaced is expected to have been executed prior to the Contract delivery date for new buses or because the new buses are needed for new or expanded services.

1. Cost to replace old buses being sold. This approach is an alternative to the cost of retaining the old fleet of (1) above. It is suggested that the liquidated damage be the lower of this alternative and that of (1).
2. Cost to meet requirements for new or expanded service. Under this approach, the liquidated damage would simply be the daily costs of the alternative fleet as calculated above.

Increased Contract Administrative Costs

Delays in delivery will increase the period that the Contract must be administered and possibly increase the effort or waste the effort of either in-house staff or consultants for in-plant inspection and to assist in taking delivery and acceptance.

1. Increased Contract period. The amount of the damage can be calculated as the average daily cost of Contract administration, apart from any technical services.
2. Increased technical services. Technical services for in-plant inspection and to assist in taking delivery and acceptance will have been budgeted consistent with the Contract schedule. The extra budget for these services could be determined as a daily rate.

Fines

Damages may include fines for which a court has already imposed or can be expected to be imposed on the Agency not meeting required emission (noise or air quality) reductions or features mandated by the Americans with Disabilities Act. Include this element only if the Agency can prove its vulnerability for such fines and if a purpose of the procurement is to comply with such laws or ordinances.

Fuel Consumption

If the new buses are expected to consume less fuel per passenger capacity, then the difference in fuel consumption costs per day may be included.

Appendix B: Guidelines for Calculating Early Delivery Incentives

Any provision of incentive payments for early delivery should be made on the basis of savings that may be reasonably expected to accrue to the Agency. Prior to its Solicitation, the Agency should document and file for the record its derivation of the amount of any incentive that would be entered in the option provided in “Liquidated Damages for Late Delivery of the Bus.” It is suggested that any savings be shared between the Contractor and the Agency on the basis of some predetermined ratio, not exceeding an amount approximately that of the anticipated profit under the Contract. The following provides suggested areas in which an Agency may accrue savings for early delivery.

Savings to Retire Old Fleet Early

If the purpose of the procurement is to replace older buses that are being retired, there can be savings in maintenance costs. The *difference* in maintenance costs, old buses minus new ones, could be a savings if the old fleet can be retired early.

Decreased Contract Administrative Costs

Early delivery can decrease the period that the Contract must be administered. The amount of savings can be calculated as the average daily cost of Contract administration, apart from any technical services.

Fines

If the Agency is being fined or can be expected to be imposed for failure to meet court-mandated emissions standards or requirements of the Americans with Disabilities Act, and early delivery reduces any such fines, savings will accrue. This element should be included *only* if the Agency can prove its vulnerability to such fines and if a purpose of the procurement is to comply with such laws or ordinances.

Fuel Consumption

If the new buses are expected to consume less fuel per passenger capacity, then the *difference* in fuel consumption costs per day may be included as a savings if the old fleet can in fact be replaced by the early delivered fleet.

Appendix C: Examples of Evaluation Criteria

Agencies should insert the proposal evaluation process and criteria, preferably in descending order of importance. For example, pricing could be the first (most important), last (least important), or otherwise ranked in order. The FTA’s Best Practices Procurement Manual (<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/funding/procurement/8286/fta-best-practices-procurement-and-lessons-learned-manual-2016.pdf>) also includes suggested evaluation criteria in Section 4.

EXAMPLE 1: Evaluation of Proposals and selection process

A. Evaluation/Selection Committee

An Evaluation/Selection Committee (“Committee”), which may include Agency staff, consortium members, and possibly one or more outside experts, will review and screen the Proposals submitted according to the pre-established criteria as set forth below.

B. Pre-Proposal Meeting (maximum of 5 points)

Attendance at the Pre-Proposal Meeting on «pre\_proposal\_meeting\_date».

C. Technical Evaluation Criteria (maximum of 80 points)

Proposals will be evaluated using the following principal selection criteria:

* Product design and performance (0–30 points):The information provided by the Proposer in its technical submittal relating to the buses to be provided will be utilized to evaluate the Proposal in relation to this factor. Vehicle construction and system design, as well as documented reliability, may be used in this evaluation, as well as other design and performance elements of the components that comprise those systems. At a minimum, test results, safety and maintenance factors, and cost of normal operation for the bus design and system components proposed may be considered in determining a final value for this factor.
* Proposer’s reputation and performance (0–30 points):The Committee will consider the capability and reputation of the Proposer as presented in the Proposal, or as is determined by review of information available from references or other resources. The evaluation may look at the Proposer’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, ability to furnish multiple bus configurations, bonding capacity, and financial history, as well as other considerations, in reaching a final point determination. The committee may also look at judgments, liens, Fleet Defect history, warranty claims, and the steps that the manufacturer has taken to resolve these concerns, in assessing the overall reputation of the manufacturer.
* Delivery schedule (0–20 points): The Committee will review the proposed delivery schedule for the Agency’s minimum purchase of coaches. Delivery schedules that fulfill the delivery requirements, with evidence that the schedule can be accomplished, may receive higher points for this category.

D. Cost Proposal Evaluation (maximum of 20 points)

As described below, the proposed cost as submitted by the Proposer on the Agency’s form will be assigned a maximum of 20 points. The Contractor is *required* to use the Agency’s form, without alteration, for submittal of its cost Proposal. *Please DO NOT use your own forms.*

The cost will be evaluated in the following manner:

Cost Proposal Criteria (0–20 points)

* The Cost Proposal criteria will be based on the “Total of Both the Low-Floor and Standard Floor Bus,” Line 3.C. of Appendix B, as noted in Section 8.B.6, “Sum of Total Base Offer per Bus.”
* The lowest average Cost Proposal will receive 20 points. Every other Proposal previously found to be in the Competitive Range will be given points proportionately in relation to the lowest price. This point total will be calculated by dividing the lowest price by the total price of the Proposal being evaluated; the result will then be multiplied by the maximum weight for price (20 points) to arrive at a Cost Proposal score.

Example: Lowest Proposed Price / Proposer’s Proposed Price × 20 = Proposal Score

The application of the above formula will result in a uniform assignment of points relative to the criterion of price.

Evaluation Methodology

The maximum number of points achievable in each of the aforementioned areas is as follows:

* Attendance at Pre-Proposal Meeting: 0–5 points
* Product design and performance: 0–30 points
* Manufacturer’s reputation and performance: 0–30 points
* Delivery schedule: 0–20 points
* Cost proposal: 0–20 points

**TOTAL POSSIBLE POINTS: 105**

EXAMPLE 2: Evaluation process

Following receipt of the Proposals, the Proposals will be evaluated for compliance with the following minimum requirements. Those Proposals that do not demonstrate evidence of compliance may not be considered beyond the preliminary review.

Minimum Requirements

* The Proposer must be an existing vehicle manufacturer with an existing manufacturing facility.
* The Proposal must be for a high-capacity vehicle with a nominal length not to exceed 45 ft.
* The vehicle must be constructed from composite material.
* The proposed vehicle must have the capability for either a CNG propulsion system or for a gasoline/hybrid propulsion system.
* The proposed vehicle must have a minimum of 44 seats.

Proposals found to be compliant with the minimum qualifications will then be evaluated to determine those Proposals that represent technically acceptable offers.

Each Proposal will be rated according to the following ratings:

* Exceptional: Exceeds evaluation standard in a way beneficial to the Agency, and has no significant weaknesses. Innovative, comprehensive and complete in all details. Low-risk. Complies with all primary program objectives for the procurement.
* Acceptable: Meets evaluation standards, and any weaknesses are readily correctable. Limited risk. Complies with many of the primary program objectives for the procurement.
* Marginal: Fails to meet evaluation standard; however, any significant deficiencies are correctable. Lacks essential information to support Proposal. Moderate risk. Complies with only one or two of the program objectives for the procurement.
* Unacceptable: Fails to meet evaluation standard, and the deficiency is uncorrectable. Proposal would have to undergo a major revision to become acceptable. Demonstrated lack of understanding of the Agency’s requirements or omissions of major areas. Unacceptable risk. Complies with none or one of the program objectives for the procurement.

Performance risk is the evaluation of each Proposer’s present and past work to assess confidence in the Proposer’s ability to perform against a proposed Contract. The following definitions are used when assessing performance risk:

* High: Significant doubt exists, based on the Proposer’s performance record, that the Proposer can perform the proposed effort.
* Moderate: Some doubt exists, based on the Proposer’s performance record, that the Proposer can perform the proposed effort.
* Low: Little doubt exists, based on the Proposer’s performance record, that the Proposer can perform the proposed effort.
* Not applicable: No significant performance record is identifiable.

The Agency may require clarifications or oral interviews with Proposers. Discussions may also be held with Proposers to determine acceptability of proposed Deviations, and/or to address deficiencies and weaknesses of the Proposal. See “Agency Rights” for additional information.

After completion of the evaluations, the Agency shall request pricing from those firms that have submitted technically acceptable Proposals. These firms will be given approximately one week to submit pricing. The received pricing will then be reviewed. The Agency does not anticipate negotiation of price offers. The award will be made to the Proposer that possesses the appropriate facility, as well as the managerial, financial and technical capabilities necessary to fulfill the requirements of the Contract; and whose Proposal conforms to Solicitation requirements and is judged by an integrated assessment of the evaluation criteria to be the most advantageous to the Agency once price and other factors are considered.

For the purposes of this procurement, all evaluation factors other than price, when combined, are significantly more important than the cost/price area in this acquisition. Therefore, the Agency may select other than the lowest-priced, technically-acceptable Proposal if it is determined that the additional technical merit offered is worth the additional cost in relation to other Proposals received. For evaluation purposes, if Proposals become more technically equivalent, then price becomes relatively more important.

The Agency is more concerned with obtaining superior technical features than with making an award at the lowest overall price to the Agency. However, the Agency will not make an award at a significantly higher overall cost to the Agency to achieve slightly superior technical features.

The Agency reserves the right to reject any or all Proposals, to waive informalities or irregularities to the extent permitted by law in any Proposal received, and to be the sole judge of the merits of the respective Proposals received.

**Evaluation Criteria**

The award will be based upon the factors listed below, in addition to price, and may not necessarily be made to the lowest-price Proposer. Factors are ranked in order of importance, with the most important factor listed first.

1. Minimum vehicle performance requirements
2. Vehicle structure
3. Advanced design provisions
4. Proposed technical Deviations
5. Manufacturing process
6. Qualifications of the Proposer
7. Past performance and current commitments
8. Maintainability
9. Proposed operating cost and reliability
10. Emissions
11. System safety provisions
12. Technical support
13. Project management
14. Deviations from Contract terms and conditions

The primary sub-criteria under each factor are the following:

1. Performance requirements:
2. Vehicle performance
3. Reduced exterior sound levels
4. Minimum range requirements
5. Compliance with general performance requirements
6. Vehicle structure:
7. Previous service experience of the vehicle, if applicable
8. Current and/or planned durability testing, including existing test results
9. Physical dimensions
10. Interior layout, including compliance with ADA requirements
11. Layout of the operator’s compartment, including the operator’s field of view
12. Available ergonomic information
13. Functional enhancements, including integration of electronic controls and minimizing the number of gauges and switches
14. Advanced design provisions: This addresses the design characteristics, including how the design complies with the program’s design objectives.
15. Proposed technical deviations: This addresses the effect and acceptability of proposed technical deviations, including proposed benefits to the Agency and Deviations that will result in cost reductions.
16. Manufacturing process: This addresses the proposed manufacturing process, including a detailed description of the proposed facilities where the Work would be done.
17. Proposed quality assurance program
18. Qualifications of the Proposer:
19. Organizational chart showing the organization proposed for this Contract
20. History of the Proposer, including information about manufacturing capabilities
21. Experience in producing the same or similar vehicles as those being proposed, with emphasis on experience in producing CNG and gasoline/hybrid vehicles
22. Experience in producing composite-structure vehicles
23. Maintenance and warranty experience, including a qualified staff to provide the necessary services
24. The Proposer’s ISO certification(s) or equivalent
25. Proposer’s facilities to be used for significant portions of the Work, including Subcontractors’ facilities:
26. Location of the facility and whether the facility is owned or leased
27. Work to be performed at the facility
28. Capacity and resources available at the facility for fulfilment of this Contract
29. Length of time the facility has been in operation to do the kind of Work proposed to be performed at the facility.
30. Past performance and current commitments:
31. Reference list
32. Proposer’s Work underway, or for which the Proposer is committed
33. Maintainability:
34. Maintainability of the proposed powerplant, including exceptions to parts availability and exceptions to pass-through warranty
35. Maintainability of proposed component parts, including exceptions to parts availability and exceptions to pass-through warranty
36. Maintenance requirements
37. Skills needed to perform maintenance Work
38. Required special equipment, tools or maintenance facility requirements that must be implemented to maintain the vehicles
39. Proposed diagnostic equipment needed to maintain the vehicles
40. Proposed “built-in” diagnostic equipment, if offered
41. Reasonableness of proposed scheduled maintenance requirements
42. Proposed spare parts package required to support the schedule maintenance and replacement of major components
43. Proposed operating costs and reliability:
44. Expected reliability and service life of major proposed components
45. Projected emissions of the vehicle
46. System safety provisions:
47. Proposed safety features
48. Knowledge of state codes and regulations affecting vehicles
49. Vehicle code changes required for the vehicle to legally operate in the state, if any
50. Technical support:
51. Identification of proposed parts and service center
52. Service center staffing and qualifications
53. Availability of electronic maintenance documentation and comprehensive plan for providing technical updates for the life of the proposed vehicles
54. Proposed availability of spare parts, including methodology for storing parts locally and for expediting needed parts
55. Proposed training plans and instruction program
56. Proposed diagnostic equipment required to maintain the vehicles
57. Provision of advanced features such as wireless self-diagnostics and/or database management
58. Project management:
59. Proposed general project schedule and plan to ensure schedule compliance or to expedite the delivery schedule
60. Experience of the proposed project management team, including the experience of key personnel.
61. Experience of technical personnel supporting each area of technical expertise as required by the Contract specifications, including test and system integration personnel
62. Experience of the proposed key contact for the project, including the level of authority that this individual will have to make decisions that are “binding” on the Proposer
63. Plan for the coordination of major Suppliers and Subcontractors, if any
64. Major component Suppliers and the products to be provided by each for this Contract
65. The interface relationships between engineering, manufacturing, program control, quality control and test departments
66. Proposed critical path schedule for the production of the pilot vehicle and remaining vehicles, as well as the methodology for controlling the schedule
67. Proposed Deviations from nontechnical terms and conditions:
68. Rationale for the proposed Deviation
69. Benefit and/or risk to Agency if the request is granted

**Certifications**

The certifications will be reviewed for proper execution and responsiveness.

**Type of Contract to be Awarded**

The Agency intends to award a fixed-price Contract per unit for up to «appendix\_c\_type\_of\_contract\_awarded\_» vehicles. The services of the Contractor will be based on the scope of Work as outlined in Section 1, “Description of Work.”

**Period for Acceptance**

The Proposal shall be valid for «appendix\_c\_period\_for\_acceptance\_» calendar days from the date stipulated in the RFP for receipt of Proposals. If this offer is accepted within that time period, the Proposer agrees to furnish all services and items as stipulated in the RFP and in any accompanying amendments.

Appendix D: Sample Contract

**NOTE:** The following is a sample Contract, which is included as an illustration of a format that an Agency may choose to use.

CONTRACT

1. Contract Documents and Order of Precedence

The Contract consists of the documents listed below. In case of any conflict among these documents, the order of precedence shall be:

1. Form of Contract
2. Section 4, “Special Provisions”
3. Section 3, “General Conditions,” and Section 5, “Federal Requirements”
4. Section 6, “Technical Specifications,” Section 7, “Warranty Requirements,” and Section 8, “Quality Assurance”
5. Contractor’s Best and Final Offer (including Contractor Proposal)

**NOTE:** An Agency may issue a conformed Contract that comprises all of the changes, Deviations, and addenda that were a part of the negotiation process. In that case, the above order of precedence would be applicable. Absent a conformed Contract, it may be appropriate to include the Contractor’s final Proposal and BAFO as accepted by the Agency as the first document in the order of precedence. It should be noted that this alternative could present more risk to the Agency, as the Contractor’s BAFO and Proposal could contradict the RFP requirements and would prevail over them.

In this instance, the order of precedence might be as follows:

1. Form of Contract
2. Contractor’s Best and Final Offer (including Contractor Proposal)
3. Addenda
4. Section 4, “Special Conditions”
5. Section 3, “General Conditions” and Section 5, “Federal Requirements”
6. Section 6, “Technical Specifications,” Section 7, “Warranty Requirements,” and Section 8, “Quality Assurance”

A modification or change to any Contract document shall take its precedence from the term it amends. All other documents and terms and conditions shall remain unchanged.

2. Compensation

The Agency shall pay «appendix\_d\_compensation\_», and the Contractor shall accept the amount as full compensation for all costs and expenses of completing the Work in accordance with the Contract, including but not limited to all labor and material required, overhead, storage and shipping, risks and obligations, taxes (as applicable), fees and profit, and any unforeseen costs.

NOTE: The Agency may insert a full pricing schedule here.

3. Contract Term and Period of Performance

The effective date of this Contract shall be the effective date set forth in the Notice to Proceed. The Contractor shall commence work after the effective date of the Contract, upon receipt of the Notice to Proceed.

The base Contract will contain orders for «appendix\_d\_contract\_term\_period\_performa». The Contract delivery date for the vehicles, in accordance with the delivery schedule set forth in “Delivery Schedule” shall be «appendix\_d\_contract\_term\_period\_perform1».

If any option is exercised, the option vehicles or other option items shall be delivered in accordance with the schedule contained in the Notice of Exercise of Option.

4. Notices

Any Notice legally required to be given by one party to another under the Contract shall be in writing, dated and signed by the party giving such Notice, or by a duly authorized representative of such party.

Notices shall not be effective unless transmitted by any method that provides confirmation of transmission and delivery, such as fax, certified mail or registered mail, and addressed to:

«appendix\_d\_notices\_agency\_name\_address\_p»

«appendix\_d\_notices\_contractor\_name\_addre»

5. Entire Agreement

This Contract constitutes the complete and entire agreement between the Agency and Contractor and supersedes any prior representations, understandings, communications, commitments, agreements or Proposals, oral or written, that are not incorporated as a part of the Contract.

[Agency to insert its normal signature format in accordance with its governing law and regulations. The Agency should ensure that the signature format conforms to state law and Agency policy.]

|  |  |
| --- | --- |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Contractor name | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Agency name |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature of authorized official | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature of authorized official |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (Print or type name and title) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (Print or type name and title) |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Tax ID number | Approved as to form by:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name and title |

Appendix E: Sample Performance Bond Form

NOTE: The following is a sample Performance Bond, which is included as an illustration of a format that an Agency may choose to use.

Faithful Performance Bond

«agency»

**CONTRACT NO. \_\_\_\_**

«procurement\_title»

**PERFORMANCE BOND**

**WHEREAS** the «agency» has awarded to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (“Principal”), Contract No. \_\_\_\_\_\_\_, Up To «appendix\_e\_quantity\_type\_of\_bus» AND

**WHEREAS** Principal is required under the terms of the Contract to furnish a Bond for the faithful performance of the Contract;

**NOW, THEREFORE,** we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, as Principal, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, (“Surety”), as Surety, are held and firmly bound unto «agency» in the sum of «appendix\_e\_amount», in lawful money of the United States of America, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severably, firmly by these presents. In case suit is brought upon this Bond, Surety shall pay reasonable attorneys’ fees to «agency» in an amount to be fixed by the court. In no event shall the surety be liable under this Bond for an amount greater than the aggregate penal sum designated in this paragraph.

The condition of this obligation is such that, if the hereby-bonded Principal or its heirs, executors, administrators, successors, assigns, or Subcontractors shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract and any alteration thereof, made as therein provided, all within the time and in the manner therein-designated and in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

Further, Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or modification of the Contract, or of the Goods to be furnished thereunder, shall in any way affect its obligations under this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or modification of the Contract or of the Goods and Technical Services to be performed thereunder.

**IN WITNESS WHEREOF,** three identical counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by Principal and Surety named herein, on the \_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 20\_\_, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

By

(“Principal”)

By

(“Surety”)

By

Appendix F: Sample Assignment of an Option to Purchase Agreement

«agency», “Assignor,” hereby assigns to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, “Assignee,” its option to purchase from, “Seller,” \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ floor transit Vehicles (“Option Vehicles”) at a price and under the terms and conditions contained in Assignor’s Contract No. «appendix\_f\_contract\_number», dated with Seller (“Contract”).

Such option commenced, per terms of Contract, on, and may be exercised at any time on or before.

With respect to the Option Vehicles assigned hereunder and this Assignment, Assignee agrees to perform all covenants, conditions and obligations required of Assignor under said Contract and agrees to defend, indemnify and hold Assignor harmless from any liability or obligation under said Contract. Assignee further agrees to hold Assignor harmless from any deficiency or Defect in the legality or enforcement of the terms of said Contract or option to purchase thereunder. Assignee agrees and understands that Assignor is not acting as a broker or agent in this transaction and is not representing Seller or Assignee, but rather is acting as a principle in assigning its interest in the above-referenced option to purchase the Option Vehicles under the Contract to Assignee.

Assignee hereby unconditionally releases and covenants not to sue Assignor upon any claims, liabilities, damages, obligations or judgments whatsoever, in law or in equity, whether known or unknown, or claimed, which they or either of them have or claim to have or which they or either of them may have or claim to have in the future against Assignor, with respect to the Option Vehicles or any rights whatsoever assigned hereunder.

Dated this \_\_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_, 20\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assignor Assignee

I hereby accept and approve the terms of this agreement and agree to hold Assignor harmless from any further liability or obligation under our agreement.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Seller

Appendix G: Guidelines for Selecting Battery Electric Bus Specifications

General Approach and Considerations

Transit agencies can choose from a number of electric drive propulsion and refueling/charging options for transit buses. This *Standard Bus Procurement Guidelines* document was updated in April 2021 to include one of these options: battery electric buses that may utilize depot-based charging, and/or on-route charging. Agencies should note that other options are available, such as fuel cell electric with hydrogen refueling, and trolleybuses. It is anticipated that the transit industry overall will utilize a mix of options to achieve the unique objectives and characteristics of their operation when deploying zero-emission buses.

Transit agencies are very familiar with, and accustomed to, using APTA’s *Standard* *Bus Procurement Guidelines* when purchasing conventional bus technologies. However, the emergence of zero-emission buses has introduced different—and more complex—factors that must be considered to achieve the greatest benefits from these advanced technology vehicles and avoid costly deployment failures. These procurement guidelines related to battery electric buses are intended to offer guidance to agencies on the considerations that are unique to that technology; this should thus be reflected in procurement documents (e.g., range, charging preference). As every transit agency has a unique set of attributes, and the variety of available zero-emission bus technologies must be matched and managed accordingly, there is not a one-size-fits-all approach for the procurement of battery electric buses. Moreover, considerations may evolve as agencies fully transition to zero emission fleets.

Factors Affecting Range

A single range value is difficult to specify for electric buses for a few reasons. First, there are multiple ways to meet an agency’s range requirements or block durations with various bus/charger combinations. For instance, a bus with a small battery pack (i.e., less energy capacity) can be used in combination with on-route or opportunity charging to meet longer-range needs. Alternatively, a bus with large battery packs (i.e., more energy capacity) can be used in combination with depot charging to meet certain needs. Therefore, range specifications for a bus need to be considered in the context of the overall charging and operations solution.

Second, unlike diesel or CNG buses, there are many operational factors outside of battery size that can significantly affect range for electric buses. These include route average speed, route grades, driving behavior, outside air temperature, thermal comfort setpoints for passengers and driver, passenger loads, and battery state of health. These factors make specifying and verifying range difficult.

Section TS 8.2 has attempted to provide a form for procuring agencies to identify the conditions for its specific environment so that bus manufacturers can 1) propose an appropriate bus and charging solution and 2) provide appropriate range expectations for the agency.

Section TS 8, “Fuel Economy/Range and Design Operating Profile,” now includes specific references to battery electric buses that are critical for consideration when developing procurement documents.

Section TS 8.1, “Altoona Fuel Economy Tests,” evaluates the range for battery electric buses and provides an “apples-to-apples” comparison of range across a set standard for all buses. The buses are tested under Altoona’s pass/fail procedures on three duty cycles: Manhattan cycle, Orange County cycle, and EPA HD-UDDS cycle. The Manhattan duty cycle represents dense urban operation with frequent stops and low speeds. The Orange County duty cycle represents urban operation with average stops and speeds. The EPA HD-UDDS cycle represents sparse urban operation with higher average speeds and durations at highway speed. However, results from Altoona testing do not reflect how a particular battery electric bus model will operate in a transit agency’s specific environment.

Section TS 8.2, “Agency Operating Profile: Battery Electric Bus” is now part of the *Standard Bus Procurement Guidelines* and allows agencies the opportunity to provide their unique operational requirements. In order for transit agencies to procure electric buses that meet the requirements of their specific fleet and duty cycle, it is important to define and communicate those operational requirements to proposing manufacturers. Accurate definition of an agency’s characteristics allows manufacturers to propose a bus configuration that will sufficiently meet those needs. It also allows manufacturers to provide accurate expectations of how the buses will behave in that particular operation.

Section TS 8.2 provides a few different methods for an agency to determine and communicate those operational requirements depending on their resources and capabilities. It should be noted that while these methods are used in an attempt to get accurate range expectations and comparisons for all proposed buses, the bus manufacturers will use various methods to predict range and this could affect results.

The default agency inputs in Section TS 8.2 allow for the most basic characterization of an agency’s operation by providing general route information. However, a more refined and accurate characterization and proposal response can be obtained by using the alternatives provided. Under the first alternative, a transit agency may either provide, or request that Proposers collect, route and duty cycle data for bus modeling and bus simulation purposes. This alternative will allow for the most personalized operational analysis of a bus on the agency’s route or routes.

If a transit agency is unable to provide or request route-specific information, then the second alternative can be used in its Specification, for which it will provide an estimated percentage of each standard duty cycle (Manhattan, Orange County, and EPA HD-UDDS) that is representative of its service.

In addition, Section TS 8.2 requires Proposers to provide a narrative with their Technical Proposal addressing specific operational characteristics of the proposed battery electric bus based on the characteristics defined by the agency.

Charging Types (Part of Section TS 9.3.5)

When making decisions regarding bus-side charging requirements, agencies must consider a few things, including the following:

* The overall charging strategy (i.e., bus and charging combinations)—depot, on-route overhead or wireless (static or dynamic)—that it has selected in order to meet its routes. This may have been identified either prior to the procurement or through the procurement process. Either way, the bus receptacle must match the intended charger type.
* If the agency has existing electric vehicle supply equipment (EVSE), it must consider whether or not to stay consistent with its existing charger types and allow for the procured buses to have the capability of charging at those chargers. If the agency does not have existing EVSE, it still must consider allowing for interoperability with future procurements. Having to maintain and manage various types of EVSE and electric buses with respect to charging may lead to increased operations costs or potential conversion costs.

The agency must ensure that the technical specifications for the chargers being procured are consistent with the buses being procured. Procurement of the chargers and buses may or may not be accomplished under the same procurement process, but either way, specifications must be aligned to ensure interoperability with respect to physical interconnection, communication and electrical power transfer. Further, while standards can help ensure interoperability with respect to mechanical coupling, electrical compatibility and communication, bus and charger combinations should still be verified if compatibility is not already established by the OEM and charger manufacturer. The figure below notes the different plug-in charger types and the SAE standards they use. Please note that an overhead conductive charger should conform to SAE J3105-1 and a wireless charger should conform to the SAE J2954-2 standard.

A screenshot of a computer

Description automatically generated

Energy Storage System Capacity (part of TS 9.3.5)

As of the time of developing this appendix, there was no established, standardized method for measuring battery state of health. Measuring battery capacity onboard a bus is difficult and may not be precise; or, in the case of simply measuring the amount of energy dispensed in a charge cycle, may be able to provide discharge capacity of the battery. Measured battery capacity is affected by discharge rate and must be accounted for or normalized. Absent a standard, agencies must rely on the OEMs to provide the measurement and/or method in order to agree with the measurement expectations for which stated capacity and warranty are provided.

Section TS 9.3.5 attempts to allow for OEMs to provide a method for measuring battery capacity, while also allowing for independent third-party measurement. Industry groups are working on establishing a standardized method for measuring battery capacity and state of health for the all-electric transit bus in particular. Once this is established, this section should be modified by the user to reflect that standard.

Fire Suppression Section, TS 5.10

The default is “no fire suppression system” because, in a battery electric bus, the BMS is the primary source of fire prevention and detection for traction batteries. The most effective means of safety in the event of a fire is evacuation.

Appendix H: Sample Technical Specifications for Charging Equipment

Guide to Using This Appendix

This appendix provides language that an agency can use for the technical specifications in a request for proposals for battery electric bus charging equipment. These technical specifications can be used either for an RFP for the bus and the charging equipment or for a separate RFP for the charging equipment.

This appendix includes language only for the Technical Specifications section of the RFP. For terms and conditions, agencies can refer to the relevant sections in this *Standard Bus Procurement Guidelines* document, including Section 3, “General Conditions,” and Section 4, “Special Provisions.”

This appendix is not intended to be used for procurements involving a “turn-key” solution (which may include related engineering procurement construction (EPC) services, installation services, etc.) and/or providing charging as a service.

The technical specifications language is designed to cover three charging types: plug-in, overhead conductive and wireless charging. Language relevant only to one charging type is covered in a section specific to that type. All other sections are relevant to all charging types.

As in the rest of this *Standard Bus Procurement Guidelines* document, the language provided is intended to be used directly by the agency in its RFP. Please note the following:

* Brackets “[ ]” indicate places where the agency needs to insert or select the correct language.
* Explanatory notes for document users are labeled “Note.”

Charging Equipment Technical Specifications Language

1. Scope of Work

«agency» (“the Agency”) is issuing this RFP for battery electric bus charging equipment procurement. The Agency requests that Proposers present installation-ready solutions to support electric bus charging in accordance with the requirements described herein.

The Agency requires that cost and lead times for delivery of proposed solutions be included in the response and that costs be broken down by component (charger and electronic components, pantograph, structural assembly, software, warranty, etc.) where such components can be supplied separately. The Agency requests that Proposers include certifications and specifications applicable to the products offered as solutions with their responses, including but not limited to Buy America compliance, UL listing status and/or NRTL certification.

1.1 Definitions and Abbreviations

Agency: The Agency itself or a third-party representative or consultant that is authorized to operate on behalf of the Agency.

ASCE: American Society of Civil Engineers.

electric vehicle supply equipment (EVSE): Defined as “the conductors, including the ungrounded, grounded and equipment-grounding conductors; the electric vehicle connectors; the attachment plugs and all other fittings, devices, power outlets or apparatuses installed specifically for the purpose of delivering energy from the premises’ wiring to the electric vehicle” by NEC Article 625. For the purposes of this document, the chargers defined below are considered a subset of EVSE.

overhead conductive charger: An overhead pantograph charger conforming to the SAE J3105-1 standard capable of delivering up to 450 kW or higher to the bus to support automated, on-demand, conductive charging. Can be used for depot or on-route charging operations.

plug-in charger: An SAE J1772 CCS Type 1 (DC connection) or SAE J3068 (AC connection) plug-in charger, capable of delivering power to the bus up to 150 kW or higher, to support overnight charging, generally at a parking stall.

SAE: Society of Automotive Engineers.

vehicle to grid: The ability to provide power from a plug-in electric vehicle back to the electrical grid in addition to managing its power load when charging from the grid.

wireless inductive charger: A wireless charger with a demonstrated capability of delivering power from 25 kW to hundreds of kilowatts to the bus with a corresponding wireless receiver to support automated, on-demand, inductive charging. Can be used for depot or on-route charging operations. Standards for heavy-duty vehicles currently under development.

1.2 Agency Operating Conditions

1.2.1 Planned Site Description

Note: Select the desired charging equipment option or options.

The Agency, in support of its battery electric bus deployment, is soliciting:

* plug-in charging equipment to be located at
* overhead conductive charging equipment to be located at
* wireless charging equipment to be located at

The preliminary and approximate location of the charging interface(s) is shown in . The exact location(s) will be determined during design in cooperation with the Agency.

Note: In this section, provide or describe the following in order to receive accurate, relevant and complete proposals.

* [Procurement, design (30/60/90 plans), construction and installation plans. If site design work has been done, Agency to provide design drawings. It is recommended that the Agency provide 30% design phase drawings.]
* [Process for coordination with local utility.]
* [Information related to local utility description and applicable utility rate structures, existing or planned.]
* [Existing site conditions, including but not limited to survey information, surface conditions, utility feeds both overhead and underground, electrical panel tie-ins and capacity, space constraints that may affect equipment, etc. The Agency should include site plans, drawings, photographs, single line electrical, etc.]
* [Planned distances from utility service to bus charging locations including, if known, from transformer/switchgear to charger(s), from charger(s) to dispensers, and dispensers to bus receptacles.]
* [Overall project schedule and details on installation requirements and schedule.]
* [Future plans for expansion of electric fleet and need for future-proofing, including bus storage layouts, existing and planned.]

Proposers shall provide installation instructions, including footprint drawings for proposed equipment. If possible, Proposers should provide recommended “best-fit configuration” for universal installation of chargers.

1.2.2 Battery Electric Bus Operation Strategy

Below is an overview of the Agency’s operating strategy for the battery electric buses and chargers:

1. The Agency is seeking charging equipment capable of charging «appendix\_h\_number\_make\_model» battery electric buses that are [briefly describe bus technical specs, battery capacity and any other equipment being charged]. Each bus will have max continuous current demand of [X amps, if known].
2. The Agency is seeking depot [plug-in, overhead pantograph, wireless] charging that will accommodate charging levels between 50 and 200 kW per port and is expected to rely on depot charging overnight between [hh:mm] and [hh:mm].
3. The Agency is seeking depot fast-lane charging that will accommodate [describe overhead fast lane charging needs].
4. The Agency is seeking on-route opportunity charging that will accommodate [describe overhead conductive charging and/or wireless charging needs].
5. Buses will have charge ports and receptacles to allow for the use of plug-in charging per SAE J1772 CCS 1 and/or SAE J3068. Charge receptacles are located at [describe location on bus].
6. Buses will have dwell times available for depot charging ranging from [X minutes] to [X hours] and for on-route opportunity charging from [X minutes] to [X minutes].
7. Buses will have charge bars installed to allow for the use of overhead infrastructure mounted pantograph charging per SAE J3105-1.
8. Buses and charge stations are expected to integrate with third-party hardware and software systems for charge management and operational data collection and reporting. [If known, provide list of known software to integrate with.]

1.2.3 Agency Operating Conditions

The following identifies the anticipated operating conditions for the bus and chargers. The Agency operates buses throughout [area]. The following is intended to ensure that the charger is capable of operating in these conditions.

If unable to operate in these operating conditions, please specify the capability of the proposed chargers.

Alternative 1

The charging equipment must operate in the identified climate conditions specified below:

1. Ambient temperatures between [area low temp] °F and [area high temp] °F.
2. Humidity levels as high as [area high humidity]%.
3. [Optional language] Rain, snow and ice conditions.
4. [Optional language] Severe winter road maintenance processes, including sand, salt, calcium chloride, calcium magnesium acetate and magnesium chloride.
5. [Optional language] Severe airborne dust conditions (particles could comprise a combination of silicate, road salt and glacier dust, with particle size as small as 0.01 μm).
6. Outdoor [and/or indoor] parking and outdoor [and/or indoor] charging in the above-mentioned temperature and elements.

Alternative 2

The charging equipment must operate in any possible anticipated climate condition for [city or county, state].

2. Standards and Regulations

2.1 Design Requirements

1. Charging equipment must comply with all applicable federal, state and local legislation, regulations, codes, standards, permits, approvals, authorizations and other requirements (collectively, “regulations”) in effect at the date of acceptance.
2. The charging equipment shall be UL classified or field certified for the intended purpose prior to acceptance.
3. Communication shall be OCPP 1.6-J (or newer) compliant and can also be locally programmed.

The following specific standards and regulations shall apply to the charging equipment (latest version at time of acceptance):

|  |  |  |
| --- | --- | --- |
| **STANDARDS FOR EV CHARGING EQUIPMENT SAFETY: Applicable to All** | | |
| **Reference** | **Name** | **Notes** |
| OSHA | Occupational Safety and Health Administration | All work must be accomplished compliant with OSHA regulations, as expressed in 29 CFR 1910 and 29 CFR 1926. Further, all contractors must identify their Designated Competent Person to the CAR. |
| NFPA | National Fire Protection Association | NFPA 70, Article 625 is relevant for EVSE and covered under UL 2202 and 2231-1 and -2.  NFPA 70E is relevant for safe work practices to protect personnel exposure to major electrical hazards, including arc flash. |
| NEC | National Electrical Code | NEC Article 625 is relevant for EVSE and covered under UL 2202 and 2231-1 and -2.  There will be additional NEC requirements that will impact site design, cable sizes, etc. |
| EMC compliance | FCC Part 15 Class A | For plug-in applications FCC Part 15 Class A handles EMC. It may be worthwhile, for large projects, to coordinate a project specific EMC study. |
| IEEE/ANSI C95.1 | Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz |  |
| **STANDARDS FOR COMPLIANCE WITH BUILDING CODES: Applicable to All** | | |
| ASCE 7 | Associated Criteria for Buildings and Other Structures |  |
| **COMMUNICATION STANDARDS: Applicable to All** | | |
| OCPP 1.6-J  (or newer) | Open Charge Point Protocol 1.6-J |  |
| OpenADR 2.0  (optional) | Open Automated Demand Response | Recommended for agencies interested in energy management and capable, or potentially capable, of automated demand response functionality. |
| ISO 15118 (optional) | Road vehicles: Vehicle-to-Grid Communication Interface | Applicable only for agencies requesting or requiring vehicle-to-grid capability for bidirectional charging. Not applicable for unidirectional charging only. |
| **STANDARDS FOR DC PLUG-IN CHARGING** | | |
| SAE J1772 | Electric Vehicle and Plug-In Hybrid Electric Vehicle Conductive Charge Coupler |  |
| UL 62 | Flexible Cords and Cables | Applicable to the electric vehicle charging cable and not the charging system as a whole. |
| UL 1741SA or UL 9741 (optional) | Bidirectional EV Charging System Equipment | Applicable only for agencies requesting or requiring vehicle-to-grid capability for bidirectional charging. Not applicable for unidirectional charging only. |
| UL 2202 | Electric Vehicle Charging System Equipment |  |
| UL 2231 | Standard for Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits |  |
| UL 2251 | Plugs, Receptacles and Couplers for Electric Vehicles | UL 2251 applies to charging up to 600 VAC or VDC. Some bus charging regularly exceeds 600 VDC and therefore may not be applicable. |
| **STANDARDS FOR AC PLUG-IN CHARGING** | | |
| SAE J3068 | Electric Vehicle Power Transfer System Using a Three-Phase Capable Coupler (for AC charging) | CCS 2 generally not applicable for plug-in DC charging equipment. |
| UL 62 | Flexible Cords and Cables | Applies to the electric vehicle charging cable and not the charging system as a whole. |
| UL 1741SA or UL 9741 (optional) | Bidirectional EV Charging System Equipment | Applicable only to agencies requesting or requiring vehicle-to-grid capability for bidirectional charging. Not applicable for unidirectional charging only. |
| UL 2202 | Electric Vehicle Charging System Equipment |  |
| UL 2231 | Standard for Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits |  |
| UL 2251 | Plugs, Receptacles and Couplers for Electric Vehicles | UL 2251 applies to charging up to 600 VAC or VDC. Some bus charging regularly exceeds 600 VDC and therefore may not be applicable. |
| UL 2594 | Electric Vehicle Supply Equipment |  |
| **STANDARDS FOR OVERHEAD CHARGING** | | |
| SAE J3105-1 | Electric Vehicle Power Transfer System Using Conductive Automated Connection Devices |  |
| UL 2202 | Electric Vehicle Charging System Equipment |  |
| **STANDARDS FOR WIRELESS CHARGING** | | |
| NOTE: Various standards for wireless charging are currently under development. Once a recognized standard is adopted and published, the Agency should include those here. | | |

NOTE: Individual (or associated) components of the chargers or charging systems should be evaluated by applicable UL standards.

2.2 Supporting Materials

The Proposer shall provide a detailed description of the charging infrastructure required to charge the bus and specify its compliance with SAE J1772 DC (for DC plug-in charging), SAE J3068 (for AC plug-in charging), SAE J3105-1 (for overhead charging), and any other standards that may be applicable. The Proposer shall describe the expected level of interoperability of the proposed charging system with other vehicles and transit buses. Specifically, the Proposer shall identify and document interoperability for Agency vehicle models, both delivered and planned, including [list all prior vehicles received and any vehicles delivered within 12 to 36 months of commissioning charging equipment].

The Proposer shall provide a list of standards and regulations that the proposed equipment meets, including but not limited to those listed in the table above.

3. Plug-In Charger Technical Specifications

3.1 Design Requirements

1. The chargers shall be capable of connecting to three-phase, 60 Hz electrical supply at 480 VAC, or approved alternative.

Alternative: The chargers shall be capable of connecting to three-phase, 60 Hz electrical supply at 208 VAC, or approved alternative.

Alternative: The chargers shall be capable of connecting to three-phase, 60 Hz electrical supply at 240 VAC, or approved alternative.

Alternative: Charging system must be able to dispense a rated continuous output of at least [50 kW, 125 kW or other].

Note: Chargers will dispense power as commanded by the battery management system of a range of vehicle types. Actual charge power is dependent on vehicle battery voltage and will decrease as battery voltage increases.

1. [Agency to provide battery size and time to charge from empty to full SoC.]
2. While charging, power factor shall exceed 95% (or 0.95).
3. Standby power consumption must be minimized.
4. The charging equipment shall be capable of operating continuously in the manufacturer’s designed operating profile without performance or safety degradations in the conditions defined in “Agency Operating Conditions,” Section 1.2 of this appendix.
5. The connectors shall not be energized except when mated with the bus mounted receptacle.
6. Access doors shall be lockable (cabinets keyed the same) and use secure latching.
7. Chargers shall be equipped with robust cable management hardware sufficient to safely and effectively store charging cables, for [length] cable length, while providing operators ease of connection to the bus.

Alternative: Chargers shall be equipped with a pedestal-mounted cable management system.

Alternative: Chargers shall be equipped with an overhead mounted reel cable management system.

Alternative: Chargers shall be equipped with lockable cable management for out-of-service conditions, in order to safely prevent access to equipment without de-energizing.

1. Chargers shall allow the Agency to set operational power limits.
2. New charging sessions shall be automatically restarted after power outage and restoration, to the extent safe and in accordance with applicable standards.
3. Controls shall include features to prevent progressive charging system damage resulting from any one or more operating issues, or out-of-limit operating conditions.
4. If electronics enclosures are located outdoors, they must be rated at NEMA 3R or above.
5. Each charger shall be capable of communication to an external network for purposes of charge management and control.

3.2 Preferences

Note: If the Agency requires any of the following, move to Design Requirements above.

1. Charging equipment with multiple dispensers is capable of providing power to all connected buses so as to provide battery and cabin temperature preconditioning.
2. If multiple dispensers cannot be powered simultaneously, charging equipment provides a means of sequencing among the dispensers during and after charging to provide battery and cabin temperature preconditioning, as well as to continually restore any charge that may be lost in the bus while the dispenser was unpowered.
3. Charging equipment is capable of scheduled completion of charges and temperature preconditioning activities where the schedule is settable and changeable by the Agency.
4. Chargers shall be equipped with local operator panel at dispenser for automatic or manual operation, for retrieving diagnostic codes, and for resetting charge session.
5. External [emergency disconnect switch or main breaker shutoff] shall be provided and meet electrical codes, standards and requirements

3.3 Supporting Materials

1. The Proposer shall provide complete charging equipment specifications for the equipment being proposed.
2. The Proposer shall provide information and options for power supply requirements for individual chargers.
3. The Proposer shall provide mounting and installation manuals and site design guides for all necessary components, including civil, electrical, mechanical and communication infrastructure requirements.
4. The Proposer shall provide a complete description of the vendor qualifications that may be required to perform work related to installation or maintenance of the Proposer’s equipment.
5. The bid package shall contain a complete description of the charging equipment, including:
6. compliance with charge standards, electrical safety standards and UL classification;
7. charger efficiency;
8. charger dimensions;
9. connector type;
10. number of connectors;
11. connector cable length(s) offered;
12. electrical disconnect switch for each charger;
13. charge method (AC or DC);
14. rated power output;
15. standby power consumption;
16. enclosure IP and/or NEMA ratings;
17. country of origin;
18. [Buy America compliance, if required];
19. ambient operating temperature ratings;
20. equipment thermal management;
21. a graph showing continuous current output versus voltage throughout the operating range; and
22. details on:

* charging instructions;
* automatic and manual control capabilities;
* dispenser control panel display features and operator functions, if equipped;
* communication management options (cellular, Ethernet, fiber, Wi-Fi);
* operations and maintenance manuals;
* options for preventive maintenance (contract with OEM terms/cost, training to perform with own forces/contracted third party); and
* maintenance requirements.

1. Charger manufacturer shall describe all transit bus models that charger has been validated for, if that validation included direct participation by the transit bus manufacturer, and note any exceptions.
2. Charger manufacturer shall provide list of all locations and contact information for installations of the proposed charger.
3. If the chargers are capable of supporting multiple dispenser outputs, the Proposer must clearly describe the total number of potential dispenser outputs, the power level for each dispenser, charge sequencing logic for multiple buses connected to the same charger, and any additional charging hardware cost for each dispenser. If separated charging stanchions or overhead reels are available or provided, the Proposer shall describe their layout, installation and operation requirements.
4. The Proposer shall propose a method for control of the charging cycle to manage the use of power from the utility grid for reduction of peak demand charges and general fleet charging management. If a charge management software solution is proposed, charging shall be able to be controlled by an OCPP-compliant system.
5. The Proposer shall describe any automatic or “smart” charging features, including programmable charging capability, networking multiple chargers, charge monitoring, remote charge management, vehicle-to-grid capability, and charge data collection and reporting. Describe whether these features are provided as a standard offering or as an option to the proposal submission. If certain features are provided as an option, clearly describe costs. Describe both up-front costs and any necessary subscription service costs.
6. The Proposer shall describe the cable management hardware being offered, including functionality, specifications, dimensions, drawings, installation requirements and component replacement costs. If optional cable management systems are available, provide additional details on costs for those systems.

4. Overhead Conductive Chargers – Technical Specifications

4.1 Design Requirements

1. The overhead conductive charging stations must comply with all applicable local, state and federal codes.
2. The chargers shall be capable of connection to three-phase, 60 Hz electrical supply.
3. The overhead pantograph support structural element shall be designed so it can attach to horizontal ground as a freestanding structural element.

Alternative: The overhead pantograph support structure shall be designed so it can securely attach to an Agency-supplied charge mast, canopy or roof.

1. The charging system must be able to dispense a rated continuous output of [150 kW, 300 kW, 450 kW] or higher.

Note: Chargers will dispense power as commanded by the battery management system of a range of vehicle types. Actual charge power is dependent on vehicle battery voltage and will decrease as battery voltage increases.

1. The charging equipment shall be capable of operating continuously without performance or safety degradations in the conditions outlined in Section 1.2 of this appendix.
2. The charging equipment shall be capable of safely and effectively making connection and operating in the Agency operating conditions defined above and up to [X inches of snow or X inches of ice], without manual intervention.
3. To ensure proper bus alignment, charger shall utilize communication links in accordance with SAE J3105 standards to determine bus identity and when bus is properly aligned for extension of pantograph. Charger must be able to safely and effectively operate in a multi-lane environment with other pantographs mounted 12 ft away and simultaneous approaching buses.
4. Charging equipment shall be rated for wind and seismic loadings as determined by ASCE 7, with an importance factor of 1.0, while supporting a retracted or operationally extended pantograph.
5. While charging, power factor shall exceed 95% (or 0.95).
6. Standby power consumption must be minimized.
7. The connectors shall not be energized except when mated with the bus charge rails.
8. Access doors shall be lockable (cabinets keyed the same) and use secure latching.
9. Chargers shall be capable of setting operational limitations on charging.
10. New charging sessions shall be automatically restarted after power outage and restoration, to the extent safe and in accordance with applicable standards.
11. Controls shall include features to prevent progressive charging system damage resulting from any one or more operating issues or out-of-limit operating conditions.
12. If electronics enclosures are located outdoors, they must be rated at NEMA 3R or above.
13. Each charger shall be capable of communication to an external network for purposes of charge management and control.
14. The overhead pantograph shall be capable of manually disconnecting and retracting the charging interface in the event of a system or power failure.
15. All manual operations for the chargers must include detailed, explicit instructions for ensuring that power is removed and the system is safe prior to any work on the system.

4.2 Preferences

Note: If the Agency requires any of the following, move to Design Requirements above.

1. Chargers shall be equipped with local operator panel for manual operation, for retrieving diagnostic codes and for resetting charge session.
2. The charging system must be equipped with [local operator panel, cloud-based system] for manual operation, retrieving diagnostic codes, and resetting charging sessions for the set of chargers being offered.
3. External [emergency disconnect switch or main breaker shutoff] shall be provided and meet electrical codes, standards and requirements

4.3 Supporting Materials

1. The Agency requests the Proposer to describe its proposals with sufficient detail for the Agency to assess the structural adequacy of the overhead support structure solution by providing either structural substantiation or by providing sufficient detail for the Agency to substantiate the structure to meet local codes and requirements.
2. The Proposer shall provide complete charging equipment specifications for the equipment being proposed.
3. The Proposer shall provide information and options for power supply requirements for individual chargers.
4. The Proposer shall provide mounting and installation manuals for all necessary components, including civil, electrical and mechanical infrastructure requirements.
5. If the Proposer has multiple options above the required power level, those options should be clearly described, including costs for each.
6. The Proposer shall provide a complete description of the vendor qualifications that may be required to perform work related to installation or maintenance of the Proposer’s equipment.
7. The bid package shall contain a complete description of the charging equipment, including:
8. compliance with charge standards, electrical safety standards and UL classification;
9. charger efficiency;
10. charger dimensions;
11. connector type;
12. rated power output;
13. standby power consumption;
14. a graph showing continuous current output versus voltage throughout the full operating range;
15. IP and/or NEMA ratings;
16. country of origin;
17. [Buy America compliance, if required];
18. ambient operating temperature ratings;
19. equipment thermal management; and
20. details on:

* charging instructions;
* automatic and manual control capabilities;
* dispenser control panel display features and operator functions, if equipped;
* communication management options (cellular, Ethernet, fiber, Wi-Fi);
* operations and maintenance manuals;
* options for preventive maintenance (contract with OEM terms/cost, training to perform with own forces/contracted third party);
* electrical disconnect switch description; and
* maintenance requirements.

1. Charger manufacturer shall describe all transit bus models that charger has been validated for and note any exceptions.
2. Charger manufacturer shall provide list of all locations and contact information for installations of the proposed charger.
3. The Proposer must describe the methods for ensuring that charging equipment is capable of safely and effectively making connection and operating in snow and freezing environment.
4. The Proposer must describe any bus-side connector requirements or recommendations.
5. The Proposer must describe software and connectivity options, web tools, APIs, etc. to facilitate data transmission to back offices and remote management of the charger.

5. Wireless Chargers – Technical Specifications

5.1 Design Requirements

1. The wireless charging stations must comply with all applicable local, state and federal codes.
2. The chargers shall be capable of connection to three-phase, 60 Hz electrical supply.
3. The charging system must be rated at [75 kW, 125 kW, 150 kW, 250 kW, 300 kW, 450 kW, 500 kW] or higher.

Note: Chargers will dispense power as commanded by the battery management system of a range of vehicle types. Actual charge power is dependent on vehicle battery voltage and will decrease as battery voltage increases.

1. The charging equipment shall be capable of operating continuously without performance or safety degradations in the conditions outlined in Section 1.2 of this appendix.
2. The charging equipment shall be capable of safely and effectively operating in the operating conditions defined above and including snow, ice, dirt, rain and standing water conditions, without manual intervention.
3. To ensure proper bus alignment, the charger shall utilize communication links to determine bus identity and when bus is properly aligned. The charger must be able to safely and effectively operate in a multi-lane environment without the risk of interference with other equipment.
4. While charging, power factor shall exceed 95% (or 0.95).
5. Standby power consumption must be minimized.
6. The primary charging pad shall not be energized except when coupled with the bus side secondary pad.
7. Access doors shall be lockable (cabinets keyed the same) and use secure latching.
8. Chargers shall be capable of setting operational limitations on charging.
9. New charging sessions shall be automatically restarted after power outage and restoration, to the extent safe and in accordance with applicable standards.
10. Controls shall include features to prevent progressive charging system damage resulting from any one or more operating issues, or out-of-limit operating conditions.
11. If electronics enclosures are located outdoors, they must be rated at NEMA 3R or above.
12. Emergency disconnect switch shall be provided and meet electrical codes, standards and requirements [if desired or required].
13. Each charger shall be capable of communication to an external network for purposes of charge management and control.

5.2 Preferences

Note: If the Agency requires any of the following, move to Design Requirements above.

1. Vehicle shall be equipped with operator control panel for manual operation, for retrieving diagnostic codes and for resetting charge session.
2. Charging system must be equipped with [local operator panel, cloud-based system] for manual operation, retrieving diagnostic codes and resetting charging sessions for the set of chargers being offered.

Note: Power electronics may be placed away from the charging pads (e.g., 40 ft).

5.3 Supporting Materials

1. The Proposer shall provide complete charging equipment specifications for the equipment being proposed.
2. The Proposer shall provide power supply requirements for individual chargers.
3. The Proposer shall provide mounting and installation manuals for all necessary components, including civil, electrical and mechanical infrastructure requirements.
4. If the Proposer has multiple options above the required power level, those options should be clearly described, including costs for each.
5. The Proposer shall provide a complete description of the vendor qualifications that may be required to perform work related to installation or maintenance of the Proposer’s equipment.
6. The bid package shall contain a complete description of the charging equipment, including:
7. compliance with charge standards, electrical safety standards and UL classification;
8. charger efficiency;
9. charger dimensions;
10. rated power output;
11. standby power consumption;
12. a graph showing continuous current output versus voltage throughout the full operating range;
13. IP and/or NEMA ratings;
14. country of origin;
15. [Buy America compliance, if required];
16. ambient operating temperature ratings;
17. equipment thermal management; and
18. details on:

* charging instructions;
* automatic and manual control capabilities;
* HMI features and operator functions, if equipped;
* communication management options (cellular, Ethernet, fiber, Wi-Fi);
* operations and maintenance manuals;
* options for preventive maintenance (contract with OEM terms/cost, training to perform with own forces/contracted third party);
* electrical disconnect switch description; and
* maintenance requirements.

1. The charger manufacturer shall describe all transit bus models that charger has been validated for and note any exceptions.
2. The charger manufacturer shall provide list of all locations and contact information for installations of the proposed charger.
3. The Proposer must describe software and connectivity options, web tools, APIs, etc. to facilitate data transmission to back offices and remote management of the charger.

6. Data Logging and Telematics

6.1 Design Requirements

1. The Proposer shall provide the Agency the ability to access raw data generated by the chargers at no additional charge for the duration of the Agency’s ownership of the chargers. The Agency recognizes that additional convenience functionality, wireless transmission, or processing capability or services may incur additional costs.
2. The Proposer shall provide the Agency sufficient means to fully decode network traffic to engineering units, including proprietary protocols or messages.
3. The Proposer shall provide the Agency with the ability to physically connect to the monitoring system to view, retrieve and analyze charger data. The Proposer shall provide connectors for the Agency’s use for the purpose of adding third-party data monitoring equipment. The Proposer shall provide diagrams that identify the location and pinouts of such connectors. The hardware for data collection and transmission shall be located behind a hinged and lockable panel with connection to the device(s) easily accessible.
4. The system shall be capable of collecting and providing reports to the Agency for the purpose of analyzing charger performance. Data collected and provided shall include but not be limited to energy consumption of the chargers and charge power output, as well as fault and diagnostic codes. The Agency prefers that at least the following summary reports be readily available and accessible for analytics and diagnostics:
5. All charging session details in accordance with OCPP 1.6-J or newer, including but not limited to transaction ID, charger ID, bus ID, timestamp, duration of charge, DC output energy (kWh), AC input energy (kWh), max power output (kW), bus connection start time, bus disconnection time, charging start time, charging stop time, energy delivered by programmable utility rate time of use periods, session termination reason (fault/diagnostic codes), start vehicle SoC, and end vehicle SoC.
6. Idle energy consumption.
7. The system shall have sufficient onboard storage to buffer data during brief loss of connection to the data network.

Alternative: The Proposer shall retain cloud-based storage data for at least one year’s worth of collected information.

Alternative: Data shall also be made available to the Agency via a web-based tool and/or APIs. The Proposer shall be capable of providing a management and analytic software platform or database repository to monitor, log, track and analyze charger data.

6.2 Preferences

1. High-resolution, high-frequency data is preferred. The Agency favors systems that can provide second-by-second data over systems that provide only aggregated data.
2. The chargers shall include instrumentation capable of metering and logging data and transmitting it to cloud storage, including but not limited to the following capabilities:
3. Measures and displays kilowatt-hours consumed and real-time load in kilowatt-hours within 1% accuracy.
4. Records energy (kilowatt-hours) for both the DC output and AC input.
5. Records fault codes and timestamp.
6. Maintains interval data storage in a first-in, first-out format.
7. Data is recorded and stored at 10-second intervals during charging sessions and 15-minute intervals during idle periods.

6.3 Supporting Materials

1. The Proposer shall describe the type, resolution and frequency of the available data.
2. The Proposer shall provide information on management and analytic software platform or system used to log, track and analyze charger data.
3. The Proposer shall provide an exemplar of the diagnostic software.
4. The Proposer shall list information that can be readily accessible independently by the Agency.
5. The Proposer shall list items that are tracked for maintenance and preventive maintenance.

7. Inspection, Acceptance and Commissioning

7.1 Requirements

1. The purpose of the factory acceptance test is to confirm that any components, systems, subsystems, major assemblies, subassemblies, products, parts, apparatuses, articles and other materials comply with the Technical Specifications and other contract documents. Where required by the contract documents or requested by the Agency, the Proposer shall cause Agency-witnessed factory acceptance testing to be conducted. Factory acceptance testing may include both a physical configuration inspection and a functional demonstration. Factory acceptance testing shall be conducted at the Proposer or Subcontractor’s facility. The Proposer shall furnish to the Agency prior to factory acceptance testing a written inspection and demonstration plan for each item for review. The Agency’s inspectors will attend factory acceptance testing unless the Agency provides a written waiver of its right to attend any such inspection. The results of factory acceptance testing shall be documented by the Proposer in a format deemed acceptable by the Agency, and all documents relating to the testing shall be forwarded to the Agency.
2. Upon delivery and installation, inspections will be carried out by the Agency to ensure compliance with all requirements, standards and regulations herein. The Agency will prepare a punch list as a result of physical inspections, startup tests and functional demonstrations. The punch list and completion schedule will be agreed upon by the Agency and the Proposer.
3. The Proposer shall provide, and the Agency shall agree to, an Acceptance Testing and Commissioning Plan for all supplied equipment that shall include detailed instructions and requirements for verifying complete functionality of the full charging system (i.e., dispensers; power converters; mounting hardware and equipment; and all required wires, cables and connections). In addition, the plan must include instructions for demonstrating the successful operation of any data monitoring and charge management functionality or services. Acceptance testing and commissioning shall also ensure that the charging solution integrates with and charges with a pilot bus or the electric buses being used (both delivered and on order) in accordance with the Electric Bus Operation Strategy above and applicable interoperability standards. At the time of acceptance testing and commissioning, the Proposer shall submit a written report to the Agency listing all incidents and unusual system performance issues, as well as documenting correct function per the approved commissioning plan.

7.2 Supporting Material

1. The Proposer shall provide an Acceptance Test and Commissioning Plan.

7.3 Requirement for charging system acceptance

1. The charging systems will be considered complete and accepted for ownership by the Agency upon the Agency’s issue of notice of final acceptance to the Proposer. The Agency’s final acceptance will be issued immediately upon the Proposer’s demonstration to the Agency that the depot charging systems designed, delivered, assembled and installed/constructed by the Proposer are fully compliant with all requirements, and that all punch list items are complete. Minimum requirements for completion of the charging system are:
2. the design, delivery, assembly and installation of complete and fully functional depot charging systems;
3. successful completion of all necessary inspections as required by authorities having jurisdiction (AHJs) and receipt of all necessary operating approvals as required by AHJs;
4. successful completion of UL field certification, if required; and
5. The Proposer’s successful testing of charging system performance by completing the tests outlined below (Section 7.4).

Alternative: Preliminary acceptance will be granted when the requirements above are complete. A revenue service performance period will be conducted on each charger to confirm consistent and reliable operations. Chargers will be operated by the Agency. The performance period is [two, three, six] months commencing on or about [date or milestone definition]. Final acceptance will be granted when [90%, 95%, other] availability is achieved over the performance period duration.

Alternative: All payments shall be made as provided herein, less a retention of [retention percentage] plus any additional amount retained as provided below and less any amounts for liquidated damages. The Agency shall make payments for chargers at the unit prices itemized in the price schedule within [number] calendar days after the delivery and preliminary acceptance of each charger and receipt of a proper invoice. The Agency shall make payments for spare parts and/or equipment at the unit prices itemized in the price schedule within [number] calendar days after the delivery and acceptance of said spare parts and/or equipment and receipt of a proper invoice. The Agency shall make a final payment for all retained funds within [number] calendar days of receipt of a final proper invoice and:

* delivery and acceptance of all contract deliverables, including manuals and other documentation required by the contract;
* Proposer provision of any certifications as required by law and/or regulations; and
* completion of performance period required under the contract and issuance of final acceptance.]

7.4 Performance Tests

7.4.1 Requirement for Plug-In Chargers Only

1. At a minimum, the Proposer shall demonstrate [three, five, other] successful charge initiations and terminations and a minimum of one hour of continuous bulk charging with [a bus, X buses] on each of the plug-in chargers. Completely charging [a bus, X buses] to full SoC is required, along with verification that the charger successfully ramps down current when approaching full SoC and terminates the charge session, as applicable.
2. The Proposer shall provide a commissioning certificate from the Agency-approved commissioning authority.
3. The Proposer shall demonstrate charging at rated power or maximum power the bus will accept, whichever is lower, for 15 minutes.

7.4.2 Requirement for Overhead Conductive Chargers Only

1. At a minimum, the Proposer shall demonstrate 20 successful charge initiations with [a bus, X buses] on each of the overhead conductive chargers.
2. The Proposer shall provide a commissioning certificate, from the Agency-approved commissioning authority.
3. The Proposer shall demonstrate charging at rated power or maximum power the bus will accept, whichever is lower, for 15 minutes. Completely charging a bus to full SoC, including successful charge termination, is required.
4. If possible, the Proposer shall also demonstrate that all combinations of any two concurrent charging operations in the same vicinity successfully initiate and maintain a charge event, as well as with a simultaneous approaching bus.

7.5 Functional Test Requirements

1. Noise measurements:

* Tests shall be conducted by the Proposer in the presence of Agency representatives to ensure that airborne noise generated by the depot charging system while operating at full capacity does not exceed 60 dBA when measured 25 ft from charging system equipment in any direction. The Proposer shall also ensure compliance with the exterior noise requirements defined in local laws and ordinances.

1. Normal stop conditions:

* Tests of all available charger and bus-side methods to stop a charge session shall be conducted to determine their effectiveness in accordance with the requirements of SAE J1772 or J3105, as applicable.

1. Emergency shutdown system:

* Tests of manual shutdown devices on the charging systems shall be conducted to determine their effectiveness in accordance with the emergency stop requirements of SAE J1772 or J3105, as applicable. To the extent possible without inflicting damage to charging or bus equipment, all automated emergency stop conditions shall also be simulated to determine their effectiveness in accordance with the emergency stop requirements of SAE J1772 or J3105, as applicable.

1. Remote monitoring provisions:

* All remote monitoring, control and data logging functionality shall be verified by the Proposer.

1. Design specification validation:

* Design specifications may be tested upon indication of an overriding issue or fault. In this event, the Proposer shall provide the necessary tests and equipment to verify the equipment specification. If the Proposer cannot provide an in situ test, the Agency may determine an appropriate test for verification in collaboration with the Proposer. For example, thermal management systems designed to maintain acceptable operating temperatures may be tested to determine their effectiveness. Temperature readings may be recorded to verify that equipment is operating within the designed range.

1. Ancillary items:

* The operation and function of ancillary items of the charging system shall be tested in the presence of Agency representatives. Deficiencies shall be recorded and corrected by the Proposer to the satisfaction of the Agency. Ancillary items shall include but not be limited to depot charging system lighting, doors, locks, control panels, switches and security systems.
* Punch lists resulting from inspections of charging system carried out by Agency representatives are addressed and completed to the satisfaction of the Agency.
* The Proposer has presented the Agency with all required deliverables per the contract terms, including but not limited to product information/verification forms, installation/startup checklists, functional performance tests, final customer experience report, operator and maintenance manuals, system manuals and diagrams, and parts manuals.
* The Proposer has completed all contract-specified operational training.
* The Proposer and the Agency have agreed to a schedule of operations training and maintenance training to be provided by the Proposer.

Deficiencies for any of the above tests shall be recorded and corrected by the Proposer to the satisfaction of the Agency. Punch lists resulting from these tests shall be addressed and completed to the satisfaction of the Agency.

Final commissioning of the depot charging systems will be completed on the electric buses upon their arrival on the Agency’s property. The Proposer shall coordinate with the bus OEMs to ensure that each plug-in and overhead fast charger integrates with and charges [each bus, X buses], as applicable.

8. Manuals, Diagrams, Training and Recommended Spare Parts

8.1 Operating Manual Requirements

1. The Proposer shall provide the Agency with three identically bound sets of operating manuals for the plug-in and fast lane overhead charging systems. Operating manuals shall include step-by-step instructions to properly start, utilize, control and shut down charging system components. The operating manuals shall include instruction in the proper utilization of the charging systems and procedures to be observed. The target audience for the operating manuals shall be Agency fleet servicing personnel charged with opening, undertaking and closing the fleet refueling process.
2. The Proposer shall also provide the Agency with operating manuals in electronic (PDF) format. The operating manuals in electronic format shall be duplicate in content and organization to the bound sets of operating manuals for the charging systems.
3. The Agency shall have final approval for content of delivered operating manuals.

8.2 Diagram Requirements

1. The Proposer shall provide single-line electrical diagrams for the installed charger bank in both PDF and CAD formats. Diagrams shall include, at a minimum, all the chargers, conductors and switches, and show the connection to primary electrical service.
2. The Proposer shall provide mechanical layout diagrams of equipment showing all equipment footprint dimensions, conduit entry points and wire termination locations in both PDF and CAD format.

8.3 Maintenance Manual Requirements

1. The Proposer shall provide the Agency with three identically bound sets of maintenance manuals for the plug-in and fast lane charging systems. Maintenance manuals shall include step-by-step instructions to properly maintain all plug-in and fast lane charging systems and equipment/components. In addition to process and instrumentation drawings and detailed descriptions of system function and operation, maintenance manuals shall, at a minimum, include information on proper troubleshooting steps, system logic, preventive maintenance procedures and checklists, and repair procedures for all major components and systems. Maintenance manuals shall include all applicable wiring and logic diagrams.
2. The target audience for the maintenance manuals shall be Agency personnel or third-party contractors charged with maintenance of Agency facilities.
3. The Proposer shall also provide the Agency with maintenance manuals in electronic text-selectable (PDF) format. The maintenance manuals in electronic format shall be duplicate in content and organization to the bound sets of maintenance manuals for the on-route and depot charging systems.
4. The Agency shall have final approval for content of delivered maintenance manuals.

8.4 Parts Manual Requirements

1. The Proposer shall provide the Agency with three identically bound sets of parts manuals for the depot charging systems. Parts manuals shall include the process and instrumentation drawings; graphical parts breakdowns (parts diagrams); and associated parts lists for all major systems, assemblies, components and subcomponents of the charging systems. The parts diagrams shall be organized and clearly associated with parts lists using unique identifiers. Parts lists shall minimally define serviceable parts by system, assembly, noun name of part, the major component the part relates to, original equipment manufacturer, the OEM part number, life expectancy (in years or usage), unique part number, and quantity per associated assembly. The Proposer shall identify any parts or special tools needed for recurring preventive maintenance.
2. The Proposer shall also provide the Agency with parts manuals in electronic (PDF) format. The parts manuals in electronic format shall be duplicate in content and organization to the bound sets of parts manuals for the on-route and depot charging systems. Electronic manuals shall be compatible with the Agency’s parts catalog documentation software. Manuals shall be text-selectable. Parts lists and associated parts graphics are preferred to be received in Excel format to facilitate seamless integration or parts lists with the Agency’s system and its relational database.
3. The Agency shall have final approval for the content of delivered parts manuals.

8.5 Training Requirements

1. The Proposer shall provide 40 hours of training for Agency operating and maintenance personnel upon initial system installation and for future maintenance of the system. The training plan shall consist of the following details: description of the courses, suggested attendees, course length and suggested timing.
2. The Agency reserves the right to modify the proposed training plan to meet its needs.
3. The instructor must be capable of training 10 Agency personnel simultaneously in each course.
4. The Proposer must provide a one-hour biannual webinar for new Agency employees and a refresher course within 60 days before expiration of the warranty.
5. The Proposer shall provide the training syllabus and all training material for review and approval by the Agency project manager prior to commencement of training. The Proposer shall provide all necessary equipment to facilitate the training. The Agency will specify the time and location for delivery for the on-site training courses at a later date after consulting with the Proposer for availability.
6. The Proposer shall provide training in video format for future training of Agency personnel.

8.6 Recommended Spare Parts Requirements

1. The Proposer shall provide the Agency with a list of recommended spare parts for the charging systems. Recommended spare parts lists shall, at a minimum, define serviceable parts by system, assembly, noun name of part, the major component the part relates to, original equipment manufacturer, the OEM part number, life expectancy (in years or usage), unit price, unique part number, and quantity per associated assembly.
2. The Proposer shall provide the Agency with a list of recommended spare parts to have on hand for the first year of maintenance and repair after final commissioning.
3. The Proposer shall also provide the Agency with a list of recommended spare parts for the charging systems in electronic (PDF and Excel) format. The list of recommended spare parts for the charging systems in electronic format shall be duplicate in content and organization to the hard copy of the recommended list of spare parts for the charging systems. The purpose of the electronic spare parts list is to import into the Agency’s electronic parts catalog system.

9. Update Requirements

1. For a period of 15 years following the Agency’s final acceptance of the charging systems, or life of the equipment, whichever is longer, the Proposer shall provide the Agency with all updates to maintenance manuals, parts lists and procedures for all systems, equipment or components of the charging system as issued by the Proposer and/or supplier to the Proposer.
2. The Proposer shall provide, within reasonable periods of time, the spare parts, hardware, software, firmware and all equipment necessary to maintain and repair the chargers for a period of at least 15 years or the life of the equipment, whichever is longer, after the date of acceptance. Parts shall be interchangeable with the original equipment and shall be manufactured in accordance with the quality assurance provisions of this contract. Prices shall not exceed the Contractor’s then-current published catalog prices.
3. Changes to chargers, including hardware, software and firmware, must be coordinated with the Agency to minimize disruptions to service. Remote updates must be scheduled with and approved by the Agency. Additionally, the Proposer must provide evidence to the Agency that the change has been successfully tested with the same model of buses provided by the Proposer. If this is not possible, the Proposer must submit a test plan to the Agency, and the Agency must approve the test plan before work to implement the change at the Agency can commence. If initial validation or verification must be done on Agency equipment, then the upgrades may only be made to a single charging unit and verified for a period of 14 days in service before rolling upgrades out to the remainder of the chargers in the fleet. If upgrades experience any issues during install or the 14-day period, then the chargers must be reverted back to the last working version until the issues are resolved at the factory.

10. Warranty Requirements

1. The Proposer shall provide a minimum [two, five, other]-year parts and labor warranty, [including, excluding] preventive maintenance, on the charging systems, which shall commence upon the date of [final acceptance, revenue service (not to exceed 90 days after final acceptance)] of each charging system as issued by the Agency. The Proposer should clearly define all terms of the warranty in its response, and include the costs of the warranty in the cost proposal. The Proposer is also invited to list other available warranty options in the proposal narrative, clearly defining all terms.
2. Voiding the warranty:
3. The warranty shall not apply to any depot charging system failure or damage resulting from accident, misuse or negligence for which the Proposer is not responsible. Normal use shall include conditions prevalent in the normal (day-to-day) Agency operational and maintenance procedures. Normal use shall also include the environmental conditions specified in Section 1.2 of this appendix.
4. Warranty repairs:
5. A representative of the OEM of the malfunctioning equipment must be on-site at the Agency’s property within 24 hours of receiving notice of a charging system issue from the Agency. The malfunctioning system or component must be properly functioning within 48 hours of receiving notice of a charging system issue from the Agency.
6. If during the warranty period, any replacement, repair or modification on a charging system component made necessary by defective design, materials or workmanship is not completed within 48 hours, then the warranty period for the entire charging system shall be extended by the number of days equal to the delay period.
7. Any parts taken from Agency inventory to perform warranty work will be replaced under warranty.

Note: If required, the Agency can refer to APTA’s Standard Bus Procurement Guidelines, Section 7, “Warranty Requirements,” and Subsection WR 2, “Repair Procedures,” for additional language defining conditions for repairs performed by the Agency.

11. Timeline

1. The Proposer shall provide estimated lead time for delivery of the proposed charging equipment with the responses to this request.

Alternative: Delivery of chargers shall be determined by signed receipt of the Agency’s designated agent(s), [agent’s name and address], at the following point(s) of delivery and may be preceded by a cursory inspection of the charger: [point(s) of delivery address].

Alternative: Delivery shall be completed within [number] weeks after delivery of the executed Contract documents. Hours of delivery shall be [time range] on the following days of the week: [days for delivery].

**Abbreviations and Acronyms**

A/C air conditioning

ABS antilock braking system

AC alternating current

ADA Americans with Disabilities Act

AGM absorbed glass mat

Ah amp hour

APC automatic passenger counter

ASCE American Society of Civil Engineers

ASTM ASTM International, formerly the American Society for Testing and Materials

ATC automatic traction control

AVL automatic vehicle location

AWG American Wire Gauge

BAFO Best and Final Offer

BMS Battery Management System

BRT bus rapid transit

CARB California Air Resources Board

CCA cold-cranking amps

CCS Combined Charging System

CCTV closed-circuit television

cfm cubic feet per minute

CGA Compressed Gas Association

CNG compressed natural gas

dB decibel

DBE disadvantaged business enterprise

DC direct current

DEF diesel exhaust fluid

DPF diesel particulate filter

ECS emission control system

EMI electromagnetic interference

EPA Environmental Protection Agency

EOL end of life

ESS energy storage system

EVSE electric vehicle supply equipment

fc foot-candle

FEA Finite Element Analysis

FEMA failure mode effects analysis

FMCSA Federal Motor Carrier Safety Administration

FMVSS Federal Motor Vehicle Safety Standards

FTA Federal Transit Administration

GAWR gross axle weight rated

GPS Global Positioning System

GVW gross vehicle weight

GVWR gross vehicle weight rated

H-point hip-point

HIC Head Injury Criterion

HMI human-machine interface

HSC hybrid system controller

HV high voltage

HVAC heating, ventilation and air conditioning

I/O input/output

IEEE Institute of Electrical and Electronics Engineers

inHg inches of mercury

ISO International Standards Organization

JIC Joint Industry Council

kJ kilojoule

LV low voltage

mA milliampere

MERV Minimum Efficiency Reporting Value

MPa mega-Pascal

NFPA National Fire Protection Association

NGV natural gas vehicle

NOx nitrogen oxides

NRTL Nationally Recognized Testing Laboratories

OCPP Open Charge Point Protocol

OEM original equipment manufacturer

PA public address

PM preventive maintenance

PRD pressure relief device

PSC propulsion system controller

psi pounds per square inch

RF radio frequency

RFI radio frequency interference

SAE SAE International, formerly the Society of Automotive Engineers

scf standard cubic feet

SHGC solar heat gain coefficient

SLW seated load weight

SoC state of charge

UL Underwriters Laboratories

UNECE United Nations Economic Commission for Europe

UPS uninterruptable power supply

USC United States Code

USDOT United States Department of Transportation

VDC volts of direct current

WEOL warrantable end of life

Wh watt-hours

VIN vehicle information number

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