



## **Oversight Procedure 36 — Buy America Compliance Review**

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### **1.0 PURPOSE**

The purpose of this Oversight Procedure (OP) is to describe the review, analysis, and recommended procedures and reporting requirements that the Federal Transit Administration (FTA) expects from the Project Management Oversight Contractor (PMOC) with regards to the project sponsor's compliance with Buy America requirements for procurements in excess of \$150,000 (49 U.S.C. 5323(j)(13)). These procurements are for **“all iron, steel, and manufactured products used in the project.”**<sup>1</sup> The instructions in this OP subordinate to the regulations in 49 CFR Part 661, Buy America Requirements, 49 CFR Part 663, and Pre-Award and Post-Delivery Audits of Rolling Stock Purchases.

While this OP focuses on Capital Investment Grant (CIG) projects, which have specific requirements by law, it also applies to all capital projects. FTA will issue Implementation Plans (IPs) to clarify the specific reviews and expected deliverables based on the project types.

### **2.0 BACKGROUND**

#### **2.1 Overview**

Several public transit agencies have experienced difficulties in understanding the nuances and complexity of FTA's Buy America Requirements (which are unrelated to the Buy American Act of 1933, which governs direct Federal procurements). FTA's Buy America requirements specifically apply to third-party procurements by state and local governments using FTA funds.

The first Buy America provision was included in the Surface Transportation Assistance Act of 1978. Currently codified at 49 U.S.C. 5323(j), this provision prohibits FTA from obligating funds for a project unless the steel, iron, and manufactured products used in the project are produced in the United States.<sup>2</sup> For steel and iron end products to be considered produced in the United States, all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.<sup>3</sup>

For manufactured products to be considered “manufactured” in the United States, all the manufacturing processes must take place in the United States, and the components of the product must be of United States origin (a component is considered of United States origin if it is manufactured in the United States, regardless of the origin of its subcomponents).<sup>4</sup>

For buses, railcars, and other rolling stock (including train control, communication, and traction power equipment), the cost of components and subcomponents produced in the United States, for fiscal year 2020 and each fiscal year thereafter, at least 70 percent of the components, must be

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<sup>1</sup> 49 CFR § 661.5.(a)

<sup>2</sup> 49 U.S.C. Section 5323(j)(2)(C)

<sup>3</sup> 49 CFR 661.5(b)

<sup>4</sup> 49 CFR 661.5(d)

produced in the United States (minimum domestic content) and final assembly must take place in the United States.<sup>5</sup>

## **2.2 Buy America Requirements for Revenue Service Rolling Stock**

In addition to the requirements outlined above, a recipient purchasing rolling stock to carry passengers in revenue service must ensure that a pre-award audit as described in 49 CFR 663.23 is complete before the recipient enters into a formal contract for the purchase of rolling stock. Similarly, recipients purchasing revenue service rolling stock must also ensure that a post-delivery audit as prescribed in 49 CFR 663.33 is complete before the title to the rolling stock is transferred to the recipient.

## **3.0 OBJECTIVES**

The primary objective of this procedure is to provide clear, consistent instructions to PMOCs engaged in overseeing a project sponsor's compliance with Buy America requirements by verifying that:

- The project sponsor continues to **“adhere to the Buy America clause set forth in its grant contract with FTA”** in accordance with 49 CFR 661.13(a);
- The project sponsor has included **“in its bid or request for proposal specification for procurement within the scope of this part an appropriate notice of the Buy America provision, and that such specifications shall require, as a condition of responsiveness, that the bidder or offeror submit with the bid or offer a completed” Certificate of Compliance with Buy America Requirements** (49 CFR 661.6 or 661.12, as appropriate) in accordance with 49 CFR 661.13(b);
- The project sponsor has confirmed and verified that all bidders and offerors meet the requirements of their original **Certificate of Compliance with Buy America Requirements** or their **Certificate of Compliance with Buy America Requirements** submitted with its final offer and are not permitted to change their certification after bid opening or submission of a final offer in accordance with 49 CFR 661.13.(c);
- Each bidder or offeror has submitted with bids or offers a completed Buy America certificate; and
- During the manufacturing process, each bidder or offeror has complied with the applicable Buy America requirements.

When reviewing the project sponsor's Buy America audit, the objective is to confirm the project sponsor's investigation and approval of the manufacturer's report of their plan for production of the rolling stock and the compliance with the regulations of that plan.

This procedure provides PMOCs with direction regarding how to perform the following:

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<sup>5</sup> FY 2016–17 require 60 percent; FY 2018–19 require 65 percent. See the Buy America [Implementation of the Phased Increase in Domestic Content Under the Buy America Waiver for Rolling Stock](#) policy statement.

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1. Review to ensure that project sponsor has all necessary Buy America and related certifications, as they relate to the procurement of all iron, steel, and manufactured products used in the project;
2. Review and make an assessment of the manufacturer's data, including project sponsor's efforts to identify component and sub-component values;
3. Determine the manufacturer's compliance of the requirements for final assembly in the United States;
4. Identify if the project sponsor agreed or disagreed with the manufacturer's reporting of components, including where they are manufactured and the origin of all of the sub-components;
5. Identify if the project sponsor investigated any component that is inconsistent with the components listed in Appendix B to Sec. 661.11 for buses and 49 CFR Section 661.11, Appendix C for rail rolling stock;
6. As requested, monitor Buy America and related provisions beginning with the final design or at a Letter of No Prejudice (LONP) and before vehicles are delivered and placed into revenue service;
7. Check the project sponsor's and manufacturer's files and records, when needed, to assure early detection of any deficiencies in Buy America regulations compliance;
8. Ensure timely intervention when there are indications that Buy America might not be met, or the project sponsor's audit is inadequate;
9. Guide project sponsors to the regulations when manufacturers are found to be deficient in Buy America or other related requirements;
10. Visit the final assembly sites when requested and be prepared with tangible information and references to FTA regulations that will allow the PMOC to:
  - a) Validate the accuracy and authenticity of all Certificates of Compliance with Buy America requirements, and verify compliance during manufacturing process (for all procurements), and
  - b) Accurately evaluate Buy America audit results for compliance (for rolling stock procurements);
11. Request FTA intervention when Buy America audit reviews uncover deficiencies and provide reporting protocols to be adopted; and
12. Participate in First Article Inspections of rolling stock or components that are near the minimum domestic content percentage. This is to confirm components or sub-component source manufacturing and manufacturing site.

In addition to reviewing specific bus or rail related audits, PMOC will be directed to evaluate general compliance for systems equipment, other manufactured products, and iron and steel.

## **4.0 REFERENCES**

The PMOC shall become familiar with the following references to Federal legislation, regulation, and guidance before reviewing the project sponsor's work. These are the principal references, but this list is not exhaustive:

### **4.1 Legislative**

- Build America, Buy America Act (BABAA), section 70914 of the [Infrastructure and Investment Jobs Act \(IIJA\)](#), Public Law 117-58, effective November 15, 2021, sections 70901-52 (also known as the "Bipartisan Infrastructure Law")

### **4.2 United States Code**

- 49 U.S.C. Chapter 53

### **4.3 Regulations**

- [49 CFR Part 661](#), Buy America Requirements (see also [FTA's Buy America web page](#))
- [49 CFR Part 663](#), Pre-Award and Post-Delivery Audits

### **4.4 Guidance**

- [FTA's Conducting Pre-Award and Post-Delivery Audits for Rolling Stock Procurements Best Practices Handbook for Recipients, Auditors, Manufacturers, and Suppliers](#) (2017)

## **5.0 PROJECT SPONSOR SUBMITTALS**

The following are to be obtained by the PMOC from the project sponsor for performance of this review.

### **For all procurements:**

- Documentation verifying compliance of systems equipment and manufactured products:
  - Buy America Compliance certification (see 49 CFR 661.6).
  - Oversight activities report(s) prepared by the project sponsor, including internal verification of observance.
- For each awarded and active contract for all iron, steel, and manufactured products used in the project:
  - The project sponsor will allow the PMOC to verify all required Buy America certificate have been submitted.
  - The project sponsor will allow the PMOC to determine the proposed or expected start and end of manufacturing for each iron, steel, and manufactured products used in the project.

### **For rolling stock procurement:**

- Pre-Award Audit (See Appendix B for examples of required certifications):
  - Pre-Award Buy America Compliance certification;

- Pre-Award Purchaser's Requirements certification;
- Manufacturer's Federal Motor Vehicle Safety certification, where appropriate; and
- Pre-Award Buy America audit report prepared by the project sponsor. This is based on manufacturer supplied reporting.
- Intermediate Audit, when applicable:
  - Interim Buy America audit report prepared by the project sponsor. This is based on manufacturer supplied reporting.
- Post-Delivery Audit (See Appendix B for examples of required certifications):
  - Post-Delivery Buy America Compliance certification;
  - Post-Delivery Purchaser's Requirements certification;
  - Manufacturer's Federal Motor Vehicle Safety certification, where appropriate; and
  - Post-delivery audit report prepared by the project sponsor. This is based on manufacturer supplied reporting.
- Post-Delivery Domestic Content Monitoring:
  - Resident Inspector Reports in accordance with 49 CFR 663.37(a).

## **6.0 SCOPE OF WORK**

For all assigned OP 36 reviews, the PMOC is responsible for reviewing and reporting on the presence, accuracy, and authenticity of all Certificates of Compliance with Buy America requirements and verifying compliance during manufacturing process.

For all assigned OP 36 reviews, the PMOC is responsible for reviewing and reporting on the project sponsor's audit report (for rolling stock procurements) and should examine the project sponsor's certifications and supporting documents (for all procurements), with all due diligence. Attention shall be focused on ensuring the project sponsor's Buy America team has "drilled down" to the lowest level required, to demonstrate that the correct minimum domestic content percentage has been followed and the content claimed is valid.

The PMOC must verify that the project sponsor and contractor(s) are meeting the requirements of any conditions or agreement stipulated by the FTA.

The FTA should assure that the project sponsor understands that failure to comply with Buy America requirements can put the project sponsor's FTA grant in jeopardy.

The PMOC shall ensure that the vehicle component manufacturing requirements have been met, and where there is doubt (for instance where major sub-assemblies of a component are foreign made but incorporated during the domestic vehicle final assembly), that these concerns are identified and brought to the project sponsor's attention for clarification. If the project sponsor cannot justify the discrepancy, the PMOC should report this finding to FTA for a determination.

The PMOC shall ensure that the project sponsor has required the manufacturers of all iron, steel, and manufactured products used in the project to maintain and periodically update Buy America compliance in a report that tracks the projected and actual Buy America attainment. The PMOC shall ensure that the project sponsor has required that the rolling stock manufacturer provides a monthly or at a minimum quarterly update report with a detailed register of components in the

rolling stock being procured. The PMOC should report any progress or failure to track components to FTA.

### **6.1 Pre-Award Requirements (Bus & Rail) Buy America and Related Provisions**

For bus and van procurements, the PMOC must confirm that the project sponsor has completed three certifications in this Pre-Award process. All three certifications must be in the project sponsor's files for future FTA reviews. These certifications are:

- Pre-Award Buy America Compliance certification;
- Federal Motor Vehicle Safety Standards (FMVSS) certification; and
- Pre-Award Purchaser's Requirements certification.

For rail rolling stock procurements, the PMOC must confirm that the project sponsor has completed two certifications in this Pre-Award process. Both certifications must be kept together in the project sponsor's files for future FTA reviews. These certifications are:

- Pre-Award Buy America Compliance certification; and
- Pre-Award Purchaser's Requirements certification.

#### **6.1.1. Pre-Award Buy America Audits**

The PMOC must confirm that the project sponsor has certified through Pre-Award audits that the procurement with FTA appropriated funds, of new revenue service buses, rail vehicles, and vans, is Buy America compliant.

The PMOC, as part of their normal oversight activities, should assure the project sponsor understands that failure to comply with Buy America requirements can put the project sponsor's FTA grant in jeopardy. The project sponsor's contract documents for acquiring the rolling stock must contain language requiring compliance with approved waivers. The supplier's bids or proposals must show compliance that includes any waiver(s) issued to the supplier by FTA or noncompliance.

Pre-award audits are required before a project sponsor can enter a formal contract for the purchase of such rolling stock with a manufacturer. The Pre-Award review period begins when the project sponsor issues the solicitation and ends when the project sponsor signs a formal contract with the selected manufacturer.

##### **6.1.1.1. Bus and Van**

For the bus portion of the Buy America Pre-Award review, the PMOC must confirm the project sponsor has verified that all vehicles will meet the following conditions:

1. The cost of all components produced in the United States is more than the minimum domestic content percentage of the total of all bus and van rolling stock components including those in 49 CFR 661.11, Appendix B. The following is a list of items that typically would be considered components of a bus. This list is not all-inclusive.
  - a) Car body shells, engines, transmissions, front axle assemblies, rear axle assemblies, drive shaft assemblies, front suspension assemblies, rear suspension assemblies, air compressor and pneumatic systems, generator/alternator and electrical systems, steering system assemblies, front and rear air brake assemblies, air conditioning compressor assemblies,

air conditioning evaporator/condenser assemblies, heating systems, passenger seats, driver's seat assemblies, window assemblies, entrance and exit door assemblies, door control systems, destination sign assemblies, interior lighting assemblies, front and rear end cap assemblies, front and rear bumper assemblies, specialty steel (structural steel tubing, etc.) aluminum extrusions, aluminum, steel or fiberglass exterior panels, and interior trim, flooring, and floor coverings.<sup>6</sup>

2. Final assembly of the vehicles will take place in the United States, or the project sponsor has obtained from the FTA a waiver letter exempting the buses or a component from FTA's Buy America requirement.
3. Project sponsor's determination that the manufacturer is responsible and capable of building the bus to the project sponsor's design and solicitation specification.
4. Purchaser's requirements certification. See description of this requirement in 6.1.2, below.
5. First Article Inspections (FAI) of the bus or van rolling stock and components that are near the minimum domestic content percentage required to be domestic. This is to confirm component or sub-component source manufacturing and manufacturing site.

A two-stage process for bus manufacturing allows the empty bus shell to be transported to the final assembly site. When the transportation is from a domestic bus shell manufacturing facility to final assembly, the cost is domestic. The regulations require that final assembly in the U.S. include, at a minimum, the following requirements described in 49 CFR 661.11, Appendix D (b):

- Installation and interconnection of the engine, transmission, axles, cooling, and braking systems;
- Installation and interconnection of the heating and air conditioning equipment; and
- Installation of pneumatic and electrical systems, door systems, passenger seats, passenger grab rails, destination signs, and wheelchair lifts; and road testing, final inspection, repairs, and preparation of the vehicles for delivery.<sup>7</sup>

The PMOC shall confirm the project sponsor's compliance with the above requirements as well as those requirements stipulated on FTA's [Buy America web page](#).

#### **6.1.1.2. Rail, All Types**

For the rail portion of the Buy America Pre-Award review, the PMOC must confirm the project sponsor has verified that all vehicles will meet the following conditions:

1. The cost of all components produced in the United States is more than the minimum domestic content percentage by cost of the total of all rail rolling stock components including those in 49 CFR 661.11, Appendix C. The following is a list of items that typically would be considered components of rail rolling stock. This list is not all inclusive.
  - a) Car shells, engines, main transformer, pantographs, traction motors, propulsion gear boxes, interior linings, acceleration and braking resistors, propulsion controls, low

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<sup>6</sup> 49 CFR 661.11, Appendix B

<sup>7</sup> 49 CFR 661.11, Appendix D (b)

voltage auxiliary power supplies, air conditioning equipment, air brake compressors, brake controls, foundation brake equipment, articulation assemblies, train control systems, window assemblies, communication equipment, lighting, seating, doors, door actuators and controls, wheelchair lifts and ramps to make the vehicle accessible to persons with disabilities, couplers and draft gear, trucks, journal bearings, axles, diagnostic equipment, and third rail pick-up equipment.<sup>8</sup>

2. Final assembly of the vehicles will take place in the United States, or the project sponsor has obtained from the FTA a waiver letter exempting the rail rolling stock or a component from FTA's Buy America requirement.
3. Project sponsor's determination that the manufacturer is responsible and capable of building the rail rolling stock to the project sponsor's design and solicitation specification.
4. Purchaser's requirements certification. See description of this requirement in section 6.1.2 below.
5. First Article Inspections (FAI) of the rolling stock and components that are near the minimum domestic content percentage required to be domestic. This is to confirm component or sub-component source manufacturing and manufacturing site.

A two-stage process for rail rolling stock manufacturing allows the transport of the empty car shell to the final assembly site. When the transportation is from a domestic car shell manufacturing facility to final assembly, the cost is domestic. The regulations require that final assembly in the U.S. include, as a minimum the following requirements described in 49 CFR 661.11 Appendix D (a):

- Installation and interconnection of propulsion control equipment, propulsion cooling equipment, brake equipment, energy sources for auxiliaries and controls, heating and air conditioning, communications equipment, motors, wheels and axles, suspensions and frames;
- Inspection and verification of all installation and interconnection work; and
- The in-plant testing of the stationary product to verify all functions.<sup>9</sup>

The PMOC shall confirm the project sponsor's compliance with the above requirements as well as those requirements stipulated on FTA's [Buy America web page](#).

#### **6.1.2. Pre-Award Purchaser's Requirement Audit**

The PMOC must confirm the project sponsor has verified that the manufacturer's bid complies with project sponsor's solicitation specifications. Further, the PMOC must review the specifications to assure there are no requirements that will impact the ability of the supplier to achieve Buy America compliance.

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<sup>8</sup> 49 CFR 661.11, Appendix C

<sup>9</sup> 49 CFR 661.11, Appendix D (a)



The PMOC's review shall include assurance that the project sponsor's certification includes the most up-to-date language requiring compliance with Buy America. PMOCs are advised to consult FTA's [Buy America web page](#) for recent changes.

The PMOC must also confirm that the project sponsor has verified that the vehicle manufacturer is responsible and capable of building the rolling stock to the project sponsor's solicitation specifications. The PMOC should confirm identification by the project sponsor of their agreement or disagreement with the manufacturer's reporting of components, where they are manufactured and the origin of all of the subcomponents.

The PMOC must identify components in the project sponsor's Pre-Award Buy America review that are at risk of being under the minimum domestic content percentage, moving from domestic to foreign, which could risk lowering the total domestic content below the minimum required. For each component near the 60 percent threshold, the PMOC must assure the project sponsor will conduct a line-by-line review of the subcomponents noting the cost and country of origin. FTA may request additional reports on these components. Project sponsor and PMOC concerns about the accuracy of the claims for final assembly must be identified.

### **6.1.3. Pre-Award FMVSS Requirements Review for Bus and Van**

The PMOC must confirm that the project sponsor has obtained a letter from the vehicle manufacturer stating the information that is required for the FMVSS vehicle plaque will be provided.

## **6.2 Intermediate Audit (Bus & Rail)**

FTA and the PMOC should encourage the project sponsor to include a requirement for an intermediate Buy America audit in the contract solicitation specification. The intermediate audit should occur early in the production but after the components and their sub-components are procured and under contract. While an intermediate audit is not required by the regulation, it shall be encouraged since it represents the last chance for the project sponsor to minimize the risk of potential adverse impact on the total domestic content of the vehicle, by taking corrective action before the end of the production process and prior to delivery, particularly for rolling stock contracts of extended delivery schedules and large order quantities or for any at-risk component(s) with near the minimum domestic content percentage that could change from domestic to foreign.

For an intermediate audit, FTA should require the project sponsor to provide the plan for the PMOCs participation in the project sponsor's FAI of components (and subcomponents). The at-risk components (and subcomponents) identified in the Pre-Award Purchaser's Requirement Review are those that are near the minimum domestic content percentage. FTA should encourage the project sponsor and supplier to conduct any FAI at the components (and subcomponents) manufacturing site. This provides an on-site opportunity to confirm subcomponent manufacturing source and country of origin. If the FAI is not at the components (or subcomponent) manufacturing site, a follow-up site visit to the component manufacturing site should be discussed with the project sponsor and FTA.

An intermediate audit or review should be best conducted after the vehicle manufacturer has signed contracts with component suppliers and as components are getting ready to be sourced. This review is conducted in the same manner as a post-delivery review. When FTA requires a

PMOC review of a project sponsor's intermediate audit, the PMOC shall consult the post-delivery review requirements below for performance of this review.

### **6.3 Post Delivery Requirements Audit (Bus & Rail)**

The PMOC must confirm the project sponsor has completed a post-delivery audit before a vehicle title is transferred from the manufacturer to the project sponsor. This section provides specific input that PMOCs can use to evaluate the project sponsor's post-delivery audit report.

The post-delivery audit review period begins when the project sponsor signs a formal contract with the selected manufacturer and ends before the title transfer or when the vehicle enters into revenue service.

The PMOC must pay close attention to the pre-award audit report and follow or pursue any changes that the manufacturer may have made that could adversely affect compliance. Examples of such changes include:

- A vendor of at-risk components (and subcomponents) identified in the Pre-Award Purchaser's Requirement Review that was near the minimum domestic content percentage that no longer complies with Buy America;
- A U.S. vendor going out of business that is replaced with a foreign vendor;
- Changing to a new vendor to avoid schedule delays or contract default and related liquidated damages due to unavailability of needed components or equipment; or
- The manufacturer's final assembly plan identified in the pre-award audit plan has changed with less than required final assembly.

The PMOC must ensure that project sponsor's approval of a replacement vendor does not change the requirement to comply with Buy America.

As with the pre-award audit, PMOCs must confirm for the bus and van post-delivery audit that the project sponsor has completed separate certifications. Certifications must be kept in the project sponsor's files for future FTA reviews.

The certifications required for bus and van projects are:

- Post-Delivery Buy America Compliance certification;
- Post-Delivery Purchaser's Requirements certification; and
- Post-Delivery FMVSS certification.

For rail projects, the required certifications are:

- Post-Delivery Buy America Compliance certification; and
- Post-Delivery Purchaser's Requirements certification.

PMOCs should note that for bus and rail projects, the Buy America post-delivery purchaser's requirements and the FMVSS certifications are similar to the reviews completed for pre-award certifications, except that the post-delivery audit must contain *actual data* instead of the estimated data used in pre-award audits. Estimates are not acceptable.

PMOCs should confirm in writing in the report that, for the bus and van post-delivery purchaser's certification, the project sponsor has completed visual inspections and road tests to demonstrate that buses meet contract specifications.

1. Project sponsors in urbanized areas with populations of more than 200,000 that purchase more than 10 buses or vans must have an inspector in the production facility during the final assembly process.
2. Project sponsors in urbanized areas with populations of 200,000 or less that purchase more than 20 buses, must have an inspector in the production facility during the final assembly process.
3. Bus purchases not meeting the criteria in 1 and 2 above, or purchases of any number of standard production or unmodified vans, require only visual inspection and road test upon delivery.

PMOCs should confirm in writing in the report that, for the rail vehicle post-delivery purchaser's certification, the project sponsor that is purchasing any number of rail vehicles must certify the following:

1. An on-site inspector has performed complete visual inspections and performance tests to demonstrate that the vehicles meet the contract specifications, and;
2. A resident inspector was on-site in the manufacturing facility, during the final assembly period and has (a) monitored the final assembly process and (b) completed a final report describing the construction activities and explaining how the construction and operation of the rail vehicles meet the contract specifications.

#### **6.4 Post-Delivery Domestic Content Monitoring**

Post-delivery domestic content monitoring is a recommended best practice that should occur during the time in the procurement process from when the vehicle manufacturer delivers the first vehicle to the recipient until the vehicle manufacturer transfers title to the last vehicle to the recipient or the recipient puts the last vehicle into revenue service, whichever is first. The recipient should complete the post-delivery audit as described in 49 CFR 663.33 on the first vehicle. FTA recommends that the post-delivery domestic content monitoring start when the post-delivery audit for the first vehicle is completed. The post-delivery domestic content monitoring should end when the recipient puts the last vehicle into revenue service.

FTA recommends that the resident inspector, or an agent or employee of the recipient should perform the post-delivery domestic content monitoring.

The purpose of post-delivery domestic content monitoring is to ensure that all vehicles after the first one are compliant with the regulations.

The personnel performing the post-delivery domestic content monitoring should monitor all the following for changes to determine that any changes detected do not affect the compliance of any vehicle:

- Change Orders;
- Changes to the Bill of Materials;
- Changes to the assembly or manufacturing processes;

- Changes to the final assembly location;
- Any changes to the cost or origin of any components and subcomponents; and
- Any change that would affect the domestic content of the vehicle.

If the recipient (or its agent) detects any changes, the recipient (or its agent) should perform an evaluation to determine if the domestic content of the vehicles has changed. The recipient (or its agent) should report any changes in domestic content to FTA. If necessary to ensure continued compliance, the recipient (or its agent) should perform an additional post-delivery audit.

### **6.5 Buy America Requirements Review for Systems Equipment**

The PMOC should confirm that the project sponsor understands that Buy America compliance applies not only to bus and rail vehicles but is also required for procurement of equipment specific to stand-alone systems as defined in 49 CFR 661. This includes Train Control Equipment (49 CFR 661.11.t), Communication Equipment (49 CFR 661.11.u), and Traction Power Equipment (49 CFR 661.11.v).

The procurement of each category of such systems equipment must comply with domestic content and final assembly requirements delineated for the rolling stock procurements in 49 CFR 661 (i.e., if a component of Train Control Equipment is classified as domestic, it must have minimum 60 percent U.S. content and final assembly must have occurred in the U.S). Further, domestic manufacture of all federally funded procurements is expected and should be certifiable.

The bill of materials provides a good initial material list. The final assembly of systems projects has been attributed to the field construction.

The project sponsor should be able to demonstrate how Buy America compliance is verified, documented, and tracked.

### **6.6 Buy America Requirements Review for Manufactured Products**

The PMOC should confirm that the project sponsor understands that Buy America compliance applies not only to bus and rail vehicles but is also required for procurement of all manufactured products, including all iron and steel, as defined in 49 CFR 661. Further, domestic manufacture of all Federally funded procurements is expected and should be certifiable. The project sponsor should be able to demonstrate to FTA and the PMOC how Buy America compliance is verified, documented, and tracked.

The bill of materials provides a good initial material list. The final assembly of infrastructure projects has been attributed to the field construction.

#### **6.6.1. Comprehensive Contract Review (Annually after first Contract Award)**

Analyze and evaluate the project and all contracts awarded to create a database of product, and vendor information to support verification and validation of all required “**Certificates of Compliance with Buy America Requirement**” (49 CFR 661.6).

The contractor shall verify and validate all required “**Certificates of Compliance with Buy America Requirement**” (49 CFR 661.6) by performing a desk review of the project sponsor’s Buy America documentation. No travel is anticipated for this part of the review. The desk review should provide a summary of the documentation, noting any errors or concerns with the Buy America certifications, audits, or reports, as applicable. The desk review shall also summarize the project and identify areas of concern for Buy America compliance (e.g., sole

source items, elements with a small domestic market, and items with lacking documentation that should be reviewed in greater detail). The contractor may utilize FTA regional staff to projects to gain historical background on the project or procurement being reviewed.

The PMOC will provide the report to FTA.

### **6.7 Common Discrepancy Types and Corrective Actions**

The PMOC shall conduct the review of submittals indicated above including any discrepancies noted and make recommendations in a report to FTA for corrective action by the project sponsor. After being directed to do so by FTA, the PMOC may discuss these recommendations and possible corrective actions of the discrepancies with the project sponsor. Examples of discrepancy types are listed below.

- Discrepancy Type 1: Project sponsor is deficient and did not have Buy America requirements in its procurement contracts for iron, steel, or manufactured products or does not have an FTA approved waiver.
  - Action: Notify FTA of the problem. The PMOC shall advise FTA that the project sponsor needs to submit revised purchasing procedures to FTA.
- Discrepancy Type 2: Project sponsor is deficient and did not receive all of the required certifications and reviews for its rolling stock procurement. Project sponsor does not have all the required certifications in its files confirming that the project sponsor has done the reviews.
  - Action: Notify FTA of the problem. The PMOC should advise the project sponsor to locate all missing and required certifications.
- Discrepancy Type 3: Project sponsor is deficient and has not adequately or sufficiently reviewed the manufacturer's Buy America documentation to determine compliance or intent to comply with requirements.
  - Action: Notify FTA of the problem. The PMOC should advise the project sponsor that it should take whatever action is necessary to obtain appropriate certifications, including performing an "after-the-fact" pre-award audit to prove that vehicles will comply with domestic content requirements.
- Discrepancy Type 4: Project sponsor is deficient and has placed vehicles into revenue service, before completing post-delivery audits to verify that the procurement complies with domestic content and final assembly requirements.
  - Action: Notify FTA of the problem. The PMOC should advise the project sponsor to provide the FTA with an explanation for how and why vehicles were placed in service before completing the post-delivery audit.
  - Action: The project sponsor must complete outstanding audits, without delay and furnish copies of the audit documentation to the FTA.
  - Action: The project sponsor must provide assurance to FTA that changes in its procurement procedures have been made so that future procurements will comply with Buy America requirement.

- Discrepancy Type 5: The project sponsor is deficient and did not use “in-plant” inspectors or did not perform visual inspections and road tests on bus procurements, for FTA funded procurement, as required.
  - Action: Notify FTA of the problem. The PMOC must advise the project sponsor to provide FTA with a complete explanation for why the inspection requirement was not met. FTA will determine the appropriate action.
  - Action: The project sponsor must change its procurement procedures and assure the FTA that future procurements will comply with regulations.
- Discrepancy Type 6: The project sponsor is deficient because the manufacturer’s assembly process included partial final assembly outside of the U.S. and final assembly activities in the U.S. did not meet minimum requirements for compliance.
  - Action: Notify FTA of the problem. The PMOC must advise the project sponsor to provide the FTA with a complete explanation for not complying with the regulations. FTA will determine the appropriate action.
  - Action: The project sponsor must provide assurance that future vehicle procurements will be conducted in compliance with FTA Buy America requirements.
- Discrepancy Type 7: The project sponsor is deficient because the manufactured products included in systems installed were manufactured outside of the U.S. and no formal written exception is available.
  - Action: Notify FTA of the problem. The PMOC must advise the project sponsor to provide the FTA with a complete explanation for not complying with the regulations. FTA will determine the appropriate action.

## **7.0 REPORTS, PAPERS, PRESENTATIONS**

The PMOC shall provide the Contracting Officer’s Representative (COR) / Alternate Contracting Officer’s Representative (ACOR) with a written report, formatted in compliance with OP 01, of their findings, analyses, recommendations, professional opinions, and description of the review activities undertaken, as well as other supporting information.

After the COR/ACOR has transmitted formal acceptance of the report, the PMOC should share the report with the project sponsor. If there are differences of opinion between the PMOC and the project sponsor regarding the PMOC’s findings, the COR/ACOR may direct the PMOC to reconcile their findings with the project sponsor and provide the COR/ACOR with a report addendum covering the modifications agreed upon by the project sponsor and PMOC.

When directed by the COR/ACOR, the PMOC shall perform data analysis and develop data models that meet FTA requirements using Microsoft Office products, such as Excel and Word, and use FTA templates when provided.

Upon approval by the COR/ACOR, the PMOC may add other software as required, but they should provide the COR/ACOR with documentation and report data when complete.

### **7.1 Reporting for Bus & Rail**

When the review applies to bus and rail vehicles, the PMOC shall provide FTA with a written report for each or any of the three reviews described above – pre-award, intermediate, post-delivery. The report is specifically meant to discuss and help resolve issues associated with traditional bus, rail, and other rolling stock audits.

### **7.2 Reporting for Systems Equipment, Other Manufactured Products, Iron and Steel**

For manufactured products or equipment specific to stand alone systems; the PMOC is also tasked with evaluating whether Buy America regulations are being adhered to by the project sponsor. Procurements that are not categorized solely as bus or rail typically do not undergo a pre-award, intermediate, and post-delivery review; however, the overall responsibility to monitor and perform oversight activities should be no different.



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**APPENDIX A: ACCEPTABLE QUALITY LEVEL**

	<b>Desired Outcome</b>	<b>Performance Requirement</b>	<b>Checklist</b>	<b>Acceptable Quality Level</b>	<b>Performance Measure</b>	<b>Monitoring Method</b>
1	The PMOC shall review the status of project sponsor's Buy America compliance.	<b>R1a.</b> The PMOC shall develop and document a process for review and analysis of a project sponsor's Buy America requirements.	<input type="checkbox"/>	<b>Q1a.</b> Process exists and has been followed.	<b>M1a.</b> Evidence of a documented process.	<b>MM1a.</b> Periodic review by FTA or its agent.
		<b>R1b.</b> The PMOC shall use its process and to validate the thoroughness of Buy America requirements at all phases of the project.	<input type="checkbox"/>	<b>Q1b.</b> The PMOC must make an assessment and provide internal verification that the process has been followed as documented.	<b>M1b.</b> Documented assessment of Buy America process and requirements.	<b>MM1b.</b> Periodic review by FTA or its agent.
2	The PMOC shall, at appropriate phases of the project, review the project sponsor's compliance with Buy America, determine the existence of any discrepancies, report such discrepancies to FTA, and concurrently work	<b>R2a.</b> The PMOC shall confirm through review of project sponsor submittals, contract provisions, audits, and certifications that Buy America requirements have been met at pre-award, intermediate, and post-delivery phases.	<input type="checkbox"/>	<b>Q2a.</b> Professional opinion of Buy America compliance by the project sponsor.	<b>M2a.</b> Documented evidence of a thorough review by PMOC for Buy America compliance at pre-award, intermediate and post-delivery, supported by a professional opinion.	<b>MM2a.</b> Periodic review by FTA or its agent.
		<b>R2b.</b> The PMOC shall continually monitor the status	<input type="checkbox"/>	<b>Q2b.</b> Professional	<b>M2b.</b> Documented evidence of	<b>MM2b.</b> Periodic review

	<b>Desired Outcome</b>	<b>Performance Requirement</b>	<b>Checklist</b>	<b>Acceptable Quality Level</b>	<b>Performance Measure</b>	<b>Monitoring Method</b>
	with the project sponsor to secure correction of them.	of the project sponsor's Buy America program, note discrepancies, discuss corrective action with project sponsor and report discrepancies together with intended corrective action to FTA.		opinion as it pertains to discrepancies in project sponsor's program together with intended corrective action.	continued monitoring and review, discussion of discrepancies, and reporting of intended corrective action, supported by a professional opinion.	by FTA or its agent.
3	The PMOC shall document its findings, professional opinions, and recommendations in a report to FTA.	<b>R3.</b> The PMOC shall present its findings, conclusions, and recommendations to FTA and, upon FTA approval, reconcile those recommendations with the project sponsor to the extent possible.	<input type="checkbox"/>	<b>Q3.</b> Reports and presentations are professional, clear, concise, and well written. The findings and conclusions have been reconciled with other PMOC reports and have been reconciled with the project sponsor to the extent possible.	<b>M3.</b> PMOC's findings, conclusions, recommendations, and presentation.	<b>MM3.</b> Periodic review by FTA or its agent.



**APPENDIX B: SAMPLE REVIEW CERTIFICATIONS (BUS AND RAIL)**

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The following review certifications required for Buy America compliance can be found at [FTA’s Conducting Pre-Award and Post-Delivery Audits for Rolling Stock Procurements Best Practices Handbook for Recipients, Auditors, Manufacturers, and Suppliers \(2017\)](#).

**Exhibit B-1: Sample Pre-Award Buy America Compliance Certification**

**PRE-AWARD BUY AMERICA COMPLIANCE CERTIFICATION**

As required by 49 CFR 663 – Subpart B, \_\_\_\_\_ (the recipient) is satisfied that the rail vehicles to be purchased, \_\_\_\_\_ (number and description of rail vehicles) from \_\_\_\_\_ (the manufacturer), meet the requirements of 49 USC 5323(j). The recipient, or its appointed analyst \_\_\_\_\_ (the analyst – not the manufacturer or its agent), has reviewed documentation provided by the manufacturer, which lists (1) the proposed component and subcomponent parts of the rail vehicles identified by manufacturer, country of origin, and cost; and (2) the proposed location of the final assembly point for the rail vehicles, including a description of the activities that will take place at the final assembly point and the cost of final assembly.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Exhibit B-2: Sample Pre-Award Buy America Exemption Certification**

**PRE-AWARD BUY AMERICA EXEMPTION CERTIFICATION**

As required by 49 CFR 663– Subpart B, \_\_\_\_\_ (the recipient) certifies that there is a letter from FTA that grants a waiver to the rail vehicles to be purchased, \_\_\_\_\_ (number and description of rail vehicles), from 49 USC 5323 (j).

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Exhibit B-3: Sample Pre-Award Purchaser's Requirements Certification**

**PRE-AWARD PURCHASER'S REQUIREMENTS CERTIFICATION**

As required by 49 CFR 663 – Subpart B,

\_\_\_\_\_ (the recipient) certifies that the rail vehicles to be purchased, \_\_\_\_\_ (number and description of rail vehicles) from \_\_\_\_\_ (the manufacturer), are the same product described in the recipient's solicitation specification and that the proposed manufacturer is a responsible manufacturer with the capability to produce a rail vehicle that meets the specifications.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Exhibit B-4: Sample Post-Delivery Buy America Compliance Certification**

**POST-DELIVERY BUY AMERICA COMPLIANCE CERTIFICATION**

As required by 49 CFR 663 – Subpart C,

\_\_\_\_\_ (the recipient) certifies that it is satisfied that the rail vehicles received, (number and description of rail vehicles) from \_\_\_\_\_ (the manufacturer), meet the requirements of 49 USC 5323 (j). The recipient, or its appointed analyst \_\_\_\_\_ (the analyst – not the manufacturer or its agent), has reviewed documentation provided by the manufacturer, which lists (1) the actual component and subcomponent parts of the rail vehicles identified by the manufacturer, country of origin, and cost; and (2) the actual location of the final assembly point for the rail vehicles, including a description of the activities that took place at the final assembly point and the cost of final assembly.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Exhibit B-5: Sample Post-Delivery Buy America Exemption Certification**

**POST-DELIVERY BUY AMERICA EXEMPTION CERTIFICATION**

As required by 49 CFR 663 – Subpart C,

\_\_\_\_\_ (the recipient) certifies that there is a letter from FTA, which grants a waiver to the rail vehicles received,

\_\_\_\_\_ (manufacturer, number and description of rail vehicles), from the Buy America requirements under 49 USC 5323 (j).

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

**Exhibit B-6: Sample Post-Delivery Purchaser's Requirements Certification**

**POST-DELIVERY PURCHASER'S REQUIREMENTS CERTIFICATION**

As required by 49 CFR 663 – Subpart C,

\_\_\_\_\_ (the recipient) certifies that a resident inspector, \_\_\_\_\_ (the resident inspector – not an agent or employee of the manufacturer), was at \_\_\_\_\_ (the manufacturer) manufacturing site during the period of manufacture of the rail vehicles,

\_\_\_\_\_ (number and description of rail vehicles). The inspector monitored manufacturing and completed a report on the manufacture of the rail vehicles providing accurate records of all vehicle construction activities. The report addresses how the construction and operation of the rail vehicles fulfill the contract specifications. After reviewing the report, visually inspecting the rail vehicles, the recipient certifies that the rail vehicles meet the contract specifications.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_



**APPENDIX C: PRE-AWARD, INTERMEDIATE, AND POST-DELIVERY REVIEW CHECKLISTS (BUS AND RAIL)**

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Item	Issue	
<b>1.0</b>	<b>Specification</b>	
1.1	Does the specification contain requirements that make it hard for the supplier to achieve Buy America requirements?	<input type="checkbox"/>
1.2	Does the specification require the supplier to meet the Buy America Act and refer specifically to the relevant sections of Title 49, CFR, Sections 661 and 663?	<input type="checkbox"/>
1.3	Does the specification call for pre-award and post-delivery audits for Buy America?	<input type="checkbox"/>
1.4	Does the project sponsor’s procurement documentation mandate or require an intermediate Buy America audit, and is the audit planned at such a point that it will identify whether or not the procurement is on target but still allow time to take corrective action(s) if there is a risk of failing to comply?	<input type="checkbox"/>
<b>2.0</b>	<b>Pre-Award Audit</b>	
2.1	Is the project sponsor’s auditor experienced in Buy America audits?	<input type="checkbox"/>
2.2	Are there any major assemblies or sub-assemblies identified in the pre-award review with domestic content close to or below the minimum domestic content percentage?	<input type="checkbox"/>
2.3	Are there significant sub-assemblies with content close to the minimum domestic content percentage that are claimed as 100% in the Major Assembly?	<input type="checkbox"/>
2.4	Has the auditor drilled down into the list of vehicle components sufficiently to demonstrate that changes at lower levels will not cause any major sub-assemblies, claimed at 100%, to not comply?	<input type="checkbox"/>
2.5	Will the vehicle bodies be manufactured in the U.S., or will they arrive as “knock down” components from abroad, requiring minor assembly work?	<input type="checkbox"/>
2.6	What inspection services does the project sponsor propose?	<input type="checkbox"/>
<b>3.0</b>	<b>Intermediate Audit</b>	
3.1	Has the project sponsor performed an intermediate audit?	<input type="checkbox"/>

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Item	Issue	
3.2	Is the project sponsor’s auditor experienced in Buy America audits?	<input type="checkbox"/>
3.3	Are there major assemblies with domestic content close to or below the minimum domestic content percentage?	<input type="checkbox"/>
3.4	Are there significant sub-assemblies with content close to the minimum domestic content percentage that are claimed as 100% in the Major Assembly?	<input type="checkbox"/>
3.5	Has the auditor drilled down sufficiently to demonstrate that changes at lower levels will not cause any major sub-assemblies, claimed at 100%, to not comply?	<input type="checkbox"/>
3.6	Are the vehicle bodies manufactured in the U.S., or do they arrive as “knock down” components from abroad, requiring minor assembly work?	<input type="checkbox"/>
3.7	Does the project sponsor have on-site inspection?	<input type="checkbox"/>
3.8	Does the project sponsor’s inspection coverage include major sub-suppliers?	<input type="checkbox"/>
3.9	If the project sponsor did not perform an intermediate audit:	<input type="checkbox"/>
3.10	Have there been any substantive changes in sourcing since the pre-award audit?	<input type="checkbox"/>
3.11	Do any of the changes impact Major Assemblies with close to or below the minimum domestic content percentage?	<input type="checkbox"/>
<b>4.0</b>	<b>Post Delivery Audit</b>	
4.1	Is the project sponsor’s auditor experienced in Buy America audits?	<input type="checkbox"/>
4.2	Did the project sponsor obtain and retain pre-award Buy America certifications from successful suppliers for purchases of more than \$150,000?	<input type="checkbox"/>
4.3	Did the project sponsor conduct pre-award and post-delivery audits for its purchase of rolling stock over \$150,000? Does the project sponsor have properly completed certifications for each review in its contract files?	<input type="checkbox"/>
4.4	If the project sponsor is purchasing rolling stock with multiple delivery dates, using options, or multi-year procurements, and, if so, has the project sponsor performed and certified pre-award and post-award audit for each group of vehicles, before placing them into revenue service?	<input type="checkbox"/>

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Item	Issue	
4.5	Has the project sponsor requested or received a waiver for any part of its purchase of vehicles? Does the project sponsor have the FTA approved waiver in its procurement files for PMOC review?	<input type="checkbox"/>
4.6	Are there major assemblies with domestic content close to or below the minimum domestic content percentage?	<input type="checkbox"/>
4.7	Are there significant sub-assemblies with content close to the minimum domestic content percentage that are claimed as 100% in the Major Assembly?	<input type="checkbox"/>
4.8	Has the auditor drilled down sufficiently to demonstrate that changes at lower levels will not cause any major sub-assemblies, claimed at 100%, to not comply?	<input type="checkbox"/>
4.9	Were the vehicle bodies manufactured in U.S., or did they arrive as “knock down” components from abroad, requiring minor assembly work?	<input type="checkbox"/>
4.10	Does the project sponsor have on-site inspections planned and implemented throughout manufacturing, assembly, and testing, and have they provided such reports?	<input type="checkbox"/>





**APPENDIX D: ACRONYMS**

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<b>Acronym</b>	<b>Term</b>
ACOR	Alternate Contracting Officer's Representative
ADA	The Americans with Disabilities Act
AGC	Associated General Contractors of America
ATC	Alternative Technical Concepts
AVS	Associate Value Specialist
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor and Statistics
BRF	Beta Range Factor
BY	Base Year
CATEX or CE or CX or Exclusion	Categorical Exclusion
CCIP	Contractor Controlled Insurance Program
CE	Categorical Exclusion
CER	Cost Estimating Relationship
CFR	Code of Federal Regulations
CIG	Capital Investment Grant
CLIN	Contract Line Item Number
CM	Construction Manager

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<b>Acronym</b>	<b>Term</b>
CM/GC	Construction Manager/General Contractor
CMAR	Construction Manager at Risk
COR	Contracting Officer's Representative
CPM	Critical Path Method
CPTED	Crime Prevention Through Environmental Design
CR	Constructability Review
CVS	Certified Value Specialists
DB	Design-Build
DBB	Design-Bid-Build
DBE	Disadvantaged Business Enterprise
DBF	Design-Build-Finance
DBFOM	Design-Build-Finance-Operate and Maintain
DBOM	Design-Build-Operate and Maintain
DEIS	Draft Environmental Impact Statement
DF	Designated Function
DHS	Department of Homeland Security
DTS	Department of Transportation Services
EA	Environmental Assessment
EIS	Environmental Impact Statement

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Acronym	Term
EMP	Emergency Management Plan
ENR	Engineering News-Record
EPCM	Engineering/Procurement/Construction Management
ESWA	Early Systems Work Agreement
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FLSSC	Fire/Life Safety and Security Committee
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GAO	Government Accountability Office
GC	General Contractor
GC/CM	General Contractor/Construction Manager
GMP	Guaranteed Maximum Price
HAZMAT	Hazardous Materials
IP	Implementation Plan
LONP	Letter of No Prejudice

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Acronym	Term
LPA	Locally Preferred Alternative
MBE	Minority Business Enterprise
MCC	Management Capacity and Capability
MDBF	Mean Distance Between Failures
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NTE	Not-to-Exceed
NTP	Notice to Proceed
O&M	Operation and Maintenance
OCIP	Owner Controlled Insurance Program
ODCs	Other Direct Costs
OHA	Operational Hazard Analysis
OIG	Office of Inspector General
OMP	Operations and Management Plan
OP	Oversight Procedure
P3	Public Private Partnership
PCMG	Project and Construction Management Guidelines
PD	Project Development
PDM	Project Delivery Method

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Acronym	Term
PHA	Preliminary Hazard Analysis
PMO	Project Management Oversight
PMOC	Project Management Oversight Contractor
PMP	Project Management Plan
POP	Project Oversight Plan
PTASP	Public Transportation Agency Safety Plan
QA/QC	Quality Assurance/Quality Control
R&D	Research and Development
RAMP	Real Estate Acquisition Management Plan
RAP	Rail Activation Plan
RCMP	Risk and Contingency Management Plan
RET	Risk Evaluation Tool
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualifications
ROD	Record of Decision
ROW	Right-of-Way
RSD	Revenue Service Date
S/DBE	Small/Disadvantaged Business Enterprises

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<b>Acronym</b>	<b>Term</b>
SABCE	Stripped and Adjusted Base Cost Estimate
SABS	Stripped and Adjusted Base Schedule
SAVE	Society of American Value Engineers
SCC	Standard Cost Category
SCIL	Safety Certifiable Items List
SGR	State of Good Repair
SIT	System Integration Testing
SITP	Systems Integration Test Plan
SOP	Standard Operating Procedure
SOW	Scope of Work
SSCVR	Safety Certification Verification Report
SSGA	Small Starts Grant Agreement
SSI	Sensitive Security Information
SSMP	Safety and Security Management Plan
STIP	Statewide Transportation Improvement Program
SYGA	Single Year Grant Agreement
TAR	Travel Authorization Request
TBM	Tunnel Boring Machine
TCC	FTA Office of the Chief Counsel

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Acronym	Term
TCRP	Transit Cooperative Research Program
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
TIP	Transportation Improvement Program
TOD	Transit-Oriented Development
TPE	FTA Office of Planning and Environment
TPM	FTA Office of Program Management
TRB	Transportation Research Board
TSA	Transportation Security Administration
TVA	Threat and Vulnerability Assessment
URA	Uniform Relocation Assistance and Real Property Acquisition Act
U.S.C.	United States Code
VE	Value Engineering
VECP	Value Engineering Change Proposals
WBE	Women Business Enterprise
WBS	Work Breakdown Structure
YOE	Year of Expenditure