Oversight Procedure 38 – Bus and Rail Vehicle Technical Review

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) regarding the project sponsor's procurements of bus and rail vehicles. The review should ensure that the vehicles being procured:

- Fit their intended use well;
- Represent good value for the product selected;
- Meet the specified requirements;
- Include the most appropriate technologies;
- Conform to Federal requirements.

For all but the smallest procurements, the PMOC should perform reviews at definitive procurement stages:

1. Planning and Solicitation
2. Vendor Selection
3. Design, Manufacturing, and Testing
4. Acceptance, Commissioning, and Readiness for Revenue Service processes.

To meet the project's goals and stay within stated cost and schedule constraints, it is important to evaluate the project sponsor's management capacity and capability.

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

The PMOC's review should occur in conjunction with other related guidance. Refer to the following OPs when performing this review:

- OP 20: Project Management Plan Review, including various supporting plans, such as Vehicle Maintenance Plans, Operations Plans, and other Plans as applicable
- OP 25: Recurring Oversight and Related Reports
- OP 35 (if applicable): ADA Review - Level Boarding for Commuter Rail
- OP 36: Buy America Compliance Review
- OP 37: Fleet Management Plan Review

3.0 OBJECTIVES

The objectives of this review are to ensure that the vehicle procurement is performed in conformance with applicable regulations and guidance, and that process corrections take place in a timely manner, involving vehicle specifications, manufacturing approaches, quality and testing processes,

commissioning, and safety certification to meet vehicle program requirements at key stages of the project.

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

- Infrastructure and Investment Jobs Act (IIJA), Public Law 117-58, effective November 15, 2021 (also known as the "Bipartisan Infrastructure Law")
- 49 U.S.C. Section 5323(j), Buy America

4.2 Regulations

- 49 CFR Parts 27, 37 & 38: U.S. Department of Transportation regulations implementing the transportation provisions of the ADA:
  - 49 CFR Part 27, Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance
  - 49 CFR Part 37, Transportation Services for Individuals with Disabilities (ADA)
  - 49 CFR Part 38, Americans with Disabilities Act (ADA) Accessibility Specifications for Transportation Vehicles
- These regulations are likely to have a significant impact on the procurement process continuing through the manufacture of the vehicles:
  - 49 CFR Part 661, Buy America Requirements
  - 49 CFR Part 663, Pre-Award and Post-Delivery Audits of Rolling Stock Purchases

4.3 FTA Circulars

- C 4220.1F, Third Party Contracting Guidance
- C 9030.1E, Urbanized Area Formula Program: Program Guidance and Application Instructions

4.4 Guidance

- Buy America Handbook: Conducting Pre-Award and Post-Delivery Audits for Rolling Stock Procurements
- Department of Transportation Disability Law Guidance: Full-Length, Level-Boarding Platforms in New Commuter and Intercity Rail Stations (2005)
- FTA's Best Practices Procurement Manual (2016)

4.5 Oversight Procedures

- OP 35: ADA Review

5.0 PROJECT SPONSOR SUBMITTALS

In support of this review, the PMOC shall obtain and study the documents listed below. Under 49 U.S.C. 5325(g), 18 CFR 18.36(i), and 49 CFR 633.17, the PMOC should have access to all supplier submittals. This includes the following:.

- Environmental document;
- Project description - grant application;
- Project (vehicle) specifications;
- Procurement solicitations, technical responses, and evaluations;
- List of drawings and supporting information on analysis and testing, including proof of design, maintainability, operability, safety, serviceability, and reliability; configuration control, and management;
- Testing program plan;
- Quality Assurance and Quality Control Plan (QA/QC) for vehicles (and supporting documents);
- Vehicle history books; and
- Safety and Security Certification Plans and Certifiable Items List (CIL).

The project sponsor should include appropriate standards to ensure that vehicles comply with all Federal and state regulations. Environmental and performance standards should be explicit and appropriate for the locale.

6.0 SCOPE OF WORK

In performance of the reviews below and following the checklist in Appendix B, the PMOC should report discrepancies and make suggestions for correction as appropriate. The PMOC should then follow up and report on the corrective actions taken by project sponsor. The PMOC should pay particular attention to those issues which may be identified in each stage of the procurement process.

- Cost: Issues impacting cost as related to the use of technology, deviation from industry accepted designs, contract packaging, and specification enforcement;
- Schedule: Issues potentially impacting schedule, and issues actually impacting schedule;
- Vehicle quality and safety issues;
- Vehicle reliability, availability, and maintainability;
- Issues impacting vehicle operability;
- Faulty or unreliable vehicle designs or systems;
- Known component or material deficiencies and availability of replacement parts; and
- Other issues, such as:
    - Payments to vendors (slow or no payments);
    - Commonality/compatibility with the existing vehicles; and
    - Interface issues with other elements of the transit system.

6.1 Planning and Solicitation

At this stage the PMOC should review concerns resulting from the National Environmental Policy Act (NEPA) process and the engineering phase. The PMOC must also review the portions of the

procurement process leading up to Vendor Selection using Invitation for Bid (IFB), two-step procurement, or Best Value procurement using competitive negotiations. The review would include the following documentation:

- Environmental documents
- Project Description–Grant Application
- Technical specifications
- Any proposed Contract Document Requirement Lists (CDRLs)
- Test Program Plans
- Design drawings and design criteria
- Quality Assurance (QA) requirements
- Technology assessments
- Requests for Expressions of Interest (RFEIs)
- Related Environmental Impact Statements (EIS)
- Contract Terms and Conditions
  - General conditions
  - Special provisions
  - Compensation provisions
  - Sample contracts
  - Bid forms
  - Contractor questionnaires
- Request for Proposals (RFPs)
- Source Selection Procedure
- IFB
- Instructions to proposers
- Minutes of pre-proposal conferences
- Any other documentation that ensures appropriate technological and financially responsible procurement of rolling stock.

The PMOC should evaluate the above documentation and process for impacts as identified above.

- The PMOC shall confirm that the intended vehicle does not potentially conflict with statements in the environmental documents.
- The PMOC shall review the design documents.
- The PMOC shall consider how well the proposed vehicle fulfills the project sponsor's stated purpose of the project and complies with applicable statutes and regulations. Considerations include:
  - Operational requirements;
  - Vehicle procurement cost;
  - Maintenance intentions; and
  - Prospects for follow-on procurements.
- The PMOC shall review the following:
  - RFP or bid package; and

- Solicitation and evaluation process, including vehicle specification and terms and conditions.

6.2 Vendor Selection

At this stage the PMOC should review the vendor selection process, which includes:

- Review of contractor proposals;
- Completed contractor questionnaires;
- Any Best and Final Offers (BAFOs);
- Proposal evaluations process;
- Completed Price Proposal (or Bid) Forms;
- Proposal questions and responses;
- Pre-award site survey(s);
- Pre-award Buy America Audit or any other documentation that ensures appropriate technological and financially responsible procurement of rolling stock.

The PMOC should evaluate the above documentation and process for impacts as identified above and to:

(a) Determine that the selected vendor meets the qualification requirements;
(b) Ensure the integrity of the proposal evaluation criteria and process;
(c) Monitor the contract negotiation process and agreed terms;
(d) Assure that the contract vehicle options meet the project sponsor's needs;
(e) Verify that a Pre-Award Buy America audit is compliant; and
(f) Monitor any Post-award, Pre-initial Notice to Proceed (NTP) Conference.

6.3 Design, Manufacturing and Testing

As part of the review of the Design, Manufacturing and Testing process, the PMOC should review the project sponsor's management of and processes for review and approval of the vehicle manufacturer's design:

- Production schedule;
- Materials;
- Subsystems;
- Vendors;
- QA/QC plans and inspection forms;
- Hold points for project sponsor inspections/approvals;
- First Article Inspection (FAI) procedures and schedule;
- Vehicle History Book Development;
- CDRL submission and approval; and
- The verification of adherence to safety, security, Buy America Audit, and Americans with Disabilities Act (ADA) requirements.

In addition, for rail vehicles, the PMOC should conduct periodic reviews and oversight of the following:

- Interface coordination between vehicle design and train control;
- Traction power;
- Communication;
- Track; and
- Wayside and related systems design.

The PMOC should also review and provide oversight of how the project sponsor manages, reviews, and approves the following:

- Vehicle manufacturer's qualification and production conformance test plans (including static and dynamic testing);
- Execution of those plans;
- Handling of non-compliant test results;
- Retesting; and
- Acceptance of the vehicle structure, interior, propulsion and braking systems, doors, and all other vehicle systems.

The PMOC should also complete the following steps:

- Review the CDRLs to determine whether they address all the characteristics to be demonstrated through analysis and testing, including proof of design, maintainability, operability, safety, serviceability, and reliability. The PMOC must closely monitor the configuration controls and management to enable ongoing and timely procurement updates and schedule performance.
- The PMOC shall review the Test Program Plan and supporting analysis and testing information to ensure the vehicle and its systems are integrated per specifications, including with the vehicle operating environment elements. The PMOC must assure that, between test and analysis, the supplier will demonstrate full compliance with the project sponsor's design specification.
- The PMOC shall review and monitor the project sponsor's final Buy America Audit.
- The PMOC shall review the project sponsor's QA plan to ensure the vehicle manufacturer and suppliers' QA/QC will be performed under adequate surveillance.

6.4 Acceptance, Commissioning, and Readiness for Revenue Service

At this final stage of the vehicle procurement process, the PMOC should review acceptance and commissioning activities and provide oversight related to project sponsor's planned management of and processes for receipt of vehicles;

- Static and dynamic (on site) qualification/acceptance testing plans and procedures;
- Identification process for needed modifications and modification management process;
- Systems integration and interface compatibility testing (integrated testing) with civil infrastructure and wayside systems;
- Commissioning and start-up operations testing (including pre-revenue);
- Acceptance and stocking of spare parts;
- Vehicle manufacturer and vendor manuals and training delivery;

- Conditional and final acceptance requirements;
- Warranty management;
- Delivery of Vehicle History Books; and
- Safety and security certification of each vehicle.

The PMOC shall review the following:

- Qualification and production conformance test plans to determine whether they address all the characteristics to be demonstrated through analysis and testing, including:
  - Proof of design;
  - Maintainability;
  - Operability;
  - Safety;
  - Serviceability; and
  - Reliability.
- The PMOC must closely monitor the integrated testing process to ensure delivery of a fully functioning transit system within the scope of the project definition.
- The PMOC shall review the vehicle manuals and training programs to make sure the project sponsor is prepared to place vehicles into revenue service. The PMOC shall mesh the vehicle manuals and training programs with other plans to be delivered, including the Bus and Rail Fleet Management Plan and the Operations and Maintenance Plan.
- The PMOC shall review the Safety and Security Certification process for all vehicles to ensure compliance to the Safety and Security Implementation Plan and the addressing of all identified items on the CIL.

7.0 REPORTS, PAPERS, PRESENTATIONS

The PMOC shall provide the COR/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.

APPENDIX A: ACCEPTABLE QUALITY LEVEL

	Desired Outcome	Performance Requirement	Checklist	Acceptable Quality Level	Performance Measure	Monitoring Method
1	The Project Management Oversight Contractor (PMOC) shall review the status of the project sponsor's procurements of road and rail vehicles.	R1a. The PMOC shall develop and document a process to review and analyze the project sponsor's procurements of road and rail vehicles.	☐	Q1a. Process exists and has been followed.	M1a. There is evidence of a documented process that does not duplicate work performed by the project sponsor or their consultants.	MM1a. Periodic review by the Federal Transit Administration (FTA)or its agent.
		R1b. The PMOC shall use their process to validate the thoroughness of road and rail procurements at all phases of the project.	☐	Q1b. Assessment must be made and the PMOC provides internal verification that the process as documented has been followed.	M1b. There is a documented assessment of road and rail vehicle procurements.	MM1b. Periodic review by FTA or its agent.
2	The PMOC shall oversee the project sponsor's procurements of road and rail vehicles to ensure that FTA grants are used to obtain best value.	R2a. The PMOC shall continually assure that FTA's interests are protected economically through review and analysis of the project sponsor's procurement of intended vehicle for: 1. Consistency with Environmental Impact Statements (EIS)/Environmental Impact Reports (EIR);	☐	Q2b. Professional opinion of compliance through project sponsor's submittals protecting FTA's economic interests.	M2b. There is documented evidence of a thorough review of the project sponsor's submittals and design documentation, supported by a professional opinion.	MM2b. Periodic review by FTA or its agent.

	Desired Outcome	Performance Requirement	Checklist	Acceptable Quality Level	Performance Measure	Monitoring Method
		2. Needs identified in Grant Application; 3. Compliance with Contract Document Requirement Lists (CDRLs); 4. Assurance that the Test Program Plan demonstrates full compliance with the project sponsor's design specification; 5. Adequacy of design documents; and 6. Adequacy of the Quality Assurance (QA) Plan.				
		R2b. The PMOC shall continually monitor the status of the project sponsor's procurements of road and rail vehicles to assure that: 1) The vehicles are a good fit for the intended use, 2) The vehicles represent good value, 3) The vehicles are assured to meet specification requirements, and 4) The project sponsor has considered the most appropriate technologies.	☐	Q2c. Professional opinion pertaining to vehicles meeting project sponsor needs and specification requirements at appropriate levels of technology.	M2b. There is documented evidence of continued monitoring and review, discussion of discrepancies and reporting of intended corrective action, supported by a professional opinion.	MM2b. Periodic review by FTA or its agent.

	Desired Outcome	Performance Requirement	Checklist	Acceptable Quality Level	Performance Measure	Monitoring Method
		R2c. The PMOC shall identify and report areas of the project sponsor's procurements of road and rail vehicles that require corrective action and suggest corrections as appropriate.	☐	Q2c. Professional opinion pertaining to corrective actions needed to assure protection of FTA's interests.	M2c. There is documented evidence of continued monitoring and review, discussion of needed corrective action with project sponsor upon FTA approval, and reporting of needed corrective action to FTA, supported by a professional opinion.	MM2c. Periodic review by FTA or its agent.
3	The PMOC shall document their findings, professional opinions, and recommendations in a report to FTA.	R3. The PMOC shall present their findings, conclusions, and recommendations to FTA and, upon approval, reconcile those recommendations with the project sponsor to the extent possible.	☐	Q3. 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.	M3. There is documented evidence of the PMOC's findings, conclusions, recommendations, and presentation.	MM3b. Periodic review by FTA or its agent.

APPENDIX B: BUS AND RAIL VEHICLE TECHNICAL REVIEW CHECKLIST

Section	Issue	Description
6.1		**Planning and Solicitation**
	1	The Project Management Oversight Contractor (PMOC)shall confirm that the intended vehicle does not potentially conflict with statements in the environmental documents. Describe any conflicts between environmental documents and intended vehicle and project sponsor's intended response.
	2	The PMOC shall consider how well the proposed vehicle: • Fulfills the project sponsor's stated purpose for the project; • Complies with applicable statutes and regulations; and • Fills operational needs.
	3	Will the specified vehicle fit the project sponsor's budget and resources available?
	4	Will additional vehicles be required and, if so, has the process taken follow-on procurements into account?
	5	Review draft specification and the final specifications: • Do the payment schedule and the work schedule match? • Will key technical documents be approved before hardware delivery? • Can the vehicles be maintained with the resources at the project sponsor's disposal? • Will the specified training program enable the project sponsor to perform vehicle operations and maintenance? • Are adequate measures taken to protect the project sponsor in terms of liquidated damages, weight penalties, design conformance, warranty provisions, and delivery of "as-built" drawings?

Section	Issue	Description
	6	Review Contract Terms and Conditions: • Did the project sponsor include the appropriate Federal Transit Administration (FTA) contract clauses? • Did the project sponsor follow appropriate contract methods to allow for competition? Do the methods yield the best price for the technology and vehicle chosen? • Has the project sponsor identified appropriate general conditions, special provisions, and technical provisions? • Does the payment schedule (specifically the front-loaded payment schedule) adequately leverage compliance with specifications? Does it ensure that the project sponsor holds sufficient retainage at Preliminary Design Review (PDR), Final Design Review (FDR), First Article Inspections (FAI), Performance Testing, Vehicle Acceptance, and the warrantee period for supplier and sub-suppliers?
	7.	Request for Proposals (RFP) Solicitation: Was a Request for Expressions of Interest (RFEI) distributed? Is there adequate competition for the selected technology/vehicle? Did the pre-proposal conference take place? Were all questions answered fully? Did the project sponsor utilize the contractor questionnaire?
6.2		**Vendor Selection**
	1	The PMOC should review the contractor's technical and price proposals, any bid forms, questionnaires, the Best and Final Offer (BAFO), and other related documents to validate open and fair competition as well as technological and financially responsible vendor selection.
	2	The PMOC should determine that the selected vendor meets specified requirements.
	3	The PMOC should monitor the negotiation process and agreed terms.
	4	The PMOC should assure that any contract options meet the project sponsor's needs.
	5	The PMOC should verify Pre-Award Buy America Audit.
	6	The PMOC should monitor Notice to Proceed (NTP), post-award conferences.

Section	Issue	Description
6.3		Design, Manufacturing, and Testing
	1	Contract Deliverables Requirements List: Does the Contract Document Requirement List (CDRL) assure that all critical performance issues are adequately analyzed, including: • Structural strength and fatigue resistance of rail vehicle body and truck or bus vehicle frame and chassis; • Brake performance; • Propulsion performance; • Dynamic performance; • Heating, Ventilation, and Air Conditioning (HVAC) performance; • Dynamic envelope, loading gauge, and clearance requirements; • Controls and interlocks; • Weight management; • Safety management; • Reliability management; • Availability management; and • Maintainability and mean time to repair. Does the CDRL schedule assure that performance is proved by analysis before the start of sub-assembly production?

Section	Issue	Description
	2	Test Program Plan and Procedures: • Are critical specified performance criteria demonstrated by test, by acceptable analysis, or prior agency certified test? • Are acceptance tests sufficient to demonstrate that each vehicle is compliant through testing of representative criteria? • Is the test program valid for the vehicle and the intended infrastructure? For instance, are new vehicle designs on new infrastructure treated to a different approach than existing vehicle designs (such as a full system test, for example)? Existing vehicle designs that were previously tested on the existing infrastructure might only require vehicle testing to assure satisfactory interfacing with the existing infrastructure. • Do the qualification and acceptance test criteria ensure the vehicles "as delivered" will meet the project sponsor's needs within acceptable boundaries without having to repeat qualification tests? • Do test procedures refer to applicable sections of the specification? • Are test procedures up-to-date and do they reflect the latest design configurations? Will the test plan validate all analyses? • Will the test plan validate performance that has not been analyzed? • Will the proposed acceptance testing validate production results and fleet performance?
	3	Does the test plan and CDRL ensure that the vehicle will perform on the actual infrastructure?

Section	Issue	Description
	4	Review design documents to answer the following questions: • Do the documents address the intended issues? • Is there a properly sequenced and efficient plan of design to ensure compliance and mitigate against rework? • Are assumptions valid and proven? • Do analytical methods meet current professional standards? • Is the project sponsor's review by people in the field who are competent and capable of detecting and commenting on design and analytical errors? • Are drawing and configuration control designed to ensure consistency throughout the fleet, including option orders? • Is PDR consistent with the specification? • Is FDR consistent with specification, with all issues of design and analysis closed? • Does the FAI validate all items of production? Does analysis and test precede production to minimize changes after production has started? • Are waivers for existing designs evaluated fully to ensure that the waivers are based on proven in-service technology used in demonstrably similar systems? • Are project technical issues being resolved/mitigated? Will open items be resolved prior to the next payment?

Section	Issue	Description
	5	Review the project sponsor's Quality Assurance (QA) Plan and the vehicle manufacturer's Quality Program Plan to answer the following questions: • Do the vehicle manufacturer and its supplier's QA program and the project sponsor's oversight ensure delivery of the vehicle "as designed"? • Does the project sponsor have qualified inspector(s) on site during manufacturing, including during pre-production of jigs and fixtures? • Do the project sponsor and vehicle manufacturer reporting relationships provide sufficient independence to allow issues to be raised? • Are protocols in place for dealing with discrepant or non-conformant products or materials, to quarantine them before proper disposal? Does the project sponsor's inspector have a voice in disposal of discrepant or non-conformant products or materials? • Is the schedule such that choices between corrective action and meeting the schedule do not compromise vehicle quality? • Have the vehicle manufacturer and the project sponsor conducted quality audits on a pre-determined schedule?
	6	Are FAIs complete? Do they validate intended design function and performance?
	7	Is the rail vehicle adequately integrated with other systems, such as train control, traction power, communications, wayside facilities, shops, and shop equipment?
	8	Have Buy America Audits been completed and validated?
6.4		**Acceptance, Commissioning and Readiness for Revenue Service**
	1	Are the qualification and acceptance tests a full validation of vehicle performance?
	2	Does vehicle acceptance validate the fleet performance within acceptable tolerances?
	3	Have vehicle history books been completed? Do they represent the configuration of the as-built vehicles supplied?

Section	Issue	Description
	4	Have systems integration tests been completed satisfactorily with a validated vehicle configuration?
	5	Have spare parts, manuals, and training been supplied in support of revenue service?
	6	Are all open items and warranty or fleet defect issues being addressed?
	7	Is the Safety and Security Certifiable Items List (CIL) completed or satisfactorily disposed to allow for safe and secure operation?
	8	Have reliability, maintainability, and other proof of design been addressed or completed?

Note: The PMOC may supplement these checklists as needed.

APPENDIX C: ACRONYMS

Acronym	Term
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

Acronym	Term
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

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

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

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

Acronym	Term
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

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