

U.S. DOT Federal Transit Administration TPM-20 Office of Capital Project Management Project Management Oversight

#### Oversight Procedure 20 — Project Management Plan 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) with regards to the project sponsor's Project Management Plan (PMP) submission at the milestones noted below.

The PMP is the overarching project implementation plan that spans the entire project period. It should be a guide for action. It should describe the approved policies, practices, and procedures related to the management, design, and construction of the major capital transit project. The PMP elements should be tailored to set forth the specific action plan for implementing the project and managing the cost, schedule, quality, and associated risks.

FTA expects the project sponsor's PMP to be based on a thorough understanding of riskinformed and sound project management strategies and plans. The PMOC's review of the PMP enables FTA to determine the adequacy of the project sponsor's legal and administrative capabilities. It also allows the PMOC to assess the project sponsor's management capacity and capability to effectively and efficiently execute the project in all aspects including planning, design, construction, testing, and revenue operations.

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

Because projects across the Nation frequently experienced cost and schedule increases, and actual ridership was often less than forecasted, Congress called for FTA to establish a Project Management Oversight (PMO) program through the Surface Transportation and Uniform Relocation Assistance Act of 1987. This Act and subsequent amendments set forth the requirement for FTA project sponsors to produce a PMP.

In 1989, FTA finalized a regulation responding to this legislation. This regulation is called the PMO Rule and is found at 49 CFR Part 633. The regulation lists the contents of a PMP at  $\underline{49}$  CFR 633.25:

"At a minimum, a recipient's project management plan shall include:

- (a) "A description of adequate recipient staff organization completes with well-defined reporting relationships, statements of functional responsibilities, job descriptions, and job qualifications;
- (b) "A budget covering the project management organization, appropriate consultants, property acquisition, utility relocation, systems demonstration staff, audits, and such miscellaneous costs as the recipient may be prepared to justify;

- (c) "A construction schedule;
- (d) "A document control procedure and recordkeeping system;
- (e) "A change order procedure, which includes a documented, systematic approach to the handling of construction change orders;
- (f) "A description of organizational structures, management skills, and staffing levels required throughout the construction phase;
- (g) "Quality control and quality assurance programs, which define functions, procedures, and responsibilities for construction and for system installation and integration of system components;
- (h) "Material testing policies and procedures;
- (i) "Plan for internal reporting requirements including cost and schedule control procedures; and
- (j) "Criteria and procedures to be used for testing the operational system or its major components;"

Title 49 U.S. Code (U.S.C.) Section 5327 Project Management Oversight follows these PMP components and added the following requirements:

"(11) Periodic updates of the plan, especially related to project budget and project schedule, financing, ridership estimates, and the status of local efforts to enhance ridership where ridership estimates partly depend on the success of those efforts;

"(12) The recipient's commitment to submit a project budget and project schedule to the Secretary each month; and

49 U.S.C. Section 5327 states: "Project Management Plan Requirements – Section 5327(a) is amended..." to include

"(13) safety and security management."

The initial phases for new fixed guideway capital projects or core capacity improvement projects are defined in 49 U.S.C. Section 5309 Fixed Guideway Capital Investment Grants. These phases are "Project Development" and "Engineering" and can be summarized as follows:

#### **Project Development Phase**

- (a) A project enters into the Project Development Phase when
  - The project sponsor submits a letter to FTA describing the project and requests entry into the project development phase;
  - Initiates activities required to be carried out under the National Environmental Policy Act of 1969 (42 U.S.C. et seq.) with respect to the project; and
  - FTA

- Responds to the project sponsor in writing and within 45 days, indicating whether the information the project sponsor provided is sufficient to enter into the Project Development Phase, including, when necessary, a detailed description of any information deemed insufficient; and
- Provides concurrent notice to Congress that the project is entering the project development phase.
- (b) During the Project Development Phase, project sponsors shall develop sufficient information for FTA to make findings of project justification, policies, and land use patterns that promote public transportation and local financial commitment.
- (c) Not later than two years after the date on which a project enters into the Project Development phase, the project sponsor shall complete the activities required to obtain a project rating and submit completed documentation to FTA.

#### **Engineering Phase**

- (a) A project may advance into the engineering phase upon completion of activities required under NEPA<sup>1</sup> as demonstrated by a Record of Decision with respect to the project, a finding that the project has no significant impact, or a determination that the project is categorically excluded; and only if FTA determines that the project is selected as the locally preferred alternative, is adopted into metropolitan transportation plan, is justified, and is supported by an acceptable degree of local financial commitment.
- (b) For consideration for an **FFGA** and readiness to proceed into the **construction phase**, the project sponsor must have fully developed the PMP and have demonstrated full compliance or revisions to the PMP that reflect current, appropriate, and effective management practices.

FTA <u>Full-Funding Grant Agreements Guidance</u> Circular 5200.1A (C 5200.1A) provides project sponsors with guidance and direction on the development of Full Funding Grant Agreements (FFGAs). This circular defines the PMP as a written plan developed and implemented to cover the "Project sponsor's detailed project management strategy to control the project budget, schedule, and quality." It states the following:

"By the time of submittal of the application for an FFGA, the Project Management Plan must explicitly address, at a minimum, each of the following: the applicant's staffing and organization, budget, schedule, document control, change orders, construction staffing, quality control and quality assurance, materials testing, internal reporting, property acquisition, operational systems testing, and safety and security. Also, the Project Management Plan must require that the plan itself will be updated periodically. The Project Management Plan also must require the applicant to submit a project schedule and budget to FTA each month."

The requirements for the PMP are also defined in the FTA Project and Construction

<sup>&</sup>lt;sup>1</sup>National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.)

*Management Guidelines (PCMG)* (2016). The PCMG provides guidance to project sponsors on project management principles and practices and summarizes FTA requirements, best practices, and research results for managing transit capital project development. The PCMG recommends a phased project management approach that starts with inputs, establishes a baseline, refines project definition, and generates This outputs that become the inputs and baseline for the subsequent phase. The PCMG suggests that project sponsors should define project requirements, allocate resources, perform project activities, monitor progress, and make adjustments to ensure timely gathering of information and decision making. The PCMG calls for project sponsors to apply the management principles and guidance embodied in the PCMG to their unique project environment. PCMG Section 2.2.3 lists the 13 required PMP elements, mirroring the language in the law.

### **3.0 OBJECTIVES**

It is essential that the PMOC understand that it is the project sponsor's responsibility to prepare the PMP and execute the project. FTA and its PMOC are responsible for overseeing the work, providing suggestions for improvement, and confirming compliance with Federal laws, regulations, and policies.

The PMOC's PMP review provides major input to FTA, which assists FTA in determining the adequacy of the project sponsor's legal and administrative capabilities as well as the management capacity and capability to effectively and efficiently execute the planning, design, and implementation of the project.

The objectives of this procedure are to guide the PMOC to

- 1. Validate the usefulness of the PMP as an overarching project implementation plan;
- 2. Assess the adequacy and soundness of the elements and subplans contained within the PMP at required points during the project and ensure such elements are complete to the level necessary for effective and efficient execution of the project given the project phase; and
- 3. Document their findings, professional opinions, and recommendations in reports to FTA.

#### 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

• <u>Infrastructure and Investment Jobs Act (IIJA)</u>, Public Law 117-58, effective November 15, 2021 (also known as the "Bipartisan Infrastructure Law")

#### 4.2 United States Code

• FTA statutes, 49 U.S.C. Chapter 53

### 4.3 Regulations

- <u>23 CFR Part 450</u>, <u>Subpart C</u>, Metropolitan Planning (Joint FTA/FHWA regulations)
- <u>23 CFR Part 771</u>, Environmental Impact and Related Procedures (Joint FTA/FHWA regulations)
- <u>49 CFR Part 24</u>, Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs
- <u>49 CFR Part 611</u>, Major Capital Investment Projects
- <u>49 CFR Part 633</u>, Project Management Oversight

# 4.4 FTA Circulars

- <u>Circular 4220.1F</u>, Third Party Contracting Guidance
- <u>Circular 5010.1E</u>, Grant Management Requirements (or most recent version)
- <u>Circular 5200.1A</u>, Full Funding Grant Agreements Guidance
- <u>Circular 5800.1</u>, Safety and Security Management Guidance for Major Capital Projects
- FTA Master Agreement (updated yearly; see the <u>FTA Grant Agreements web page</u> for the most recent version)

# 4.5 Guidance

- <u>Guidance for Transit Financial Plans</u> (2000)
- <u>Reporting Instructions for the Section 5309 New Starts Criteria</u> (2023)
- <u>Quality Management System Guidelines</u> (2019)
- Project and Construction Management Guidelines (2016)
- <u>Construction Project Management Handbook</u> (2016)
- TCRP Report 131: <u>A Guidebook for the Evaluation of Project Delivery Methods</u> (2009)

# 5.0 PROJECT SPONSOR SUBMITTALS

The project sponsor is required to formally submit the PMP to FTA at the following milestones of the project:

- For the Readiness Review to enter the engineering phase
- For the Readiness Review for Full Funding Grant Agreement (FFGA)
- When 40 percent of construction value has been bid and contracted
- At revenue operations [as a retrospective or as-built]

Depending on the length of time between each milestone, the project sponsor may choose to submit documents in the interim. FTA may require interim submittals when any major section of the PMP has been significantly affected (e.g., major policies or procedures have changed based on changes to the procurement methods, manner in which cost or schedule are tracked, major organizational or responsibility changes, program changes, logistics changes, scope changes, and other similar changes.

Appendix B provides the typical table of contents for a PMP. The PMP elements and subplans are explained in greater detail in Section 6.0 below. The project sponsor should appropriately

scale the PMP to the size of the project. The treatment of elements and subplans may vary with the size and complexity of the project. However, a Safety and Security Management Plan is always required.

### 6.0 SCOPE OF WORK

### 6.1 PMP Element and Subplan Requirements by Phase

Based on the table of contents in Appendix B, the following sections provide supplemental information regarding the PMOC's review of the PMP at each of the three review milestones and at interim points as directed by the Contracting Officer's Representative (COR)/Alternate Contracting Officer's Representative (ACOR). At these milestones, the project sponsor is expected to provide FTA with a PMP developed to the level of completeness indicated. If the PMOC determines an element of the PMP is not complete to a satisfactory level, the PMOC should recommend to FTA that the element be returned for revision and resubmittal. The PMOC will be required to re-review such elements. Also, if an unanticipated project event, for example a change in organizational structure warrants the revision of an element or elements of a PMP, another review by the PMOC will be required.

The PMOC shall become familiar with FTA's guidance on PMP development, which can be found in the Project & Construction — Management Guidelines and Circular 5010.1E Grant Management Requirements (or most recent version). The PMOC should understand that the project sponsor is required to develop and implement a PMP that demonstrates their management capacity and capability to:

- Effectively and efficiently manage the implementation of the proposed project;
- Provide, directly or by contract, adequate professional, managerial, and technical expertise for the project's design, construction, and start-up, as well as qualified services for inspection and supervision of construction, testing, and start up work;
- Assure conformance with grant agreements, applicable statutes, regulations, codes, ordinances, and safety standards;
- Recognize FTA's role and the PMOC's role in performing oversight of the project;
- Establish and maintain adequate internal controls regarding system operations, service schedules, and financial reporting for capital assets and operations.

### **Cursory Review**

Upon receiving the PMP, the PMOC shall quickly check it for adequacy and completeness. If the PMP outline appears unsatisfactory, the PMOC shall recommend that FTA return the PMP to the project sponsor for revision and resubmittal.

### **Full Review**

In the PMOC's full review, they shall assess, evaluate, and characterize the PMP; shall consider the extent, nature, level of detail, and quality of the project sponsor's approach as portrayed by the entire PMP and in each PMP element. The PMOC's review report should provide FTA with findings, analyses, professional opinions, and recommendations in a clear and understandable

format. Each element of the PMP appropriate and required for this phase in the project's development shall be addressed. If an element is recommended for acceptance, revision, or rejection, this recommendation shall be clearly noted in the PMP report.

### 6.2 Technical Assistance/Oversight Reviews During Project Development

During Project Development, FTA may perform technical assistance workshops and reviews and assign FTA staff or a PMOC. The reviews provide the project sponsor guidance to meet the requirements to enter engineering and provide FTA with information about the project's strengths and weaknesses to timely complete the Readiness Review for entry into the Engineering Phase of the project. FTA may recommend that the PMOC hold a workshop to help establish roles and responsibilities and define baseline standards of performance related to the management of the project. Few, if any, projects project sponsors have all the capabilities or authorities to plan, design, and implement a major capital project by themselves. Bringing the project sponsor's staff, consultants, the PMOC team (including appropriate sub- contractors), and relevant third parties together in a workshop early in Project Development can help to shape the project management approach. Through workshop discussions, all parties can gain a better understanding of each other's requirements, responsibilities, and authorities as related to the project.

Examples of workshop participants are other Federal transportation representatives (FRA, FAA), other passenger transport agencies (transit, intercity rail and bus, airport authorities), State DOTs, city departments of streets, utilities, zoning/permitting, emergency responders, and other stakeholders.

Workshop discussions can lay the foundation for the project management approach that is documented in the PMP. FTA can participate as well to set forth the Federal requirements for a major capital transit investment and explain FTA's oversight process.

In a workshop setting, vital project implementation topics can be put on the table and fully explored. Examples of topics include real estate requirements, policies, and procedures (i.e., appraisal requirements; eminent domain authority and protocols); alternative delivery contracting authorities and protocols; negotiated contract sum vs. low bid; permitting submittal requirements and protocols; community concerns and outreach plans; and other appropriate implementation topics. In the workshop, a partnering-type process can be established that can help to weather future political shifts and agency leadership changes.

### 6.3 Review for Entry into Engineering

It is important to recognize the expected status of the project when preparing for the Readiness Review for Entry into Engineering:

- NEPA process is complete
- The project has an acceptable rating (reference 49 CFR 611.207)
- The elements listed in Appendix B of OP 51 "Checklist for Approval to Enter Engineering" are complete

Within the PMP, the project sponsor should delineate specifics for administrative and technical activities, environmental assessment work, property acquisition and relocation, and community relations, and delineate the process and activities it will employ to ensure completeness and

accuracy of the Project Development phase work so as to meet FTA requirements for technical and financial readiness for Engineering and future project development phases.

The PMP review at this milestone shall focus on assessing the project sponsor's capability and project management approach to take the project successfully from Project Development through Engineering and through award of the FFGA. In addition, the PMP at this phase should demonstrate a well-conceived plan for project bidding and construction.

The PMOC shall assess and evaluate the degree to which the PMP elements 1) mirror and complement the project sponsor's overall management strategy and 2) are effective in minimizing scope changes, cost increases, and schedule extensions. The PMP covers all material project activities over the entire project life and the PMP constitutes evidence of the project sponsor's capacity and capability to manage the project. Given these, the PMOC's review of the PMP is a critical input to FTA's finding of whether the project sponsor is eligible for an engineering grant in accordance with 49 CFR 611.201, New Starts Eligibility.

The PMOC shall review and summarize their findings and opinions and present recommendations with respect to the adequacy and soundness of the plans and procedures for:

- <u>NEPA Coordination</u>. As the NEPA determination will have been made, the PMOC should verify that the project sponsor's plan for managing and implementing mitigation actions is in place. The PMOC should ensure that the project sponsor has incorporated environmental mitigation work into the design documents, cost estimates, and schedules. This should include identifying the environmental site assessments that will need to be completed before the real estate process is started. If the project documents are not advanced enough to incorporate the environmental mitigation work, the PMOC shall ensure this is checked at the next milestone review.
- <u>Design Control</u>. The review should confirm that the project sponsor has established and implemented appropriate plans and procedures for design control including reviews for design, value engineering, life cycle cost considerations, constructability, and safety. The review should confirm that the ridership forecast is supported by the project operations plan and transit capacity. Procedures for the resolution of drawing and specification review comments should be in place; these procedures should be in use by all design team members. The PMOC should check that change control procedures are established to ensure that changes are adequately carried through all drawings.
- <u>Property Acquisitions and Relocation</u>. The PMOC should review and assess the project sponsor's property acquisition and relocations policies and procedures including, but not limited to, the Real Estate Acquisition Management Plan.
- <u>Project Controls</u>. The PMOC should review the project sponsor's document control, cost, schedule, and control procedures with the project team and third parties and assess whether these procedures are in place and well followed. The PMOC should review the baselines for the capital cost estimate and schedule and assess the project sponsor's approach and plans for identifying risk, assessing, and mitigating risk, and the developing adequate contingencies. The risk management plan shall incorporate mitigation measures, including maintenance of contingency amounts for cost and schedule at project

hold points. It is important to note that this PMP review is not a risk review. Procedures for performing risk and contingency reviews are contained in the Risk Management Review, OP-40. In addition, the PMOC should review procedures for cost-sharing agreements with outside funding partners and check that the schedule for receiving funds is consistent with the requirements of the project schedule.

- <u>Project Delivery and Procurement</u>. The PMOC shall review the project sponsor's plan for project delivery and procurement. The PMOC shall evaluate the soundness and adequacy of the project sponsor's approach to bidding and awarding of contracts, procurement of materials, equipment and vehicles and the construction administration and construction management of the Project. The PMOC should verify that the selected project delivery methods and contract packaging strategies are reflected in project schedules and cost estimates.
- <u>PMP Subplans</u>. The PMOC shall review for adequacy and soundness the project sponsor's PMP subplans, including:
  - Management Capacity and Capability documents (OP 21);
  - Safety and Security Management Plan (OP 22);
  - Real Estate Acquisition and Management Plan (OP 23);
  - Quality Assurance/Quality Control Plan (OP 24);
  - Fleet Management Plans (OP 37)
  - Risk and Contingency Management Plan (OP 40)

The PMOC shall analyze these subplans and make suggestions for improvement to the project sponsor along with recommendations for resolving issues surrounding the development and implementation of these plans.

### 6.4 Review During Engineering

This PMP review should assess the project sponsor's basis for the project, how well the project sponsor has addressed the environmental review requirement, and how robust the project sponsor's management plan is to take the project successfully from Project Development through engineering. Further, it is critical that the PMP, at this phase, demonstrate the project sponsor's consideration and careful planning of risk and contingency management plans and controls.

The PMOC's review should fully assess the degree to which the PMP describes the processes and methods needed to implement the project and the interfaces that will be created between various participants. The PMOC shall review and summarize their findings and opinions and provide recommendations with respect to the adequacy and soundness of the project sponsor's plans and procedures for:

- Environmental assessment, including environmental site assessments
- Design control
- Project controls
- Project delivery and procurement
- PMP subplans including (refer to other OPs on each of these subplans):
  - Project sponsor's Management Capacity and Capability Plan (OP 21)

- Quality Assurance / Quality Control (QA/QC) Plan (OP 24)
- Safety and Security Management Plan
- Real Estate Acquisition and Management Plan
- Fleet Management Plans
- Risk and Contingency Management Plan

### 6.5 Readiness Review for FFGA

The requirements for an FFGA are:

- Updated PMP and subplans, which includes a risk and contingency management plan;
- Processes and procedures in place to manage the project during FFGA/construction;
- Staffing Plan that includes real estate acquisition and management, schedule and cost controls, risk management, construction management, quality assurance and quality control, safety and security management, and start-up and testing;
- Refined and updated level of project definition to support FFGA costs and schedule;
- All critical third-party agreements and permits are in place; and,
- Resolution of all remaining issues from the Engineering Review.

As a part of the FFGA Readiness Review, which should take no more than two months, the PMOC shall review the PMP to reassess the management capability of the project sponsor to successfully take the project upon award of an FFGA through bid, award, and construction, and into revenue operations.

The PMOC shall review and summarize their findings and opinions and present recommendations with respect to the adequacy and soundness of the project sponsor's PMP and subplans and procedures, and the successful implementation of such plans and procedures for:

- <u>NEPA Coordination</u>. The PMOC should confirm that the project sponsor's plan for managing and implementing mitigation actions is in place and confirm that the environmental mitigation (including environmental site assessments) work is incorporated into the design documents, cost estimates, and schedules.
- <u>Design Control</u>. The review should confirm implementation of appropriate plans and procedures for design control in all aspects. Areas of focus include level of:
  - Consistency with design criteria
  - Coordination and change control among design disciplines for drawings and specifications
  - Completeness of soils testing and site surveys
  - Coordination with third parties
  - Completeness of project documents for bidding
- <u>Project Controls</u>. The review at this stage should confirm implementation of project controls in all aspects including procedures for cost and schedule control, risk management, and dispute or conflict resolution during construction. The PMOC should again check for procedures on cost sharing (see Entry to Engineering). Risk and contingency management policies and procedures should be in place and routinely used.

- <u>Property Acquisition</u>. The review should assess whether the land acquisitions and relocation activities have been implemented in compliance with established policies and procedures and are in compliance with applicable laws and regulations. In addition, a review of the project sponsor's procedures for tracking and monitoring the status of real estate activities should be done to confirm the project sponsor's ability to meet project schedule.
- <u>Project Delivery and Procurement</u>. The review should confirm implementation of plans and procedures for project delivery and procurement. Specifically, the review should focus on the project sponsor's schedule for bidding construction packages and procuring equipment and vehicles.
- <u>Labor Relations and Policies</u>. The review should assess the establishment of these policies.
- <u>Construction of Fixed Infrastructure</u>. The review should assess the establishment of plans and procedures regarding construction administration, construction management, construction inspection, coordinating construction work by third parties, site logistics, and construction change order and shop drawing document flow and authorities.
- <u>Start-up and Revenue Operations</u>. The review should assess the establishment of plans and procedures regarding testing/commissioning, closeout of construction contracts, and training of staff.
- <u>PMP Subplans</u>. The PMOC shall review the project sponsor's PMP subplans for adequacy and soundness, including the project sponsor's Management Capacity and Capability documents, QA/QC Plan, Safety and Security Management Plan, Risk and Contingency Management Plan, Real Estate Acquisition Management Plan, and Bus and Rail Fleet Management plans. The PMOC shall analyze these subplans and provide technical assistance to the project sponsor. The PMOC shall also give the project sponsor recommendations for how to resolve issues with the development and implementation of these plans.

### 6.6 Reviews During Construction

PMP reviews should take place when approximately 40 percent of the construction has been bid awarded and again at revenue operations to serve as an as-built document. The PMOC should update their previous assessment of the capability of the project sponsor and the project sponsor's management approach to successfully take the project through completion of bidding, award, construction, and revenue operations.

The PMOC should update their evaluation of the soundness and adequacy of the project sponsor's approach to:

- Performance of environmental mitigation measures during construction.
- **Design control.** The review should check for maintenance of the project sponsor's schedule for completion of contract documents relative to the schedule for bidding and awarding of contract; and implementation of procedures established for configuration and change control of documents.

- All of the following: Project Controls, Project Delivery and Procurement, Labor Relations and Policies, and Construction procedures. The PMOC should focus on the project sponsor's implementation of plans and procedures for document control, cost, schedule and risk control, and dispute resolution. Also, the PMOC should focus on updating their assessment of the adequacy and soundness of the project sponsor's plan for start-up and testing operations including coordination, collection of materials, and staffing and training staff for operations.
- **PMP Subplans.** The PMOC should assess the implementation of established plans and procedures for the project sponsor's PMP subplans including the project sponsor Management Capacity and Capability, QA/QC, Safety and Security Management Plan, Real Estate Acquisition Management Plan, and Bus and Rail Fleet Management plans.

### 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.



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### APPENDIX A: ACCEPTABLE QUALITY LEVEL

PLACEHOLDER



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#### APPENDIX B: PMP TABLE OF CONTENTS

Symbol LegendPreliminary information required	Element to be completed	• Element to be modified or augmented with additional information as necessary
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PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
1. Basis for the Project			
Objectives of the project	•		
Description of the project	•		
Name of project sponsor and all partners involved in project development work	•		
Description of project organization with key personnel and support contractors, including safety and security, for project development	•		
	•		
Evidence of Locally Preferred Alternative adoption into the Metropolitan Planning Organization (MPO) Long Range Plan	•		
Evidence of project in the Transportation Improvement Program (TIP) or Statewide Transportation Improvement Program (STIP)	•		
Evidence of legal authority to implement the project and other legal approvals	•	0	
PMP workshop documentation (if applicable)	•		

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
2. Environmental Assessment/Mitigation Plan			
Delineation of National Environmental Policy Act (NEPA) analysis requirements /project impact analysis	•		
Description of mitigation principles	•		
Plan for management and implementation of mitigation actions	•	0	0
3. Design Control Plan			
Description of relationship between forecasted ridership, operating plan, and proposed project transit capacity in guideways, stations, and support facilities	•		
Design criteria for each discipline	•		
Schedule for the development of contract documents (including the level of development expected at each milestone for design/construction drawings, specifications, general and supplementary conditions of contracts for construction, and the Division 1)	•	0	
Design reviews for drawings and specifications		0	

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
Design Control Plan (cont.)			
Value Engineering Review /Life Cycle Review	•	0	
Coordination Review – Internal to agency and design team; external to third parties, intergovernmental, etc.; Transit-Oriented Development (TOD) and Joint Development	•	0	
Constructability Review	•	0	
Operability and Maintainability Review	•	0	
Other peer or industry reviews	•	0	
Design Change and Configuration Control of documents during Design and Construction	•		
Change Identification	•	0	
Documentation Procedures	•	0	
Review and Approval	•	0	

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
Design Control Plan (cont.)			
Plan (list and schedule) for third-party agreements and permits, including utilities, real estate, railroads, TOD/joint development, etc.	•	0	
Investigation and Testing Plan			
Plan/schedule for site surveys, geotechnical and materials investigation before/during design	•		
Plan/schedule for geotechnical and materials testing during construction	•	0	
4. Project Controls			
Document and Records Controls			
Description of document organization approach including review, distribution, storage	•	0	0
Identification of physical document location	•	0	0
Identification of electronic document control system and description of interoperability among management systems	•	0	0
Evidence of document control procedures being implemented	•	0	0
Cost Control Procedures			
Description of estimating methods/assumptions	•		
Final cost estimating methodology report	•		

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
Project Controls (Cont.)	_		
Procedures for maintaining baseline project cost through:			
Minimizing schedule delays		•	0
Managing contingencies		•	0
Implementing contracting techniques		•	0
Allocating costs		•	0
Procedures for working with construction contractors to maintain SCC cost breakdown of contract sum through construction at contract closeout.		•	0
Schedule Control Procedures			
Description of scheduling methods and assumptions	•		
Procedures for updating baseline project schedule		•	0
Procedures for keeping the project on schedule		•	0
Risk Control Procedures			

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. And/or Req. FFGA	In Bid/Award and/or Constr.
Description of risk identification procedures pertaining to project team organization, scope, cost, schedule, quality;	•	0	
Risk identification in project team; drawings; general and supplementary conditions; Div. 1, Div. 2 – 48 technical specifications			
Risk evaluation/assessment plan and procedures	•	0	
Risk control and management plan and procedures	•	0	
Contingency control and management plan and procedures including establishment of minimum contingency levels at each milestone (contingency drawdown)	•	0	0
Role of insurance	•	0	
Dispute/Conflict Resolution Plan (claims avoidance and claims resolution)			
Plan for design phases	•		
Plan for procurement	•	0	
Plan for start-up and revenue operations		•	0
Procedure delivery and procurement plan		•	0
5. Project Delivery and Procurement Plan	•		
Procedures for procurement (advertising, bidding, awarding of contracts for consultants and construction contractors, procurement for equipment, etc.)		•	0
Procurement plan and schedule (indicate project phase, durations for RFP, screening, interviews, selection, board approvals, etc.)		<b>A</b> •	0

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
Project Delivery and Procurement Plan (Cont.)			
Community outreach services	•		
Information system services	•	0	
Real estate services	•		
Project management services	•	0	
Design services	•	0	
Legal services and other services	•	0	
Construction management services	•	0	
Construction testing and inspection services	•	0	
Construction	•	0	
Preliminary selection of project delivery method (DBB, DB, CMGC etc.) (include rationale for and identification of risks inherent in selection method)	•	0	
Final selection of project delivery method	•	0	
Major contract packages – description of packages and construction sequencing	•	0	
Procurement of long lead items and pre-FFGA items or work	•	0	
Procurement of materials, equipment, vehicles including procurement in advance of construction contract	•	0	
Work by the project sponsor's own forces	•	0	
Work by third parties such as utilities, railroads, private sector, etc.	•	0	

Appendix B: PMP Table of Contents OP 20 Project Management Plan Review October 2023 Page B-7 of 9

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
Project Delivery and Procurement Plan (Cont.)			
Contracting strategy for TOD and Joint Development	•	0	0
Identification of Disadvantaged Business Enterprises (Disadvantaged Business Enterprise [DBE]) opportunities, Federal DBE, State/Local Woman-Owned Business Enterprise & Minority-Owned Business Enterprise, plans and goals	•	0	0
6. Labor Relations and Policies			
Wage rates and classifications		•	
Wage and hour requirements		•	
State and local regulations		•	
No-strike agreements		•	
7. Construction of Fixed Infrastructure – Procedures			
Construction contract administration		•	
Construction management		•	
Construction inspection		•	
Coordination with third parties		•	
Site logistics plan (materials transport and storage; temporary site facilities; maintenance of existing pedestrian ways, transit and traffic operations during construction; protection of existing utilities)		•	
Processing shop drawing, bulletin, Requests for Information		•	
Negotiating and approving change orders and claims		•	
Substantial completion; final completion		•	

Appendix B: PMP Table of Contents OP 20 Project Management Plan Review October 2023 Page B-8 of 9

PMP Table of Contents	In PD, and/or Req. Entry to Eng.	In Eng. and/or Req. FFGA	In Bid/Award and/or Constr.
8. Start-Up and Revenue Operations			
Start-up and revenue operations			
Testing plan		•	
Systems		•	
Equipment		•	
Vehicles		•	
Closeout materials (warranties, testing results, Operation & Maintenance manuals, spare parts, etc.)		•	
Plan for Training of Staff		•	
9. Project Sponsor Management Capacity and Capability Document	s (MCC)		
Management capacity and capability	•	0	0
10. Quality Assurance / Quality Control Program Plan			
QA/QC Plan	•	0	0
11. Real Estate Acquisition and Management Plan			
Safety and Security Management Plan	•	0	0
12. Real Estate Acquisition and Management Plan			
Real Estate Acquisition Management Plan	•	0	0
13. Fleet Management Plan			
Fleet Management Plan	•	0	



U.S. DOT Federal Transit Administration TPM-20 Office of Capital Project Management Project Management Oversight

# 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
СЕ	Categorical Exclusion
CER	Cost Estimating Relationship
CFR	Code of Federal Regulations
CIG	Capital Investment Grant
CLIN	Contract Line Item Number
СМ	Construction Manager

Appendix C: Acronyms OP 20 Project Management Plan Review October 2023 Page C-1 of 7

Acronym	Term
CM/GC	Construction Manager/General Contractor
CMAR	Construction Manager at Risk
COR	Contracting Officer's Representative
СРМ	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

Appendix C: Acronyms OP 20 Project Management Plan Review October 2023 Page C-3 of 7

Acronym	Term
LPA	Locally Preferred Alternative
MBE	Minority Business Enterprise
MCC	Management Capacity and Capability
MDBF	Mean Distance Between Failures
МРО	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
ОНА	Operational Hazard Analysis
OIG	Office of Inspector General
OMP	Operations and Management Plan
ОР	Oversight Procedure
Р3	Public Private Partnership
PCMG	Project and Construction Management Guidelines
PD	Project Development
PDM	Project Delivery Method

Acronym	Term
РНА	Preliminary Hazard Analysis
РМО	Project Management Oversight
РМОС	Project Management Oversight Contractor
РМР	Project Management Plan
РОР	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
ТВМ	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
ТРМ	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