

PROJECT MANAGEMENT PLAN GUIDANCE FOR MAJOR PROJECTS

ISSUED BY: Federal Highway Administration (FHWA)

This guidance is for use by recipients of Federal financial assistance in the preparation of project management plans for certain projects as required by section 106(h) of title 23, United States Code. This guidance applies only to the development of these project management plans. Major projects must comply with all applicable Federal requirements.

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Background

Project Management Plans are required by 23 U.S.C. 106(h), which reads as follows:

(h) MAJOR PROJECTS.-

(1) IN GENERAL. - Notwithstanding any other provision of this section, a recipient of Federal financial assistance for a project under this title with an estimated total cost of \$500,000,000 or more, and recipients for such other projects as may be identified by the Secretary, shall submit to the Secretary for each project –

(A) a project management plan; and

(B) an annual financial plan, including a phasing plan when applicable.

(2) PROJECT MANAGEMENT PLAN. - A project management plan shall document –

(A) the procedures and processes that are in effect to provide timely information to the project decision makers to effectively manage the scope, costs, schedules, and quality of, and the Federal requirements applicable to, the project; and

(B) the role of the agency leadership and management team in the delivery of the project.

(3) FINANCIAL PLAN. - A financial plan--

(A) Shall be based on detailed estimates of the cost to complete the project;

(B) shall provide for the annual submission of updates to the Secretary that are based on reasonable assumptions, as determined by the Secretary, of future increases in the cost to complete the project;

(C) may include a phasing plan that identifies fundable incremental improvements or phases that will address the purpose and the need of the project in the short term in the event there are insufficient financial resources to complete the entire project. If a phasing plan is adopted for a project pursuant to this section, the project shall be deemed to satisfy the fiscal constraint requirements in the statewide and metropolitan planning requirements in sections 134 and 135; and

(D) shall assess the appropriateness of a public-private partnership to deliver the project.

Purpose of Project Management Plan

Major projects, as defined in 23 U.S.C. 106(h), are typically large, complex projects designed to address major highway needs and requiring the investment of significant resources. The preparation of the project management plan helps to ensure successful project delivery and the maintenance of public trust, support, and confidence throughout the life of the project.

The project management plan is a tool to help the Project Sponsor maintain focus towards effectively and efficiently delivering a quality product through construction closeout. Any activities beyond construction closeout do not need to be addressed in the project management plan. The purpose of the project management plan is to clearly define the roles and responsibilities of the agency leadership and management team, and to document the procedures and processes that are in effect to provide timely information to project decision makers in areas such as:

- Identifying project requirements
- Establishing communication protocols
- Managing:
 - Scope
 - Quality
 - Schedule
 - Cost
 - Resources
 - Risks, and
 - Applicable laws and regulations

Project management plans are submitted by the recipient of Federal financial assistance. For the purposes of this guidance, the term “Project Sponsor” means the agency or other entity, including any private entity that provides funding for the project and administers any construction or construction engineering/inspection activities for the project. When a private entity is responsible for submitting the project management plan, the plan should be coordinated with the public Project Sponsor.

Projects That Require a Project Management Plan

Major Projects

As described in 23 U.S.C. 106(h), the recipient of Federal financial assistance for a title 23 project with a minimum estimated total cost of \$500 million or a project that has been otherwise identified by the Secretary as a major project, must submit a project management plan to the Secretary. Project management plans are submitted to the FHWA division office for approval.

For the purposes of determining whether a project’s estimated cost exceeds \$500 million, FHWA will use the total cost estimate for the project scope set forth in the NEPA decision document. The total cost of the project is the value of all resources necessary to perform the preliminary engineering (including the cost of NEPA and other environmental documentation), right-of-way, environmental mitigation, construction, project management, public outreach, and costs of external third party work such as utility and railroad relocations regardless of funding source or administering agency.

Operationally Independent and Non-Concurrent Construction Projects

Occasionally, a Project Sponsor plans to spread construction of a project (defined by the NEPA decision document) over such a long period of time that it is reasonable to treat portions of the overall project as separate and independent projects for purposes of determining whether major project requirements apply. In this case, for the sole purpose of applying the major project requirements, FHWA may approve operationally independent and non-concurrent construction projects. Any resulting operationally independent and non-concurrent construction project that meets the \$500 million major project threshold is subject to the major project requirements in 23 U.S.C 106(h). The project management plan for the operationally independent and non-concurrent construction project should cover the scope for that portion of the project. (For additional information on operationally independent and non-concurrent construction criteria,

see December 2014 Major Project Financial Plan Guidance located at https://www.fhwa.dot.gov/majorprojects/financial_plans/guidance14.cfm).

Additional Project Management Plan Considerations

Phasing

Project Sponsors often build major projects over a long period of time, funding and building phases of the overall project incrementally. In the event the Project Sponsor determines that there are insufficient financial resources immediately available to complete the entire project as defined in the NEPA decision document, financial plans may identify fundable incremental improvements or phases (a “phasing plan”) that will address the purpose and need of the overall project in the short term (23 U.S.C. 106(h)(3)(C)).

For those Major Projects with phased financial plans, the project management plan should include the entire scope of the project’s NEPA decision document in the Project Description section. As outlined in “Contents of the Project Management Plan” section of this guidance, detailed information about the funded phase should be included. (For additional information on Phased Financial Plans, see December 2014 Major Project Financial Plan Guidance located at https://www.fhwa.dot.gov/majorprojects/financial_plans/guidance14.cfm).

Multiple Project Sponsors

When there are multiple Project Sponsors, a single project management plan should be prepared. Alternatively, each Project Sponsor may submit a project management plan describing its portion of the project. In such instances, each project management plan should be coordinated, consistent, and submitted to the FHWA for approval at the same time.

Project Management Plan Submittal Process

For all major projects, the project management plan should be submitted and approved by FHWA prior to the approval of Initial Financial Plan for construction.

Executive Leadership Endorsement

A written endorsement of the project management plan by the Project Sponsor’s executive leadership furthers the commitment of achieving the project objectives and officially initiates the use of the procedures and requirements as set forth in the project management plan. See Attachment A, Sample Executive Leadership Endorsement.

FHWA Review and Approval

Once the executive leadership of the Project Sponsor(s) has endorsed the plan it should be submitted to the FHWA division office for approval. The FHWA division office will coordinate with the FHWA Major Projects Team in the Office of Infrastructure to review all project management plans and any updates that require FHWA review. Approval of the project management plan as conforming to section 106(h) requirements will be based upon a compliance review that evaluates the documented procedures and processes to manage the project and the roles of the project management team.

FHWA will determine whether the project management plan conforms to applicable requirements not later than 60 days after the document is received by the FHWA Major Projects

Team. The FHWA approval of the project management plan or update rests with the FHWA division office. Prior to the division's approval of the project management plan or an updated project management plan, the division must receive a concurrence e-mail from the FHWA Major Projects Team.

Updates

The project management plan should be updated as appropriate throughout the life of the project. The purpose of the updates to the project management plan is to ensure that the documented project procedures, processes, and roles are current. Project management plan updates with significant changes to the project should be submitted to FHWA for review and approval. All other project management plan updates should be submitted to FHWA for recordkeeping purposes.

Examples of significant changes that will necessitate submittal of the updated project management plan to FHWA for review and approval include:

- Organizational structure changes in the Project Sponsor's project management team. Examples include, but are not limited to: addition or deletion of consultant support on the team and significant changes in the size and structure of the project management team from what was indicated in the current project management plan.
- Changes to project management procedures or processes from those that were identified and approved in the current project management plan. Examples include, but are not limited to: the implementation of new project controls, additional processes or procedures to address issues related to a specific contract requirement, scope changes that trigger new procedures or processes, and modification of processes and procedures to address substantial changes in project risks.

As part of the financial plan annual update review, the FHWA division office will review the project management plan to determine if an update is necessary and if the Project Sponsor is fulfilling commitments described in the project management plan. The FHWA division office may consult with the FHWA Major Projects Team as necessary.

Contents of the Project Management Plan

The following topics form the basic contents for the project management plan. The intent of the following sections is not to require a prescriptive format for the plan, but rather to provide a general framework for the project management plan that will satisfy section 106(h) requirements and most effectively serve the Project Sponsor and FHWA. References to the Project Sponsor's existing documented processes may be used in the project management plan. (See Attachment B, Project Management Plan Checklist.)

1. Project Purpose, Goals, Objectives and Metrics. This section of the project management plan should outline the purpose, goals, objectives, and metrics for the project. These topics are defined below.

- **Project Purpose.** A well-defined project purpose is instrumental to project success. The purpose establishes why the Project Sponsor is proposing to deliver the project. This

section of the project management plan should be consistent with the NEPA Purpose and Need statement.

- **Goals and Objectives.** The goals and objectives of the overall project should be documented in the project management plan. Project goals and objectives explain what needs to be achieved by the project. Project goals broadly define the long term vision for the project. In contrast, project objectives are defined strategies or implementation steps to attain the identified goals. Objectives are specific, measurable, short term actions that outline the “who, what, when, where, and how” of a project. Objectives define what is considered a successful project and set the framework for establishing quantitative and qualitative metrics for the project. The goals and objectives provide direction throughout the development and delivery of the project.
- **Metrics.** Project success is determined by how well the objectives are met throughout the life of the project. In order to measure the success of a project, the project team should set project specific metrics including targets and tracking requirements. These performance metrics may address: schedule, funding, cost, quality, safety, scope, control, and public trust. Performance metrics should be clear, specific and include appropriate targets and tolerances.

2. Project Description. This section should include a general overview of project scope including design, construction, environmental work, utilities/railroads, and right-of-way activities. The project management plan should contain the entire scope of the project as defined in the NEPA decision document. A summary of environmental process that established the project scope should also be included in the project management plan. A map of the defined project should be included.

Project sponsors often fund and/or build phases of the overall project incrementally. If the overall project scope is being delivered and managed in a phased approach, this section of the project management plan should describe all of the phases. A graphic depicting the phases in relation to the overall project should be included.

The section should document all operationally independent and non-concurrent phases approved for the project.

3. Project Procurement. The procurement should meet the project goals and objectives and comply with all Federal, State, and local laws, regulations, rules, and mandates applicable to the Project Sponsor and the Project. This section should describe how the Project Sponsor will acquire services such as environmental studies, design, and construction. This section should address how procurement decisions are to be made, including selection of consultants / contractors and contracting methods.

4. Project Organizational Management. The project management team should be organized in such a way to achieve all of the stated project objectives and goals from managerial, technical, oversight, and decision-making perspectives. This section of the project management plan should outline the organizational structure for the project and define the roles and responsibilities of the agency leadership and the project team. The plan should explain how the project team members are expected to collaborate with each other throughout the course of the project

implementation process. Example of roles and responsibilities may include senior leadership, project managers, technical support or subject matter experts from Project Sponsors, consultants, contractors and partnering agencies. The project organizational management should be developed to help ensure that all Federal, State, and local laws, regulations, rules, and mandates applicable to the Project Sponsor and the project are met. A graphical representation of the organization such as organizational chart should be included for clarity.

5. Project Management Controls (Contract Administration, Scope, Cost, Schedule, Risks, and Quality). This section of the project management plan should address types of project management controls for the major project. Project management controls are the data gathering, management, and analytical processes used to track and evaluate performance and identify response strategies to meet stated objectives of the project. This data is used to communicate information that helps to ensure effective management and timely decision making. The project management controls should be developed to help ensure that all Federal, State, and local laws, regulations, rules and mandates applicable to Project Sponsor and the project are met. This section should also document how and when project performance is reported. The following project management controls are used on most major projects and should be addressed in the project management plan.

- **Contract Administration.** This subsection should discuss how the Project Sponsor will document, monitor, and control contract administration activities for the project. It should document processes and tools used for tracking and addressing contract requirements. Project controls for change management and claims management are two contract administration topics that should be clearly addressed in this section.
 - **Change Management.** A change order is a modification, deletion, or addition of work to a project, which differs from the original project scope or prior changes. For example, the change action may result in a change in costs, a change in schedule, a change in scope of work, or a revision of other contractual terms and conditions. The project management plan should define the procedures for addressing change orders during the project execution. The roles and responsibilities between Project Sponsor and the contractor should be documented in the project management plan. A graphical flow chart should be included for clarity. In addition, the project management plan should outline how change orders will be documented and maintained for record keeping.
 - **Claims Management.** The project management plan should define the claims management process to be followed in cases of contractor claims. The roles and responsibilities of those reviewing and approving the claims should be discussed. The project management plan should outline how claims will be documented and maintained for record keeping. This section should also describe strategies to minimize the potential for a dispute to escalate to a claim.
- **Scope.** The project management plan should document the criteria for defining, tracking, and controlling overall project scope. The discussion should include the processes for approving scope changes and for verifying that the planned scope of work meets the project requirements, including project permits and approvals. The Major Project Financial Plan is one tool used to document, monitor, and update project scope.

- **Cost.** This subsection should discuss how the Project Sponsor will document, monitor, and control project cost. It should document processes and tools used for tracking project expenditures, identifying cost overruns and savings, and addressing cost issues. The Major Project Financial Plan is one tool used to document, monitor, and update project cost.
- **Schedule.** This subsection should discuss how the Project Sponsor will document, monitor, and control project schedule. The schedule should be a complete representation of the project's implementation and should include a realistic completion date. This subsection should document processes and tools used for tracking schedule, identifying scheduled deviations, and addressing schedule issues. The Major Project Financial Plan is one tool used to document, monitor, and update the project schedule.
- **Risk.** This subsection should discuss how the Project Sponsor will document, monitor, and control project risks. It should document processes and tools used for identifying, analyzing, and tracking project risks and response strategies. The Major Project Financial Plan is one tool used to document, monitor, and update project risks.
- **Quality.** This subsection should discuss how the Project Sponsor will document, monitor, and control project quality throughout the life of the project. It should document processes and tools used for tracking and analyzing project quality and identifying and addressing issues.

6. Project Communications Management. The project management plan should address processes and procedures to ensure effective communications among project team members and with stakeholders. Stakeholders may include but are not limited to the following: the traveling public, political officials, media, interests groups, and businesses. This section should cover how informal and formal communications will be conducted and managed.

7. Project Documentation & Reporting. This section describes how project records will be managed. This includes defining the document control and tracking systems as well as any project reporting procedures. This section should also discuss how lessons learned will be tracked throughout the life of the project and the final documentation of all lessons learned.

8. Project Closeout. This section of the project management plan should outline the processes and procedures for contract closeout to ensure that all specified contract work is completed, record documents are maintained appropriately, and financial obligations are settled. This section should also discuss the requirements for a coordinated transition from the construction phase to the operations and maintenance phase. The project closeout plan should be developed to help ensure that all Federal, State, and local laws, regulations, rules, and mandates applicable to Project Sponsor and the project are met.

9. Project Oversight. This section of the project management plan should document the oversight roles and responsibilities of both the Project Sponsor(s) and FHWA to effectively manage the Federal requirements applicable to the project, including review and approval actions. For Project Sponsors with a significant history of delivering Federal-Aid Highway Program projects (e.g. State Departments of Transportation), program level stewardship and oversight agreements between the Project Sponsor and FHWA have been previously developed

(e.g. FHWA/State DOT Oversight Agreement). This section should reference those agreements and any other project level oversight plans.

In some cases, a Project Sponsor may not be a typical recipient of Federal-Aid Highway Program funding (e.g. tollway authorities), and is using Federal financial assistance for the first time. This section should specify the oversight roles and responsibilities of both the Project Sponsor and FHWA to ensure that all Federal-Aid Highway Program requirements are met.

10. Management of the Project Management Plan. This section of the project management plan should outline the processes and procedures for maintaining and updating the project management plan. The process described in this section should outline how the Project Sponsor will ensure that the roles, responsibilities, procedures, and processes in the project management plan are current and being implemented. The project management team member responsible for managing the project management plan should be identified.

11. Other Possible Sections. Other sections and/or appendices, such as civil rights, right of way, utilities, environmental monitoring, project agreements, and dispute resolution may be added to the project management plan as appropriate. The Project Sponsor should identify additional sections and/or appendices that enhance the project management and ensure that goals and objectives are met. For example, sections should be added for aspects of the project that pose a significant risk and/or require processes and procedures that are unique to the project.

Sample

EXECUTIVE LEADERSHIP ENDORSEMENT

The **(Project Sponsor)** has developed a project management plan for **(Project Name)** in **(city/state)** to comply with the requirements of title 23, United States Code, section 106 and the Project Management Plan Guidance issued by the Federal Highway Administration. The plan provides documented procedures and processes to manage the project and the roles of the project management team.

This endorsement officially initiates use of the procedures and requirements as set forth in the project management plan on the **(Project Name)**.

The effectiveness of the project management plan will be continuously evaluated. Revisions will be issued as the project progresses to generate the most effectively managed project and to meet the project objectives and goals.

_____ Date: _____
Chief Executive Officer, **(Project Sponsor Agency)**

PROJECT MANAGEMENT PLAN CHECKLIST

Fillable PDF version of checklist

PROJECT MANAGEMENT PLAN CHECKLIST: Have the following factors been considered during the preparation of the project management plan?

- 1. Project Purpose, Goals, Objectives, and Metrics
 - Describe project purpose, i.e. rationale for the project that is consistent with NEPA Purpose and Need statement
 - Identify project goals, i.e. long term vision for the project
 - Describe project objectives, i.e. specific, measurable, short term actions that outline the “who, what, when, where, and how” of a project
 - Outline project metrics, i.e. project targets and tracking requirements

- 2. Project Description
 - Narrative description of project scope
 - Map
 - Date of NEPA Decision Document(s) (month/year)
 - Document Operationally Independent and Non-Concurrent Construction (OINCC) determinations, if applicable
 - If phasing plan is presented, include detailed description of the project phases

- 3. Project Procurement
 - Describe how the Project Sponsor will or has acquired services such as environmental studies, design and construction
 - Summarize how procurement decisions are to be made including selection of consultants and /or contractors and contracting and delivery methods to be utilized

- 4. Project Organizational Management
 - Outline the organization structure for the project and define the roles and responsibilities of the project team
 - Graphical representation of the organization such as organizational chart

- 5. Project Management Controls (Contract Administration, Scope, Cost, Schedule, Risks, and Quality)
 - Describe project management controls
 - Document how and when project performance is reported
 - Address the following subsections
 - Contract Administration. Discuss how the Project Sponsor will document, monitor and control contract administration activities for the project, including change management and claims management process
 - Scope. Document the processes for defining, tracking, and controlling overall project scope
 - Cost. Outline how the Project Sponsor will document, monitor, and control project cost

- Schedule. Document processes and tools used for tracking schedule, identifying scheduled deviations, and addressing schedule issues
 - Risk. Discuss how the Project Sponsor will document, monitor, and control project risks
 - Quality. Discuss how the Project Sponsor will document monitor and control all aspects of project quality throughout the life of the project
6. Project Communications Management
- Address processes and procedures to ensure effective communications between project team members and stakeholders
 - Outline how informal and formal communications will be conducted and managed
7. Project Documentation & Reporting
- Describe how project records will be managed
 - Discuss how lessons learned will be tracked throughout the life of the project and the final documentation of all lessons learned
8. Project Closeout
- Outline the processes and procedures for contract closeout plan.
 - Discuss the requirements for a coordinated transition from the construction phase to the operations and maintenance phase
9. Project Oversight
- Describe the oversight roles and responsibilities of both the Project Sponsor(s) and FHWA
 - Reference to previously developed FHWA/State DOT Oversight Agreements, if applicable
10. Management of the Project Management Plan
- Outline the processes and procedures for maintaining and updating the project management plan
 - Identify team members responsible for managing the project
11. Other Possible Sections
- Include other sections/topics for aspects of the project that pose a significant risk and/or require processes and procedures that are unique to the project
12. Executive Leadership Endorsement