

TSM Limited Scope Project Customization Guideline

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Table of Contents

- Introduction..... 1
- Section I: Project Customization General Overview and Examples..... 2
- Section II: Required Aspects of Project Delivery Process..... 2
 - Key Deliverables required for the Concept Development Phase..... 3
 - Key Deliverables required for the Final Design Phase 3
- Section III: Approvals and Controls for Project Customization 3
- Section IV: Review of Project Customization 4

Introduction

Project customization is the process of tailoring the overall project delivery process to meet the requirements of a TSM limited scope project based on its specific scope and complexity. Project customization is a key feature of the Transportations Systems Management's new customized Project Delivery process. The purpose of this document is to provide general guidelines related to the implementation of project customization under the new TSM Limited Scope Project Delivery Process.

The new process is a limited scope process and consists of the following three phases, from start to finish: Concept Development (CD), Final Design (FD) and Construction (CON). The Project Manager assigned to a given project will *customize* the Phase Network Diagram to produce a project-specific schedule.

Phase Network Diagram customization efforts can range from tailoring activity and logic adjustments, to adjusting the work efforts associated within specific activities. For instance, certain work products or work packages may not be required for certain Programmatic ITS projects (e.g. Smart Moves Projects). Therefore, those products or packages do not have to be reflected in the project's scope. Furthermore, certain activities within the Phase Network Diagrams may not be required for a particular project. The specific amount of work within an activity may need to be increased or decreased, based on the specific project's scope and complexity. Examples of such customization efforts are provided in Section I of the guideline.

While project customization is a major focus of the TSM process, there are other aspects of the process that will be required for every project. The level of effort and the amount of time a project remains in any phase will be customized on a project-specific basis. Also, there are key deliverables associated with each of the three phases that must be produced regardless of customization. A more detailed discussion of key deliverables is provided in Section II of this guideline.

In addition, the TSM process includes a number of approvals and controls that aid in the project customization effort, such as a Project Charter and Scope Statements. Once a project-specific schedule is established for a phase, key project control deliverables can be produced, such as a project management plan, schedule and budget. These deliverables require input from the Department's Subject Matter Experts (SMEs) and approvals from Department managers. Once approved, these deliverables will serve to manage and control the project's development.

A more detailed discussion of the approvals and controls associated with project customization are provided in Section III of this guideline.

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Section I: Project Customization General Overview and Examples

Project customization begins with the development of the Scope Statement. After receiving the Problem Statement and/or specific requests from Traffic Operations management and upon completion of the Project Screening (PS), the CD Scope Statement will be utilized in customizing the CD scope, schedule and budget. Towards the end of CD, the FD Scope Statement will be utilized in customizing the FD scope, schedule and budget. Note that the project moves from CD straight to FD, due to the limited scope nature of the TSM projects.

To illustrate the use of customization under the new process, three examples are provided below. These include: (1) Customizing the TSM Phase Network Diagram to reflect the anticipated environmental document; (2) Use of logic adjustments to reflect the actual logic anticipated for a project's delivery; and (3) Tailoring specific activities to meet project-specific requirements. As shown by these examples, customization can be applied throughout the different layers of the TSM project delivery process, from the Phase Network Diagram level to the scope of work associated with specific activities.

The example of customizing the Phase Network Diagram to reflect a project's anticipated environmental document is useful, since every TSM limited scope project will need a Certified Categorical Exclusion (CCE). The CCE will be completed during the Concept Development phase of TSM limited scope project. Furthermore, based on the Scope Statement that was developed during the CD Phase, the specific CD activities and descriptions will be customized based on the project's characteristics. The same kind of customization process is to be applied to all elements of the project, such as right of way and access, utilities, structures and roadway engineering.

An example of customization involving logic adjustments consists of revising finish-to-start tasks so that they are performed concurrently. That type of logic adjustment may be encountered with some of the longer processes, such as utility accommodations, right of way acquisitions, and access design. For instance, the FD Phase Network Diagram shows the activity, *Conduct Subsurface Utility Engineering*, as a finish-to-start relationship with various activities such as *Prepare ITS Facilities Layout Plan* and *Complete Traffic Signal, Signing & Striping Plans*. In the case for a given project where *Conduct Subsurface Engineering* may take longer than anticipated for specific sites, activities such as *Prepare ITS Facilities Layout Plan* and *Complete Traffic Signal, Signing & Striping Plans* can be started for the preparation of plans of sites that have there the subsurface engineering has been completed already. If that scenario occurs for a given project, or if it is anticipated for a given project, the project's schedule can be customized to show that the successor activities will begin while the predecessor activity is still being completed. In summary, the logic shown in the Phase Network Diagram represents a global view of the new project development process, serving as a guide for the preparation of a project's schedule. Logic adjustments should be made, when appropriate, to reflect either the anticipated interrelationship of project delivery activities, or to reflect their actual interrelationships as the project's development advances.

Section II: Required Aspects of Project Delivery Process

As outlined above, project customization involves tailoring the delivery process to meet a given project's scope and complexity. Although customization is associated with removing those activities not needed for a project, its purpose is not to cut corners or avoid necessary work; rather, it is to be undertaken to promote the effective and efficient delivery of the TSM's limited scope projects. With that understanding in mind, there are certain aspects of the project delivery process that are required which, in essence, represent the basic skeleton of the process. For instance, as noted above, all projects must advance through both phases of the TSM limited scope project delivery process. Likewise, within each one of those phases, there are key deliverables that must always be

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completed. For example, a Charter must be completed for every project during the Problem Screening Phase. Many of the deliverables required for Concept Development and Final Design are listed below:

Key Deliverables required for the Concept Development Phase:

- CD Scope Statement
- Concept Development Schedule
- Concept Development Budget
- Design Communications Report
- Environmental Screening Report
- Purpose and Need Statement
- Preliminary Preferred Alternative
- Concept Development Report
- CD Quality Certification
- Executed Consultant Agreement for Final Design Phase
- Environmental Document (i.e., Categorical Exclusion, Environmental Assessment, EO 215, or Environmental Impact Statement)
- Final Design Scope Statement
- FD Project Management Plan

Key Deliverables required for the Final Design Phase:

- Final Design Schedule
- Final Design Budget
- Final Design Agreement Addendum or New Design Agreement
- Final Design Submission
- Designer's PS&E
- PS&E Submission
- PS&E Certification
- Consultant Agreement Addendum for Construction Engineering
- Authorization to Advertise

Section III: Approvals and Controls for Project Customization

Under the TSM limited scope project delivery process, project customization is not implemented in a vacuum, but rather involves a collaborative process which includes various approvals and controls throughout the project delivery process.

Control of a project's scope begins with development and customization of the CD Scope Statement. Utilizing the project-specific Problem Statement, Problem Screening Report information, stakeholder input, and the CD Scope Statement template, the Project Manager develops the project-specific CD Scope Statement. The CD Scope Statement outlines the project-specific work activities to be completed during the CD Phase. The CD Scope Statement is circulated for SME input, Traffic Operation's Regional Manager's concurrence and MSE Director's approval. By approving the project-specific CD Scope Statement, the Director of Mobility & Systems Engineering provides ultimate approval of the project customization. Upon approval, the CD Scope Statement is provided to the Designer to develop a scope of work and fee proposal.

During the CD Phase, there are a number of activities that require collaboration and coordination with project stakeholders, such as *Obtain Stakeholder Input*, *Scope and Core Group Meetings*, *Coordination with Permitting Agencies*, and *Obtain SME Input*. Input obtained through these activities help to further define the project's scope as the project's development progresses, which in turn helps to guide and control customization of the project's

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delivery. Various approvals are also required during the CD Phase, which are associated with project customization and include, but are not necessarily limited to:

- The FD Scope Statement, which is completed during CD, requires approval from Managers of the Department's various SME Offices, for those portions of the scope statement related to their areas of expertise. FHWA reviews and approves the CD Report, which contains the FD Scope Statement.
- The CD Quality Certification, in which the designer certifies that the project's development has been completed in accordance with the approved CD Scope Statement, requires approval by the Project Manager.
- The project's Final Design Baseline Schedule, which is completed during the CD Phase, must be approved by the Director of MSE.
- The project's Final Design Budget, which is completed during the CD Phase, must be approved by the Director of MSE.

As with the CD Phase, the project delivery process includes various controls and approvals, related to project customization, in the other delivery phases. This includes the use of project scope statements, project management plans, baseline schedules and budgets for each phase of project delivery, and associated Senior Management and FHWA approvals.

The Design Communications Report (DCR) provides another means of control and approval for project customization. The DCR, a major feature of the project delivery process, is initiated during the CD Phase and is continually updated for the project through the remaining phases of project development (i.e. Final Design and Construction). Since the DCR documents major project decisions, and makes them available for review by project stakeholders, it serves as a tool to define and manage a project's scope, which in turn influences how a project's delivery is customized. Individual DCR entries are prepared by the project's designer for review and approval by the Project Manager. Upon receipt of the Project Manager's approval, the designer uploads the entries to the proper location on the Department's intranet site, making them readily available for review by internal stakeholders.

Section IV: Review of Project Customization

In review, project customization is a fundamental feature of the Department's TSM limited scope project delivery process. Using project customization, a project's delivery is closely tailored to its scope and complexity. As shown in Section I of this guideline, customization can be applied throughout the different layers of the new project delivery process, from the network diagram level to the scope of work associated with specific activities. Although this approach places a focus on customizing a project's delivery, as outlined in Section II, there are certain aspects of the delivery process that must be completed for every TSM limited scope project. Those aspects form the skeleton of the project delivery process and must be completed for every project to conform to the project delivery goals and objectives shared by the Department and Federal Highway Administration. Lastly, as was outlined in Section III, the new project delivery process includes various controls and approvals for project customization to help insure the effective and efficient delivery of TSM limited scope projects.

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