

Chapter 4 *Structure and Content of the Procurement*

This chapter provides brief discussions of the content of the sections of the Request for Qualifications, Request for Proposal, and Instructions to Proposers. Refer to the [Preparation Guide for Request for Qualification \(RFQ\)](#), [Request for Proposal \(RFP\)](#), and [Instructions to Proposers \(ITP\)](#) for a detailed process of procurement document preparation.

Prior to initiating the development of the RFQ and RFP, novice project team members should consult with an experienced project team whose members can share their expertise. This transfer of knowledge helps ease the learning curve associated with design-build, encourages the application of best practices, and highlights the pitfalls that other projects have overcome so that they may be avoided from the outset.

Note: Make sure the paragraph symbol (show/hide) is active in order to see the instruction boxes in the templates.

Note: When fill-in information is added in a template, the author should insert the information by removing the dollar signs and number, but leave the asterisks:

\$\$2\$\$ becomes ***Information***

If an entire subsection has been altered, then the title of the subsection would be bracketed by asterisks (2.5.3.1 ***General***)

Header and Footers should be consistent on all Projects.

1. Remove the template version number and date in the headers and footers on all documents prior to publishing.
2. Add the Project name to the headers prior to publishing the RFQ or RFP, do not make any additional edits to the header.
3. Add applicable RFQ or RFP advertisement date and Project name to the footers prior to publishing the RFQ or RFP, do not make any additional edits to the footer.

4-1 Request for Qualifications

The RFQ is the first phase of a two-phase procurement process and is used to solicit the Statements of Qualifications (SOQ's) from interested Design-Build Firms. It is a formal and structured process which must comply with Federal Regulations, State Statute, and the Washington Code of Regulations. The RFQ asks interested Submitters to submit a SOQ in response to criteria defined within the RFQ.

The RFQ consist of 7 Sections:

1. Introduction
2. Contact Information
3. Procurement Process
4. Scope of the Project
5. Teaming Parameters
6. Submittal Quantities and Logistics
7. SOQ Content and Evaluation Criteria

The following sections provide overviews of the sections of the RFQ. Instructions for completing fill-ins are also provided where appropriate. When fill-in information is added in a template, the author should insert the information by removing the dollar signs and number but leave the asterisks. For example: *****\$\$2\$\$**** becomes *****Information*****

If an entire subsection has been altered, then the title of the subsection would be bracketed by asterisks. For example: 3.1 *****Process Overview*****

Request for Qualifications

*****\$1\$\$**** This fill-in is for the title of the Project.

*****\$2\$\$**** This fill-in is for the location of the Project.

Submittal Information Point of Contact

*****\$1\$\$**** This fill-in is for the webpage Ad & Award created for your Project. For more information on webpage reference *Design-Build Manual* Chapter 5, Section 5-3, *Contract Ad & Award Website Information*.

WSDOT Technical Point of Contact

*****\$1\$\$**** This fill-in is for the Technical Point of Contact information for the Project. For more information reference *Design-Build Manual* Chapter 5, Section 5-9, *Roles and Responsibilities*.

Process Overview

*****\$1\$\$**** This fill-in is for the stipend amount. For more information on stipend reference *Design-Build Manual* Chapter 2 Section 2-2.2.2, *Stipends*.

Procurement Schedule

For more information on procurement schedule reference *Design-Build Manual* Chapter 5-1, *Timelines and Deliverables*.

*****\$1\$\$**** This fill-in is for the RFQ issue date.

*****\$2\$\$**** This fill-in is for the date for voluntary submitter's meeting.

*****\$3\$\$**** This fill-in is for the date and time for the RFQ questions. For more information reference *Design-Build Manual* Chapter 5 Section 5-4, *Request for Qualification Process*.

*****\$4\$\$**** This fill-in is for the deadline for WSDOT response.

*****\$5\$\$**** This fill-in is for the SOQ due date.

*****\$6\$\$**** This fill-in is for the date to notify short listed submitters.

*****\$7\$\$**** This fill-in is for the issue RFP date for the Project.

*****\$8\$\$**** This fill-in is for the voluntary Proposer's meeting date for the Project.

***\$\$9\$\$\$ This fill-in is for the ATC submittal deadline date for the Project.

***\$\$10\$\$\$ This fill-in is for the deadline for submitting Proposers' questions for the Project.

***\$\$11\$\$\$ This fill-in is for the deadline for WSDOT response to Proposers' questions for the Project.

***\$\$12\$\$\$ This fill-in is for the proposals due date for the Project. (varies wildly depending on the size/scope/complexity of the project. Ad & Award prefers this to occur on Thu or Fri. Cannot occur on Bid Opening Day

***\$\$13\$\$\$ This fill-in is for the announce best value proposer date for the Project. (3 weeks, or more after Proposal Due Date. Must occur on Bid Opening Day

***\$\$14\$\$\$ This fill-in is for the estimated Notice to Proceed date for the Project.

Questions, Clarifications, and Addenda

***\$\$1\$\$\$ This fill-in is for the specific date and time for deadline of questions. Time shall be in "hour:minutes:seconds" format.

Voluntary Meeting for Potential Submitters

***\$\$1\$\$\$ This fill-in is for the meeting start and end time. For more information reference *Design-Build Manual Chapter 5 Section 5-4, Request for Qualification Process*.

***\$\$2\$\$\$ This fill-in is for the meeting location with address.

Estimated Cost

***\$\$1\$\$\$ This fill-in is for the estimated contract cost.

Time for Completion

***\$\$1\$\$\$ This fill-in is for the substantially complete date for the Project.

WSDOT's Project Goals

***\$\$1\$\$\$ This fill-in is for Project goals. Pick 3 to 4 project goals. These goals need to be consistent with those chosen in the RFP. Goals need to reflect project specific attributes and aspects of the project, which the D-B can provide added value. Keep in mind that the more goals selected the longer the evaluation will take. If the Project is a Federal Funded Project, one of the Project Goals must be Disadvantaged Business Enterprise (DBE) Participation. If it is determined that this Project will not have DBE goals, remove the DBE Participation Project goal. For more information reference *Design-Build Manual Chapter 2 Section 2-5, Project Goal Setting*.

Project Scope and Status

\$\$1\$\$ This fill-in is for the scope/description for the Project. For more information reference *Design-Build Manual* Chapter 2 Section 2-2.2, *Identification of Funding and Schedule*.

\$\$2\$\$ This fill-in is for the funding information for the Project. For more information reference *Design-Build Manual* Chapter 2, Section 2-2.2, *Identification of Funding and Schedule*.

WSDOT Consultant/Technical Support

\$\$1\$\$ This fill-in is for the Consultant Firm name for the Project.

\$\$2\$\$ This fill-in is for the Consultant Firm name for the Project.

\$\$3\$\$ This fill-in is for the description of work the Consultant Firm is supporting WSDOT on for the Project.

Disadvantaged Business Enterprises Participation

If it is determined that this Project will not have DBE goals, remove this section and replace with "This Section is intentionally omitted."

\$\$1\$\$ This fill-in is for the percent amount of construction portion for the project. For more information contact OEO and reference *Design-Build Manual* Chapter 10.

\$\$2\$\$ This fill-in is for the percent amount of design portion for the project. For more information contact OEO and reference *Design-Build Manual* Chapter 10.

Federal Small Business Enterprise Participation (Federally-Funded Template Only)

\$\$1\$\$ This fill-in is for the percent amount of construction portion for the project. For more information contact OEO and reference *Design-Build Manual* Chapter 10.

\$\$2\$\$ This fill-in is for the percent amount of design portion for the project. For more information contact OEO and reference *Design-Build Manual* Chapter 10.

SOQ Submittal Quantities

\$\$1\$\$ This fill-in is for the number of copies for the Project

\$\$2\$\$ This fill-in is for the number of copies for the Project

\$\$3\$\$ This fill-in is for the title for the Project.

SOQ Organization and Scoring (Federally-Funded Template)

Key Personnel can be changed on a project-by-project basis and the use of DBE Participation with FSBE should be discussed with OEO.

If it is determined that this Project will not have DBE goals and no DBE Participation, remove DBE Participation from the table.

\$\$1\$\$ Note user to provide “fill-in” key personnel points for the Project.

\$\$2\$\$ Note user to provide “fill-in” maximum number of pages for key personnel for the Project.

\$\$3\$\$ Note user to provide “fill-in” Project Manager points for the Project.

\$\$4\$\$ Note user to provide “fill-in” goals for the Project.

\$\$5\$\$ Note user to provide “fill-in” points for the Project.

\$\$6\$\$ Note user to provide “fill-in” Design Manager points for the Project.

\$\$7\$\$ Note user to provide “fill-in” Construction Manager points for the Project.

\$\$8\$\$ Note user to provide “fill-in” major participants points for the Project.

\$\$9\$\$ Note user to provide “fill-in” maximum number of pages for major participants for the Project.

\$\$10\$\$ Note user to provide “fill-in” criteria or project goals for major participants for the Project.

\$\$11\$\$ Note user to provide “fill-in” criteria for major participants points for the Project.

\$\$12\$\$ Note user to provide “fill-in” total points for the Project.

SOQ Organization and Scoring

Key Personnel can be changed on a project-by-project basis and the use of DBE Participation with FSBE should be discussed with OEO.

If it is determined that this Project will not have an Inclusion Manager, remove Inclusion Manager from the table.

If it is determined that this Project will not have DBE goals and no DBE Participation, remove DBE Participation from the table.

\$\$1\$\$ Note user to provide “fill-in” key personnel points for the Project.

\$\$2\$\$ Note user to provide “fill-in” maximum number of pages for key personnel for the Project.

\$\$3\$\$ Note user to provide “fill-in” Project Manager points for the Project.

\$\$4\$\$ Note user to provide “fill-in” goals for the Project.

\$\$5\$\$ Note user to provide “fill-in” points for the Project.

\$\$6\$\$ Note user to provide “fill-in” Design Manager points for the Project.

\$\$7\$\$ Note user to provide “fill-in” Construction Manager points for the Project.

\$\$8\$\$ Note user to provide “fill-in” Inclusion Manager points for the Project.

\$\$9\$\$ Note user to provide “fill-in” major participants points for the Project.

\$\$10\$\$ Note user to provide “fill-in” maximum number of pages for major participants for the Project.

\$\$11\$\$ Note user to provide “fill-in” criteria or project goals for major participants for the Project.

\$\$12\$\$ Note user to provide “fill-in” criteria for major participants points for the Project.

\$\$13\$\$ Note user to provide “fill-in” total points for the Project.

SOQ Format

\$\$1\$\$ This fill-in is for the title for the Project.

Introduction Letter (Section 1) (pass/fail)

\$\$1\$\$ This fill-in is for the maximum bidding capacity for the Project. For more information contact WSDOT Contract Ad & Award and reference the WSDOT *Advertisement and Award Manual*.

\$\$2\$\$ This fill-in is for the work class(es) title for the Project. For more information contact WSDOT Contract Ad & Award and reference the WSDOT *Advertisement and Award Manual*.

\$\$3\$\$ This fill-in is for the amount of dollars in work class for the Project. For more information contact Contract Ad & Award and reference the WSDOT *Advertisement and Award Manual*.

Key Personnel (Section 2) (*\$\$1\$\$*** Points)**

\$\$1\$\$ This fill-in is for the key personnel points for the Project.

\$\$2\$\$ This fill-in is for the number of years for the Project.

\$\$3\$\$ This fill-in is for the number of years for the Project.

\$\$4\$\$ This fill-in is for the number of years for the Project.

\$\$5\$\$ This fill-in is for the additional key personnel for the Project (i.e. Project Quality Manager, Geotechnical Group Manager, and Structural Lead Engineer).

Major Participants (Section 3) (*\$1\$ Points)**

\$1\$ This fill-in is for the major participants points for the Project.

Evaluation Criteria

\$1\$ This fill-in is for the major specific criteria for the project. If necessary, adjust number of criteria in table 7.2.

\$2\$ This fill-in is for the number (s) in which information shall be assessed for the Project.

\$3\$ This fill-in is for the number (s) in which information shall be assessed for the Project.

Financial (Appendix B) (pass/fail)

\$1\$ This fill-in is for the Proposal Bond/Security Penal Sum =5% of estimated upset price or project budget (if no upset price) for the Project.

\$2\$ This fill-in is for the umber (s) Performance and Payment Bond Penal Sum = 100% of estimated upset price or project budget (if no upset price) for the Project.

FORM A

\$1\$ This fill-in is for the Project Title for the Project.

Appendix B

Make sure the defined terms are a mirror image of what is in the General Provisions. If you add definitions to the General Provisions, you must add them here.

If the Project has a FSBE Goal, delete the "Small Business" definition and remove it from the General Provisions as well.

\$1\$ This fill-in is for the elements of the Conceptual Plans for the Project.

\$2\$ This fill-in is for the Forward Compatible elements for the Project.

\$3\$ This fill-in is for the Future Channelization Plan improvements for the Project.

\$4\$ This fill-in is for the Interim Channelization Plan information for the Project.

\$5\$ This fill-in is for the title for the Project.

\$6, 7 & 8\$ This fill-in is for the Hot Lane Roadway for the Project.

4-2 Instructions to Proposers

The ITP provides guidance to the proposers on submittal requirements, procurement processes, and Proposal evaluation criteria. Most important, the ITP defines the ways the project goals will be optimized to provide the owner best value through a combination of cost, schedule, and technical considerations. The ITP consist of 8 Sections:

- | | |
|--|---|
| 1. General Information | 5. Contract Award and Execution |
| 2. Procurement Process | 6. Practical Design
Workshopminority |
| 3. Proposal Delivery, Content, and
Format | 7. Proposer Stipends |
| 4. Proposal Evaluation Process | 8. Protests |

The following sections provide overviews of the sections of the ITP. Instructions for completing fill-ins are also provided where appropriate. When fill-in information is added in a template, the author should insert the information by removing the dollar signs and number but leave the asterisks. For example: ***\$\$2\$\$*** becomes ***Information***

If an entire subsection has been altered, then the title of the subsection would be bracketed by asterisks. For example: 1.3.3 ***Utility Relocations***

Introduction

\$\$1\$\$ This fill-in is for the title for the project.

\$\$2\$\$ This fill-in is for the RFQ advertisement date of the project.

Project Goals

\$\$1\$\$ This fill-in is for the *goals for the project*. (Pick 3 to 4 project goals. These goals need to be identical with those chosen in the RFQ. Goals need to reflect project specific attributes and aspects or the project which the D-B can provide added value. Keep in mind that the more goals selected the longer the evaluation of Proposals will take.)

Procurement Schedule

For more information on procurement schedule reference *Design-Build Manual Chapter 5, Section 5-1, Timelines and Deliverables*.

\$\$1\$\$ This fill-in is for the RFP issue date.

\$\$2\$\$ This fill-in is for the date for Voluntary Proposer's Meeting.

\$\$3\$\$ This fill-in is for the ATC submittal deadline date.

\$\$4\$\$ This fill-in is for the deadline for submitting Proposers' questions.

\$\$5\$\$ This fill-in is for the deadline for WSDOT response to Proposers' questions.

\$\$6\$\$ This fill-in is for the proposals due date.

\$\$7\$\$ This fill-in is for the announce Apparent Best Value Proposer.

\$\$8\$\$ This fill-in is for the estimated Notice to Proceed date.

Project Cost

This is the Engineer's estimate.

\$\$1\$\$ This fill-in is for the Engineer's estimate range.

Disadvantaged Business Enterprise Participation Requirements

If the Project is determined not to have a DBE Goal, leave the Section number and title, delete the unused Section and replace with "This Section is intentionally omitted."

Disadvantaged Business Enterprise Goals

\$\$1\$\$ This fill-in is for the percentage amount for the design portion.

\$\$2\$\$ This fill-in is for the percentage amount for the construction portion.

Federal Small Business Enterprise Goals

\$\$1\$\$ This fill-in is for the percentage amount for the design portion.

\$\$2\$\$ This fill-in is for the percentage amount for the construction portion.

Organizational Conflicts of Interest

\$\$1\$\$ This fill-in is for the consultant firm information.

Communications

\$\$1\$\$ This fill-in is for the proper communication contact information.

RFP Addenda and Responses to Questions

\$\$1\$\$ This fill-in is for the link to the Contract Ad and Award website

Right of Way Access

\$\$1\$\$ This fill-in is for the required application.

Pre-Proposal Submittal of Alternative Technical Concepts

\$\$1\$\$ This fill-in is for the time ATC must be submitted by.

Liquidated Damages for Key Personnel

If used, WSDOT Engineer must document the basis for the Liquidated Damages in the Project file.

\$\$1\$\$ This fill-in is for the liquidated damage amount.

\$\$2\$\$ This fill-in is for the liquidated damage amount.

\$\$3\$\$ This fill-in is for the liquidated damage amount.

\$\$4\$\$ This fill-in is for the liquidated damage amount.

Contents of the Proposal (Federally-Funded Template)

If a Section, form, or appendix is not used delete it.

If it is determined that this Project will not have DBE Goals, remove the ** paragraph near the end of this table.

\$\$1\$\$ Note user to provide “fill-in” title of proposal Section for the Project.

\$\$2\$\$ Note user to provide “fill-in” maximum number of pages for goals and sub goals for the Project.

\$\$3\$\$ Note user to provide “fill-in” goal #2 for the Project.

\$\$4\$\$ Note user to provide “fill-in” goal #3 for the Project.

\$\$5\$\$ Note user to provide “fill-in” goal #4 for the Project.

\$\$6\$\$ Note user to provide “fill-in” price proposal Section for the Project.

Contents of the Proposal (State Funded Template)

If a Section or form is not used delete.

\$\$1\$\$ Note user to provide “fill-in” title of proposal Section for the Project.

\$\$2\$\$ Note user to provide “fill-in” goal #1 for the Project.

\$\$3\$\$ Note user to provide “fill-in” maximum number of pages for goals and sub goals for the Project.

\$\$4\$\$ Note user to provide “fill-in” goal #2 for the Project.

\$\$5\$\$ Note user to provide “fill-in” goal #3 for the Project.

\$\$6\$\$ Note user to provide “fill-in” goal #4 for the Project.

\$\$7\$\$ Note user to provide “fill-in” price proposal Section for the Project.

Appendices

Delete “A DBE Performance Plan in Appendix D in accordance with Section 3.3.3 of this ITP” if it is determined that this Project doesn’t have a DBE Goal (Federal).

Page Limits, Copies, and Submission Instructions

\$1\$ This fill-in is for the title.

\$2\$ This fill-in is for the title.

\$3\$ This fill-in is for the Section number.

\$4\$ This fill-in is for the number of copies.

\$5\$ This fill-in is for the number of copies.

\$6\$ This fill-in is for the Section number.

\$7\$ This fill-in is for the Section number.

\$8\$ This fill-in is for the title.

Disadvantaged Business Enterprise Participation (Section 2) (Federally-Funded Template)

If the Project is determined not to have a DBE Goal, leave the Section number and title, delete the unused Section and replace with “This Section is intentionally omitted.”

\$1\$ (Section 3)

\$1\$ This fill-in is for the Project Goal number.

\$2\$ This fill-in is for the summary description of what WSDOT is looking for.

\$3\$ This fill-in is for the how the Design-Builder will meet the goal.

\$4\$ This fill-in is for the Goal criteria.

\$5\$ This fill-in is for the what very good or excellent is.

\$1\$ (Section 4)

\$1\$ This fill-in is for the Project Goal number.

\$2\$ This fill-in is for the summary description of what WSDOT is looking for.

\$3\$ This fill-in is for the how the Design-Builder will meet the goal.

\$4\$ This fill-in is for the Goal criteria.

\$5\$ This fill-in is for the what very good or excellent is.

*****\$\$1\$\$*** (Section 5)**

\$\$1\$\$ This fill-in is for the Project Goal number.

\$\$2\$\$ This fill-in is for the summary description of what WSDOT is looking for.

\$\$3\$\$ This fill-in is for the how the Design-Builder will meet the goal.

\$\$4\$\$ This fill-in is for the Goal criteria.

\$\$5\$\$ This fill-in is for the what very good or excellent is.

Appendix A - Proposer Information and Certifications

If a Form is not used leave the Form and replace with “This Form is intentionally omitted.”

\$\$1\$\$ This fill-in is for the Substantial Completion date.

\$\$2\$\$ This fill-in is for the DBE Performance Plan Section.

\$\$3\$\$ This fill-in is for the WSDOT-Owned property address.

Price Proposal (Section *\$\$1\$\$***)**

\$\$1\$\$ This fill-in is for the Price Proposal Section number.

Technical Evaluation Scoring Summary

\$\$1\$\$ This fill-in is for the technical Section number.

\$\$2\$\$ If it is a Federal aid Project and it has a DBE Goal. Use This fill-in is for the DBE Participation credit/points.

\$\$3\$\$ This fill-in is for the Project goal title.

\$\$4\$\$ This fill-in is for the Project goal credit/points.

\$\$5\$\$ This fill-in is for the Project goal title.

\$\$6\$\$ This fill-in is for the Project goal credit/points.

\$\$7\$\$ This fill-in is for the Project goal title.

\$\$8\$\$ This fill-in is for the Project goal credit/points.

\$\$9\$\$ This fill-in is for the Price Proposal Section number.

\$\$10\$\$ This fill-in is for the total credits/points.

Upset Amount

If it is determined that an Upset Amount is not required on this Project, leave the Section number and title, delete the unused Section and replace with “This Section is intentionally omitted”.

\$\$1\$\$ This fill-in is for the Upset Amount.

Evaluation of the Technical Proposal

\$\$1\$\$ This fill-in is for the Section number that identifies the elimination of allowable closures.

Proposer Stipends

\$\$1\$\$ This fill-in is for the stipend amount.

PROPOSAL FORMS

FORM A (Federally-Funded Template)

\$\$1\$\$ This fill-in is for the Project title.

\$\$2\$\$ This fill-in is for the Project title.

\$\$3\$\$ Note user to provide “fill-in” goal #2 for the Project.

\$\$4\$\$ Note user to provide “fill-in” goal #3 for the Project.

\$\$5\$\$ Note user to provide “fill-in” goal #4 for the Project.

FORM A (State Funded Template)

\$\$1\$\$ This fill-in is for the Project title.

\$\$2\$\$ This fill-in is for the Project title.

\$\$3\$\$ Note user to provide “fill-in” goal #1 for the Project.

\$\$4\$\$ Note user to provide “fill-in” goal #2 for the Project.

\$\$5\$\$ Note user to provide “fill-in” goal #3 for the Project.

\$\$6\$\$ Note user to provide “fill-in” goal #4 for the Project.

FORM B

\$\$1\$\$ This fill-in is for the Project title.

\$\$2\$\$ This fill-in is for the calculated or estimated value.

\$\$3\$\$ This fill-in is for the item number.

FORM C

\$\$1\$\$ This fill-in is for the Upset Amount.

FORM D

\$\$1\$\$ This fill-in is for the Project title.

\$\$2\$\$ This fill-in is for the interim milestones.

FORM E

\$\$1\$\$ This fill-in is for the Project title.

FORM K

\$\$1\$\$ This fill-in is for the Project title.

FORM M

\$\$1\$\$ This fill-in is for the Project title.

\$\$2\$\$ This fill-in is for the Project title.

\$\$3\$\$ This fill-in is for the stipend amount.

FORM N

\$\$1\$\$ This fill-in is for the invoice date

\$\$2\$\$ This fill-in is for the bill to name and address

\$\$3\$\$ This fill-in is for the Project title.

\$\$4\$\$ This fill-in is for the stipend amount.

\$\$5\$\$ This fill-in is for the stipend amount.

\$\$6\$\$ This fill-in is for the stipend amount.

FORM Q

\$\$1\$\$ This fill-in is for the location of property.

\$\$2\$\$ This fill-in is for the Appendix name.

4-3 Chapter 1 General Provisions

RFP Chapter 1 contains the contract General Provisions. It replaces Division 1 of the Washington State Department of Transportation (WSDOT) [Standard Specifications M 41-10](#) and provides the general provisions applicable to design-build delivery. RFP Chapter 1 is largely a standardized document applicable to all WSDOT conventional design-build projects.

Though it is largely standardized, it is nonetheless very important for the WSDOT project team to be familiar with its terms, both the parts of the chapter that must be tailored to the project-specific conditions and the key parts that drive the contractual relationships between WSDOT and the Design-Builder.

Any changes to RFP Chapter 1 that modify policy, content that may materially affect the intent, or content that may affect Federal eligibility or involve Federal Regulations, must be reviewed and approved by the Washington State Attorney General's Office and the FHWA.

Key elements of RFP Chapter 1 are discussed in Exhibit 4-1 below:

Exhibit 4-1 RFP Chapter 1: General Provisions

RFP Chapter 1 is the overriding contract that governs the design and construction of the project. It replaces Division 1 of the WSDOT [Standard Specifications M 41-10](#). Key elements of the chapter include:

1-01	Definitions and Terms	1-06	Control of Material
1-02	Certifications and Representations	1-07	Legal Relations and Responsibilities to the Public
1-03	Interpretation of Contract Documents	1-08	Prosecution and Progress
1-04	Scope of the Work	1-09	Measurement and Payment
1-05	Control of Work		

Definitions and Terms

Section 1-01, Definitions and Terms, includes the definitions for acronyms and defined terms in the RFP. Any term (or acronym) that is capitalized in the RFP is a defined term with its definition provided in this section.

Certifications and Representations

Certifications and Representations, describes:

- Responsibility For Design
- Disclaimer Regarding Documentation
- Design Professional Licensing Requirement
- Examination of Site of Work
- Further Assurances

Interpretation of Contract Documents

- Interpretation of Contract Documents, describes:
- Contract Documents
- Order of Precedence
- Integration of WSDOT *Standard Specifications* M 41-10 and Cited References into Contract
- Contract Bond
- Ambiguities
- Interpretations
- Approvals and Acceptances
- Computation of Periods
- Waiver
- Limitation on Third Party Beneficiaries
- Severability
- Headings
- Amendments
- Governing Law
- Escrowed Proposal Documents

The decision on whether to include the Escrowed Proposal Documents (EPDs) requirement in the RFP lies with WSDOT Region Management. While there is no set dollar threshold, it is common to only require EPDs when the project is of significant size and its duration extends across multiple construction seasons. Work with your ASCE if you wish to omit General Provision 1-03.15 from your RFP.

Scope of the Work

Scope of the Work, describes:

- Intent of contract
- Coordination of contract documents, plans, Special Provisions, specifications, and addenda
- Practical Design Workshop
- Changes
- Procedure and Protest by the Design-Builder
- Differing Site Conditions
 - Guidance requiring coordination between the requirements of Section 1-04.7 and the information provided in the GBR, GDR, and SGDR. Work with the GeoTech Engineer and ASCE.
- Progress Estimates and Payments
- Use of Materials Found on the Project
- Final Cleanup

Control of Work

Control of Work, describes:

- Authority of The WSDOT Engineer
- Authority of Assistants and Inspectors
- Plans and Working Drawings
- Performance
- Inspection of Work and Materials
- Removal of Defective Work
- Guarantees
- Final Inspection
- Final Acceptance
- Superintendents, Labor, and Equipment of The Design-Builder
- Cooperation With Other Contractors
- Method of Serving Notices
- General Warranties

Control of Material

Control of Material, describes Buy America requirements for Federally- funded projects and is intentionally omitted for State-funded projects.

Legal Relations and Responsibilities to the Public

Legal Relations and Responsibilities to the Public, describes:

- Laws to be Observed
- State Taxes
- Forest Protection and Merchantable Timber Requirements
- Sanitation*
- Permits and Licenses
- Load Limits
- High Visibility Apparel
- Wages**
- Worker's Benefits
- Requirements for Nondiscrimination
- Federal Agency Inspection
- The Design-Builder's Responsibility for Work
- Responsibility for Damage
- Protection and Restoration of Property
- Utilities Relocations

- Public Liability and Property Damage Insurance
- Gratuities
- Patented Devices, Materials, and Processes
- Rock Drilling Safety requirements
- Use of Explosives
- Public Convenience and Safety
- Rights-of-Way
- Opening of Sections to Traffic
- Personal Liability of Public Officers
- No Waiver of State's Legal Rights

For additional information on Section 1-07 for Federal-aid projects, refer to Chapter 10 of this manual.

* COVID-19 Health and Safety Plan requirement resides.

** See Wages section of this Chapter for Prevailing Wage information.

Prosecution and Progress

Prosecution and Progress, describes:

- Subcontracting
- Assignment
- Contract Schedule
- Prosecution of Work
- Time for Completion
- Suspension of Work
- Maintenance During Suspension
- Extensions of Time
- Liquidated Damages
- Termination of Contract
- Incentives and Disincentives

Measurement and Payment

Measurement and Payment, describes:

- Measurement of Quantities
- Weighing Equipment
- Scope of Payment
- Equitable Adjustment
- Deleted or Terminated Work
- Force Account
- Mobilization
- Payment for Material on Hand
- Payments
- Partnering
- Disputes and Claims
- Audits
- Claims Resolution

Use of Design-Build Reference Documents

Reference documents may be in the form of environmental documents and decisions, old contract plans or As Built plans, reports, condition surveys, agreements, GSPs, other contracts, photographs, old boring logs, correspondence, and meeting minutes.

Reference Documents should be used to provide information that may be useful or of interest to the Proposers in preparing their proposals and executing the contract.

Reference Documents are provided to the Design-Builder for use at the Design-Builder's risk and come without Department warranties except as specifically provided for in the contract documents. Reference Documents are not to be confused with RFP Technical Requirements. Reference Documents that are going to be included need to be reviewed as a project's RFP is being developed. Items found within Reference Documents that are viewed as mandatory (not to be left to the decision of the Designer of Record) need to have their context included in the contract documents as a Technical Requirement.

Reference Documents are not included in the contract documents for many reasons, including the following:

- The intent may be to show a historical aspect and may be outdated or obsolete;
- The information may have been provided or prepared by parties that the Department has no control or with which the Department has no contractual or legal agreement;
- The document itself may be guidance not a requirement;
- The Designer of Record needs to have the ability to use Reference Documents in the same manner as Department staff;
- The volume of Reference Documents being used on the Department's design-build projects creates a high potential for conflict;
- The information may be ambiguous regarding its assignment of responsibility for performance of work; and/or
- The information may have been obtained for a different project or at another time and may or may not represent current conditions, such as geotechnical borings for building projects along the roadway corridor.

The Department cannot require work to be done in accordance with all of the Reference Documents, essentially using Reference Documents as the Technical Requirements. An RFP's technical requirements may incorporate portions of the Reference Documents by reference, thereby converting that portion of the Reference Document into a technical requirement. However, it is preferable to avoid this approach because it can lead to confusion regarding the intent.

4-4 Chapter 2: Technical Requirements

RFP Chapter 2 provides the project Technical Requirements. The Technical Requirements are organized by discipline. The Technical Requirements are primarily the governing design requirements for the project. They also include construction requirements where they vary from the WSDOT *Standard Specifications* M 41-10.

Some of the key elements of RFP Chapter 2 are discussed in Exhibit 4-2 below:

Exhibit 4-2 RFP Chapter 2: Technical Requirements

RFP Chapter 2 provides the project-specific Technical Requirements of the project, including design criteria, methodology, and deliverables; project-specific construction requirements; and operational requirements. RFP Chapter 2 is divided into 30 sections:

- | | |
|---|--|
| 1. General Information | 16. Illumination |
| 2. Mandatory Standards | 17. Traffic Signals |
| 3. Vacant | 18. Intelligent Transportation Systems |
| 4. Vacant | 19. Signing |
| 5. Surveys and Mapping | 20. Pavement Marking |
| 6. Geotechnical | 21. Traffic Operations |
| 7. Pavement | 22. Maintenance of Traffic |
| 8. Environmental | 23. Railroad |
| 9. Communications | 24. Right of Way |
| 10. Utilities and Relocation Agreements | 25. Control of Materials |
| 11. Roadway | 26. Toll Infrastructure |
| 12. Project Documentation | 27. Vacant |
| 13. Bridges and Structures | 28. Quality Management Plan |
| 14. Stormwater | 29. Maintenance During Construction |
| 15. Roadside Restoration | 30. Water Crossings |

The following sections provide overviews of the Technical Requirements. Instructions for completing fill-ins are also provided where appropriate. When fill-in information is added in a template, the author should insert the information by removing the dollar signs and number but leave the asterisks. For example: ****\$\$2\$\$*** becomes ***Information****

If an entire subsection has been altered, then the title of the subsection would be bracketed by asterisks. For example: *2.5.3.1 ***General****

If the requirements/language of a Technical Requirements' subsection do not apply to a specific Project, the text of that subsection can be omitted from the RFP, but the RFP must retain the title of the omitted subsection to preserve the subsection numbering and referencing throughout the entire RFP. Leave the subsection number and title and replace the content with "This section is intentionally omitted."

Section 2.1: General Information

Section 2.1, General Information, provides the project scope and description.

Section 2.2: Mandatory Standards

Section 2.2, *Mandatory Standards*, describes how Mandatory Standards are to be followed by the Design-Builder. Refer to [Section 2.2](#) for further information.

Section 2.3: Vacant

Section 2.3 is currently vacant.

Section 2.4: Vacant

Section 2.4 is currently vacant.

Section 2.5: Surveys and Mapping

Introduction

Surveying and Mapping creates the base map for all projects. Understanding the basic principles of surveying is important to ensure the project features are constructed at the correct location and elevation. The backbone of all surveying is monuments, which makes it critical to preserve as many monuments as possible.

Reference Documents

\$1\$ This fill-in describes the method/type of survey used to create the base map. WSDOT typically uses two different methods/types of surveying: LIDAR and standard.

Lidar uses a scanner and generates a point cloud that creates a 3D image without point coding. Standard surveying is the traditional method with either a total station and prism, or GPS receiver. All points surveyed using standard methods have point coding. There is also a difference in the accuracy of the points, with standard survey being more precise.

\$2\$ This fill in describes the Plane Coordinates Zone. It is either North Zone or South Zone.

The area now included in the following counties shall constitute the north zone: Chelan, Clallam, Douglas, Ferry, Island, Jefferson, King, Kitsap, Lincoln, Okanogan, Pend Oreille, San Juan, Skagit, Snohomish, Spokane, Stevens, Whatcom, and that part of Grant lying north of parallel 47° 30' north latitude.

The area now included in the following counties shall constitute the south zone: Adams, Asotin, Benton, Clark, Columbia, Cowlitz, Franklin, Garfield, that part of Grant lying south of parallel 47° 30' north latitude, Grays Harbor, Kittitas, Klickitat, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum, Walla Walla, Whitman and Yakima.

\$3\$ This fill-in defines the horizontal survey datum for the project. All WSDOT projects use the North American Datum of 1983 (NAD 83). There have been several adjustments to the NAD 83, such as NAD 83/91, NAD 83/07, and NAD 83/11.

Survey control monuments may have coordinates associated with each of the NAD 83 adjustments. The user of this section needs to know which adjustment was used when the base map survey data was collected.

\$4\$ This is the combined factor used to build the base map and typically matches the Record of Survey.

Survey Manager

Interagency Agreements and Memoranda

In 1990, The Board of Registration for Professional Engineers and Land Surveyors (Board), and WSDOT developed an interagency agreement regarding surveying. This agreement allows WSDOT employees to practice land surveying under the direct supervision of a licensed Professional Land Surveyor (PLS) or Professional Engineer (PE), provided the PE competent in the principles of land surveying.

The provisions of the interagency agreement between the Board and WSDOT do not extend to design-build consultants. Therefore, the design-build survey manager must be a licensed Professional Land Surveyor, if they are directing or supervising non-licensed staff performing surveying.

WSDOT Monumentation

It is important to notify the Region Survey Office when a design-build project is awarded. The timelines specified in this section are short and may be difficult to achieve if the Region Survey Office does not receive advance notification. Record of Surveys and Monument Maps should be reviewed at 30 percent, 60 percent, 90 percent, and draft final stages of completion.

When highways were originally constructed, the centerline was monumented. These monuments are the basis for determining WSDOT property ownership. As subsequent construction projects occurred on highways monuments were removed without sufficient documentation to their original positions. It is best to take all precautions not to impact the monuments. If construction activities must impact monuments, the monument location must be accurately determined and tied to other monuments that will not be impacted.

Monument Submittal

The WSDOT Engineer needs to review the DNR monumentation permit and understand how each monument position will be referenced. Once, an original monument is disturbed or removed there may be no way of determining the original position.

Post Construction Record of Survey

In order to meet the 7 day review time allotted the Region Survey Office will need to be informed of monuments impacted and control points set for the project as the project progresses.

Section 2.6: Geotechnical

Introduction

Section 2.6, Geotechnical, defines the technical requirements that the Design- Builder must meet when performing geotechnical work. The chapter defines the technical requirements in two ways:

1. The chapter contains specific language against which the Design-Builder's work will be evaluated and accepted.
2. The chapter refers the Design-Builder to Mandatory Standards that contain specific language against which the Design-Builder's work will be evaluated and accepted.

It may be necessary to augment, or add to, the current template language to provide project specific technical requirements for work not covered in the base template document. Modifications to the template require the involvement of the Geotechnical Office and the Construction Office. Carefully review the requirements for the decommissioning of wells contained in the template and ensure that the requirements are aligned with the requirements in Chapter 3 of the *Geotechnical Design Manual*. Coordinate all template revisions related to wells with the Geotechnical Office.

For Alternate Technical Concepts (ATC) proposed by the Design-Builder, the Design-Builder must identify any necessary revisions to Section 2.6, provide revisions to the technical requirements, and receive approval from WSDOT before moving forward with the ATC.

Usage

The Geotechnical Office will work with the Project Office to add project specific requirements into the RFP language if needed.

If the template requires fill-ins, instructions on their use will be included in the template. The author should follow the instructions within the template document.

The WSDOT [Geotechnical Design Manual](#) (GDM) M 46-03 contains additional guidance in Chapter 22 regarding the geotechnical work necessary for RFP development.

Specific preparatory work needed for RFP development, such as subsurface drilling, testing, geotechnical characterization, development of the GDR and GBR, etc., should be discussed with the Geotech office well in advance of the Ad Date. Chapter 22 of the GDM should be consulted for additional background on what is required to be accomplished prior to Ad.

In accordance with the GDM, the Geotechnical Office will prepare a Geotechnical Data Report (GDR), Geotechnical Baseline Report (GBR), and compile pertinent reference geotechnical documentation into a package for prospective Proposers for inclusion in the appendices.

Section 2.7: Pavement

Introduction

WSDOT retains the responsibility for pavement designs on design-build projects. The Region Materials Engineer or the HQ Pavement Office provides a Pavement Design Report that includes the pavement sections and other design requirements needed to construct the project. The requirements of the Pavement Design Report are incorporated into the Section 2.7 template that, along with general design and construction requirements, forms the basis of pavement related plans developed by the Design-Builder. Include the Pavement Design Report in the appendices. Pavement design details not provided for in the Pavement Design Report or Section 2.7 are to be provided by the Design-Builder.

WSDOT has found that a State-provided pavement design ensures that the resulting pavement is a good investment. There are many different pavement designs that could work for a project and some will result in a lower initial cost than WSDOT's design. If the pavement design were left to the Design-Builder, the structure of a design-build contract would encourage the design of the lowest initial cost pavement. However, the pavement with the lowest initial cost is usually not the pavement that has the lowest cost over the pavements life. WSDOT's policy is to design pavement that results in the lowest life-cycle cost taking into account the cost of maintenance and rehabilitation in addition to the initial cost when determining the appropriate design for a project. This does not restrict the Design-Builder from providing alternate pavement designs. Alternative proposals will be considered provided they are structurally equivalent and equal or lower life-cycle cost than WSDOT's design. By providing the pavement design, WSDOT ensures a long lasting low life-cycle cost pavement while providing a level playing field for the design-build Proposers.

General

Fill-in: ***\$\$1\$\$*** Elements of pavement work

Pavement Sections

The pavement sections to be used in the project are shown in the approved pavement design report. The pavement sections for each alignment are inserted into this section. Ensure that every alignment that may require pavement work is included.

Include any additional requirements for each pavement section. Example: The compacted depth for the I-5 lanes and shoulders shall be as follows:

- 1.05 feet PCCP with corrosion resistant dowel bars, over
- 0.25 feet HMA Class ½-inch PG 64-22 (0.29 Million mix design ESALs), over
- 0.35 feet CSBC.

Place geotextile for soil stabilization meeting the requirements of Section 9-33 of the WSDOT *Standard Specifications* M 41-10 between subgrade and the CSBC.

This section also includes design and construction requirements common to all pavement construction. These requirements should only be changed if different requirements are called out in the Pavement Design Report.

Fill-ins:

***\$1\$\$** Mainline SR number or alignment (i.e. I-5 mainline or LR Line)

***\$2\$\$** Pavement sections from the Pavement Design Report

Local Agency Pavement

It is WSDOT policy to design and construct Local Agency pavement to the Local Agency's standards. Most design-build projects will require the Design-Builder to provide a design for Local Agency pavement.

Projects with minor pavement construction on Local Agency facilities may include pavement sections for the Local Agency pavement. In this case, this section can be omitted and the pavement sections for the Local Agency pavement included in Section 2.7.3.1.1.

Minimum pavement thicknesses are shown for Local Agencies without pavement design standards. These are intended for low volume roadways that may need pavement work as part of the project. A specific pavement design should be required for higher volume roadways or roadways where substantial work required.

Miscellaneous Pavement

Miscellaneous pavement includes driveways, parking areas, maintenance access roads, and any other pavement outside the travel lanes and shoulders. Design of these pavement sections is left up to the Design-Builder.

Incorporation of Existing HMA into Final Pavement Design

This section provides criteria under which WSDOT may allow the reuse of existing pavement. There is some risk that the existing pavement has hidden distress or is too thin to provide adequate structural support. To reduce the risk to WSDOT, minimum requirements for investigating the existing pavement are included in this section. The core information (thickness and photos) should be submitted to the Region Materials Engineer and HQ Pavement Office to determine if the pavement is adequate to carry future traffic. More investigation may be needed if there are questions regarding the quality or thickness of the existing pavement.

Hot Mix Asphalt Pavement Rehabilitation

The purpose of pavement rehabilitation is to restore the structural capacity of the pavement and provide a smooth riding surface for future traffic. HMA rehabilitation may include crack sealing, pavement repair, prelevel, an HMA overlay or planing the existing pavement followed by an overlay. The specific requirements will be included in the approved pavement design report.

It is important that all distress in the existing pavement be properly identified to ensure the rehabilitated pavement performs well. The pavement design report will detail the types and general locations of distress that needs to be repaired. The Design-Builder is required to identify specific locations of the distress to be repaired and prepare a pavement rehabilitation plan. The pavement rehabilitation plan is WSDOT's chance to ensure that all of the locations requiring rehabilitation work have been properly identified. The project team should carefully review the plan and verify the type and location of repairs correlate with the condition of the existing pavement in the field.

Fill-in:

\$\$1\$\$ HMA pavement rehabilitation requirements from the Pavement Design Report

Crack Sealing

Prior to an HMA overlay cracks greater than 0.25 inches wide need to be sealed to prevent the intrusion of water and eliminate voids in the surface to be paved. Where planing bituminous pavement is called for prior to the overlay the cracks will need to be sealed after planing. After planing, many of the cracks will be narrower which must be considered when estimating the quantity.

Fill-ins:

\$\$#\$\$ **\$\$1\$\$*** Estimated quantity (LF) of crack sealing

Hot Mix Asphalt Pavement Repair

Pavement repair is needed to restore sections of HMA where cracks have propagated through the entire thickness of the HMA reducing the pavement's capability to carry loads. These areas are usually identified by small (6 to 18 inch) block type cracking where the pavement has begun to depress under loads. These areas should not be confused with age related cracks that do not penetrate full depth of the HMA and will be removed by planing bituminous pavement (if required) before the overlay. Additional evidence such as depressed pavement, pumping of fines or coring to verify crack depth should be used to verify that the cracks extend through the entire thickness of the HMA.

Fill-ins:

\$\$2\$\$ Estimated quantity (SY) of pavement repair

Prelevel

Prelevel is a thin layer of HMA used to fill ruts and improve the smoothness of the existing HMA prior to an overlay. Prelevel is not needed if planing bituminous pavement is performed prior to the overlay.

Fill-ins:

\$1\$ Tons per lane mile of prelevel from Pavement Design Report

\$2\$ PG of asphalt in the HMA for prelevel

Hot Mix Asphalt Overlay

An HMA overlay increases the structural thickness of HMA and provides a smooth riding surface. Distress in the existing HMA needs to be repaired in accordance with the Pavement Design Report prior to the overlay.

Fill-ins:

\$1\$ Class of mix from Pavement Design Report

\$2\$ PG of mix from Pavement Design Report

\$3\$ The location of the overlay should be shown in the Conceptual Plans. If not shown in the Conceptual Plans, the location should be shown here.

Bridge Overlay Replacement

To be completed by the bridge office.

Planing Bituminous Pavement and Hot Mix Asphalt Overlay

Planing bituminous pavement prior to overlaying is an economical way to rehabilitate an HMA pavement. Planing the existing HMA prior to paving removes surface distresses eliminating the need to repair them prior to the overlay. Planing also allows paving of just the travel lanes if the shoulders are in good condition. Distress that extends below the HMA removed by planing must still be repaired prior to overlaying.

The planing depth in the RFP is the minimum depth of planing required. The Design-Builder may have to increase the depth of planing to remove the entire existing top lift if delamination occurs.

Fill-ins:

\$1\$ The location of the overlay should be shown in the Conceptual Plans. If not shown in the Conceptual Plans, the location should be shown here.

\$2\$ Depth of planing from the Pavement Design Report

\$3\$ Class of mix from Pavement Design Report

\$4\$ (need to add fill-in to RFP) PG of mix from Pavement Design Report

Cement Concrete Pavement Rehabilitation

Cement concrete pavement rehabilitation preserves the pavement by replacing broken panels, grinding to provide a smooth pavement, repairing spalled pavement, and restoring load transfer between panels by retrofitting with dowel bars. The specific requirements will be included in the approved pavement design report. Not all projects will require that existing cement concrete pavement be rehabilitated. For projects that do require cement concrete pavement rehabilitation, it is important the requirements be clearly described to ensure that the needed rehabilitation is performed.

It is important that all distress in the existing pavement be properly identified to ensure the rehabilitated pavement performs well. The pavement design report will detail the types and general locations of distress that needs to be repaired. The Design-Builder is required to identify specific locations of the distress to be repaired and prepare a pavement rehabilitation plan. The pavement rehabilitation plan is WSDOT's chance to ensure that all of the locations requiring rehabilitation work have been properly identified. The project team should carefully review the plan and verify the type and location of repairs correlate with the condition of the existing pavement in the field.

Fill-in:

***\$1\$\$** PCCP pavement rehabilitation requirements from the Pavement Design Report

Replace Cement Concrete Panel

The goal of cement concrete panel replacement is to replace panels that have a high likelihood of failure. This section lists typical distresses that indicate a panel more likely to fail (break up) in the near future. The Pavement Design Report may provide other criteria that should also be included in this section.

Fill-ins:

***\$\$#\$\$** Estimated number of cement concrete pavement panels to be replaced

Partial Depth Spall Repair

Partial depth spall repair is used to correct distress near the surface of concrete pavement. Locations of spall repair need to be identified by the Design-Builder and included on the pavement rehabilitation plan.

Dowel Bar Retrofit

Locations to be dowel bar retrofitted are described in the approved pavement design report. The locations should be identified in the RFP or Conceptual Plans.

Cement Concrete Pavement Grinding

Locations of cement concrete pavement grinding are described in the approved pavement design report. The locations should be identified in the RFP or Conceptual Plans.

Construction Requirements

GSPs or Special Provisions required by the pavement design report should be included in this section.

Fill-ins:

\$1\$ Fill in Special Provisions to be used for the pavement construction on the project. The Pavement Design Report will include Special Provisions that are needed for the project. Other Special Provisions related to paving may need to be included at the designer's discretion.

\$2\$ Include the number of ESALs for the HMA mix design found in the Pavement Design Report

Cement Concrete Pavement Smoothness

Mean roughness index (MRI) is used to evaluate the smoothness of new cement concrete pavement and cement concrete pavement grinding. The requirements for measuring smoothness are included in Section 5-01 of the WSDOT [Standard Specifications](#) M 41-10 for cement concrete pavement grinding and Section 5-05 of the WSDOT [Standard Specifications](#) M 41-10 for new cement concrete pavement. The incentives and disincentives for smoothness are only applicable to new cement concrete pavement. Cement concrete grinding only needs to meet the minimum MRI requirement. Corrective action is required if the cement concrete grinding does not meet the minimum requirements but there is no incentive or disincentive payment.

Hot Mix Asphalt Smoothness

HMA pavement smoothness data and testing is provided by the HQ Pavements Office. Designers should follow the instructions of GSP 5-04.3(13).OPT1.FR5 to obtain the existing MRI values to include in Appendix J of the RFP. Only existing travel lanes that will be overlaid (including lanes to be planed and overlaid) require the existing MRI values be included in Appendix J.

\$1\$ Date the existing MRI testing was performed by HQ Pavement Office

Temporary Traffic Detours

The Design-Builder may propose detouring traffic to construct the project. The design of the detour is left up to the Design-Builder since WSDOT cannot always predict the location and duration that a detour is needed on a design-build project.

WSDOT typically constructs shoulders with thinner pavement than the mainline travel lanes. Thin shoulder will not stand up to prolonged mainline traffic and the pavement structure may need to be increased to carry detour traffic. If the Design-Builder proposes to detour traffic onto a shoulder an evaluation of the shoulders ability to carry traffic will be required. The evaluation may include coring or other means to determine the thickness and underlying condition of the shoulder pavement. If the evaluation shows that the shoulder will not support traffic for the duration of the detour, the shoulder pavement will need to be improved or replaced before traffic is detoured onto it.

If a detour is unacceptably rough, contact the HQ Pavements Office for IRI testing. For long duration detours, the Region may consider lowering the required IRI limits.

Section 2.8: Environmental

Introduction

Environmental compliance in design-build can pose a considerable risk to both WSDOT and the Design-Builder. The design-build process allows the Design-Builder latitude in developing a design that varies from the conceptual plans, providing the Design-Builder the opportunity to develop the most efficient or innovative design. However, these variations may change environmental impacts, which could affect project approvals, permits, and the schedule.

As a result, early and continued involvement from environmental staff is necessary to identify how the design can be flexible and innovative while ensuring the project scope and RFP is consistent with the regulatory approvals and permits being obtained for the project.

The environmental requirements included in Section 2.8, *Environmental* must clearly identify environmental permitting and mitigation responsibilities to be managed by the Design- Builder. If not, it can lead to schedule and cost risks to the Design-Builder and the Project. This section (as do all the DB template documents) includes fill-in locations that allow the project team to incorporate project-specific information. Please note that some entire sections may need modification to accurately describe project requirements. Furthermore, a project team may need to add a subsection(s) to address unique project requirements (e.g., dredging, fish exclusion, underwater noise monitoring, etc.).

A critical step in the development of Section 2.8, *Environmental* is the preparation of a Commitments List. This list identifies all of the environmental commitments that the Design-Builder is responsible for implementing during design and construction of the project. It is compiled from all the environmental permits and approvals obtained for or applicable to the project. The Commitments List becomes a contract document and gets included in the RFP as Appendix C1. Section 2.8.4 requires the Design-Builder to implement and report on the fulfillment of these commitments. Additional guidance for tracking environmental commitments can be found in [Chapter 490](#) of the WSDOT *Environmental Manual* M 31-11.

Appendix E contains all the environmental documents related to the project. Examples include the NEPA decision document, Endangered Species Act (ESA) documentation and concurrence, Section 106 concurrence, and wetland and stream memos. In addition, any other studies conducted to gain an understanding of the environment resources that exist within the project area should be included in Appendix E to help the Proposers prepare an accurate proposal.

Appendix P contains all the permits obtained for the project. It is worth noting that permits will often include requirements that may apply to WSDOT or to the Design-Builder, so just including a copy will not necessarily make it clear to the Design-Builder what is expected. The Commitments List spells out the requirements that the Design-Builder is responsible for implementing.

An [Environmental flowchart](#) and [tables](#) are available for download on the DB Program SharePoint Site to facilitate your understanding of environmental processes in design-build projects.

Usage

This section explains how to use the template and provides guidance for certain subsections of Section 2.8, *Environmental*. This includes guidance for fill-ins, GSP selection, and references to helpful examples or resources for the author.

Mandatory Standards

If your project includes in-water work that involves the need for a Temporary Stream Diversion, please include the General Special Provision (GSP) for Temporary Stream Diversion 7-06.SA1.FR7 or 7-06.SA2.FR7 (whichever is appropriate for your project) within the Special Provisions in Appendix B.

Recommend referencing other applicable GSPs in Section 2.8 and including them in Special Provisions Appendix B.

Interagency Agreements and Memoranda

If there are agreements with regulatory agencies or the tribes that pertain to the Project, keep this subsection and include the appropriate agreements in Appendix E. If there are no applicable agreements, the author may omit this subsection.

Below are examples of existing interagency agreements that may apply to WSDOT design-build projects. Any commitments that exist within these documents (that are to become the responsibility of the Design-Builder) will need to be spelled out in the Commitments List.

- Memorandum of Agreement (MOA) Concerning Implementation of the Fish and Wildlife Hydraulic Code for Transportation Activities between the Washington State Department of Fish and Wildlife (WDFW) and WSDOT.
- Other project-specific agreements. For example, an MOA between WSDOT, FHWA, the tribes and the Department of Archaeology and Historic Preservation (DAHP) regarding historic or archaeological resources.

Environmental Compliance Manager

If the Environmental Compliance Manager was described as Key Personnel in the Request for Qualifications, adjust this section to ensure qualification requirements are in alignment or do not contradict.

There is an optional fill-in that can be used if the project is not a linear roadway project. For example, if the project involved the construction of a new Ferry Terminal, the author could include the phrase “and aquatic or marine-related” for the fill-in.

Environmental Compliance Inspector

The Environmental Compliance Inspector (ECI) shall be responsible for producing a Daily Environmental Inspection Reports (DEIR). A DEIR shall be produced for each day of field Work. The RFP should list out what a DEIR shall include at a minimum. The template includes a couple standard requirements and a fill-in for more requirements. The fill-in allows the RFP author to address unique areas of risk associated with the project.

Below are examples of DEIR requirements to consider:

- Project name and Contract number
- Inspectors name
- Date, time, weather conditions and precipitation totals
- Inspections performed and the results of the inspections, including specific location in the case of projects with multiple stages or work areas
- A list of special inspections performed (Hold Points) and the results
- A list of BMP maintenance or additions needed
- Documentation of communications with the ESC Lead regarding BMP maintenance or additions needed
- Documentation of required water quality testing performed and the results of these tests
- A copy of any checklist used in performing the inspection
- ECI signature
- ECM initials indicating review of the document

If your Project has a significant amount of earth moving and acres of soils disturbed, consider adding a subsection under Personnel Requirements below the Environmental Compliance Inspector subsection to require the Design-Builder to hire a full-time Erosion and Sediment Control (ESC) Lead.

If you add a new subsection, consider using the following language:

“Erosion and Sediment Control Lead

The ESC Lead shall be assigned to the Project and be available on-site, full-time until Ecology approves the Notice of Termination for the Project’s NPDES permit. A commitment of less than full-time may be approved by the WSDOT Engineer based on Project needs and time of year.”

Note, additional ESC Lead requirements are currently listed under the Temporary Erosion and Sediment Control Plan subsection.

Environmental Meetings

Modify this section based on project specific requirements. For example, consider adding an additional subsection after the Kick-Off Meeting if the Project requires an Environmental Preconstruction Meeting. An example of a new subsection follows:

“Environmental Preconstruction Meeting

The Design-Builder shall organize and lead an environmental preconstruction meeting with WSDOT and any necessary regulatory agencies ~~***\$\$1\$\$~~ Calendar Days prior to the start of construction activities. During the environmental preconstruction meeting, the Design-Builder shall discuss the ECP, including its environmental training program, to demonstrate how the Design-Builder shall meet permit conditions and fulfill environmental commitments. The Design-Builder shall discuss its construction schedule and identify the early construction elements.”

If the Project has a significant number of commitments, consider adding a subsection that requires Environmental Commitments Review Meetings. An example of a new subsection follows:

“Environmental Commitments Review Meetings

The Design-Builder’s ECM shall organize and implement monthly environmental commitment review meetings with WSDOT during design and construction to ensure that the Project meets all Project environmental commitments included in the Environmental Commitments List (Appendix C). The ECM shall review environmental commitments at each meeting and work with WSDOT staff to close out commitments as they are met throughout the life of the Contract.”

Part II: Environmental Plans and Strategies

Add subsections for any Project-specific plans that the Design-Builder must prepare, as required. Examples include:

- Soil and Groundwater Management Plan,
- Concrete Containment and Disposal Plan,
- Temporary Stream Diversion Plan,
- Fish and Aquatic Species Exclusion Plan,
- Invasive Plant Species Monitoring and Control Plan
- Worker and Public Health and Safety Plan.

Others may be required depending on your Project-specific commitments.

If there are expectations or minimum plan requirements, be sure to include those in the appendices of your RFP and reference them. For example, the WSDOT General Special Provision (GSP) regarding Temporary Stream Diversion (either 7-06.SA1.FR7 or 7-06.SA2.FR7, whichever is appropriate for each culvert site).

Spill Prevention, Control, and Countermeasures (SPCC) Plan

This subsection states that the Design-Builder's SPCC Plan shall meet the "SPCC Plan Requirements" provided in Appendix E. These requirements were adapted from the existing SPCC requirements listed in Section 1-07.15(1) of the WSDOT [Standard Specifications](#) M 41-10 so they would be appropriate for a design-build project. [Click here](#) for the most recent copy of the SPCC Plan Requirements for inclusion in Appendix E.

Water Quality Monitoring

Monitoring Plan for In-Water Work

Include this subsection if the project involves in-water work and has the potential to violate State surface water quality standards (WAC 173-201A). In-water work consists of work that occurs below the Ordinary High Water Mark (OHWM) of lakes and streams or work that occurs below the Mean Higher High Water (MHHW) in tidal areas.

You must modify this subsection in the template depending on the whether you have an individual 401 Water Quality Certification from Ecology, or if you have a Section 401 Letter of Verification (LOV) or "no further action" from the Army Corps. *If left alone, this subsection will lead to confusion since the two pathways have redundant but inconsistent requirements.* If the Project requires an individual 401 Water Quality Certification from Ecology, include *only* the first two paragraphs of this subsection (shown below in quotes), and strike the remaining paragraphs:

"The Design-Builder shall prepare a WQMPP as a Type 3 Working Drawing and submit it to the WSDOT Engineer for Review and Comment ***\$\$1\$\$*** Calendar Days prior to beginning in-water work so WSDOT can work with Ecology to

get the required approval. The WSDOT Engineer may grant the Design-Builder permission to coordinate directly with Ecology in preparing their submittal. The WQMPP shall address all of the requirements identified within the Section 401 Water Quality Certification (Appendix P) issued to WSDOT. WSDOT has guidance that was developed in collaboration with Ecology for preparing a WQMPP and sampling water quality, which is available on WSDOT's website under Environmental Commitments and Compliance.

All costs, delays, or both that result from not having an Ecology-approved WQMPP shall be the Design-Builder's responsibility, in accordance with Section 1-04 of the General Provisions. The Design-Builder shall be responsible for updating the WQMPP in accordance with the requirements of the Section 401 Water Quality Certification (Appendix P). If monitoring shows the activity is out of compliance, the Design-Builder shall immediately stop the in-water work that is causing noncompliance with the water quality standard and notify the WSDOT Engineer. The Design-Builder shall provide the sampling results to WSDOT on a weekly basis during in-water construction."

If the project has a Section 404/10 Nationwide Permit that is automatically certified (i.e., no further action from the Army Corps) or receives a Section 401 Letter of Verification (LOV) from Ecology, strike the first two paragraphs of this subsection, and include *only* the third and subsequent paragraphs (shown below in quotes):

"The Design-Builder shall prepare a water quality monitoring plan as a Type 3 Working Drawing, and submit it to the WSDOT Engineer for Review and Comment. The water quality monitoring plan shall identify how the Design-Builder will comply with State water quality standards contained in WAC 173-201A and authorized by U.S.C. Section 1313 and by Revised Code of Washington 90.48. WSDOT has guidance that was developed in collaboration with Ecology for preparing a water quality monitoring plan and sampling water quality, which is available on WSDOT's website under Environmental Commitments and Compliance.

At a minimum, the Design-Builder's water quality monitoring plan shall include the following:

- Description of in-water activities
- BMPs and procedures use to protect water quality during work occurring in waters of the State
- Applicable water quality standards and parameters
- Sampling locations and monitoring frequency
- Name(s) and phone number(s) of the person(s) responsible for on-site monitoring and reporting
- Documentation and reporting protocols
- Map showing sampling locations
- Monitoring form for recording sample results in the field

The Design-Builder shall submit the water quality monitoring plan as part of the Design-Builder's ECP to WSDOT for Review and Comment 14 Calendar Days prior to beginning construction.

If monitoring shows the work is out of compliance, the Design-Builder shall immediately stop the in-water work causing noncompliance with the water quality standard and notify the WSDOT Engineer. The Design-Builder shall provide the sampling results to WSDOT on a weekly basis during in-water construction. The Design-Builder shall update the water quality monitoring plan during construction of the project to address changes required to meet water quality standards. The Design-Builder shall submit updates to the water quality monitoring plan to the WSDOT Engineer."

National Pollutant Discharge Elimination System Construction Stormwater General Permit Sampling

Only include this subsection if the project triggers an NPDES Construction Stormwater General Permit (CSWGP).

Bird Protection Plan

This subsection states that the Design-Builder's Bird Protection Plan shall be prepared in accordance with the WSDOT *Bird Protection Protocols and Standards* provided in Appendix E. [Click here](#) to get the most recent copy of the *Bird Protection Protocols and Standards* for inclusion in Appendix E

Permits and Approvals

Permit Acquisition

WSDOT has determined that the Design-Builder shall obtain the NPDES CSWGP because the application (Notice of Intent (NOI)) requires specific information that will be based on the Design-Builder's approach. If the project team does not want the Design-Builder to obtain the CSWGP, then they must obtain approval from the WSDOT Assistant State Construction Engineer assigned to their region or mode.

Some projects will trigger supplemental data submittals to Ecology during the NOI process. For example, projects with:

- New outfalls to surface waters that are impaired (303(d) or TMDL) for turbidity, fine sediment, pH, or phosphorus, and/or;
- Known existing site contamination (soil or groundwater).

WSDOT maintains NOI guidance to assist in various aspects of the submittal requirements that can be found on the Erosion Control [Policies and Procedures webpage](#):

- General submittal requirements
- Existing Contamination
- Discharges to Impaired Waters

The Design-Builder may trigger supplemental data submittal(s) during the NOI process, which could result in additional environmental commitments. The cost of compliance during construction will depend on the extent of existing contamination that will be disturbed and the potential to discharge into an impaired waterbody. Additional environmental commitments may include:

- Enhancements to pollution prevention planning documents (e.g., TESC, SPCC, dewatering or concrete handling plans) for impairments or contamination
- Specific performance expectations for contamination
- Monitoring, sampling, and reporting requirements for impairments or contamination (these requirements could be triggered by presence of hazardous materials or Section S8 of the CSWGP)
- Administrative Order for contamination

If the Project has complex surface water environmental risks or existing known contamination that will likely be disturbed, WSDOT should clearly describe this in Section 2.8, *Environmental* including the potential for increased costs associated with compliance.

The Design Builder is ultimately responsible for identifying all receiving water outfalls (that may receive a discharge) and known contamination based on readily available data during the NOI process. This responsibility includes all areas disturbed by construction and construction support activity (including off-site areas that meet the CSWGP criteria). Failure to identify all outfalls and contamination during the NOI process may lead to permitting delays, including NOI resubmittal and additional public notice in accordance with General Condition 20 (G20) of the CSWGP.

Permit Compliance, Modifications, and Additional Approvals

Coordinate with region or mode environmental staff when the Design-Builder proposes an alternative construction method or a design change(s) to determine whether the change is consistent with the initial environmental permit applications and documentation. If the change(s) alter the Project description or the methods and means previously described, then WSDOT may need to contact regulatory agencies or tribes to determine if reevaluation or permit modifications are necessary. Examples of items to review for changes to environmental permits and documentation include:

- Alternative Technical Concept (pre-proposal)
- Change Order
- Notice of Design Change (NDC)
- Field Change Request (FCR)
- Nonconforming Issue (NCI)
- Nonconformance Report (NCR)

Threatened and Endangered Species

If the Project utilizes the WSDOT/FHWA Programmatic Biological Assessment (PBA) to ensure compliance with the ESA, reference and include completed Project Notification Forms (PNF) in Appendix E and reference PBA minimization measures included in the Environmental Commitments List (Appendix C). Consider adding (and modifying if necessary) the following language that informs the Design-Builder of risks associated with designs exceeding thresholds for coverage under the PBA:

“If the Design-Builder modifies design or construction activities from those described in the *** WSDOT United State Fish and Wildlife Services (USFWS) and WSDOT National Marine Fisheries Services (NMFS) Project Notification Forms (PNF) ***, ESA consultation may have to be re-initiated. If this occurs, the Design-Builder shall work through WSDOT to provide the necessary information required to determine if re-initiation of ESA is needed. If reinitiation is needed, then the Design-Builder shall work through WSDOT to provide the necessary information required for re-initiation of ESA consultation. WSDOT will take the lead in coordinating with USFWS and NMFS. If ESA consultation needs to be re-initiated due to changes made by the Design-Builder, all cost and schedule impacts shall be the Design-Builder’s responsibility.

The *** WSDOT USFWS and NMFS PNFs *** contains a number of performance standards. Performance standards have been included in the Environmental Commitments List (Appendix C). The Design-Builder shall fulfill and report on the implementation of performance standards and environmental commitments in the Environmental Commitments Close Out Report described in this Section.”

Submittals

Make sure this subsection is consistent with the general and Project-specific submittals described in the Environmental Plans and Strategies subsection. Review the bullets and sub-bullets in the Submittals subsection, and add or delete plans as necessary (e.g., Soil and Groundwater Management Plan, plans for temporary stream diversion, Worker Health and Safety Plan, Air Quality and Fugitive Dust Control Plan).

Section 2.9: Communications

Section 2.9, Communications, contains the requirements for handling internal and external communications about the project. It plays a strategic role in obtaining stakeholder and public consensus for the project.

WSDOT will lead communications on projects. The extent of the Design-Builder’s support will depend on the WSDOT region communications office’s ability to devote the necessary time and resources to the project. For some projects, WSDOT may want to take the lead on most communications efforts while the Design-Builder will provide support by supplying construction closure info, drafting key messages, noise flyers, etc. In other cases, WSDOT may want the Design-Builder to do most of the work, while WSDOT retains approval rights for any communications written/created by the Design-Builder. The correct approach for the project may also depend on the sensitivity of the public.

The WSDOT project team, which should include personnel from the region communications office, determines the best approach and the requirements for this section.

When developing Section 2.9, consideration must be given to the flow of communication. The flow of communication must consider internal employees, the general public, stakeholders, media, and other governmental agencies. Each group has unique requirements and deadlines for receipt or dissemination of information. The WSDOT project team must consider each group's needs and determine the best method and timelines for handling information.

Section 2.9 should also include requirements for public outreach such as a hotline, project signs, and project website. Public outreach may also require meetings with the general public, stakeholders, media, and governmental agencies.

Section 2.9 should include information on the following topics:

- Mandatory Standards
- Joint responsibilities, WSDOT responsibilities, and Design-Builder responsibilities
- Project communications plan requirements
- Crisis communications plan requirements
- Design-Builder Communications Specialist requirements and duties
- Communications Task Force requirements
- Maintenance of Traffic (MOT) and Access notification requirements
- Construction information
- Media relations

General

Describe the purpose for communications for the project. Create a bulleted list of some of the project goals, such as supporting successful delivery of the project, providing information to individuals and entities directly affected by construction, educating the public about environmental benefits and improvements, reinforcing positive WSDOT relationships, educating the public about the need, vision, and context for the project.

Mandatory Standards

Review this list to ensure the standards are listed. Consider whether you need to include the Associated Press Stylebook, particularly if the Design-Builder will be creating public materials such as news releases, blogs, media advisories, project website, and other written materials.

Joint Responsibilities

\$\$1\$\$ Modify this to fill in the name of the project

Communications Planning Workshop

***\$\$1\$\$** Modify this to fill in to indicate whether WSDOT or the Design-Builder will plan the communications/No Surprises workshop.

The Communications Planning Workshop should include the WSDOT Communications Team, WSDOT Project Office, and Design-Builder to review the project, communications planning, review emergency communications procedures, and create a flow chart of communications to outline the phone tree. WSDOT should also take the opportunity to review our “No Surprises” philosophy.

Project Communications Plan

Modify this to state whether WSDOT or the Design-Builder will establish and implement the project communications plan. It is helpful to have a WSDOT plan to provide to the Design-Builder to describe expectations, roles, responsibilities, and WSDOT resources that can be utilized by the Design-Builder. WSDOT will always retain final approval of a project communication plan, regardless of authorship.

WSDOT’s Responsibilities

***\$\$1\$\$** - Modify this to describe a goal/task specific to this project in the first bullet point. It may involve coordination with other construction projects, attending community meetings or briefings. If the listed goals are sufficient, you may eliminate the ***\$\$1\$\$** bullet point.

Design-Builder’s responsibilities

Consider adding a bulleted list in here of other things you want the Design-Builder to be responsible for such as:

- Responding to correspondence
- Providing noise hotline support
- Creating and maintaining a citizen database of emails/phone calls/letters, and public information materials such as folios, maps, fliers and fact sheets
- Taking photos
- Shooting and editing project video

Personnel Requirements

***\$\$1\$\$** Modify this to indicate how many years of experience the Design-Builder’s Communications Specialist should have. When deciding, consider the required outreach, the level of support they will be expected to provide, and the level of expertise needed to accomplish the goals. A project with more outreach required to State and elected officials or that is inherently controversial may warrant a Communications Specialist with more experience than other projects.

If the Project Engineer, in consultation with WSDOT communications, determines that the Design-Builder will not be required to hire a communications specialist, this section may be intentionally omitted.

Task Force Meetings

This section is designed to ensure that the Design-Builder keeps WSDOT communications and the project team apprised of plans.

Construction Schedule

Modify ***\$1\$\$** to note email address of either project email, regional construction email or another user.

Modify ***\$2\$\$** and ***\$3\$\$** with time and days of the week. Example “no later than 11 a.m. Tuesdays”

If a Design-Builder communications specialist will not be required due to intentionally omitting section 2.9.5.1, delete the last sentence of the section that states: “The Communications Specialist shall write a summary of the upcoming approved closures for posting on the construction closures website and submit it to WSDOT by ***\$3\$\$**.”

Coordination with Traffic Management Plan

This section ensures that the Design-Builder coordinates closures and communications with other nearby projects.

Traffic Conditions

If the region does not have a Traffic Management Center, delete that portion of it, but keep the section about informing the WSDOT project personnel.

Commercial Vehicle Access and Restriction Information

Modify ***\$1\$\$** to indicate how many Calendar Days that freight/commercial vehicles must be notified in advance of the restriction.

Modify ***\$2\$\$** to note which agencies must be notified. Examples may include the Washington Trucking Association, the WSDOT Commercial Vehicles Division, Washington State Patrol, transit, emergency services, transportation offices of other cities/agencies, and local ports or trucking areas.

Emergency Vehicle Access

This is to ensure that local emergency service providers such as local law enforcement, hospitals, and ambulance services are notified about access through or detours around the area.

Bicycle and Pedestrian Access

No modifications are needed unless the State wishes to identify specific bicycle and pedestrian groups.

Methods and Tools for Dissemination of Information

Modify ***\$1\$\$*** to indicate whether WSDOT or the Design-Builder will be responsible for updating the project website.

Telephone Hotline

Determine whether a hotline is needed for the project. If not this section may be intentionally omitted.

Collateral Materials

The fill-in can be modified to indicate additional collateral materials that must be developed such as progress fact sheets for media and folios.

External Events

Modify ***\$1\$\$*** to indicate approximately how many events the will occur during the project.

Modify ***\$2\$\$*** to list event names specific to the Project. This list should be consistent with the number of events shown in ***\$1\$\$***.

Photographs and Video

Modify ***\$1\$\$*** to indicate whether WSDOT or the Design-Builder will lead photography and video efforts.

External whether WSDOT or the Design-Builder will lead photography and video efforts

Submittals

Modify this section to add bullet points of other deliverables listed in the project design- build contract. Examples of additional submittal materials may be noise flyers, project folio, media fact sheets, PCMS messaging, HAR messaging, and project webpage content.

Section 2.10: Utilities and Relocation Agreements

Introduction

WSDOT retains the responsibility to work with public utilities for reimbursement or compensation for relocation of their facilities.

It is important to provide utility locations to the Design-Builder. Due to time constraints placed on the Design-Builder, it is likely that the Design-Builder will assume that all existing utilities are in good condition unless noted otherwise, although utility As Builts are a Reference Document and should be relied upon.

Utilities will already have an existing agreement with WSDOT or a Local Agency. During the preliminary site investigation, determine the location and condition of all utilities. In preliminary design, identify any utilities that will be impacted and, whenever possible, relocate them prior to the Design-Builder beginning work. An exception would be for a multi-season project that has the potential for an innovative solution that could change utility impacts. In this case, it may be prudent to delay utility relocation until after award.

If relocation must be done in conjunction with the design-build contract, give the Design-Builder responsibility for and control of the relocation itself. Establishing a cost for potential coordination delays can impact the overall price of a contract.

If the preliminary agreement with a utility (public or private) requires modification as a result of the Design-Builder's final design, the risk and responsibility for this delay should rest with the Design-Builder.

In urban environments, consider a full subsurface utility investigation if the conditions of the existing facilities could potentially impact the project schedule.

Care should be taken to ensure a franchise agreement or permit exists. Expired permits should be addressed prior to ad.

Usage

Mandatory Standards:

Verify the list of Mandatory Standards and their hierarchy listed in the template for accuracy for the project and add any other project-specific Mandatory Standards in the fill-in.

Protection in Place

List any additional Protect in Place requirements or agreement commitments in the fill-in.

Section 2.11: Roadway

Introduction

Section 2.11, Roadway, outlines the contract requirements for roadway design and grading elements including design criteria that Design-Builder must follow. With the inclusion of practical design in WSDOT [Design Manual M 22-01](#), there is a significant amount of flexibility afforded the designer and the Engineer of Record. The project team needs to verify the appropriate level of flexibility that should be allowed based on context and modal needs in the Basis of Design and include appropriate minimum requirements in the RFP. Where minimum criteria called out in the WSDOT [Design Manual M 22-01](#) are not the desired end result, the project team should identify controlling criteria that meet the needs of the project. These controlling criteria should be identified in the RFP in the Basic Configuration.

Usage

Mandatory Standards:

Verify the list of Mandatory Standards and their hierarchy listed in the template for accuracy for the project and add any other project-specific Mandatory Standards in the fill-in.

Design Criteria

Although WSDOT develops Conceptual Plans, the Design-Builder will likely propose revisions to WSDOT's roadway design within the given constraints in this section. This section needs to outline the roadway design criteria that Design-Builder must meet

in order to meet project needs. The project-specific design criteria could be identified in design documents such as Basis of Design, Design Analysis, or environmental and community engagement processes resulting in project commitments or constraints.

During the RFP development, the project team needs to evaluate inclusion of project specific design criteria and determine where the WSDOT [Design Manual M 22-01](#) minimums need to be revised to meet project needs such as:

- Design Speed
- Design Vehicle
- Cross-Slope
- Superelevation Rate
- Maximum or Minimum Profile Grade
- Cut/Fill slope
- Clear Zone
- Pedestrian and Bike requirements
- Median Cross-Overs
- Enforcement Areas
- Highway Classification and access control
- Reference to Pre-Approved Design Analysis

Roadside Barrier Selection & Impact Attenuators

Include these sections in the RFP if guardrail or concrete barrier may be included in the project or if elements such as guardrail are to be prohibited. The fill-ins may include a barrier type preference such as single slope concrete barrier, minimum exposed height, or any other project specific criteria. The WSDOT [Design Manual M 22-01](#) provides guidance on the types of barrier that could be considered and the project team should review the guidance and may include the acceptable barriers and impact attenuators for site-specific conditions, locations, or corridor consistency.

Fencing

Include this section if the Design-Builder needs to address existing or new fence on the project. If fencing is included, the project team should develop a Design Document identifying the criteria for constructing, repairing, or replacing fence as part of the conceptual design approval package.

Fall Protection

Include this section in projects requiring fall protection for pedestrian facilities or future maintenance of project elements such as culverts, walls, steep reinforced slopes.

Side Slopes

Include in all projects that include earthwork and side slopes.

Maintenance Access

Existing maintenance access roads that need to remain should be identified in the Conceptual Plans. The project team should also evaluate future maintenance needs for drainage, illumination, landscaping etc. and include any project specific requirements in the RFP.

Break In Limited Access

Include this section in all projects with limited access. Necessary breaks in limited access must be pre-approved in accordance with the WSDOT [Design Manual M 22-01](#). Break in limited access on interstate requires FHWA approval. The fill-ins identify the location of limited access breaks and any specific purpose of their intent or if no breaks are allowed in the project.

Channelization Design

Include this section in projects with proposed channelization revisions. Fill-in #1 is intended to identify project specific locations such as intersections, ramps, and ramp meter storage etc. where the Design-Builder must provide minimum configuration identified in the conceptual channelization plans.

Pedestrian Facilities

Include in all projects that impact existing pedestrian facilities or to identify project specific pedestrian improvements included in the project.

Noise Walls

Include this section in projects with noise walls and provide project specific noise wall requirements (height, location etc.) and their configuration in accordance with the environmental commitments. When landscaping is required along noise walls, make sure that Section 2.15 language is consistent with this section.

Rumble Strips

Include this section in projects with rumble strips. Fill-ins to identify types and location of rumble strips specific to the project.

Design Parameter Worksheet

Include this section in all projects. The project team as part of the conceptual design approval package must develop the design parameter table and identify the criteria used for the conceptual design. The project team should thoroughly evaluate the range of dimensions allowed for each element in order to determine an acceptable minimum because the Design-Builder will typically choose allowable minimums for bidding purposes. The Design-Builder updates the design parameter table based on the final design and constructed project.

Roadside Barrier Technical Memorandum

Include in all projects that may affect existing barrier or require new roadside barrier.

Impact Attenuator Technical Memorandum

Include in all projects that may affect existing impact attenuator or require new attenuator.

Section 2.12: Project Documentation

Introduction

Section 2.12, *Project Documentation*, identifies the project documentation requirements for both design and construction on a design-build project. WSDOT *Design Manual* M 22-01, [Chapter 300](#) provides guidance on the design procedures, Design Documentation, and approval requirements necessary to deliver successful highway projects. For design-build projects, WSDOT is responsible for acquiring Conceptual Design Approval including approval of known Design Analyses prior to advertisement of the RFP documents. Involve the ASDE (and FHWA as necessary) early on during Preliminary Engineering. The Design-Builder is responsible for acquiring the Project Development Approval and preparing the Design Documentation package. WSDOT *Design Manual* M 22-01, [Chapter 300](#) provides guidance on approval authorities for various Design Documents dependent on FHWA oversight. Project documentation requirements for construction documents is included in the WSDOT *Construction Manual* M 41-01 including requirements for temporary and permanent final records. In order to avoid a lengthy close out process, the project team and Design-Builder close out task force should start developing project documentation as early as possible, and it is recommended that documentation be finalized as the project is progressed and various project phases are completed.

Usage

Mandatory Standards:

Verify the list of Mandatory Standards and their hierarchy listed in the template for accuracy for their project and add any other project specific Mandatory Standard in the fill-in such as regional Channelization Plan Checklist, etc.

Design Documentation Package and Project File

In a design-build project, WSDOT is responsible for completing Conceptual Design Approval prior to advertising the RFP. The Conceptual Design Approval should be included in the appendix for reference. The guidance on Conceptual Design Approval for design-build projects is included in the WSDOT *Design Manual* M 22-01. The Design-Builder is responsible for completing Project Development Approval, Design Documentation Package, and Project File, all applicable components identified in the [Chapter 300](#) of the WSDOT *Design Manual* M 22-01. Include this section in all projects.

All revisions to the concept as documented in the Conceptual Design Approval must be updated in the PDA. The fill-in in this section is intended to provide the guidance or template for the Design-Builder to follow in developing the Project Development Approval.

Practical Design Documents (Basis of Design, Alternative Comparison Table)

The Basis of Design and alternative comparison table are developed as part of the conceptual design approval package during the RFP development. The Basis of Design identifies project need, context, design controls, modal priorities, preferred alternative, and required design elements. The Design-Builder is responsible for making all revisions to the Basis of Design and alternative comparison table resulting from the proposed design. Include this section in all projects.

\$\$1\$\$ Package

Different regions have different names for channelization plans. All fill-ins in this section are used to provide the regional term for channelization plans, except fill-in #12, which identifies the Mandatory Standard (Channelization Plan Checklist, Plan for Approval Checklist, etc.) that will be used to Review and Comment on the channelization plan submittal. Include this section in all projects that require Design-Builder to develop channelization plans.

Clarify in the RFP if a Channelization Package has been prepared by WSDOT. If it has, consider using it as a Reference Document. If the Channelization Package is identified as contractual Basic Configuration, then any minor changes to radius, transitions, etc. will require an ATC or change order.

Technical Memoranda

This section includes requirements for the development of technical memoranda required in the contract for design decisions. Include in all projects requiring technical memoranda in the RFP.

Calculations

The contract requirements for preparing calculations would generally be included in all projects.

Design Analyses

Include in all projects. All Pre-Approved Design Analyses are listed in this section and must be included in the appendix for reference. Any Design-Builder proposed revisions to existing design analyses or new proposed design analyses must be reviewed and approved in accordance with this section. WSDOT [Design Manual](#) M 22-01, [Chapter 300](#) provides the necessary guidance on developing a Design Analysis.

Maximum Extent Feasible

Include this section in all projects where existing pedestrian facilities may be altered and it may not be feasible to meet WSDOT design criteria for pedestrian facility design elements. If only new pedestrian facilities are proposed on a project, WSDOT design criteria for pedestrian facilities must be met and MEF documentation is not allowed. The design-build team must coordinate with the Regional ADA Coordinator on all proposed MEFs prior to preparing and submitting the MEF document.

Final Design Documents

Include in all projects. The project team should encourage the Design-Builder to develop and complete the final Design Documents as the design is being developed and Released for Construction. The project team should review and verify the final Design Documents depict the final constructed design by the Design-Builder.

Section 2.13: Bridges and Structures

Introduction

Section 2.13, *Bridges and Structures*, defines the requirements for bridges, retaining walls, noise walls, buried structures, , illumination/ITS/sign structures, and other structures.

The WSDOT *Bridge Design Manual* (BDM) sets the standard for bridge and structure design within WSDOT right of way. The BDM outlines WSDOT's design details and methods, incorporating standard practices that are based on years of experience and historical performance. All mandatory requirements for design-build contracts are in Chapter 15 of the BDM. If the RFP or a Mandatory Standard references a specific section in the BDM, the Design-Builder shall first review the applicable portions of Chapter 15. All other chapters in the BDM shall be considered a Reference Document. All active BDM Design Memorandum shall be included as Mandatory Standards.

The template is meant to provide general design requirements. It may be necessary to augment, or add to, the current 2.13 template language to provide project specific technical requirements for work not covered in the base template document. Modifications to the template require the involvement of the WSDOT Bridge & Structures Office and the HQ Construction Office.

Usage

The Bridge and Structures Office will work with the Project Office to add project specific requirements into the RFP language is needed.

The WSDOT *Bridge Design Manual* (BDM) Chapter 15 contains additional technical requirements that may not be contained in the RFP. Coordination with the Bridge & Structures Office is necessary to ensure any fill-ins do not create conflicts.

Design Criteria

\$1\$ Provide required minimum clearances for each overwater structure. Required minimum vertical clearances may vary at each location and shall be defined for freeboard and maintenance access. If site specific clearances are not defined in the RFP, the default clearances shall control.

- a. Freeboard - above the 100 year Mean Recurrence Interval (MRI) and maintained across the width of the hydraulic opening This dimension is defined in the Preliminary/Final Hydraulic Design Report.
- b. Maintenance - above the channel thalweg to the Controlling Top Elevation. This should be determined in accordance with the WSDOT [Design Manual](#).

\$2\$ Test level requirements for all bridge barrier for the project. Typically will Be TL-4, for most bridge. TL-5 shall be used for bridges as described in the BDM 10.2.1.

Bridge Seismic Design Criteria

\$1\$ Each bridge on the project shall be classified as Critical, Essential or Normal for purposes of seismic design. See WSDOT *Bridge Design Manual* Section 4.1.

Temporary Structures

\$1\$ List the structures(s) where the foundations need to be located outside the ordinary high water. Contact the Hydraulics Office for recommendations on identifying locations.

Conceptual Design Development Requirements

The design development by WSDOT should be advanced as necessary to identify the conceptual type, size, and location of all major structures, such as bridges and buried structures with a span length 20 feet or greater. Retaining walls with an exposed face height at any location of more than 10 feet that have significant surcharge loads, subsurface soil reinforcing conflicts, or utility conflicts shall be identified as high risk and may benefit from a conceptual type, size, and location. The Geotechnical Office may provide global stability analysis for high risk walls to increase the confidence of constructability prior to RFP release.

Structures design and construction is an opportunity to recognize both the cost and schedule advantages of design-build. Design-Builders have different areas of expertise, resources, and subcontractors, which can be most efficiently utilized in

design-build if they have flexibility in determining structure types. To facilitate the process, it is best to not prescribe structure types in the Technical Requirements.

The structure conceptual plan is part of RFP Appendix M. The purpose of the structure conceptual plan is to present a baseline structural concept where bridges or buried structures are assumed by those preparing the RFP to be appropriate based on the criteria and requirements specified in the RFP. When determining the structure type, size and location for the structure conceptual plan, constructability shall be considered which may require construction staging diagrams, evaluation of potential crane placement locations, girder launching, girder shipping, and potential capacity of existing adjacent structure. The structure conceptual plan is developed to be consistent with the overall baseline civil roadway concept of RFP Appendix M. The content of the structure conceptual plan for a bridge or buried structure includes the items listed in the Conceptual Plan Checklist of WSDOT *Bridge Design Manual* (BDM) Appendix 15.2-A1.

Structure conceptual plans for retaining walls should include plan location, elevation view, and a cross section taken at the critical wall locations to demonstrate surcharge locations, utility conflicts, or maximum soil reinforcing lengths.

Section 2.14: Stormwater

Introduction

Section 2.14, *Stormwater* specifies requirements for design and construction of the stormwater drainage system. The WSDOT *Highway Runoff Manual* M 31-16 directs the planning and design of stormwater management facilities for new and redeveloped Washington State highways, rest areas, park and ride lots, ferry terminals, and highway maintenance facilities statewide. The WSDOT *Highway Runoff Manual* frequently references the WSDOT *Hydraulics Manual* M 23-03 to address the analysis and design of hydraulic features. The two manuals are used in tandem to complete the analysis and design of stormwater drainage systems within the Project.

Usage

Section 2.14, *Stormwater* is applicable whenever there is stormwater or drainage work within the Project. Section 2.14, *Stormwater* is created to supplement the WSDOT *Highway Runoff Manual*, the WSDOT *Hydraulics Manual*, and other documents included in the Mandatory Standards. The WSDOT *Highway Runoff Manual* and WSDOT *Hydraulics Manual* cannot provide the solutions for all possible stormwater and hydraulic design scenarios. As WSDOT gains more experience with the design-build process, Section 2.14, *Stormwater* will be updated with lessons learned from stormwater and drainage designs that may help future design-build projects. Any supplemental stormwater and hydraulic policies and requirements in Section 2.14, *Stormwater* may eventually be incorporated into the WSDOT *Highway Runoff Manual* or WSDOT *Hydraulics Manual*. When tailoring Section 2.14, *Stormwater* to the Project and creating the Conceptual Hydraulic Report, the Project Engineering Office (PEO) should work closely with the Region Hydraulics office.

This section provides guidance on how to add to or edit Section 2.14, *Stormwater*, including guidance on how to complete the fill-ins. The person who prepares Section 2.14, *Stormwater* must have detailed knowledge about the Project and have experience in stormwater and hydraulic design. Looking through the scope of work, the designer should identify which work would need additional clarification, guidance, or project specific requirements.

For example: The Conceptual Hydraulic Report calls for a cross culvert to be installed along an interstate highway. It has been determined that using an open cut method to install the culvert is not allowed. However, this requirement is not mentioned anywhere in the Mandatory Standards. To enforce this requirement, it must be written in Section 2.14, *Stormwater*. This type of issue is normally a project-specific decision. The language added to Section 2.14, *Stormwater* for the new requirement could be, “Using an open cut method along the highway ***\$1\$*** at milepost ***\$2\$*** to install the culvert is not allowed.” Without this written requirement in the 2.14, *Stormwater*, the Design- Builder can open cut the highway to install the culvert, and legally WSDOT cannot stop the Design-Builder from doing it.

Another example is where the WSDOT PEO creating the RFP has determined that only steel pipes can be installed on the WSDOT bridge even though other pipe materials may meet the requirements. Section 2.14, *Stormwater* should provide the detailed specifications for the acceptable pipe material to be installed on the WSDOT bridge. The language added to Section 2.14, *Stormwater*, for the new project-specific requirement could be, “Only steel pipes are allowed to be installed on WSDOT Bridge ***\$1\$***/**/\$2\$***.”

General

The fill-in is for any additional element of Work that needs to be added to the Section 2.14, *Stormwater*.

- ***\$\$<Number>\$\$\$*** Note user to provide “fill-in” details specific to the Project.

Mandatory Standards

The fill-in is for any additional Mandatory Standard that needs to be added to the Section 2.14, *Stormwater*.

- ***\$\$<Number>\$\$\$*** Note user to provide “fill-in” Mandatory Standards specific to the Project.

Computer Software

The fill-in is for to specify the acceptable version MGSFlood. Consult with Headquarters Hydraulics Section for the latest version.

- ***\$\$<Number>\$\$\$*** Note user to provide “fill-in” version number specific to the Project.

Acceptable Design Reference Documents

The first fill-in is to specify either “Eastern” or “Western” Washington. The second fill-in is for any additional Acceptable Design Reference Document that needs to be added to the Section 2.14, *Stormwater*.

\$\$<Number>\$\$ Note user to provide “fill-in” guideline specific to the Project.

Conceptual Level Hydraulic Report and the Design Builder’s Hydraulic Reports and Intermediate Drainage Designs

Typically, the conceptual designs are about 15 percent to 30 percent complete. The Conceptual Hydraulic Report should document all assumptions and show all calculations made. The Conceptual Hydraulic Report should follow the Hydraulic Report Outline and Checklist posted on the website <https://wsdot.wa.gov/Design/hydraulics>

All deviations and adjustments from the WSDOT *Highway Runoff Manual* and the WSDOT *Hydraulics Manual* should be identified and documented in the Conceptual Hydraulic Report. Approval of deviations and adjustment should be obtained prior to the RFP.

Existing soil infiltration rates and seasonal high groundwater surface elevations at potential BMP locations may take a long time to obtain. Completing and having this type of information in the Conceptual Hydraulic Report is recommended to help reduce questions about the project site.

All the commitments should be identified and documented in the Conceptual Hydraulic Report.

Drainage Conveyance System

This section sets the default requirements for dealing with the existing drainage conveyance system that is impacted or modified by the Project. The PEO creating the RFP can change the requirements in this section if the PEO does a lot of up-front work determining the condition of the existing drainage conveyance system. If any section of the existing drainage conveyance system is determined by the PEO to be in good condition and does not need to be replaced by the Project, the PEO, in close coordination with the Region Hydraulics office, will list that part of the existing drainage conveyance system in Appendix H of the RFP.

Wall Drains

Work with Headquarters Hydraulics Section, Structural, and Geotechnical Offices to determine the minimum wall drain pipe diameter.

- ***\$\$<Number>\$\$*** Note user to provide “fill-in” minimum diameter of underdrain pipes specific to the Project.

Infiltration

Existing soil infiltration rates and/or seasonal high groundwater surfaces elevation need to be determined for the designs of infiltration type detention and treatment BMPs. It is best to obtain the infiltration rates and groundwater surface elevations prior to the RFP. For infiltration facilities, long lead times are required to define groundwater levels (at least one complete winter season). Document in the Conceptual Hydraulic Report any infiltration BMP design and assumptions made for the infiltration rates and groundwater surface elevations.

Runoff Treatment and Flow Control

Follow the minimum requirements determination in Chapter 3 in the WSDOT [Highway Runoff Manual](#) to determine if runoff treatment and/or flow control is required. Also determine if any retrofit requirements, especially if the Project is within the Puget Sound Basin, apply to the project. If required, document how runoff treatment, flow control, and stormwater retrofit will be provided in the Conceptual Hydraulic Report.

The fill-in is for any project-specific construction activities based on the type of stormwater BMPs that were called out in the Conceptual Hydraulic Report.

- ***\$\$<Number>\$\$*** Note user to provide “fill-in” construction activities for stormwater BMP construction specific to the Project

Abandonment and Removal of Existing Drainage Structures

For the fill-in, provide stations and offsets, or Mileposts for the existing drainage structures called out for removal or to be abandoned. If an existing drainage structure is abandoned, it needs to follow the requirements in the WSDOT [Hydraulics Manual](#) and WSDOT [Standard Specifications](#) M 41-10.

- ***\$\$<Number>\$\$*** Note user to provide “fill-in” drainage structures specific to the Project.

Hydraulic Reports

There are six fill-ins within this section. The first, second, fourth, and fifth fill-ins are used to lengthen or shorten the review time of each submittal based on the complexity of the project and of the submittal. Please keep in mind Section 2.28, *Quality Management Plan* generally says the Design-Builder shall provide a 14 Calendar Day review period for all submittals.

The third fill-in is used to make sure Final Hydraulic Report is submitted to WSDOT within a specified length of time after the last drainage intermediate drainage design package has been submitted.

The sixth fill-in is used to make sure As Built Hydraulic Report is submitted to WSDOT within a specified length of time after the project achieves Substantial Completion.

- ***\$\$<Number>\$\$*** Note user to provide “fill-in” Calendar Days for the WSDOT Engineer’s Review and Comment period of each submittal.

List of Submittals

The fill-in is for any submittal that has been added to the contract that was not previously called out in the Section 2.14, *Stormwater*.

- ***\$\$<Number>\$\$*** Note user to provide “fill-in” submittals specific to the Project.

Section 2.15: Roadside Restoration

Introduction

Section 2.15, Roadside Restoration, covers all work necessary to provide aesthetic guidance for structures and for the restoration of the roadsides. Environmental mitigation may also be included.

Roadside work in design-build is an important part of any project and should comply with WSDOT policy as well as environmental requirements for Sensitive Areas. The Design-Build process allows the Design-Builder latitude in developing a design that varies from the Conceptual Plans or guidance included in Appendix L, providing the Design-Builder the opportunity to develop the most efficient or innovative design. However, these variations require review and concurrence by the WSDOT Landscape Architect or as delegated to the region Landscape Architect (LA), which could affect the project schedule.

As a result, early and continued involvement from LA staff is necessary to identify how the design can be flexible and innovative while ensuring the project scope and RFP are consistent with the regulatory requirements for the project and the statewide Roadside Policy.

The RFP Coordinator/Procurement Manager should contact the Bridge & Structures Architecture Services for support with architectural aspects of roadside structures such as retaining walls, noise walls, bridges, barriers, sign structures, and fencing. If Chapter 2.15 is written by a consultant, Bridge & Structures Architecture Services should be provided opportunity for review of the RFP text and of the Bridge and Landscape Architectural Standards appendix document.

The requirements included in Section 2.15 must clearly identify aesthetic requirements, roadside restoration requirements, and mitigation responsibilities to be managed by the Design-Builder. This section (as do all the DB template documents) includes fill-in locations that allow the project team to incorporate project-specific information. Please note that some entire sections may need modification to accurately describe project requirements. Furthermore, a project team may need to add a subsection(s) to address unique project requirements (e.g., the LA and the Bridge Architect work together to define structure aesthetics, Environmental staff work with LA staff on Sensitive Area restoration, hydraulics engineers work with LA staff on stream restoration, etc.)

A critical step in the development of Section 2.15 is the determination of the structural needs, environmental mitigation needs, the potential impacts of the project, and Right of Way expected to be available for restoration. This list identifies all of the commitments that the Design-Builder is responsible for implementing during design and construction of the project. These project requirements are conceptually defined and become contract documents in the RFP and in Appendix L. Additional guidance for policy requirements can be found in the WSDOT [Roadside Policy Manual](#) M 31-10.

Appendix L contains all the restoration and aesthetics guidance related to the project. Examples include the Project Aesthetic Guidelines document, a Roadside Restoration Conceptual Plan, Conceptual Mitigation Plans, or other guidance documents to aid in preparation of the contract plans. In addition, other studies that support environmental requirements may be found in Appendix E, Environmental Documents. These documents should provide clear enough guidance to help the Proposers prepare an accurate Proposal.

Section 2.15 should also make the Proposer aware of the expectation for community involvement in developing plans to meet their expectations. While adhering to the standards in the guidance in Appendix L is mandatory, the public expectations must also be met, so engaging the public early on is a necessary component in eliminating surprises to the community.

The RFP Coordinator/Procurement Manager should contact the Bridge & Structures Architecture Services for support with architectural aspects of roadside structures such as retaining walls, noise walls, bridges, barriers, sign structures, and fencing. If Chapter 2.15 is written by a consultant, Bridge & Structures Architecture Services should be provided opportunity for review of the RFP text and of the Bridge and Landscape Architectural Standards appendix document.

Usage

Application of template: This template is to be used as a starting place. Each project has its own particular needs and constraints, which require careful consideration when reviewing the section for retention, deletion, or addition. This template applies

to most roadway projects, but does not include complete guidance for environmental mitigation or fish passage projects. Those sections must be developed to represent the unique needs and requirements. For further fish passage project guidance, please refer to in the Design-Build Resources folder in SharePoint.

It is critical to review several other sections when preparing the requirements for Section 2.15. Check sections on geotechnical, erosion control, environmental, and structures to be certain that aesthetic, environmental, roadside, and mitigation requirements are consistent from section to section. This consistency may require meeting with other groups to develop consensus for approach and adaptation of the various sections to be consistent. Examples where consistency may be an issue:

- Aesthetic guidance for roadside restoration does not allow quarry spalls as final ground treatment but Erosion Control or Geotechnical section allows it.

- Aesthetic guidance allows limited wall types while structure or geotechnical sections allow more types than desirable from an aesthetic standpoint.
- WSDOT [Roadside Policy Manual](#) M 31-10 stresses retention of existing vegetation while staging areas are being offered to the contractor, which may be detrimental to the existing vegetation and require tree mitigation depending on impact type.
- Erosion control materials or maximum slopes allowed by geotechnical section can be inconsistent with the ability to replace trees on the roadsides as required in Section 2.15.
- Soil depth requirements for growing trees on lids require structural ability of the bridge to withstand the weight, while structural engineers or project engineering may not want to make specific requirements of the contractor. This collaboration needs to be worked out very early on.

RFP Fill-In Guidance

Section fill-in suggestions are listed below:

Mandatory Standards

- Fill-in ***\$1\$*** - Enter the name of the design criteria document.
- Fill-in ***\$2\$*** - Enter the name of the Bridge and Landscape Architectural Standards.
- Fill-in ***\$3\$*** Enter any additional mandatory standards.

Design Criteria, General

Fill-in ***\$1\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Retaining Walls

Fill-in ***\$1 & 2\$*** (two locations) – Enter the name of the aesthetics guidance document from Appendix L.

Retaining Walls Facing Away from the Roadway

Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** - Enter pigmented sealer color for the community side of the walls. Generally, this will be a selection from the WSDOT [Standard Specifications](#) M 41-10, Section 9-08.3 and will be specified in Appendix L guidance document.

Retaining Walls Visible from the Roadway

Review this section for applicability – may need to delete it.

Fill-in ***\$1\$*** - Enter in either WSDOT [Standard Concrete Finishes for Bridge & Structure Construction in Highway Projects](#) or the name of the aesthetics guidance document from Appendix L.

Fill- in ***\$2\$*** with color of pigmented sealer color.

Review this section for applicability – may need to delete it.

Fill-in ***\$2\$*** (two locations) – Enter the name of the aesthetics guidance document from Appendix L.

Fill-in ***\$3\$*** - Enter the concrete color of pigmented sealer color.

Bridge Aesthetics

Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** -name of design criteria specific for the Project.

Abutment Wall Aesthetics

Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** - Fill in the name of design criteria specific for the Project.

Barrier Aesthetics

Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Sign Structures and Toll Gantries Aesthetics

Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Right of Way and Fall Protection Fencing Aesthetics

Review this section for applicability – may need to delete it. Review this section for applicability – may need to delete it. Fill-in ***\$1\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Lighting

Fill-in ***\$1&2\$*** (two locations) – Enter the name of the aesthetics guidance document from Appendix L.

Planting Design Requirements

Fill-in ***\$1\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Fill-in ***\$2\$*** - Enter the on center spacing of vines expected to be planted on noise and retaining walls.

Fill-in ***\$3\$*** - Enter roadside restoration plans and design criteria document.

Fill-in ***\$4\$*** - Enter the name of the aesthetics guidance document from Appendix L.

Fill-in ***\$5\$*** - Enter the name of the aesthetics guidance document from

Fill-in ***\$6\$*** Enter the vine center spacing requirements.

Fill-in ***\$7\$*** - Enter the center spacing requirements for shrubs and trees, respectively.

Mitigation

Fill-in ***\$8\$*** - Enter additional species of weeds expected to be controlled.

Grading

Review grading section to include or delete as appropriate to the project work. Fill-in ***\$1\$*** -Enter name of the aesthetics guidance document from Appendix L.

Planting and Seeding Preparation

Fill-in ***\$1\$*** - Enter the minimum depth of topsoil expected where topsoil is used.

Gravel, River Rock, and Boulders

Review this section for applicability – may need to delete it.

Plant Establishment

Fill-in ***\$1\$*** - Fill in the number of years of plant establishment period for the project. The years of plant establishment depend upon the number of years required for environmental mitigation work. The roadside tree replacement numbers to mitigate according to the WSDOT [Roadside Policy Manual](#) M 31-10 requirements for trees removed may be reduced by 5 percent for each year over 3 years.

Roadside Restoration and Mitigation Standards

Review and determine if mitigation language is necessary.

Landscaping Warranty

Review this section for items included in the project and delete unnecessary items such as form liners, MSE panel samples, concrete sealer or other items.

Project Submittals During Construction

Fill-in ***\$\$1\$\$*** - Enter any additional submittals required for the project regarding roadside, mitigation, or aesthetic design. May include samples of streambed gravel, form liner samples or MSE panels for MSE walls, pigmented sealer samples, certified lab analysis for topsoil type A, etc.

GSP Selection Guidance / Standard Specifications References

General

General paragraph mentions concrete wall finishes (GSP 6-02.3(14). GR6) and pigmented sealers (GSP 6-02.3(14)C.GR6) for the project. These specifications are applicable to sections

- Retaining Walls
- Retaining Walls Facing Away from the Roadway
- Retaining Walls Visible from the Roadway
- Noise Wall Aesthetics
- Bridge Aesthetics
- Barrier Aesthetics

Sign Structures and Toll Gantries Aesthetics

Sign Structures and Toll Gantries require paint to be specified from GSP 6-03.3(30). GR6. This section also covers work in:

- Right of Way and Fall Protection Fencing Aesthetics
- Color Aesthetics
- Lighting

Vegetation Replacement Criteria

Planting Area design requires weed and pest control (Sections 8-02.3). Soil replacement or restoration specifications are required from 8-02.3. Planting Design is covered by Sections 8-02.3. Mulch is required in Section 8-02.3.

Mitigation

Mitigation usually requires Section 2-01 and 2-03 specifications to cover clearing, disposal of cleared materials, and grading. Habitat structures are also required for some.

Planting and Seeding Preparation

Grading specifications are covered in Section 2-03.

Planting Area Preparation work requires specifications in Section 8-02.3. Seeding Area Preparation requires work in Section 8-01.3. Compost is covered in Section 8-02.2. Include weed control specifications from Sections 8-02.3.

Topsoil

Include topsoil specification in Sections 8-02.2 and 8-02.3.

Planting Area Soil Preparation

Planting area soil preparation materials are covered in Section 8-02.2 and requirements are covered in Sections 8-02.3.

Seeded Area Preparation

Seeded Area Preparation is covered in Section 8-01.3.

Bark or Wood Chip Mulch

Include Bark or Wood Chip Mulch requirements from Section 8-02.2 and installation requirements from Section 8-02.3.

Gravel, River Rock, and Boulders

River rock gravel and boulders are covered in Sections 9-03.11.

Plant Establishment

Include plant establishment requirements from Section 8-02.3.

2.15.6.1: Submittals include Section 8-02.3 work plans and other project specific submittals. Additionally, submittals may be needed for concrete textures and pigmented sealers. See 6-03.13 specifications.

Section 2.16: Illumination

Introduction

Section 2.16, Illumination, applies to work related to modifying existing or installing new Street lighting systems. However, this section also contains directions and requirements for impacts to other more generic electrical equipment such as electrical service cabinets, transformers, conduit, conductors, junction boxes, pull boxes, and cable vaults. Other sections such as Section 2.17, Traffic Signals, and Section 2.18, ITS, will refer to Section 2.16 for directions and requirements concerning these electrical components.

Street light systems may be owned, operated, and maintained by either WSDOT, cities, or counties. When street light systems, owned by either cities or counties, are effected by the project, all subsections of Section 2.16 must be evaluated for modifications to include the requirements of those other agencies.

Usage

Section 2.16, Illumination, should be included in design-build contracts when new highway or street lighting systems will be installed or existing highway or street light systems will be modified or otherwise impacted or any of the following work items are included in the project:

- Installing new or impacting existing power supply systems including electrical service cabinets, transformer cabinets or the power supply systems between a utility service point and an electrical service cabinet.
- Installing new or impacting any conduit runs, junction boxes, pull boxes, cable vaults, electrical conductors, or communication cable associated Traffic signal or ITS systems.
- Installing and removal of temporary electrical systems such as temporary lighting, or other systems that include, conduit, junction boxes, pull boxes, cable vaults, electrical conductors, or communication cables

When the design-build contract does not include any street light system work but does include impacts to conduits, conductors, junction boxes, pull boxes, cable vaults, electrical service cabinets, or transformer cabinets associated with other systems, Section 2.16 should be included. Modified by deleting, omitting, or otherwise modifying those sections specifically referring to Illumination systems, leaving only those sections applying to electrical equipment impacted by the project.

2.16 Illumination

Mandatory Standards

(DM1040.02)

Modify this list of standards to reflect the work being performed. Add city and county standards references as they would apply to work being performed on their equipment.

Fill-ins *****\$1\$*****, *****\$2\$*****, and *****\$3\$*****, should reflect the WSDOT region where the project is located. For example - *****\$1\$***** "Northwest Region".

Software

(DM1040.02)

Update the lighting software, AGI32, requirements to the most current version of the software.

Traffic Task Force Meetings

(DM1040.02)

\$\$1\$\$ Include other agency stakeholders and individuals that would be relevant to the project.

Permanent Lighting Design Requirements

(DM1040.04)

\$\$1\$\$ Provide allowable line loss specific to the project. This requirement may differ between different WSDOT Regional requirements and other agency requirements.

\$\$2\$\$ Provide minimum allowable wire size specific to the project. This requirement may differ between different WSDOT Regional requirements and other agency 2.1 requirements.

\$\$3\$\$ Provide truck size specific to the project. This requirement may differ between different WSDOT Regional requirements and other agency requirements.

\$\$4\$\$ Provide relevant WSDOT Region or Local Agency document identified in Appendix Q.

Photometric Analysis

(DM1040.07)

\$\$1\$\$ Provide applicable depreciation factor for HPS fixture analysis to the project. This requirement may differ between different WSDOT Regional requirements and other agency requirements

\$\$2\$\$ Provide applicable depreciation factor for LED fixture analysis. This requirement may differ between different WSDOT Regional requirements and other agency requirements

Lighting Under and Inside of Structures

(DM1040.050.20 &21)

Add additional verbiage to this section when there are steel or concrete box girders installed or impacted on the project that will require the installation of bridge inspection lighting inside of the girders.

Specific Requirements

(DM1040.07)

\$\$1\$\$ Provide job specific lighting locations and requirements

Light Standards and Foundations

(DM1040.05)

\$1\$ Provide additional requirements unique to the project.

\$2\$ Provide location of light standards to would be installed per other agency standards. If all light standards on the project are per WSDOT requirements, delete this bullet item.

\$3\$ Provide the Local Agency name for installation standards. Repeat this bullet item for multiple Local Agency light requirement areas. If all light standards on the project are per WSDOT requirements, delete this bullet item.

Luminaires

(DM1040.05)

\$1\$ Provide the type of fixtures, usually either HPS or LED type.

\$2\$ Provide the specific manufacturer(s) and fixture specific requirements for LED fixtures. LED specific fixture requirements may vary between WSDOT regions.

Typically provide multiple manufacturers approved for the project.

Equipment Provided by WSDOT

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.2)

\$1\$ Provide a list of equipment supplied by WSDOT. If none, indicate that in this section.

Electrical Service, Transformers and Cabinets

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

\$1\$ Indicate the breaker rating for illumination branch breakers. This requirement may vary between WSDOT regions. If no standard breaker rating is required then say that breakers are to be rated to meet NEC requirements.

Salvage

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

\$1\$ Indicate the address and location where equipment is to be returned to WSDOT. This will vary depending on WSDOT Region. Identify location of Local Agency where removed Local Agency equipment is to be returned.

\$2\$ List the specific pieces of equipment including quantities to be returned to either WSDOT or the Local Agency. Specify which pieces of equipment go to each location.

Conduit System

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17 (Traffic Signals) and 2.18 (ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Junction Boxes, Pull Boxes, and Cable Vaults

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17 (Traffic Signals) and 2.18 (ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Junction Boxes

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17 (Traffic Signals) and 2.18 (ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Pull Boxes

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17 (Traffic Signals) and 2.18 (ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Cable Vaults

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17 (Traffic Signals) and 2.18 (ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Section 2.17: Traffic Signals

Introduction

Section 2.17, Traffic Signals, applies to work related to modifying existing or installing new Traffic Signal systems. In addition to vehicle traffic signal systems, this section would also include work involving pedestrian traffic signal systems, bicycle signal systems, ramp meter traffic signals (although ramp meters are typically included in Section 2.18, ITS), flashing beacons used to control vehicle traffic, warning signals (usually flashing beacons with signs) and emergency vehicle traffic signals. All are considered different types of Traffic Signal Systems.

Traffic Signals, as a system, may include, but are not limited to the following items:

- Traffic signal standards and mast arms
- Strain poles
- Span wire
- Vehicle and ADA-compliant pedestrian signal heads
- Vehicle detection (typically either induction loops or video cameras)
- Pedestrian detection
- Emergency vehicle detection
- Traffic signal controllers and cabinets
- Traffic signal interconnects

Additional electrical equipment used to support the traffic signal system are also included as work items with the effected traffic signal systems. These additional electrical equipment items could include conduit, conductors, junction boxes, pull boxes, cable vaults, service cabinets and transformers and uninterrupted power supply (UPS) cabinets. The technical materials and construction requirements for these items are detailed in Section 2.16, *Illumination*. These requirements should not be duplicated in different sections of the RFP. Information regarding these items should be referenced back to Section 2.16. Coordination in developing Sections 2.16, *Illumination*, and Section 2.17, Traffic Signals, in regards to these requirements is essential.

Traffic Signal systems may be owned, operated, and maintained by either WSDOT, cities, or counties. When Traffic Signal systems owned by either cities or counties are effected by the project, all subsections of Section 2.17 must be evaluated for modifications to include the requirements of those other agencies.

Usage

Section 2.17 Traffic Signals should be included in design-build contracts when new Traffic Signal systems will be installed or existing Traffic Signal systems will be modified or otherwise impacted or when any of the following work items are included in the project:

- Installing new or impacting existing conduit runs, junction boxes, pull boxes, cable vaults, electrical conductors or communication cable associated with Traffic signal systems
- Installing and removal of temporary Traffic Signal systems including temporary vehicle detection systems and the associated electrical equipment
- Installing or modifying a traffic signal interconnect system

General

(WSDOT *Standard Specifications* M 41-10, Section 8-20)

Modify this section to include other types of traffic signal systems as they apply to the project. This may include flashing beacon signals, warning signs with flashing beacons or emergency vehicle signal systems

Forward Compatibility

(WSDOT *Standard Specifications* M 41-10, Section 8-20.1)

***\$\$1\$\$** Add requirements to this section that would make the traffic signal system compatible with future projects or requirements. If a future project is planned to modify the channelization at the traffic signal location then the current design would want to build the traffic signal to accommodate that future expansion. For example if a future project would add lanes and widen the roadway then the current project RFP may want to ensure that the Traffic signal poles and controller cabinets were located far enough away from the roadway to accommodate that future expansion without moving the signal poles or cabinets.

Mandatory Standards

(WSDOT *Standard Specifications* M 41-10, Section 8-20.1)

Modify this list of standards to reflect the work being performed. Add city and county standards references as they would apply to work being performed on their equipment.

Fill-ins ***\$\$<Number>\$\$** should reflect the WSDOT region where the project is located. For example: ***\$\$1\$\$** “Northwest Region”.

Design Requirements

(DM1330.06)

*****\$1\$***** Describe the locations and level of work at each location*****\$2\$***** Describe locations and work involving other aspects of Traffic signal revisions or modifications.**Operational Analysis Software**

(DM1330.06)

*****\$1\$***** Add software requirements to design or modify traffic signal systems or to provide traffic analysis information such as modeling traffic flow to determine turning movement volumes of delay times at intersections.**Foundations**

(DM1330.06)

*****\$1\$***** Provide additional requirements for soil conditions such as lateral bearing pressure requirements or other job specific requirements**Junction Boxes, Pull Boxes and Cable Vaults**

(DM1330.06)

Refer back to Section 2.16.3.4.5 for all requirements. Coordinate with that section to add job specific requirements for Traffic signal Design.

Wiring

(DM1330.06)

*****\$1\$***** Add WSDOT Regional specific requirements for signal wiring**Signal Heads**

(DM1330.06)

Modify requirements to meet WSDOT Region requirements.

Induction Loop and Video Camera Vehicle Detectors

(DM1330.06)

*****\$1\$***** Provide requirements specific to the WSDOT Region**Traffic Signal Controller and Controller Cabinet Equipment**

(DM1330.06)

*****\$1\$***** Provide requirements specific to the WSDOT Region

General

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

\$\$1\$\$ Provide requirements specific to the WSDOT Region

Emergency Maintenance

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3) No additional instructions

Signal System

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.3)

\$\$1\$\$ Provide requirements specific to the WSDOT Region and the project

Material Requirements

(WSDOT [Standard Specifications](#) M 41-10, Section 9-29)

Modify this section per WSDOT Regional requirements. Add or modify this section to reflect the requirements of Local Agencies. Sections 2.17(Traffic Signals) and 2.18(ITS) will reference this section. Coordinate with those sections to modify to reflect the job specific requirements for Traffic Signal and ITS work.

Submittals

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.2)

\$\$1\$\$ Provide requirements specific to the WSDOT Region and the project

Final Signal Plan

(WSDOT [Standard Specifications](#) M 41-10, Section 8-20.2)

\$\$1\$\$ Provide requirements specific to the WSDOT Region and the project.

Section 2.18: Intelligent Transportation Systems

Introduction

The primary document driving the design of the Intelligent Transportation Systems (ITS) component of the Design-Build project is the ITS Design Requirement document. This document provides background on how and why certain ITS components are designed as well as specific requirements associated with many ITS components. Section 2.18 of the RFP is more of an overlay to the ITS Design Requirements document, adding project specific requirements as well as site-specific requirements. While a Conceptual Plan may be developed for the project, the requirements of the RFP and ITS Design Requirements document are the primary tools that guide the overall ITS design.

When developing Section 2.18 of the RFP, early and continued involvement with the regional ITS Implementation and Operations staff is required to identify specific ITS needs from the project.

The ITS requirements included in Section 2.18 of the RFP need to clearly identify specific ITS features to be included by the Design-Builder. This section includes a number of fill-in locations that allow the project team to incorporate project-specific information (such as the number of metered lanes on an on-ramp, or the approximate location where a weather station is needed). Some entire sections may need modification or deletion to accurately describe project requirements. In special situations, a subsection (or sections) may need to be added to address unique project requirements (e.g., Active Traffic Management (ATM), Part-time Use Shoulder Lane (PUSL), tolling, etc.)

Appendix T contains the ITS Design Requirements document, Appendix B contains the ITS Special Provisions and Appendix T contains the ITS Standard Details. It is imperative that the latest versions of these items are obtained for inclusion in the project. All of these items are living documents that are frequently being updated by the ITS Design and ITS Implementation groups.

Usage

This section explains how to use the template and provides guidance for certain subsections of Section 2.18, *Intelligent Transportation Systems*. This includes guidance for fill-ins, GSP selection, and references to helpful examples or resources for the author.

General

This section contains a brief summary of the ITS elements expected to be included in the project. It should be modified for each project to only include those items that are applicable. It also contains two fill-in sections. Both fill-in items are for non-typical ITS devices as well as tolling devices. If not applicable, these fill-ins should be left blank and the sentence syntax modified accordingly.

Mandatory Standards

There are four fill-in locations in this section. The first fill-in is for the WSDOT Regional ITS Special Provisions; the second fill-in is for the WSDOT Intelligent Transportation System Design Requirements document if your region has adopted it; the third fill-in is for the WSDOT Regional ITS Details; and the fourth fill-in is for the WSDOT Signal, Illumination, and ITS Details. These fill-ins are required for all projects that contain ITS elements. The documents for first three fill-ins are to be provided by the Regional ITS Design team.

General Requirements

This section contains four fill-ins. The first fill-in is for the ITS expandability requirements specific to the project. The second fill-in is for the Region-specific documents that dictate cabinet layouts (typically the ITS Design Requirements and ITS Details). The third fill-in is for the Region-specific document that describes cabinet labelling (typically the Regional ITS Special Provisions). The fourth fill-in is for the Region-specific document which directs the replacement of existing ITS cabinets (typically the ITS Design Requirements).

Vehicle Detection

This section contains two fill-ins for the Region-specific document that describes vehicle detection (typically the Regional ITS Special Provisions).

Temporary Vehicle Detection

This section contains a fill-in for the Region-specific document that describes temporary vehicle detection.

Loop Detectors

This subsection contains a single fill-in for the Region-specific details for loops not covered by the [Standard Plans](#) (typically the Regional ITS Details). The template refers to loop names common to the Northwest Region; these names may need to be changed when used in other regions.

Ramp Metering/Data Stations

This section contains more detailed information on where ramp meters are to be constructed or modified by the project. The first and third fill-ins reference Regional ITS Details. The second fill-in is a list of all of ramp locations where ramp meters are to be constructed on, as well as the number of metered lanes they should have and if any HOV bypasses are required. The fourth fill-in contains the same information for any existing ramp meters that are being modified or reconstructed by the project.

Ramp Meter Advance Warning Sign

This subsection contains a single fill-in for the Region-specific details for ramp meter advance warning signs not covered by the [Standard Plans](#) (typically the Regional ITS Details).

Grounding

This subsection contains a single fill-in for the Region-specific document that describes loop testing procedures (typically the Regional ITS Special Provisions).

Ramp Meter Pole

This section contains a fill-in for the Region-specific document that describes Ramp Meter Poles (typically the ITS Design Requirements).

Closed Circuit Television System

This section contains more detailed information on where traffic surveillance cameras are to be constructed or modified by the project. This section does not contain any fill-ins, but the author may wish to modify the section requiring the Design-Builder to show that the views from the proposed camera locations will meet the listed requirements. Typical ways of doing this are to require video from a bucket truck or aerial drone, or in the case of new roadways, a 3-dimensional model showing the future camera views. This is especially important when considering the impact of future signs and sign bridges as well as large structures and can help identify view occlusions from vegetation.

Closed-Circuit Television Camera Pole Site

This subsection contains a fill-in for the region-specific details for camera poles not covered by the Standard Plans (typically the Regional ITS Details).

Variable Message Signs

This section contains more detailed information on where Variable Message Signs (VMS) are to be constructed by the project. The first fill-in is a list of all of the locations that VMS are to be constructed (usually by station, as well as direction).

Access to Variable Message Signs

This subsection contains a fill-in for the Region-specific details for Access to Variable Message Signs (typically the ITS Design Requirements).

Highway Advisory Radio Sign

This subsection contains more detailed information on where Highway Advisory Radio Signs (HARS) are to be constructed by the project. The first fill-in is a list of all of the locations that HARS are to be constructed (usually by station, as well as direction). The second and third fill-ins are for the documents guiding the HARS design (typically the Regional ITS Special Provisions and ITS Details).

Highway Advisory Radio Transmitter

This subsection contains more detailed information on where one or more Highway Advisory Radio Transmitters (HART) are to be constructed by the project. The first fill-in is a list of all of the locations that HART are to be constructed (usually by highway and cross street, or by Station). The second and third fill-ins are for the documents guiding the HART design (typically the Regional ITS Special Provisions and ITS Details).

Environmental Sensor Station

This section contains more detailed information on where one or more Environmental Sensor Stations (weather stations) are to be constructed by the project. The first fill-in is a list of all of the locations that weather stations are to be constructed (usually by highway and cross street, or by Station). The second and third fill-ins are for the documents guiding the weather station design (typically the Regional ITS Special Provisions and ITS Details).

Communication Conduit System

This section contains more detailed information on where the communication conduit system is to be constructed by the project. The first fill-in is the Regional document that contains details about conduit placement and vaults, typically the ITS Details. The second fill-in is a list of all of the locations where a mainline conduit system is to be constructed (usually by roadway with begin and end stations). The third fill-in is for the document guiding the warning tape and locate wire design (typically the Regional ITS Special Provisions).

Existing Conduit Systems

This subsection describes whether the Design-Builder may reuse the existing communication conduit system within the limits of the project. The fill-in is simply “not” if the existing conduit system needs to be replaced. However, if the existing conduit system only needs to be replaced where impacted then the first paragraph should be modified accordingly.

Junction Boxes, Pull Boxes and Cable Vaults

This subsection contains two fill-ins for the Region-specific details for junction boxes, pull boxes and cable vaults not covered by the Standard Plans (typically the Regional ITS Details).

Communication Cables and Interfaces

This section contains more detailed information on where the communication cable and interface system is to be constructed by the project. The first fill-in is for the highways that the system should be installed along. The second fill-in is a list describing the existing communication system within the project limits. An example of this fill-in is:

- Mainline SMFO cable
- Distribution SMFO cable
- Distribution copper twisted pair cable
- Communication end equipment
- Splice vaults, splice closures, fiber optic connection components, and copper terminations

The third fill-in is a list of the types of cabinets that communication equipment needs to be installed in on the project; typical choices are: ITS, TRS, Permanent Traffic Recorder (PTR), weather station, and roadside toll cabinets. The fourth fill-in lists the Region- specific details for Communication Cables and Interfaces not covered by the Standard Plans (typically the Regional ITS Details).

Fiber Optic Cable

This subsection contains more detailed information on where the communication cable to be constructed by the project. The first fill-in is a list of each type of cable (mainline or distribution), the strand count of the cable, and the cable end points. A few examples of this fill-in are:

- A new continuous 96-strand mainline cable between the Stevenson Hub (SR 514, MP 12.34) and the Riverside Hub (SR 514, MP 28.70), with additional full terminations at the Skyway Fiber Terminal Cabinet (SR 514, MP 18.40) and the Kingsgate Hub (SR 514, MP 23.10)
- A new 48-strand distribution cable between the Stevenson Hub (SR 514, MP 12.34) and the Skyway Fiber Terminal Cabinet (SR 514, MP 18.40), connecting all devices in between
- Strands 43-48 (Six strands) of the 48 SMFO distribution cable shall be terminated in each roadside toll cabinet in the 12-port preterminated patch panel

The second fill-in is the strand count of the distribution SMFO cable. The third fill-in is a list of the types of cabinets that need to be connected to the distribution cable on the project; typical choices are: ITS, TRS, Permanent Traffic Recorder (PTR), and weather station cabinets. The fourth fill-in is typically for identifying the Regional ITS Special Provisions. The fifth fill-in is for the document that contains cable pulling lubricant requirements (typically the Regional ITS Special Provisions).

Fiber Optic Cable Installation

This subsection contains a single fill-in for the document containing fiber optic cable installation requirements (typically the Regional ITS Special Provisions).

Fiber Optic Cable Identification Requirements

This subsection contains a single fill-in for the document containing fiber optic cable identification requirements (typically the Regional ITS Special Provisions).

Fiber Optic Connection Components

This subsection contains a single fill-in for the document containing requirements for fiber optic connection components (typically the Regional ITS Special Provisions).

Lucent Connector-Ultra-Physical Contact Fiber Connectors

This subsection requires that all fiber optic connectors be type LC-UPC, the standard in the Northwest Region. Modify this section as needed to meet the requirements of the Region where the project is located.

Patch Panel Components

This subsection contains more detailed information on the locations where existing fiber distribution panels need to be replaced with new preterminated patch panels. The first fill-in is a list of the types of cabinets that panels needing replacement; typical choices are: ITS, TRS, Permanent Traffic Recorder (PTR), roadside toll, and weather station cabinets.

The second fill-in for any specific locations not included in the first list. The third fill-in is for the document that contains patch panel requirements (typically the Regional ITS Special Provisions).

Wireless Communications

This subsection prohibits the use of wireless communication for ITS within the project to prevent the Design-Builder from replacing fiber optic-based communication with wireless communication. This section will need to be changed if the project has a need for wireless communication.

Twisted Pair Media

This subsection is used for projects that contain existing twisted pair (TWP) cable plant that needs to be maintained throughout the life of the project. If the ITS devices connected to the existing TWP system are to be moved to a new fiber optic based system and the existing TWP system is to be removed once the project is complete, the first paragraph should be modified accordingly. The first fill-in is the roadway (or roadways) within the project that contain existing TWP systems. The second fill-in represents a termination point that is outside of the project limits. If a cable is damaged that extends outside of the project, it needs to be replaced to its termination point. Also needed in this section is a description of the TWP system that the Design-Builder is required to provide when the project is complete.

Electric, Electronic, Video and Telephone Cables

This section contains a single fill-in for the document containing cable requirements (typically the Regional ITS Special Provisions).

Video, Voice, and Data Distribution and Transmission System

This section contains five fill-ins describing the networking needs for the ITS. The first fill-in is the quantity of separate and distinct Ethernet communication networks to be constructed using the distribution fiber. Often this is two, but it will be more if tolling is part of the project. The second fill-in describes each of the required networks. In the case of the typical two networks, this would be stated as: "one for ITS (ES, VMS,

HAR, signals, etc.), and one for CCTV.” In the case of tolling, it might be added to with: “one for TRS, and one for tolling.” Other networks should be identified here, as needed. The third fill-in is the location of the TMC that the field information is sent to. As an example, for the Seattle area this fill-in would be “TMC in Shoreline, WA.” The fourth fill-in is for any specific equipment (and its location) needed for the project that is otherwise not covered in the ITS Design Requirements or elsewhere in the RFP. The fifth fill-in is for listing any additional items that are to be furnished and installed in the hub.

Intelligent Transportation Systems Hubs

This section is a single fill-in that should contain the project requirements for communication hubs, both new installations as well as hub replacements or modifications to existing hubs. This is also where the requirement for a hub generator should be located. A reference to the current specification (normally contained in the Regional ITS Special Provisions) should be included in this section.

Allowable Working Hours on the Intelligent Transportation Systems

This subsection contains a single fill-in that provides the daily time window that the Design-Builder is allowed to take existing ITS devices and systems offline. This entry can be as simple or as complicated as is needed. However, simpler often creates better results. As an example, in the Seattle area the allowable window is typically 9:00 p.m. to 4:00 a.m.

Maintaining Ramp Metering During Construction

This subsection contains a single fill-in for the document containing ramp metering maintenance requirements during construction (typically the ITS Design Requirements).

Intelligent Transportation Systems Testing

This section contains a single fill-in for the document containing specific ITS testing requirements (typically the Regional ITS Special Provisions).

Fiber Optic Cable Test Documentation

This subsection contains three fill-ins for the documents that contain specific fiber optic cable testing requirements (typically the Regional ITS Special Provisions).

Maintenance Access Requirements

This section contains two fill-ins for the document that contains the Regional ITS Details.

Intelligent Transportation Systems Final Design Submittal

This section contains a single fill-in for the document that contains the Regional ITS Details. In addition, the bulleted list could be shortened for projects that do not contain all of the ITS items listed.

Other Submittals

This section contains a bulleted list that could be shortened for projects that do not contain all of the ITS items listed.

Section 2.19: Signing

Introduction

The Washington State Department of Transportation (WSDOT) uses traffic control signs as the primary mechanism for regulating, warning, and guiding traffic. The proper traffic control signs must be in place when any section of highway is open to the motoring public. Each Design-Build project has unique and specific signing requirements. For statewide signing uniformity and continuity, it is sometimes necessary to provide signing beyond the project limits. Design characteristics of the facility determine the size and legend for a sign. As the design speed increases, larger sign sizes are necessary to provide adequate message comprehension time. The [Manual on Uniform Traffic Control Devices](#) (MUTCD), the WSDOT [Traffic Manual M 51-02](#) and the WSDOT [Sign Fabrication Manual M 55-05](#) contain standard sign dimensions, specific legends, and reflective sheeting types for all new signs.

Usage

A note to the user: If a section is not used, leave the section number and title, delete the unused section, and replace with “This section is intentionally omitted.”

General

\$\$1\$\$ Identify the State Route(s) and Milepost Limits.

\$\$2\$\$ Identify the State Route(s) and Milepost Limits.

\$\$3\$\$ Identify the State Route(s) and Milepost Limits.

Sign Spacing

\$\$1\$\$ Identify Specific Service Signs – i.e. Motorist Information Signs.

\$\$2\$\$ Identify Local Agency.

Sign Posts

\$\$1\$\$ Identify the State Route(s) and Milepost Limits.

For Construction Specifications, include the following General Special Provisions (GSP) in Appendix B:

- GSP 8-21.GR8
- GSP 8-21.2.GR8
- GSP 8-21.2(9-06.16).GR8
- GSP 8-21.2(9-06.16).OPT1.GR8
- GSP 8-21.2(9-28.11).GR8
- GSP 8-21.2(9-28.14).GR8
- GSP 8-21.2(9-28.14).OPT6.GR8
- GSP 8-21.2(9-28.14(2)).GR8

Overhead Signs on Structures

\$\$1\$\$ Identify State Route(s) and Milepost Limits.

\$\$2\$\$ Identify the Specific Bridge(s) – i.e. 005/312 – I-5 Under Israel Rd.; 005/337E – I-5 Over Martin Way.

\$\$3\$\$ Identify the Specific Bridge(s) – i.e. 405/21 – I-405 Over NE 3rd Street.

Signs on Signal Poles and Mast Arms

\$\$1\$\$ “Signal Standard Detail Plan Sheet, IS-13. See: www.wsdot.wa.gov/publications/fulltext/Standards/PSL/is-13/IS-13.pdf.”

Ramp Meter Signing

\$\$1\$\$ “Ramp Meter Signal Standard Plan Sheet IS-13A. See: www.wsdot.wa.gov/publications/fulltext/Standards/PSL/is-13/IS-13A.pdf.”

Speed Limit and Speed Reduction Signs

\$\$1\$\$ Identify the State Route(s) and Milepost Locations.

Toll Rate Signs

\$\$1\$\$ Identify State Route(s) and Milepost Limits.

Left Lane Restriction Signs

\$\$1\$\$ Identify State Route(s) and Milepost Limits.

Left Lane Restriction Ends Signs

\$\$1\$\$ Identify State Route(s) and Milepost Locations.

Conceptual Guide Sign Plan

§§1§§ “, when applicable, Motorist Information Signs; Overhead Active Traffic Management Signs; Overhead HOV Signs; Overhead Toll Signs; and Overhead HOT Lane Signs.”

Bicycle Restriction Signs

§§1§§ Identify State Route(s) and Milepost Limits.

Plan Requirements

§§1§§ “when applicable, Variable Message Signs”

§§2§§ “WSDOT [Plans Preparation Manual](#) M 22-31, pages 4-42 to 4-44”

Future Active Traffic Management Signs

§§1§§ Identify State Route(s) and Milepost Limits.

Section 2.20: Pavement Marking

Section 2.20, Pavement Marking, contains the requirements for permanent pavement markings for the project.

Section 2.21: Traffic Operations

Section 2.21, Traffic Operations, contains the requirements for Traffic Operations.

Section 2.22: Maintenance of Traffic Introduction

Section 2.22, is required in all Design-Build projects that anticipate implementing temporary traffic control. This may range from one-time set-ups to set-ups that may need to be in place for multiple days/months. The traffic control configuration can range from daily/nightly closures of lanes using temporary devices to re-stripping the roadway to create space for construction work activities for a longer period of time.

Usage

This section explains how to use the template and provides guidance for certain subsections of Section 2.22, *Maintenance of Traffic*. This includes guidance for fill- ins, GSP selection, and references to helpful examples or resources for the author.

Unless noted elsewhere in this document, all sections and subsections of 2.22, Maintenance of Traffic (MOT), are required.

General

§§1§§ List Local Agencies that are anticipated to approve or provide comment on TTC Plans.

Transportation Management Plan

\$\$1\$\$ List region-specific department. An example would be the WSDOT Region's Traffic Management Center.

Traffic Incident Management Plan

WSDOT Regions vary on how they manage incidents and the plan should reflect the Region's specific approach. For example, the Northwest Region has a Traffic Management Center that actively monitors multiple highway/freeway systems via cameras and loop detection. Incidents can be detected via this system, monitored on the WSP Radio, or reported to the Region's Radio Team. They will then activate Variable Messages on the permanent system. Incidents within a project can be reported to the TMC and actions taken accordingly. It is recommended that the designer be familiar with their Region's methods of response to incidents.

General

\$\$1\$\$ List region-specific department. An example would be the WSDOT Region's Traffic Management Center.

Variable Message Signs

\$\$1\$\$ List region-specific department. An example would be the WSDOT Region's Traffic Management Center.

Note that if the Region does not have a permanent Variable Message Sign system within the project limits, that this section may be deleted and replaced with "This section is intentionally omitted."

Highway Advisory Radio

\$\$1\$\$ List region-specific department. An example would be the WSDOT Region's Traffic Management Center.

Note that if the Region does not have a permanent Highway Advisory Radio system within the project limits, that this section may be deleted and replaced with "This section is intentionally omitted."

Design-Builder Response Time

\$\$1\$\$ Time should be appropriate for project location. An example would be 45 minutes for populated areas such as Seattle, Olympia, and Tacoma.

Maintenance of Traffic Task Force Meetings

\$\$1\$\$ Insert cities, counties and known applicable agencies such as local school district, local transit, bike clubs such as Cascade Bicycle club, etc.

Design Vehicle

\$\$1\$\$ Insert design vehicle size. For example, for freeway system a WB-67 would be appropriate.

Allowable Closures

\$\$1\$\$ Design-Builder should coordinate with the WSDOT Engineer on determining events where closures would need to be restricted. The events would be large enough in size where its attendance arriving and leaving have a significant impact to the corridors used for the event. An example would be a Fair, a city event such as a parade, a football game, a local race (example Seafair Rock n' Roll) etc.

\$\$2\$\$ Design-Builder should work with the WSDOT Engineer on determining local venues where their arrival and departure could affect the highway system. The Traffic Office can assist in determining the venue capacity that would impact the State highway system. An example would be a local Amphitheatre, racetrack, or stadium whose combined attendance over a set number would impact the roadway. The Region Traffic Office can provide guidance on what this capacity would be based on the maximum capacity or near maximum capacity of a venue based on type of event.

Lane Closures

\$\$1\$\$ This section should be a table listing details of the allowable closure times for each lane to be closed, and days of the week. The designer should contact their Region Traffic Office on determining lane closure hours.

The example table below shows the format that NWR uses to list lane closure hours in the RFP:

A table is prepared for each direction and each section of the project, should the project extend through areas requiring different closure hours.

Full Freeway, Highway, and Roadway Closures

\$\$1\$\$

This section should be a table listing details of the allowable closure times for each lane to be closed, and days of the week. Designer should contact their Region Traffic Office on determining times for freeway, highway, and roadway closures.

The example tables below show the format that NWR uses to list freeway, highway, and roadway closure hours in the RFP:

A descriptive paragraph is provided for each section to be closed that addresses the limits, any pertinent details, duration, etc.

*****\$\$1\$\$*****

\$\$1\$\$ This section would be developed if the designer determined that there were work elements that would be performed best under a full freeway, highway, or roadway closure. The designer should work with the Region Traffic Office on determining the best closure window and verbiage for this section. Typically the verbiage includes the section of roadway that may be closed, list any associated ramps that may be closed, and provide the allowable hours for this closure such as Friday 10:00 p.m. to Monday 5:00 a.m. If a roadway is being allowed to be closed in each direction, the designer will need to work with the Region Traffic Office on determining if both directions can be closed simultaneously or separately and that criteria addressed in this section. Each closure and their times would be listed separately.

Entrance and Exit Ramp Closures

\$\$1\$\$ This section would be a table listing each ramp and the times they may be closed. The Designer should work with their Region Traffic Office on determining the hours.

*****\$\$1\$\$*****

\$\$2\$\$ Additional closures that are not already covered above may be described here.

Allowable Shoulder Closures

\$\$1\$\$ This section would be a table listing times that shoulders may be closed.

If there are multiple roadways, the closures should be listed by roadway (example, SR routes, interstate routes, local streets). The Designer should work with their Region Traffic Office on determining the hours.

Traffic Operations During Construction

\$\$1\$\$ List region-specific department and phone number. An example would be the WSDOT Region's Traffic Management Center or Radio center.

Mainline During Construction

\$\$1\$\$ This fill-in addresses minimum lane and shoulder widths. The Designer should work with the Region Traffic Office on determining what these widths should be. Example language: ****11-foot wide lanes with 4-foot shoulders****. For projects where it is anticipated that re-striping may be occurring over multiple nights the following has been provided on projects: ****11-foot wide lanes, and shall not exceed 14 feet wide unless otherwise specified and 4-foot shoulders****

Design Criteria

\$\$1\$\$ Taper rate should be based on design speed. Example, if design speed is 70 mph, then minimum taper rate would be 70:1.

Advance Signing

Designer to work with their Region on determining when these signs are to be provided. Not every project may have space for these signs.

\$\$1\$\$ Provide the quantity of signs that are to be installed.

\$\$2\$\$ This fill-in provides the location. Example: One in the northbound and one in the southbound direction of I-5. The quantity should add up to the total listed in

***\$\$1\$\$.

\$\$3\$\$ Provide the contact name and number, and WSDOT office with address (typically a maintenance office) where the signs can be picked up. The Designer will need to verify the office and contact name.

Design Criteria

The design team will work with their Region Traffic Office to provide these fill-ins.

\$\$1\$\$ Provide minimum lane widths on ramps (typically nothing less than 11 feet)

\$\$2\$\$ Provide minimum shoulders widths on ramps (typically 2 feet)

\$\$3\$\$ Provide design vehicle (typically WB-67)

\$\$4\$\$ Provide desirable ramp taper rate (typically 20:1)

\$\$5\$\$ Provide minimum ramp taper rate (typically 15:1)

\$\$6\$\$ Input the design vehicle

For fill-ins ***\$\$4\$\$*** and ***\$\$5\$\$***, when determining these, keep in mind duration that the temporary configuration may be in place. If anticipating several months or years, you may want to consider something more towards a 20:1 taper rate minimum.

Local Roads During Construction

\$\$1\$\$ Insert the local cities and counties that will be reviewing and approving TTC plans.

Design Criteria

The design team will work with their Region Traffic Office to provide fill-ins for lane widths on local streets.

\$\$1\$\$ Provide minimum lane widths on local roads

\$\$2\$\$ Provide minimum existing lane widths on local roads

Barrier and Glare Screen

\$\$1\$\$ Insert mainline roadway name project is on

Pedestrian and Bicycle Access During Construction

\$\$1\$\$ Designer can work with Region Traffic Office and/or their communications office on identifying the local bicycle clubs that utilize the local trails, to provide the fill-in.

Traffic Control Supervisor

\$\$1\$\$ Time should be appropriate for project location. An example would be 45 minutes for populated areas such as Seattle, Olympia, and Tacoma.

Rolling Slowdowns

\$\$1\$\$ Fill-in to provide roadway that rolling slowdowns will be permitted and include times and days of week. Example: "Rolling slowdowns on southbound I-5 will only be permitted between 12:01am and 4:00am on Monday, Tuesday, Wednesday, Thursday, and Friday.

Designer to work with the Region Traffic Office for times and days of the week.

If it is determined that rolling slowdowns are not suitable for the project, then this section may be deleted and replaced with "This section is intentionally omitted."

Traffic Safety Drums

Designer to work with their Region Traffic Office. If the retroreflective sheeting is not an option that will be permitted, this section will require modification and Section "Wide Angle Prismatic Retroreflective Sheeting" will need deletion. See guidance provided for Section "Wide Angle Prismatic Retroreflective Sheeting"

Wide Angle Prismatic Retroreflective Sheeting

Not all Regions may wish to utilize this type of reflective sheeting on the drums. Designer to work with the Region Traffic Office for concurrence of use. If not permitted, this section may be deleted as well as the subsections and replaced with "This section is intentionally omitted." It will also require modification to "Traffic Safety Drums". The second paragraph would be modified to read: The Design-Builder shall use traffic safety drums with two white and two fluorescent orange bands in accordance with Sections 9-28.12 and 9-35.7 of the WSDOT [Standard Specifications](#) M 41-10. All traffic safety drums shall be the same type.

Section 2.23: Railroad

Introduction

Construction and Maintenance Agreements with each Railroad within the project area need to be initiated a minimum of 1 year prior to RFP date. These agreements with Railroads must be executed BEFORE the project is awarded. The HQ Railroad Liaison, or designee, may assist with preparing Special Provisions of the RFP.

Railroad Right of Entry and Training Requirements

There are many scenarios for working on or near railroad property. The table below is a basic list of type of intrusion and requirements. Please contact Railroad Liaison for specific site or project information.

On railroad property	Not within 25 feet of track (no potential to foul)	Railroad flagging not required	Right of Entry permit or agreement needed	Safety Certification and E-rail Safe requires
On railroad property	Within 25 feet of track	Railroad flagging needed	Right of Entry permit or agreement needed	Safety Certification and E-rail Safe requires
Off railroad property	Within 25 feet of track or potential to foul track	Railroad Flagging needed	Right of Entry not needed	Safety Certification required

Usage

- Application of template will be determined during the scoping and initial design phase, please consult with the HQ Railroad Liaison (or designee) if there are any potential impacts to Railroad property.
- Fill-in guidance (each fill-in for each section/subsection of template)
 - Railroad Owner/Operator
 - Railroad facilities location
 - Railroad publish standards
 - Protective Services (Flagging)
 - Construction Requirements or minimum clearance standards provided by Railroad
 - Insurance safety and background check requirements required by Railroad (generally described in the Contractors Right of Entry Agreement with the Railroad)
- GSP Selection guidance will be provided by the HQ Railroad Liaison for each project

Contractor's Right of Entry Agreement

Use this fill-in to provide contact information for obtaining the Contractor's Right of Entry Agreement.

Section 2.24: Right of Way

Introduction

WSDOT must delineate existing Right of Way (ROW) and access as part of base data collection. ROW and access are potential high-risk areas that can significantly impact the project schedule both in project development by WSDOT and contract execution by the Design-Builder. To determine if adequate ROW is available to build the project, it is necessary to accurately determine the physical boundaries of existing ROW along the route. Whenever possible, establish the ROW limits within which the Design-Builder must work on a project.

In some cases, it may be advantageous for WSDOT to delay purchasing a portion of the required ROW until the final footprint is created by the selected Design-Builder. This is important in areas with very high real estate costs where WSDOT wishes to minimize the amount of real estate purchased. It is important to relay WSDOT's desire to minimize ROW within the RFP scoring system. When making this decision, factor the potential cost of delays associated with ROW acquisition into WSDOT's risk cost.

Under Federal and Washington State statutes and regulations, WSDOT's ability to acquire property in a timely manner is limited. Because WSDOT is in the best position to appraise, negotiate, and purchase ROW or relocate impacted facilities associated with a design-build project, these risks will normally remain with the WSDOT. A preliminary assessment of the ROW personnel required to meet a project's schedule is necessary in order to determine whether the project should even be considered for design-build.

Usage

This section explains how to use the template and provides guidance for certain subsections of Section 2.24 Right of Way. This includes guidance for fill-ins, GSP selection, and references to helpful examples or resources for the author.

Available Right of Way

The following are optional fill ins for this section:

*****(WSDOT Ownership) ***** WSDOT owns existing right of way, including access rights, as shown on the Right of Way Plans (Appendix R). WSDOT has not determined the need for, nor acquired any additional ROW, for the subject project. The Design-Builder shall have access to the ROW upon Notice to Proceed (NTP).

****(WSDOT Acquire)**** WSDOT will acquire the property for this Project as shown in the Conceptual Plan or the Right of Way Plans (Appendix R), or both. The Design-Builder shall have access to the ROW upon NTP. If the ROW is not available upon NTP, WSDOT will consider an extension of time in accordance with Section 1-08 of the General Provisions.

Right of Way Use Permit

If there are Right of Way Use Permits or a Haul Road/Detour Agreement with a Local Agency, fill in the appropriate agency name and include the appropriate documents in Appendix R.

Additional Right of Way Acquisition

Additional ROW may be necessary if the Design-Builder's proposed design requires the acquisition of property outside the ROW. This subsection outlines all requirements by the Design-Builder to contact the WSDOT engineer to obtain an approximate amount of time that would be required for acquisition. The WSDOT Real Estate Services (RES) office shall be consulted to determine availability of existing ROW or impacts to project schedule, risks, and budget regarding acquisition of additional right of way either by WSDOT or the Design-Builder. If the Design-Builder requests additional ROW, all costs associated with the additional ROW are paid by the Design-Builder. Design Builder shall not have access to additional properties until the ROW is certified by WSDOT RES.

Property Management

This subsection states that the Design-Builder shall establish a Property Management Plan for all property existing, acquired or to be acquired for the project. The plan at a minimum should include temporary fencing, how often inspections for vandalism, rodent infestation and illegal dumping. The plan should also include the methods for curing any issues found during inspections. See the WSDOT *Right of Way Manual* for more information regarding the Property Management Plan.

Demolition

The Design-Builder is responsible for all demolitions to be removed by Project. This section outlines requirements for the Work.

Right of Entry

Right of Entries are to be used only for the sole benefit of the property owner, i.e. for driveway reconnects and slope blending of property adjacent to the highway.

If there are right of entries that pertain to the project, then fill in the County Assessor's Tax Parcel numbers.

Notice of Entry

If the Design-Builder determines the need to conduct due diligence on property pursuant to RCW 47.01.170, and the property is not owned by WSDOT, the Design-Builder shall issue a Notice of Entry. The work associated with the Notice of Entry shall not be for invasive work or ground disturbance activities. A Temporary Easement may be required for more invasive work than permitted in RCW 47.01.170.

A sample of a Notice of Entry is available on the DB Program SharePoint Site [here](#).

Construction Interdisciplinary Commitments

If there have been commitments made to property owners through a Construction Memo: (Form RES-344) executed by the WSDOT Engineer during the acquisition of the property that shall be fulfilled by the Design-Builder with respect to the property parcel acquired, then the copies are included in Appendix R. See [Form RES-344](#).

Notification

\$\$1\$\$ Provide “fill-in” number of Calendar Days required by the WSDOT Engineer for advance notification of any work within the right of entry limits for the project.

Right of Way Certification

Prior to the commencement of construction in any Project phase or segment, ROW must be certified in accordance with Chapter 17 of the WSDOT *Right of Way Manual*. If additional ROW acquisitions occur after certification, an updated certification must be submitted to the WSDOT Engineer for approval prior to commencement of construction

Section 2.25: Control of Materials

Section 2.25, *Control of Materials*, contains no fill-ins and is not typically modified.

Section 2.26: Toll Infrastructure

Introduction

When tolling is included as part of a Design-Build project, WSDOT typically will have a civil design-build contract provide the physical civil infrastructure needed for the toll system (e.g. toll gantries, toll cabinets, toll rate signs, signing, etc.) while having a separate contract with a roadside toll vendor whom provides actual toll equipment at toll points (license plate cameras, lane controllers, readers/antennas, etc.) This Section gives requirements for toll infrastructure elements, coordination requirements with the toll vendor, and requirements for developing a toll system roll out plan in order to achieve a toll system rollout.

When developing Section 2.26 of the RFP, early and continued involvement with the WSDOT Toll Division staff is required to identify specific toll infrastructure needs for the project.

The toll infrastructure requirements included in Section 2.26 of the RFP need to clearly identify specific toll features to be included by the Design-Builder. This section includes a number of fill-in locations that allow the project team to incorporate project-specific information (such as the number of toll points, or the approximate type and location where a toll rate sign is needed). Some entire sections may need modification or deletion to accurately describe project requirements. In special situations, a subsection (or sections) may need to be added to address unique project requirements (e.g., express toll lanes, single point tolling, modifications to existing toll system elements, etc.)

Coordination with the authors of the following sections are critical in development of the RFP:

- Section 2.13 Bridges and Structures (toll gantries and toll rate sign structures)
- Section 2.16, Illumination (power needs for toll vendor)
- Section 2.18, Intelligent Transportation Systems (general ITS elements and toll and toll rate sign communication networks)
- Section 2.19, Signing (toll signing)
- Section 2.20, Pavement Markings (express toll lane markings and access point locations)
- Section 2.22, Maintenance of Traffic (traffic control closures to be provided by the Design-Builder to the toll vendor for their installation and testing work)

Appendix Z contains toll appendices that are project specific.

Usage

This section explains how to use the template and provides guidance for certain subsections of Section 2.26, *Toll Infrastructure*. This includes additional guidance for fill-ins contained within the Section 2.26 template and references to helpful examples or resources for the author.

Performance Requirements

This subsection identifies the requirements for coordinating with the WSDOT Engineer and the toll vendor. It identifies the need for the Design-Builder to provide a Toll System Coordinator. The size and complexity of the tolling piece of the project will dictate the experience needed by the person for this position. It also establishes the frequency for toll task force meetings throughout the project where the Design-Builder will coordinate their design and construction with the toll vendor.

Design and Construction Requirements

This subsection gives a general outline of what is required of the Design-Builder for toll related work. The type of toll facility will dictate what is needed. In general, the two types of toll facilities are either a single point full road toll system (typical for toll roads, tunnels, or bridge) or an express toll lane system (currently on I-405 and SR 167). It is critical to coordinate with the WSDOT Toll Division to determine what their toll vendor needs in order to install the toll equipment on these facilities.

Express Toll Lane Access Points

This subsection shall include detailed information on where access points into/out of express toll lanes are to be located. These location description should be fairly detailed for beginnings, endings, and mid-point/intermediate access points. These locations shall be agreed upon by the project office and the WSDOT Toll Division using actual and project traffic pattern data during the conceptual design phase.

This subsection can be omitted if the toll system is not an express toll lane facility.

Toll Point

A toll point is a location on the toll facility where vehicle information is collected in order to charge a user a toll. It typically consists of a toll gantry and associated toll cabinets. The Design-Builder will install these elements and the toll vendor will come later and install toll equipment on the gantry and within the toll cabinets.

Depending on the corridor, these toll points can either be called out to specific locations (like on a ramp) or a general area to allow some flexibility by the Design-Builder. The goal of a toll point location is to ensure that all vehicles using the toll facility travels through a toll point.

Radio Frequency Survey

When a toll point is completed, antennas and readers are installed on a toll gantry to identify transponders that are installed on vehicles as part of the *Good To Go!* program. This equipment uses radio frequency to read the transponders. Some toll projects will warrant a need to work with the WSDOT Radio Shop to perform a radio frequency (RF) survey to ensure that a location does not currently have existing frequencies in a the range that the toll readers use that would interfere with toll operations. Having this survey done before advertising the RFP will mitigate risk of needing to relocate a toll point. Some projects may not have flexibility to move toll points around which would not necessitate the need for an RF survey.

Toll Gantry

A toll gantry is typically a monotube structure over the road which looks very similar to a sign structure. They can be either cantilevers or full span structures depending on the need of the project. Currently, the toll vendor only needs one toll gantry at a toll point but this needs to be confirmed with the WSDOT Toll Division for each project.

It is best practice to have a toll gantry be exclusively used for toll equipment installation and not have overhead signs installed on it. For efficiency, toll gantries can be shared for more than one toll point (e.g. a T-cantilever used for a northbound and a southbound toll point on direct access ramps) but this needs to be coordinated with the WSDOT Toll Division beforehand.

Coordination with Section 2.13 Bridges and Structures is required. Vibration requirements and per lane/shoulder loads of toll equipment that will be installed by the toll vendor will be included in Section 2.13.

Roadside Toll Cabinets

The Design-Builder will install roadside toll cabinets that are connected to the final communications network and power service before turning over the cabinets to the toll vendor for their installation of toll equipment. Generally these cabinets are double wide cabinets (four doors). This section will need to specify the type of finish the cabinet will have (either color or mill finish) based on the project needs.

This subsection also discusses the needs for cabinets to be provided for uninterruptible power supplies (UPS) and toll reader equipment. The Design-Builder provides these empty cabinets for the toll vendor's use if required.

Toll Rate Sign

Toll rate signs are required on a toll facility to indicate the current toll a user would pay at that time. The type and locations of the toll rate sign(s) will depend on the type of facility. Express toll lane systems require toll rate signs before each access point and at direct access interchanges leading directly into the toll lanes. A single point full toll facility requires the toll rate sign to be placed near but upstream of a toll point. Please see the WSDOT Toll Signing Guidance document for more information on the type of toll rate sign needed.

This section goes into great detail on the design and testing needs for toll rate signs. Coordinate with the Region on the type and manufacturer of electronic displays and signs controllers that will be installed on the toll rate signs.

Toll rate signs will be completely installed by the Design-Builder and operated and maintained by WSDOT. Currently, the toll vendor will not have any involvement in the installation, testing, operations, or maintenance of toll rate signs.

Communication System

Each toll point will have their own dedicated toll network which typically consists of six-strands of distribution fiber that connects to a nearby communication hub. This ensures that no other data is on the toll network fiber when connected to the hub. The toll information then travels from the communication hub to the WSDOT Northwest Region TMC where the toll vendor's host system servers are located.

Details on the toll fiber network are located in Section 2.18 Intelligent Transportation System

Conduit

Coordinate with the WSDOT Toll Division to determine the type and quantity of conduit that is to be provided by the Design-Builder for the Toll Vendor's use. The Design-Builder will install these conduit empty and the Toll Vendor will pull their cable for the toll equipment.

Spare Parts

Due to the uniqueness of the toll infrastructure for a project, spare parts for toll rate signs and toll cabinet are typically provided by the Design-Builder and given to the WSDOT entity that will be responsible for maintaining physical infrastructure on the corridor (usually Signal Maintenance).

Turnover, Operations, and Maintenance

This subsection goes into detail regarding what toll infrastructure elements need to be completed before turning toll point sites over to the toll vendor for their toll equipment installation and testing activities. Coordination with the WSDOT Toll Division and overall project phases is needed as this subsection is written.

Toll Infrastructure Design Concept Plan

This is a deliverable by the Design-Builder that gives the general layout of toll infrastructure elements on the corridor. This enables the Design-Builder to start thinking about the toll pieces as the rest of their design progresses. This also allows WSDOT and the various departments have a better understanding of where toll points, signs, access points, etc. are proposed to be located which helps with later design reviews.

Toll System Rollout Plan

The Toll System Rollout Plan is more of a narrative document that gives insight on how the Design-Builder plans to meet the requirements of this section from design, through construction, and reaching Toll Commencement (start of toll collection). This document needs to include all coordination efforts, schedule, and phasing for the Design-Builder, the toll vendor, and WSDOT's efforts.

Toll Infrastructure Preliminary Design Submittal

This design submittal is focused on schedule and narrative deliverables required by the Design-Builder. Since there are no "tolling" RFC drawings/sheets, the actual design of toll infrastructure, ITS, signing, pavement markings, roadway, etc. will be captured in those discipline plan sheet deliverables.

Toll Infrastructure Final Design Submittal

Similar to the Preliminary Design Submittal, this Final Design Submittal is focused on narrative documents, schedule, and additional supportive materials to ensure that turnover of toll points to the toll vendor is smooth. The Design-Builder will also provide traffic control to the toll vendor so this submittal includes updates to the Design-Builder's various traffic control plans.

Section 2.27: Vacant

Section 2.27 is currently vacant.

Section 2.28: Quality Management Plan

Introduction

The Quality Management Plan is an integral portion of each Design-Build project. The “Plan” is the basis by which the Design-Builder conducts their management processes for the project. Furthermore, the “Plan’s” WSDOT approval for Design and Construction is integral to any work proceeding.

Usage

Section 2.28 defines the relationship between the Design-Builder and WSDOT.

- WSDOT’s expectations for; partnering/disputes, pre-activity meetings, QA task force team, nonconformance, executive management, quality system, other project documents for submittal, and pre-approved corrective action plans
- Principal and general staffing requirements with some variation allowed due to project complexity are stated
- Design processes requirements are defined from, development, to RFC, and finally to As Built.
- Materials requirements, deliverables, materials testing quality program, materials laboratory, materials testing frequencies/random sampling, testing plans, F & t analysis, materials documentation reviews and expectations
- Construction QA and QC plan requirements for progress schedule, notice to WSDOT, Hold Points, electrical inspection, WSDOT oversight, QA inspection, inspection guidelines/documentation, inspection forms/checklists, and the right to “Stop Work”
- Submittals, the executive management review/audits, document review, and QA/QC for submittals

Fill-Ins

- Section 2.28 has very few fill-in possibilities and they are all self-explanatory.

Section 2.29: Maintenance During Construction

Introduction

Typical maintenance activities include patching potholes, cleaning ditches, painting stripes on the roadway, repairing damage to guardrail, and controlling noxious weeds. In addition to maintaining assets, operational services are also provided, including plowing snow, cleaning rest areas, responding to incidents, operating structures (e.g. drawbridges), and operating traffic signals, lighting, and Intelligent Transportation Systems (ITS).

Given the nature and cost of maintenance work, as well as the exposure inherent in maintenance and operational activities, it is important for designers to consider maintenance and operations staff as major stakeholders in every project. It is also important for maintenance and operations staff to understand the purpose of the project and to participate in determining the best method(s) to keep it functioning as designed while maintaining their responsibilities outside of the specific project limits. This chapter provides multiple options to help improve coordination with maintenance and operations staff during project design. These “best practices” are a culmination of responses from WSDOT [Design Manual](#) M 22-01 user surveys, interviews with maintenance and operations superintendents, and various regional practices that have demonstrated potential improvement related to the coordination of design and maintenance efforts and personnel. The concepts and methods presented herein do not replace any approved communication or documentation processes that may be currently required by a WSDOT region during the project development process.

Usage

All sections in 2.29 are to be used and determined by the project limits if they apply or not.

Section 2.30: Water Crossings

General

Introduction

Section 2.30 should be included in any contract that builds a structure over water. It addresses the requirements for fish passage as well as hydrologic requirements such as hydraulics reports, scour analysis, long term aggradation and degradation, FEMA flooding analysis, and designer qualifications.

Assumptions

Section 2.30 was developed with several built in assumptions. Please be sure your project aligns with these assumptions. If they do not, changes to the Section 2.30 template will probably be needed. These assumptions are as follows:

1. The project is primarily fish passage.
2. WSDOT has not developed the JARPA. The contract assigns this to the Design-Builder.
3. Before the RFP is issued, the Design PEO and Headquarters Hydraulics and Region Environmental have developed a draft PHD through extensive discussions and negotiations with the Tribe(s) and WDFW. This is when many decisions about the final design are made.
4. As policy, WSDOT does not want to assign the Design-Builder the risk to do whatever it takes, at whatever the cost, to obtain the permits.

5. Therefore, the expectations of the Tribe and WDFW must be put in the contract as requirements, not as options.
6. We do not expect the Design-Builder to innovate the dimensions in Table 2.30-B or other commitments we have made to the Tribes. All of these must be made contract requirements. If any innovation is to occur in those dimensions, it will require an ATC.
7. ATC's on channel, structure, restoration, or that change or affect any of the commitments made to the Tribe(s) or WDFW must be reviewed by both before we respond to the Design-Builder. ATC's that are uncertain of approval by the Tribes or WDFW should be rejected.
8. Design-Builder innovation is expected to be limited to constructability and managing traffic.

Usage

- Subsections that contain fill-ins and instruction boxes
- Any additional subsections that provide background/explanation for technical/complex Technical Requirement language. (This is at the discretion of the SME)
- Current content

General

- ***\$\$<1>\$\$\$ Note user to provide "fill-in" Fish Passage ID Numbers specific for the Project.
- ***\$\$<2>\$\$\$ Note user to provide "fill-in" State Routes specific for the Project.
- ***\$\$<3>\$\$\$ Note user to provide "fill-in" Mileposts specific for the Project.
- ***\$\$<4>\$\$\$ Note user to provide "fill-in" names specific for the Project.

Definitions

- Must include the Structure Free Zone exhibit drawing in Appendix H. The purpose of the Structure Free Zone is to define the zone within which there is zero tolerance for encroachment by any part of a structure, even by 0.001 inch. The most up to date version of the SFZ drawings are found in the Plan Sheet Library.
- Consider using the term "Projects of Similar Scope and Complexity (Relates to fish passage Work)" in the RFQ and ITP when describing Key Personnel experience requirements or past project requirements. If doing so, this definition should be added to the RFQ and ITP.

Personnel Requirements

Be sure to check the RFQ and ITP for consistency of meaning, qualifications and job duties when using these terms: Stream Team, Stream Design Engineer, Geomorphologist, Biologist. Also note that some qualifications are identified as minimums: these are expected to be scored as zero for failure to meet the minimums. Other qualifications are described as desirable: these should be scored as the Evaluators see fit.

Fish Passable Structures

Be sure to review Section 2.13 for consistency with Section 2.30 for allowable structure types. Section 2.13 is developed by the HQ Bridge and Structured Division and they might not be aware of restrictions on structure types that could be imposed by the Tribe(s) or WDFW are allowable structures.

Table 2.30-B – Structure and Channel Design Characteristics

- ***\$1\$\$*** **\$2\$\$\$*** Note user to provide “fill-in” type of LWM required for each passage based on the structure length and diameter in Chapter 10 of the WSDOT *Hydraulics Manual* or, if there is an agreement with the Tribe, the type and number agreed with the Tribe. Add more rows if there are more than one type.
- For guidance on establishing the Maintenance Clearance, see: <https://wsdot.wa.gov/sites/default/files/2020/07/08/Design-Instructions-2020-01.pdf> and <https://wsdot.wa.gov/publications/manuals/fulltext/M22-01/720.pdf>

Channel Design

- ***\$\$<1>\$\$\$*** Note user to provide “fill-in” if any fish passage is required to be designed to regrade, insert here any contract specific requirements for the channel bank as is erodes as part of the regrade process specific for the Project.

Preconstruction Conference, Placing Aggregate in Streambed, and Streambed Test Section

These sections specifically mention required attendance by HQ Hydraulics. This is to ensure state-wide consistency in messaging to the Design-Builders on certain expectations.

Other Contract Considerations - TR 2.30

1. Hydraulic Length and use of headwalls?
2. LWM – stipulate whether it’s inside or outside the shadow of the structure?

Other Contract Considerations - RFQ

3. Consider using the Goal described herein along with Submittal/Evaluation Requirements
4. Consider using the term “Projects of Similar Scope and Complexity (Relates to fish passage Work)” in the RFQ and ITP when describing Key Personnel experience requirements or past project requirements. If doing so, this definition should be added to the RFQ and ITP.

Other Contract Considerations - ITP

5. Consider using the Goal described herein along with Submittal/Evaluation Requirements

6. Consider using the term “Projects of Similar Scope and Complexity (Relates to fish passage Work)” in the RFQ and ITP when describing Key Personnel experience requirements or past project requirements. If doing so, this definition should be added to the RFQ and ITP.
7. Submittal requirements are necessary as a check to be sure each Proposer understands what is required and is committed to build what is required.

Other Contract Considerations - Ch1 - General Provisions

8. Must include Indemnification for Flooding 1-07.14(1)
9. Must include the indemnification for Regrade 1-07.14(1)
10. Consider using the Incentive spec below, 1-08.11
11. Basic Configuration – The Basic Configuration provides several functions on a design-build contract, most of which are usually not necessary on a fish passage contract. Several WSDOT DB fish passage contracts have deleted all references to the Basic Configuration and Necessary Basic Configuration Changes. The concept of Basic Configuration was created as a convenient way to address two important functions: (1) to define aspects of the design that cannot be changed (without an approved ATC or change order) and are best described in a drawing, and (2) which the owner guarantees there is an acceptable design solution using the basic configuration. Examples used in the past have been complex horizontal and vertical roadway alignments, top elevation and offsets of noise walls, and existing right of way. It was “convenient” on complex geometric contracts because the owner’s conceptual design frequently could be used with little modification. The second function flows from what is known as the Spearin Doctrine which, translated into design-build terms, is the owner’s implied warranty that the project can be designed and constructed in accordance with the plans and specifications. Most contract requirements that require a drawing can simply be stated in the technical requirements by referencing the drawing; and, owing to the relative simplicity of a fish passage contract, there are usually few if any of these needed. On the other hand, the owner’s implied duty to create a contract that is constructible meeting all contract requirements still exists in a fish passage contract. That means it is still up to the design office to verify that there is a combination of stream horizontal alignment, stream vertical alignment, right of way area, MOT constraints, utility considerations, structure type with a Maintenance Clearance, Hydraulic Length, and Hydraulic Span Width that can be designed and constructed in concert with the contract. It is recommended, therefore, that the design office carry its conceptual design to the extent needed to affirm this to be true.

Other Contract Considerations - TR Utilities

12. In order to avoid a costly delay by discovering an unknown utility during construction, it is recommended that the PEO conduct a three-dimensional Subsurface Utility Exploration and include the results in the RFP documents.