Chapter 300

Design Documentation, Approval, and Process Review

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300.01 General

This chapter provides the WSDOT design procedures, documentation and approvals necessary to deliver projects on the transportation network in Washington, including projects involving the Federal Highways Administration (FHWA).

This chapter presents critical information for design teams, including:

- WSDOT's Project Development process.
- Design documentation tools, procedures, and records retention policy.
- Major Project approvals including Design Approval, Project Development Approval, Basis of Design, Design Analysis, and other specific project documents for design-bid-build and for design-build delivery methods.
- FHWA oversight and approvals.
- Information about conducting project process reviews.
- Additional references and resources.

For local agency and developer projects on state highways, design documentation is also needed. It is retained by the region office responsible for the project oversight, in accordance with the WSDOT records retention policy. All participants in the design process are to provide the appropriate documentation for their decisions. See Section 300.04(3) for information about the approval process and authority. For more information about these types of projects, see Chapter 1130 and the Local Agency Guidelines.

300.02 WSDOT Project Delivery

A project is developed in accordance with all applicable procedures, Executive Orders, Directives, Instructional Letters, Supplements, manuals, and the FHWA/WSDOT Stewardship and Oversight Agreement. A project can be influenced by separate plans or studies such as the Washington State Highway System Plan, corridor sketches, planning studies, Field Assessments, and scoping phase documentation.

300.02(1) Project Delivery Method

The project delivery method pertains to WSDOT projects and may vary depending on project type and cost. Preservation projects with an overall project cost of \$10 million and over, and all other projects with an overall project cost of \$2 million and over, are required to go through the Project Delivery Method Selection process. The overall project cost is the total of the Preliminary Engineering, Right of Way, and Construction costs. Project Delivery Method Selection, described below, applies only to WSDOT projects and is not meant to be applied to local agency or developer projects that occur within WSDOT's jurisdiction. Project Delivery Method Selection also does not apply to projects that WSDOT is asked to design and/or construct on behalf of another funding entity. WSDOT primarily uses two delivery methods: Design-bid-build (DBB) and design-build (DB). DBB is considered the traditional project delivery method where a project office puts together a complete set of plans, specifications, and estimate (PS&E) that is advertised for contractors to bid on. The project is constructed by a contractor in accordance with the PS&E and WSDOT provides construction oversight. For DB projects, the WSDOT develops a request for proposal (RFP) that includes a basic configuration for the project and a Conceptual Design Approval. The RFP is published, and a contractor is selected. The contractor is responsible for the design, project construction, and final Design Documentation Package.

Design-build's typical application is for improvement projects in the mobility, economic initiatives, or environmental subprograms where there are opportunities for innovation, greater efficiencies, or significant savings in project delivery time.

For all projects, the delivery method is determined using WSDOT Project Delivery Method Selection Guidance (PDMSG) with the following exceptions:

- Projects under \$2 million are programmatically exempt from PDMSG, do not require a Project Delivery Method Selection Checklist, and will be DBB.
- Preservation Paving projects under \$10 million are programmatically exempt from PDMSG, do not require a Project Delivery Method Selection Checklist, and will be DBB.

300.02(2) Environmental Requirements

WSDOT uses the Environmental Review Summary (ERS) portion of the Project Summary to scope environmental impacts associated with the proposed project and document the anticipated environmental class of action (Environmental Impact Statement/Environmental Assessment/Categorical Exclusion). Projects that have only state funds must have State Environmental Policy Act (SEPA) documentation. Projects involving a federal action in any phase of the project require National Environmental Policy Act (NEPA) documentation. On National Highway System (NHS) routes, a Design Analysis involving one of the controlling criteria (see Section 300.05(2)) is a federal action.

Upon receipt of the ERS approval for projects requiring an Environmental Assessment or Environmental Impact Statement under NEPA, the region proceeds with environmental documentation, including Community Engagement, appropriate for the magnitude and type of the project.

The environmental approval levels are shown in Exhibit 301-3. Refer to your Region Environmental Office and Chapter 225 for more information.

300.02(3) Real Estate Acquisition

Design Approval and approval of right of way plans are required prior to acquiring property. A temporary construction easement may be acquired prior to Design Approval for State funded projects and with completion of NEPA for Federally funded projects. For early acquisition of right of way, consult the Real Estate Services Office, the April 2, 2013 memorandum on early acquisition policy, and Right of Way Manual Chapter 6-3.

300.02(4) Low-Cost Enhancements

For operational changes identified by the Region Transportation Operations Office as part of the Low-Cost Enhancement or Field Assessment Program that are included in a project, the project documentation will be provided by the Region Transportation Operation Office in the form of a QBOD (Q program Basis of Design) with the Region Traffic Engineer as the approval authority. The QBOD is included in the project documentation along with the project's BOD and retained in accordance with the WSDOT records retention policy. Design elements requested by the Low-Cost Enhancement or Field Assessment programs that are outside of the range of values provided in the Design Manual will require a Design Analysis. The Region Transportation Operations Office will prepare the Design Analysis and obtain approvals in accordance with Exhibit 300-2.

300.02(5) Emergency Projects

For emergency projects, also refer to the Emergency Funding Manual. It provides the legal and procedural guidelines for WSDOT employees to prepare all necessary documentation to respond to, and recover from, emergencies and disasters that affect the operations of the department. Emergency projects are required to acquire Project Development Approval in accordance with this chapter. Since the scope of an emergency project can vary greatly, contact your ASDE to determine the scale of this effort.

300.03 Design Documentation

300.03(1) Purpose

Design documentation records the evaluations and decisions by the various disciplines that result in design recommendations. Design assumptions and decisions made prior to and during the scoping phase are included. Changes that occur throughout project development are documented. Required justifications and approvals are also included.

All original technical documents must bear the certification of the responsible licensee as listed in Executive Order E 1010

300.03(2) Design Decisions

Throughout the Design Manual, the terms consider, document, justify, and Design Analysis are used. These terms indicate a scaled level of documenting a design decision.

The lowest level of documentation is consider. "Consider" means to think carefully about a decision and the level of documentation is at the discretion of the engineer. "Document" means to place a short note in the Design Documentation Package (see Section 300.03(3)) that explains the decision. The actual form of this note is at the discretion of the engineer. "Justify" means to prepare a design decision memo to the DDP that identifies the reason for the decision with a comparison of the advantages and disadvantages. The format used to justify a decision is the same as a Design Analysis except it is only approved by the engineer of record. The highest level of documenting a decision is the Design Analysis. When a Design Analysis is required, how it is documented, and who approves it, is explained in the next section.

300.03(2)(a) Design Analysis

A Design Analysis is a process and tool used to document important design decisions, summarizing information needed for an approving authority to understand and support the decision. Design Analyses must include a comparison of safety and operations performance. The approving authority is shown in Exhibit 300-2 or Exhibit 300-4.

A Design Analysis is required where a dimension chosen for a design element that will be changed by the project is outside the range of values provided for that element in the Design Manual. A Design Analysis is also required where the need for one is specifically referenced in the Design Manual.

For Design Build contracts, known Design Analyses identified in the Conceptual Design need to be approved prior to Conceptual Design Approval. Design Analyses identified as part of an Alternative Technical Concept (ATC) need to be completed and approved prior to the ATC approval. Any subsequent Design Analyses need to be completed and approved prior to Release for Construction (RFC).

A region approved Design Analysis is required if a dimension or design element meets current AASHTO guidance adopted by FHWA, but is outside the corresponding Design Manual criteria. Email a PDF copy of all region-approved Design Analyses to the ASDE supporting your region.

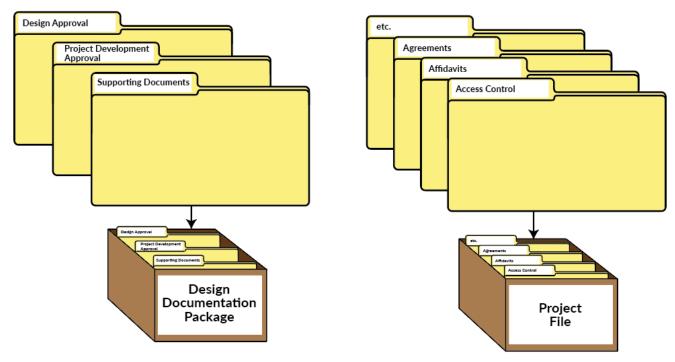
In the case of a shoulder width reduction at an existing bridge pier, bridge abutment, sign structure, or luminaire base in a run of median barrier, the Design Parameter Sheet may be used instead of a Design Analysis to document the dimensioning decision for the shoulder at that location.

On National Highway System (NHS) routes, a Design Analysis involving one of the controlling criteria (see Section 305.05(3)) is a federal action. Projects involving a federal action in any phase of the project require additional documentation, such as NEPA, Section 4(f) of the USDOT Act, ESA, etc., for which a programmatic agreement may or may not be provided. Contact region Environmental staff for more information.

A template is available for the development of the Design Analysis document here: https://wsdot.wa.gov/engineering-standards/design-topics/design-tools-and-support#Tools.

300.03(3) Design Documentation Package and Project File

The Design Documentation Package and Project File include documentation of project work. They are effectively two separate documentation products that have two separate retention processes.



The Design Documentation Package (DDP) consists of the Design Approval, Project Development Approval, and supporting documents that preserves the decision documents generated during the design process. The DDP documents and explains design decisions, design criteria, and the design process that was followed.

The contents of the DDP are listed in the DDP checklist in seven sections as follows:

- 1. Introductory Documents
- 2. Project Summary Documents
- 3. Core Documents
- 4. Environmental Documents
- 5. Supporting Documents
- 6. Other Approvals and Justifications
- 7. Other Items

Sections one through five of the checklist remain the same for all projects. Items in section 6 and 7 may vary depending on the project at the discretion of the engineer of record. Reference the instructions for the DDP checklist of further information.

Any time after completion of the design efforts, the design team submits the DDP to the person in the region responsible for records retention (e.g., Region Plans Engineer). These people work with the WSDOT Records Department to place the DDP into the State Records Center. The DDP is retained in a State Records Center for a period of 75 years and then transferred to State Archives for permanent storage.

The Project File (PF) contains the documentation that is important to the project design, but not included in the DDP. This includes items for planning, scoping, programming, design, contract assembly, utility relocation, needed right of way, advertisement, award, constructability, traffic management, and maintenance review comments for a project. A Project File is completed for all projects and is retained by the region office responsible for the project. Responsibility for the project may pass from one office to another during the life of a project, and the Project File follows the project as it moves from office to office.

See the Project File checklist for documents that are contained in the Project File. The Project File checklist should be included at the beginning of the Project File as a table of contents. If an item on the checklist is not applicable to the project, you may simply state such in the comment column.

The Project File may be purged 3 years after the Construction Office has issued the Final Contract Voucher Certification.

300.04 Project Approvals

This section describes WSDOT's project design milestones for design-bid-build (DBB) and design-build (DB) projects. Work with the ASDE for project approvals that will be required for other delivery methods.

Exhibit 300-1 shows all the deliverables that are required for DB and DBB projects. Use information in this section, Exhibit 300-1, and the DDP checklist to understand what is necessary for each project approval and how they are assembled.

When design elements within an incorporated city or town's jurisdiction are changed by the project, local agency and HQ Local Program approvals are required, as listed in Exhibit 300-2. If the project changes design elements both within a city or town's jurisdiction and within WSDOT's jurisdiction, both sets of approvals are required. See Section 100.05(1) for guidance on jurisdiction. Information pertaining to FHWA approvals and oversight is provided in Section 300.05. Documents for projects requiring FHWA review or approval are submitted through the ASDE.

300.04(1) Design-Bid-Build Projects

The region develops and maintains documentation for DBB projects using this chapter and the checklist for the Project File and Design Documentation Package (see Section 300.03(3)). For an idea of when design documentation should be completed in the design process, consult the Deliverables Expectation Matrix in Section 305.03(2).

For the purpose of documentation, DBB projects have two approval milestones: Design Approval and Project Development Approval (PDA). Design Approval can be achieved when a basic configuration of the project is known, which is around 30% design. Project Development Approval is achieved near the end of the design process prior to advertising the project for construction.

Design Approval locks the version of the Design Manual that will be utilized for up to three years of the design process. When PDA is acquired, the design must conform to the version of the Design Manual as stated in the Design Approval. In essence, having a Design Approval allows the design team to continue through the remainder of the design process without having to reanalyze their project for updates to the Design Manual.

The contents of the Design Approval and PDA are discussed in detail in Sections 300.04(1)(a) and 300.04(1)(b). Projects that have a short duration may combine the Design Approval and PDA into one document. This is called a Combined Design Approval/PDA and is discussed further in Section 300.04(1)(c).

DBB projects that are designed by one project office and then turned over to another office for construction must transfer the Project File (along with a copy of the DDP) to the construction office for their use. Exhibit 300-5 is an example checklist of recommended items to be turned over to the construction office at the time of project transition. If the construction office changes an item documented in the DDP, it is responsible for documenting the change in a supplement to the DDP.

300.04(1)(a) Design Approval

Design Approval may occur prior to NEPA/SEPA approval and is required prior to acquiring property. Approval levels for design and PS&E documents are presented in Exhibit 300-2 through Exhibit 300-5.

The Design Approval contains the introductory documents, project summary documents, and core documents as shown in Exhibit 300-1 and detailed in the DDP Checklist. Include other items from the DDP Checklist that are complete prior to Design Approval.

Once complete, the Design Approval becomes part of the DDP. The portion of the DDP Checklist applicable to Design Approval is used as the table of contents.

Design Approval is entered into the DDP and remains valid for three years or as approved by the ASDE. An extension must be documented and filed in the DDP.

300.04(1)(b) Project Development Approval

When all project development documents are completed and approved, Project Development Approval (PDA) is granted by the approval authority designated in Exhibit 300-2. The PDA becomes part of the DDP.

Refer to this chapter and the DDP checklist for design documents necessary for PDA. Exhibit 300-2 through Exhibit 300-4 provide approval levels for project design and PS&E documents.

The PDA contains the same introductory documents and project summary documents as the Design Approval (see Exhibit 300-1). Any of the documents that are unchanged from the Design Approval may simply be referenced in the PDA. If they have changed, update the document and insert it in the PDA. If the plans for approval are conceptual in the Design Approval, they must be finalized for the PDA.

The NEPA/SEPA process must be complete for PDA.

Project Development Approval remains valid for three years.

300.04(1)(c) Combined Design Approval / Project Development Approval

All projects require Design Approval and PDA; however, many projects have a short timeline for design and the design offices do not find it beneficial to create two separate documents. If this is the case, both approvals may be combined into one approval. To do this, complete all the products as listed in Exhibit 300-1 and title the approval "Combined Design Approval / Project Development Approval". Even though the products listed in Exhibit 300-1 are not required until design is complete, most of these products should be completed early as they set direction for the project. For an idea of when products should be delivered in the design process, consult the Deliverables Expectation Matrix in Section 305.03(2).

A Combined Design Approval / Project Development Approval remains valid for three years.

300.04(2) Design-Build Projects

For design-build (DB) projects, WSDOT provides a preliminary design referred to as the conceptual design and the design-builder becomes the engineer of record responsible for completing the final design. For this reason, WSDOT obtains Conceptual Design Approval (CDA) for DB projects and the engineer applies a PE stamp without signature per WAC 196-23-020(2). See the WSDOT Design-Build Manual for additional information regarding the level of completeness required for the conceptual design and development of the request for proposal (RFP).

Once a contract is executed, the design-builder is responsible for maintaining and completing all design documentation, including the PDA, DDP supporting documents, and Project File. Refer to the design-build DDP checklist for design documents necessary for CDA, PDA, and DDP supporting documents.

300.04(2)(a) Conceptual Design Approval

Conceptual Design Approval (CDA) is entered into the DDP and locks the version of the Design Manual that will be utilized for three years or as approved by the ASDE (an extension to the CDA must be filed in the DDP). Check with the ASDE for any required Design Manual policy updates that need to be included in the RFP. Once the RFP is issued, the version of the Design Manual and any required Design Manual policy updates are locked throughout the duration of the contract.

Assemble the CDA similar to the DBB Design Approval (see Section 300.04(1)(a) and Exhibit 300-1) with the most significant difference being that CDA is required prior to publishing the request for qualifications (RFQ), which is considered advertisement for design-build projects. With ASDE concurrence, an RFQ may be published without a CDA. Environmental documentation must be complete prior to publishing the RFP, except for rare cases (see Design Build Manual 1-2.4 Federal Regulations and the NEPA Process and 2-7.9.1 Environmental Considerations). In these cases, the approving authority (Exhibit 300-2) must provide their approval and the environmental documentation must be complete prior to executing the DB contract.

300.04(2)(b) Project Development Approval

For DB projects, the design-builder undertakes full responsibility for delivery of the project, including developing the final design. The CDA package is transferred to the design-builder upon contract execution, and the design-builder updates the files to reflect their design. The updated documents, and all other items shown in Exhibit 300-1, make up the PDA package. Refer to the project RFP for final and intermediate deliverables, the approval process, and final records for the project. PDA and the applicable DDP Supporting Documents are required prior to project completion.

It is a prudent practice to start the compilation of design documentation early in a project and to acquire PDA before the completion of the project. At the start of a project, it is critical that WSDOT project administration staff recognize the importance of all required documentation and how it will be used in the DB project delivery process.

300.04(3) Local Agency and Development Services Approvals

Other entities (e.g. local agencies, tribes, or developers) proposing projects within WSDOT jurisdiction are required to follow WSDOT design documentation policy as noted in this chapter. Documentation is submitted to WSDOT for review and approval according to Exhibit 300-4. Where FHWA approval is indicated, the ASDE will forward project documentation to FHWA for approval and transmit FHWA's approval, comments, and/or questions back to the submitter.

A Summary of Design (SOD) may replace the Basis of Design (BOD) in Exhibit 300-1 if agreed to by the region signing authority and the ASDE. All other documentation required by this chapter must be provided, however a non-WSDOT funded project may not have a Project Profile or an Environmental Review Summary.

In cases where design decisions are imposed by WSDOT or FHWA as mitigation, the decision will be documented by WSDOT and included in the design documentation package.

The requirement to submit a BOD/SOD for approval may be waived by the approving authority designated in Exhibit 300-4, based on the criterion in Section 1100.05(1)(a). When a region is the approval authority for the BOD/SOD and is considering an exemption, the region approving authority can assume the role of the ASDE to determine if an exemption is appropriate.

For information on jurisdiction, consult Section 100.05(1).

300.05 FHWA Coordination

The <u>2024</u> Stewardship & Oversight (S&O) Agreement between WSDOT and FHWA Washington Division <u>establishes roles and responsibilities for project approvals.</u>

For all projects on the National Highway System (NHS), the level of FHWA oversight and approvals can vary for numerous reasons such as type of project, the agency doing the work, PoDI/non-PoDI designation, and funding sources. Oversight and funding do not affect the level of design documentation required for a project, but it may instigate FHWA approval as detailed in the following sections.

Documents requiring FHWA review and approval are submitted through the HQ Design Office.

300.05(1) FHWA Projects of Division Interest

Projects of Division Interest (PoDI) are projects for which FHWA determines the need to exercise oversight and approval authority. These projects have an elevated risk, contain elements of higher risk, or present a meaningful opportunity for FHWA involvement to enhance meeting program or project objectives. Collaborative identification of these projects allows FHWA Washington Division to concentrate resources on project stages or areas of interest. It also allows WSDOT to identify which projects are PoDIs and plan for the expected level of engagement with FHWA.

The Stewardship & Oversight Agreement generally defines Projects of Division Interest as:

- Major Projects (A federal aid project with total cost >\$500M)
- Federal Discretionary Grant Projects
- NHS Projects that may require FHWA Project or Program Approvals
- Projects Selected by FHWA based on Risk or Opportunity

The S&O Agreement also states: Regardless of retained project approval actions, any Federal-aid Highway Project either on or off the NHS that the Division identifies as having an elevated level of risk can be selected for risk-based stewardship and oversight and would then be identified as a PoDI.

For each project designated as a PoDI, FHWA and WSDOT prepare a Project-Specific PoDI Stewardship & Oversight Agreement that identifies project approvals and related responsibilities specific to the project.

300.05(2) Design Analysis on NHS Routes

<u>Approval of Design Analyses on NHS routes including interstate has been delegated to HQ Design. The ASDE is</u> <u>responsible to notify FHWA of design analyses</u> on all Interstate projects (mainline and ramps) associated with the following ten controlling criteria:

- Design Speed
- Lane Width
- Shoulder Width
- Horizontal Curve Radius
- Superelevation Rate
- Stopping Sight Distance: horizontal alignments and vertical alignments except for sag vertical curves
- Maximum Grade
- Cross Slope
- Vertical Clearance
- Design Loading Structural Capacity

A Design Analysis on an NHS route is a federal action and NEPA documentation is required in the following cases:

- NHS route with a speed greater than or equal to 50 mph: Any Design Analysis associated with the above ten controlling criteria.
- NHS routes with a speed less than 50 mph: Only Design Analysis associated with the following two controlling criteria:
 - Design Loading Structural Capacity
 - o Design Speed

No FHWA involvement is required for non-NHS routes.

300.06 Changes to Approved Documents

There are four ways to revise an already approved design document: errata, supplement, amend, or supersede. The person revising the document must work with the approving authorities to determine which of the approaches will be taken. These four approaches apply to all design documents requiring approval signatures and are detailed in the following subsections.

300.06(1) Errata

Errata are corrections to errors in the original document (e.g., misspelled word or mistyped numbers). The intent and conclusion of the original document is unchanged. The highest Region and HQ approval authority must agree that the clerical errors do not change the intent of the originals. Errata are listed on a separate document by page and line reference and included in the DDP or PF in the same section as the original document. Errata are not circulated for approval signatures.

300.06(2) Supplement

Supplements provide new or additional information while leaving the original document intact. These are noted as supplements on the title page and an introductory paragraph/section is included in the supplement that clearly indicates the parent document and why it is being supplemented. The supplement is filed in the DDP or PF in the same section as the original document. Supplements are circulated for approval similar to the original document.

300.06(3) Amend

Amended documents are where an original is modified beyond the level of an errata. For amendments, the original document is modified by marking up the original document. An amendment should be limited to a section or specific pages of the original document. If the amendment is large and covers a significant amount of the document, consider superseding the original (see below). The amendment must include a cover document that explains the reasons for the modifications and how they impact the conclusion of the original document. Amendments must have a signature page and obtain approvals according to Exhibit 300-2 thru Exhibit 300-4. Amendments are a separate document from the original and the original and the amendment are filed in the DDP or PF in the same section.

300.06(4) Supersede

Superseded documents replace the original document in its entirety. A watermark is applied to the original document indicating that it has been superseded. Treat the superseding document as a completely new document. The superseding document must have a section stating what document it supersedes, clearly indicating the title and approval date of the original document. Superseding documents must have a signature page and obtain approvals according to Exhibit 300-2 thru Exhibit 300-4. Both the superseded and superseding documents are retained in the DDP or PF in the same section.

300.07 Process Review

The ASDEs conduct process reviews. The process review is done to provide reasonable assurance that projects are prepared in compliance with established policies and procedures and adequate records exist to show compliance. Projects are normally selected for a review after contract award, which allows the design team appropriate time to assemble the final project documentation. The process review will focus on the Design Documentation Package and the Project File but may include other documents as requested.

A process review usually involves the region's project development leadership, Project Engineer, and the design team leader. The ASDE may invite others to participate such as FHWA, Transportation Operations, Hydraulics, Public Transit, or Active Transportation.

At the conclusion of a process review, findings may be issued that ask for corrections or additions to the DDP. The original DDP will remain intact, and additions or corrections will be added via memorandum and/or supplements and filed with the original DDP.

300.08 References

300.08(1) Federal/State Laws and Codes

23 Code of Federal Regulations (CFR) 635.111, Tied bids

Revised Code of Washington (RCW) 47.28.030, Contracts – State forces – Monetary limits – Small businesses, minority, and women contractors – Rules

RCW 47.28.035, Cost of project, defined

"Washington Federal-Aid Stewardship Agreement," https://wsdot.wa.gov/sites/default/files/2021-10/ENV-NSEPA_2015StewardshipAgree.pdf

300.08(2) Design Guidance

WSDOT Directional Documents Index, including the one listed below:

• Executive Order E 1010, "Certification of Documents by Licensed Professionals," WSDOT

WSDOT technical manuals, including those listed below:

- www.wsdot.wa.gov/publications/manuals/index.htm
- Advertisement and Award Manual, M 27-02, WSDOT
- Cost Estimating Manual for WSDOT Projects, M 3034, WSDOT
- Design Manual, M 22-01, WSDOT
- Emergency Relief Procedures Manual, M 3014, WSDOT
- Environmental Manual, M 31-11, WSDOT
- Hydraulics Manual, M 23-03, WSDOT
- Highway Runoff Manual, M 31-16, WSDOT
- Local Agency Guidelines (LAG), M 36-63, WSDOT
- Plans Preparation Manual, M 22-31, WSDOT
- Roadside Manual, M 25-30, WSDOT
- Roadside Policy Manual, M 3110, WSDOT
- Temporary Erosion and Sediment Control Manual, M 3109, WSDOT
- Traffic Manual, M 51-02, WSDOT
- Limited Access and Managed Access Master Plan, WSDOT

https://wsdot.wa.gov/business-wsdot/highway-access-requests-training

Program Management Manual, M 3005, WSDOT

wwwi.wsdot.wa.gov/publications/manuals/fulltext/M3005/PMM.pdf

Washington State Multimodal Planning, WSDOT

www.wsdot.wa.gov/planning/

300.08(3) Supporting Information

A Policy on Geometric Design of Highways and Streets (Green Book), AASHTO, 2018

Mitigation Strategies for Design Exceptions, FHWA, July 2007. This publication provides detailed information on design exceptions and mitigating the potential adverse impacts to highway safety and traffic operations.

Exhibit 300-1 Design Documentation Package

		Design-bid-build			Desigr	Design-Build	
DDP Section	Document	DA	PDA	Combined DA/PDA	CDA	PDA	
1	Introductory D	Introductory Documents					
1.1	Table of Contents	R	U	R	R	R	
1.2	Memorandum	R	U	R	R	R	
1.3	Vicinity Map	R	U	R	R	R	
2	Project Summary I	Docume	ents **				
2.1	Project Definition or Project Profile			R	R	U	
2.2	Environmental Review Summary	R	U				
2.3	Basis of Design (BOD)						
2.4	Complete Streets						
3	Core Documents						
3.1	Design Parameters Sheets	R	U	R	R	U	
3.2	Safety Analysis	R	U	R	R	U	
3.3	Design Analysis	R*	R	R	R*	R	
3.4	Maximum Extent Feasible	R*	R	R	R*	R	
3.5	 Plans for Approval Intersection/Channelization Plans Interchange Plans 	С	R	R	С	R	
3.6	Alignment Plans and Profiles	С	N/A	N/A	С	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	N/A	R	
5	Supporting Documents	As Needed See DDP Checklist					
6	Other Approvals and Justifications						
7	Other Items as Deemed Necessary						

* If known at this stage in the design process

** See Section 300.04(3) for non-WSDOT funded projects

- C = Conceptual
- R = Required
- U = Required if Updated after Design Approval

N/A = Not Applicable

Exhibit 300-2 Approval Authorities

Project Type	BOD Approval	Design Analysis Approval [1]	Design Approval <u>,</u> <u>Conceptual Design</u> <u>Approval,</u> and Project Development Approval
Project of Division Interest (PoDI)	[2]	[2]	[2]
Interstate			
Non-Preservation Projects	HQ Design	HQ Design	HQ Design
Preservation Projects	HQ Design	HQ Design	Region
National Highway System (NHS)			
Projects on all limited access highways, or on managed access highways outside of incorporated cities and towns	Region ‡	HQ Design	Region
Projects on managed access highways within incorporated cities and towns: Inside curb or EPS [4] [7]	Region ‡	HQ Design	Region
Projects on managed access highways within incorporated cities and towns outside curb or EPS [7]	City/Town	HQ LP	City/Town
Non-National Highway System (Non-NHS)			
Improvement projects on all limited access highways, or on managed access highways outside of incorporated cities and towns	Region ‡	HQ Design	Region
Improvement projects on managed access highways within incorporated cities and towns [5]: Inside curb or EPS [5] [7]	Region ‡	HQ Design	Region
Improvement projects on managed access highways within incorporated cities and towns [5] outside curb or EPS [7]	City/Town	HQ LP	City/Town
Preservation projects on limited access highway, or on managed access highways outside of incorporated cities and towns, or within unincorporated cities and towns [6]	Region	Region	Region
Preservation projects on managed access highways within incorporated cities and towns [6]: Inside curb or EPS [4] [7]	Region	Region	Region
Preservation projects on managed access highways within incorporated cities and towns [6] outside curb or EPS [7]	City/Town	HQ LP	City/Town

‡ HQ Design concurrence required

HQ = WSDOT Headquarters

HQ LP = WSDOT Headquarters Local Programs Office

EPS = Edge of paved shoulder where curbs do not exist NHS = National Highway System

For a list of NHS Routes, see: www.wsdot.wa.gov/mapsdata/travel/hpms/NHSRoutes.htm

Notes:

- [1] See Section 300.03(2)(a) for additional details. Note that if a dimension or design element meets current AASHTO guidance adopted by FHWA, but is outside the corresponding Design Manual criteria, the Design Analysis approval authority is the Region.
- [2] Projects of Division Interest (PoDI) must receive FHWA approvals per the PoDI Agreement regardless of funding source or project type.
- [3] <u>ASDE will notify FHWA.</u> See Section 300.05(2) for FHWA involvement with Design Analysis.
- [4] Raised medians, splitter islands, and central islands are also City jurisdiction. See Exhibit 100-1.
- [5] Refer to RCW 47.24.020 for more specific information about jurisdiction and responsibilities that can affect approvals.
- [6] For Bridge Replacement projects in the Preservation program, follow the approval level specified for Improvement projects.
- [7] <u>See Section 300.04.</u>

Exhibit 300-3 Approvals

Item	Approval Authority			
	Region	HQ	FHWA	
Program Management				
Project Profile		X [10]		
Work Order Authorization		Х	X [1]	
Public Hearings				
Corridor Hearing Summary		X [2]		
Design Hearing Summary		X [3]	X [8]	
Limited Access Hearing		X [4]		
Access Control				
Limited Access Break: Interstate		[7]	Х	
Limited Access Break: non-Interstate		Х		
Environmental Document				
Environmental Review Summary	Х			
NEPA – Environmental Impact Statement (EIS)		[7]	Х	
NEPA – Categorical Exclusion (CE)	Х			
NEPA – Environmental Assessment (EA)		[7]	Х	
SEPA – Categorical Exemption (CE)	Х			
SEPA – Environmental Checklist & Determination of Non-Significance (DNS)	Х			
SEPA – Environmental Impact Statement (EIS)		Х		
Design		•	•	
Access Revision Report: Interstate		[7]	Х	
Access Revision Report: Non-Interstate		<u>X</u>		
Basis of Design (BOD)	[9]	[9]	[9]	
Design Analysis	[9]	[9]	[9]	
Design Approval	[9]	[9]	[9]	
Experimental Features		Х	Х	
Geotechnical Report		X [<u>25]</u>		
Grading Plans	Х			
Hydraulic Report	X [15]	[15]		
Irrigation Plans	X [16]	X[16]		
Materials/Pavement Design Report	Х	Х		
Materials Source Report		X [12]		
Maximum Extent Feasible	Х	X[<u>20]</u>		
Monumentation Map	Х			
Pavement Design Report		X [26]		
Proprietary Items	X [27]			
Project Development Approval	[9]	[9]	[9]	
Public Art Plan – Interstate	X [17]	X [17]	X [17]	
Public Art Plan – All other highways	X [<u>18]</u>	X [<u>18</u>]		
Roadside Restoration and Wetland Mitigation Planting Plans	X [16]	X [16]		
Resource Conservation Areas	X [16]	X [16]	Х	
Rest Area Plans		<u> </u>		
Resurfacing Report		X [<u>26]</u>		
Right of Way Plans	[11]	<u>X</u>		

ltom	Approval Authority		
Item	Region	HQ	FHWA
PS&E Process Approvals			
Agreements (e.g., railroad, construction, turnback, etc.)	Х	X [<u>24]</u>	
DBE/Training Goals		X [<u>28]</u>	
Contract Time-Related Liquidated Damages		X [5]	
Incentive Provisions		X [5]	
Interim liquidated damages		X [6]	
Lump Sum Traffic Control	Х		
Mandatory Material Sources and/or Waste Sites	Х		
Nonstandard Bid Item Use		X [5]	
Right Of Way Certification	Х	X [<u>23</u>]	
Special Provisions		X [5]	
State Force Work	X [<u>28]</u>		
State-Furnished Materials	X [<u>28]</u>		
Tied Bids	X [14]		
Ultimate Reclamation Plan Approval Through DNR	X		
Work Performed for Public or Private Entities	X [29]		
Structures	<u> </u>		1
Bridge Design Plans (Bridge Layout)	Х	Х	
Preliminary Bridge Plans for Unusual/Complex Bridges on the Interstate		[7]	Х
Structures Requiring Type Size and Location		Х	
Traffic			1
Continuous Illumination – Mainline	X [21]	X [19]	
Crash Analysis Report	X [<u>21</u>]	X	
High Mast Illumination		X [19]	
Illumination Plans	X [<u>21]</u>		
Intelligent Transportation System (ITS) Plans	X [<u>21]</u>		
Interchange Plan for Approval	X		
Intersection Control Evaluation	X [21]	X [19]	
Intersection or Channelization Plans	X		
ITS Systems Engineering Analysis Worksheet	X [21]		
Preliminary Signalization Plans	<u> </u>	X [19]	
Safety Analysis		<u> </u>	
Signal Permits			
Signalization Plans			
Traffic Analysis	X [<u>21]</u> X		
Tunnel Illumination		X [19]	
Work Zone Transportation Management Plan/Traffic Control Plan	X [<u>21]</u>		

Notes:

- [1] Federal-aid projects
- [2] Assistant Secretary Regions and Mega Programs
- [3] State Design Engineer
- [4] Right of Way Plans Manager
- [5] HQ Construction

- [6] Transportation Data, GIS & Modeling Office
- [7] Final review & concurrence required at HQ prior to submittal to approving authority.
- [8] On Interstate projects, the State Design Engineer submits the approved design hearing summary to the FHWA for federal approval.
- [9] See Exhibit 300-2
- [10] HQ Capital Program Development and Management (CPDM)
- [11] Certified by a professional licensee
- [12] HQ Materials Lab
- [13] Regional Administrator
- [14] Per 23 CFR 635.111
- [15] See the Hydraulics Manual for approvals levels.
- [16] Region Landscape Architect. If the region has no Landscape Architect, approval from HQ is required.
- [17] See Section 950.07(2)(a)
- [18] See Section 950.07(2)(b)
- [19] State Transportation Operations Engineer
- [20] ASDE with <u>OECR</u> ADA Coordinator concurrence
- [21] Region Traffic Engineer
- [22] See Plans Preparation Manual Section 400.02(2) 6.
- [23] HQ Real Estate Services
- [24] See Agreements Manual
- [25] State Geotechnical Office
- [26] State Pavement Office
- [27] See Plans Preparation Manual Section 700.01(6)
- [28] See Plans Preparation Manual Section 700.09(10)
- [29] See Plans Preparation Manual Section 400.02(1) 15.

Exhibit 300-4 Local Agency and Development Services Approving Authority

Project Type	Basis of Design (BOD/SOD) Approval	Design Analysis Approval [1]	Design Approval and Project Development Approval		
Interstate					
All projects	HQ Design	HQ Design [2]	HQ Design		
Highways (NHS) & (Non-NHS)					
Projects on limited access highways	HQ Design	HQ Design	Region*		
Projects on managed access highways	Region*	HQ Design	Region*		

*The Approving Authority may be the Local Programs Engineer or Project Development Engineer as determined by the Region.

- [1] See Section 300.03(2)(a).
- [2] ASDE will notify FHWA. See Section 300.05(2) for FHWA involvement with Design Analyses.

Exhibit 300-5 Design to Construction Transition Project Turnover Checklist Example

This checklist is recommended for use when coordinating project transition from design to construction.

- 1. Survey
 - □ End areas (cut & fill)
 - □ Staking data
 - □ Horizontal/Vertical control
 - Monumentation/Control information
- 2. Design Backup
 - □ Index for all backup material
 - Backup calculations for quantities
 - Geotech shrink/swell assumptions
 - Basis of Design, Design decisions and constraints
 - □ Approved Design Analyses
 - □ Hydraulics/Drainage information
 - □ Clarify work zone traffic control/workforce estimates
 - Geotechnical information (report)
 - Deckage of as-builts used (which were verified) and right of way files
 - Detailed assumptions for construction CPM schedule (working days)
 - **Graphics and design visualization information (aerials)**
 - **D** Specific work item information for inspectors (details not covered in plans)
 - Traffic counts
 - Management of utility relocation
- 3. Concise Electronic Information with Indices
 - Detailed survey information (see Survey above)
 - □ Archived InRoads data
 - Only one set of electronic information
 - □ "Storybook" on electronic files (what's what)
 - CADD files
- 4. Agreements, Commitments, and Issues
 - Agreements and commitments by WSDOT
 - □ RES commitments
 - □ Summary of environmental permit conditions/commitments
 - Other permit conditions/commitments
 - Internal contact list
 - Construction permits
 - □ Utility status/contact
 - Identification of the work elements included in the Turnback Agreement (<u>DOT Form 224-241 & DOT</u> Form 224-240 and highlighted plan sheets <u>showing turnbacks</u>)
- 5. Construction Support
 - □ Assign a Design Technical Advisor (Design Lead) for construction support
 - An expanded version of this checklist is available at: Design guidance & support | WSDOT (wa.gov)