

# Design Documentation

## Course Introduction

Jim Mahugh, ASDE  
Joanna Lowrey, ASDE  
May 2023

Roger Millar, Secretary of Transportation  
Amy Scarton, Deputy Secretary of Transportation

# Safety Briefing



## In Person

- Who is first aid trained?
- Who will call 911?
- Who will get the defibrillator?
- Who will call the safety officer?
- Address of this complex?

## Teleworking

- Do you have trip hazards?
- How do you exit your workplace?
- Can 911 see your house address?
- Where can you go in an earthquake?
- Do your smoke detectors work?
- Do your CO2 detectors work?
- Do you have a first aid kit?

# Logistics



Bathrooms

Breaks



Teleworking



Cell Phones



# Introductions

- Region
- Years of Service



## Participate

- Get OUT what you put IN
- Ask Questions

# Attendee Background

- Mentimeter: Go to [menti.com](https://menti.com) and type the code 20 92 455
- Mentimeter QR Code:

Update one day prior to class



# Course Outline

This training will cover:

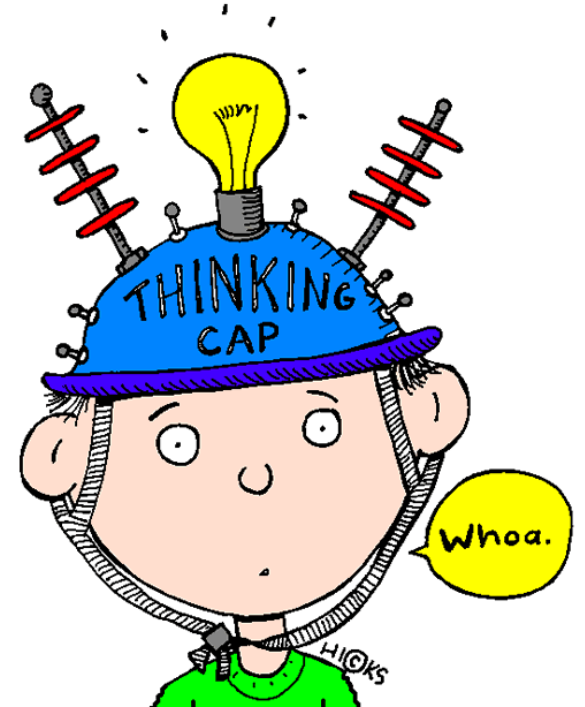
- Design Approval (DA)
- Project Development Approval (PDA)
- Design Documentation Package (DDP)
- Project File (PF)
- Process Review

# Class Goals and Objectives

After taking this course, you should understand:

- Why we document
- Terminology associated with design documentation
- Design Approval documentation
- Project Development Approval documentation
- Contents of a Design Documentation Package

You will also be provided with contact information and exam



# Why Do We Document?

- Mitigate Liability Risk
  - It is easier to defend a well documented decision than a good decision without documentation
- Tort cases are a civil case for any wrongful act, damage, or injury done willfully, negligently, or in circumstances involving strict liability (can't be breach of contract)
  - Washington State is a Joint and Several state
  - Washington State has no cap on the value of liability damages in a civil lawsuit



# Why Set Standards for Documentation?

- Demonstrate practical & logical decision making
- Consistency
  - Inconsistency can quickly establish a breach
  - If a particular document (decision process) is missing then there is a gap in telling our design story
  - Saves time and money in research preparation for a defense team
- FHWA Stewardship and Oversight (S&O) Agreement
  - WSDOT must follow the S&O to receive federal funds
  - Contains documents needed for a FHWA Audit

# Why Set Expectations for Documentation?

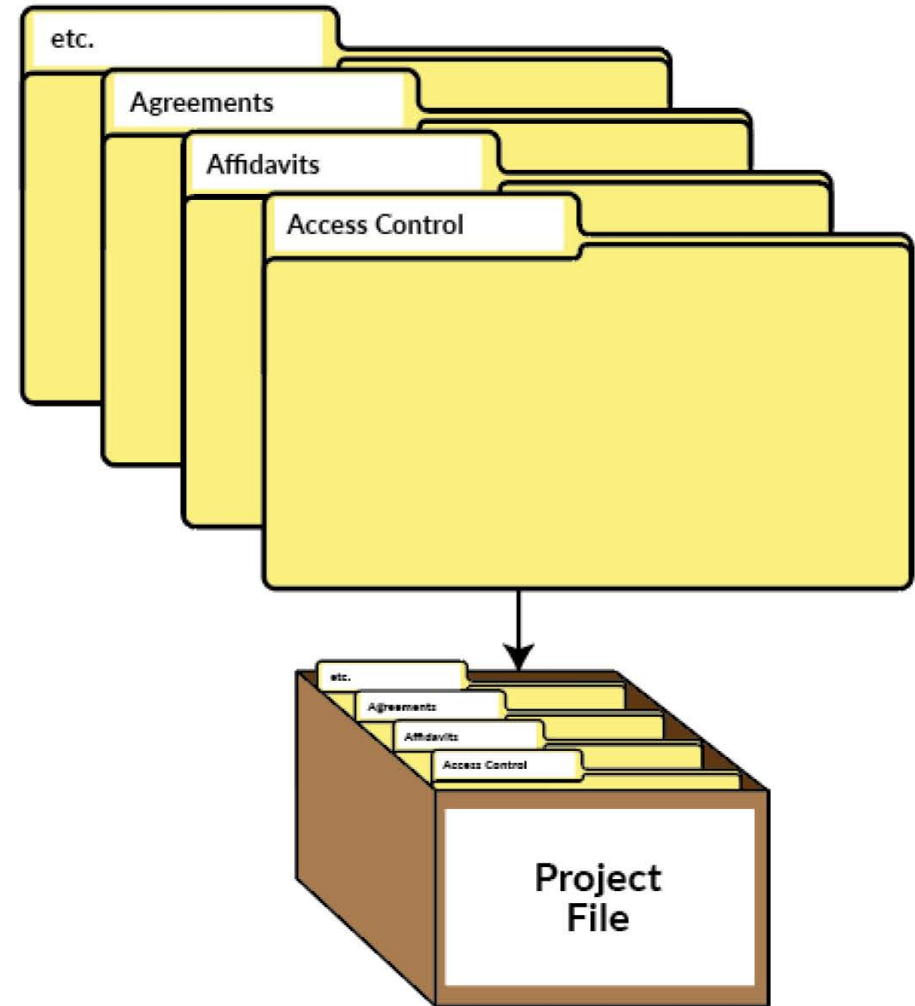
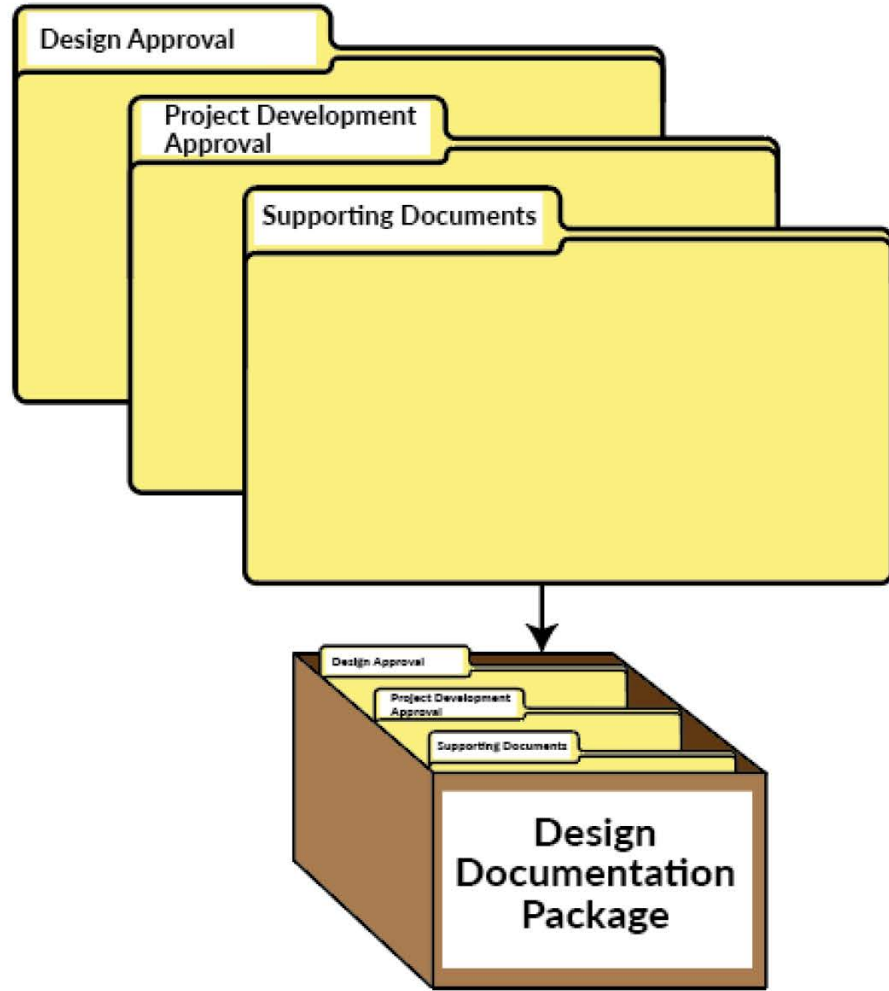
Most Importantly it captures:

What you did and  
why you did it?

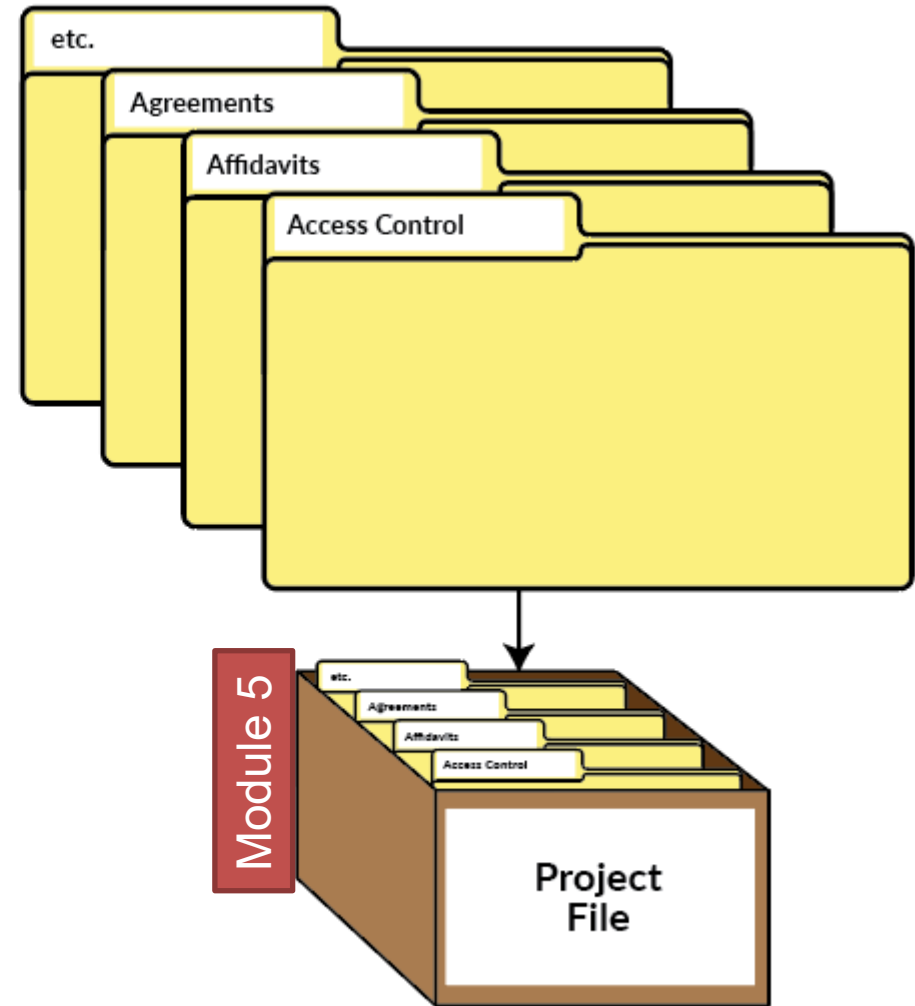
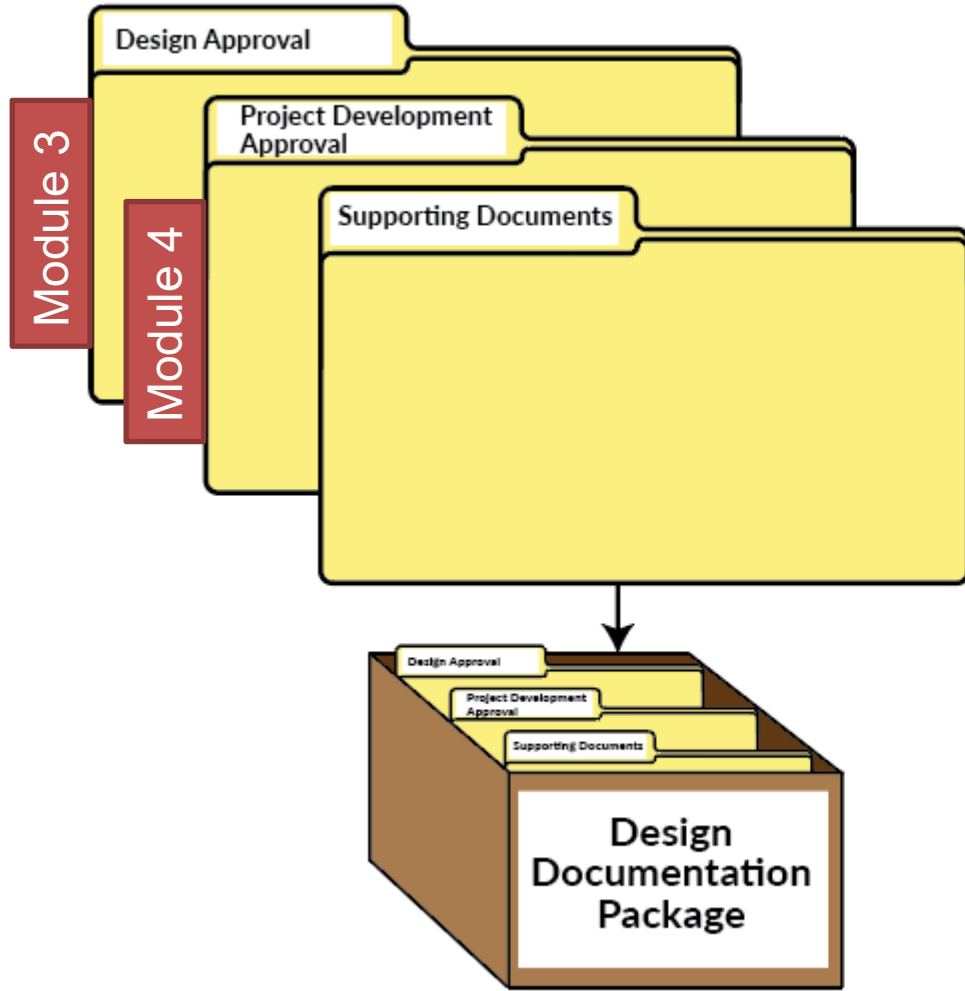
# **Design Documentation**

## **Design Documentation Package**

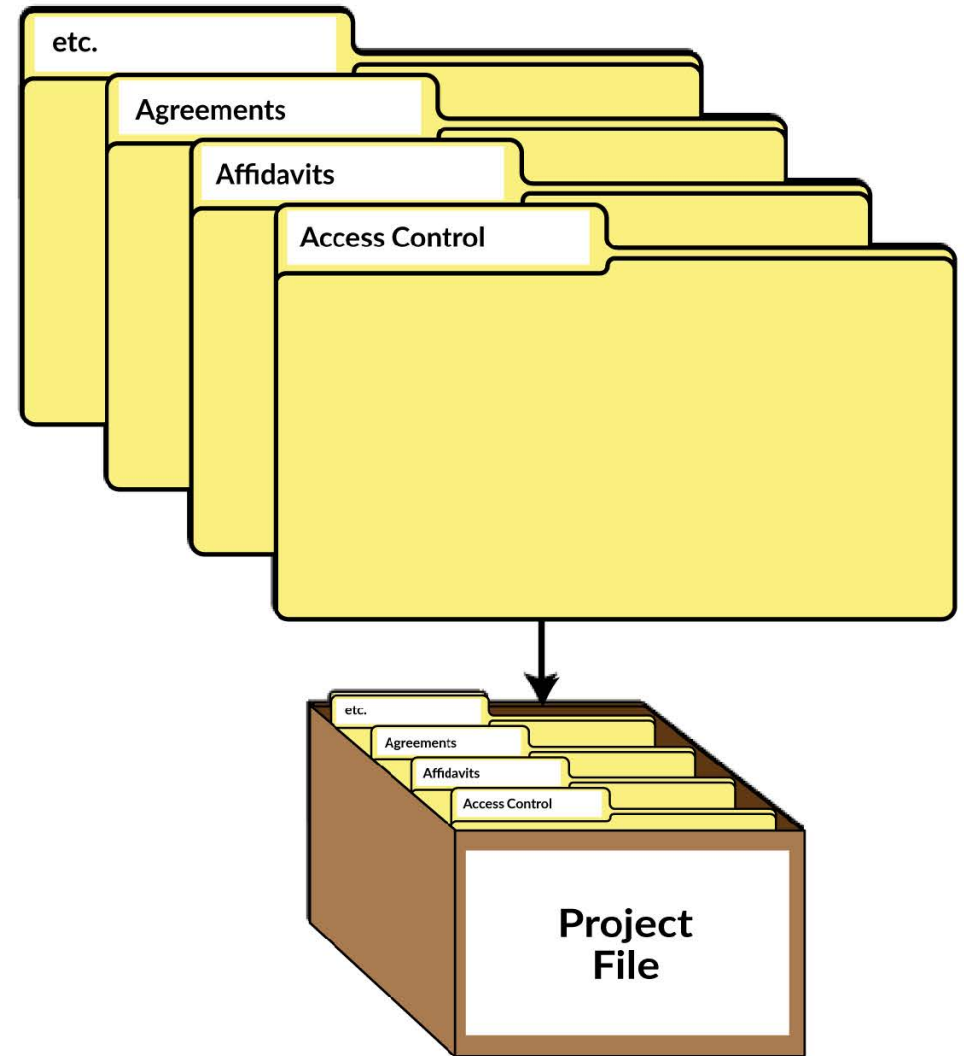
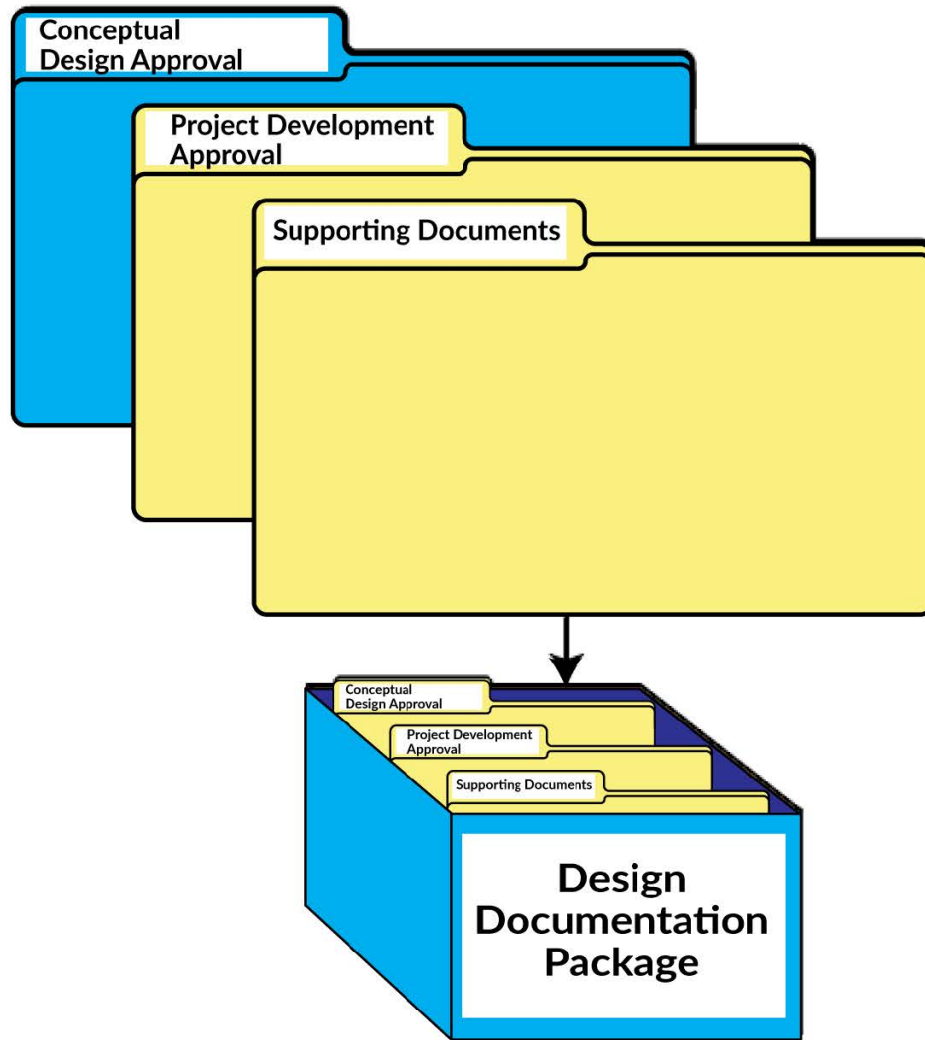
# Design Documentation – Design-Bid-Build



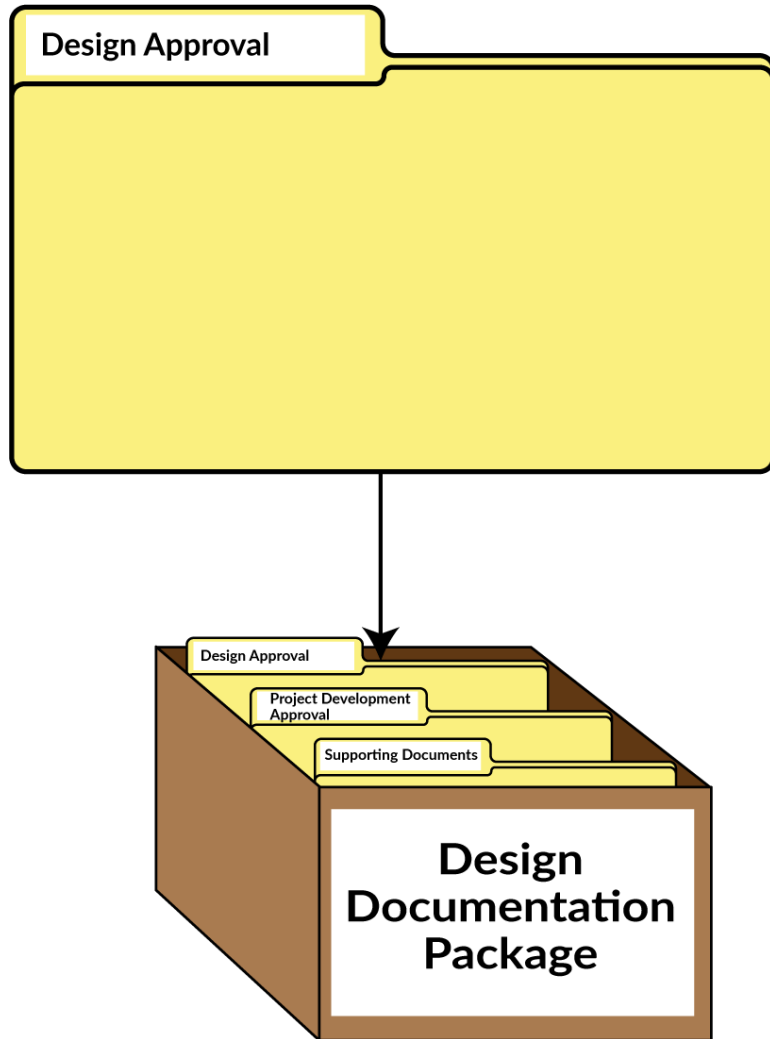
# Design Documentation – Design-Bid-Build



# Design Documentation – Design-Build

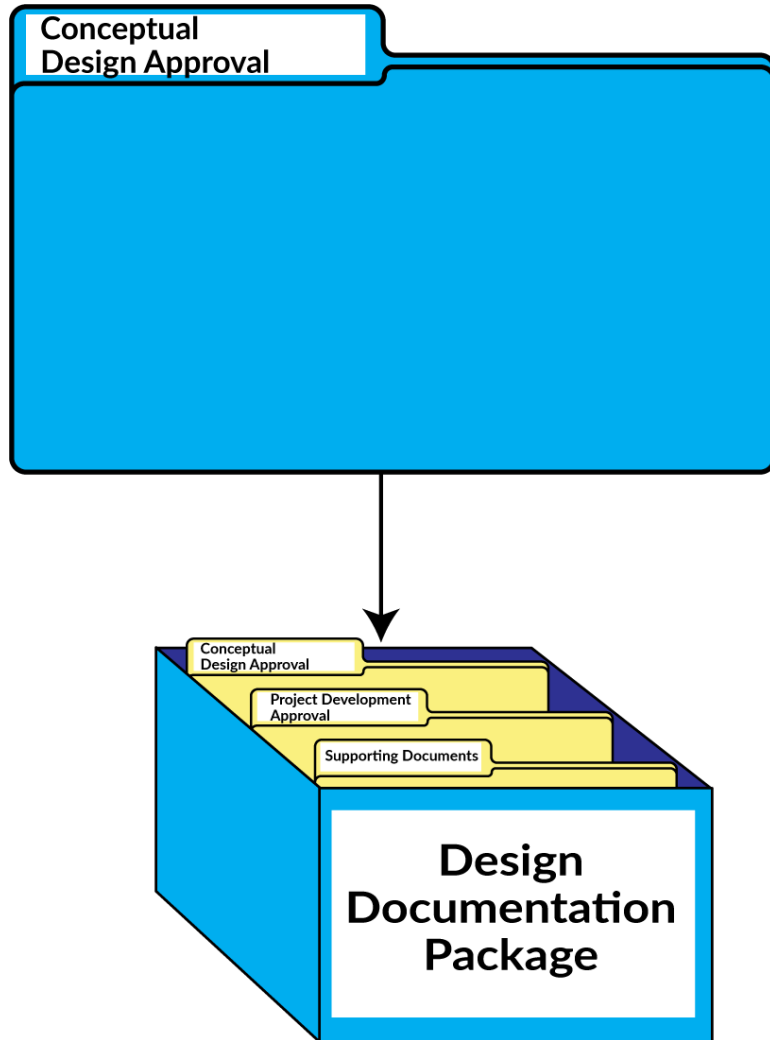


# Design Documentation – Design-Bid-Build



- Done on large or complex projects
- Required for right of way acquisition to begin
- Does not contain environmental approval
- Sets design policy for three years
- Completed around 30% design

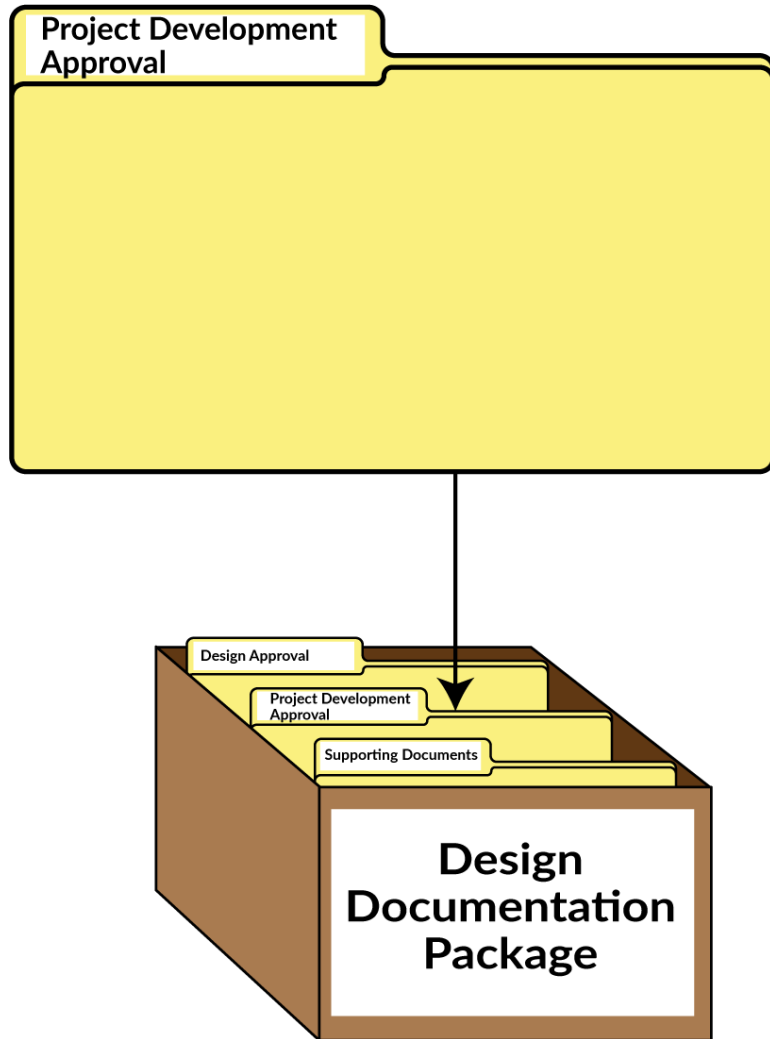
# Design Documentation – Design-Build



- Completed prior to RFQ
- Sets design policy for the duration of the design-build contract
- Do not need NEPA
  - Need two Notice to Proceeds
    - One for the completion of Preliminary Design
    - One for the beginning of Final Design and Construction
- Compiled by WSDOT staff

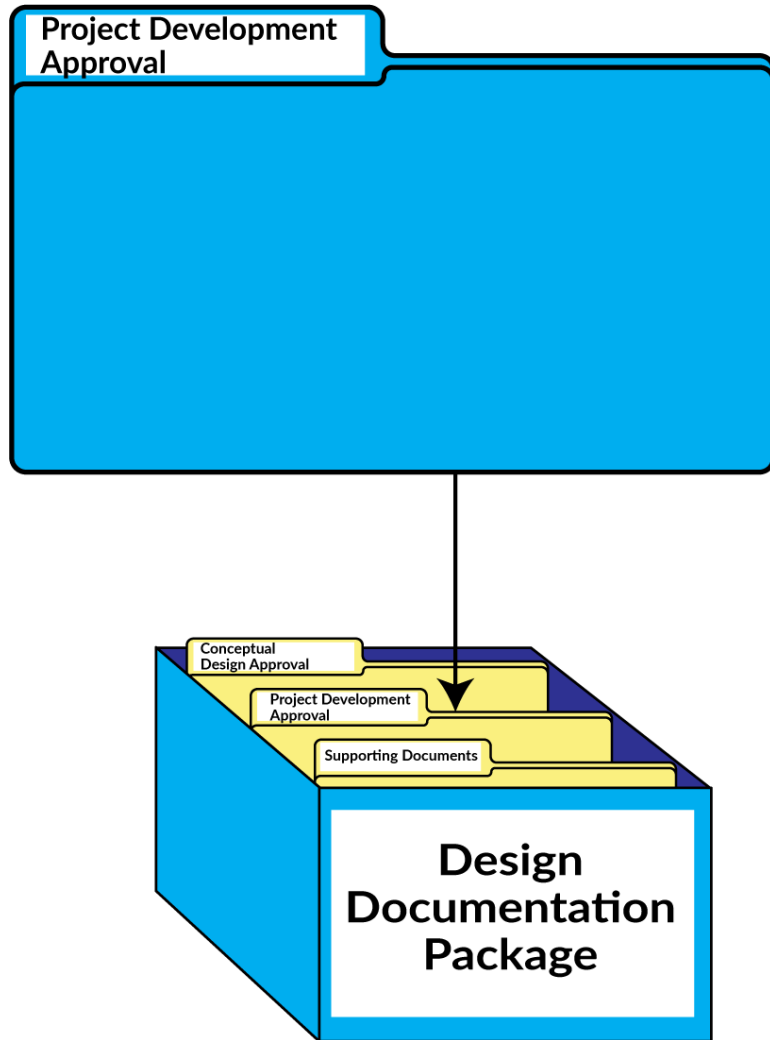


# Design Documentation – Design-Bid-Build



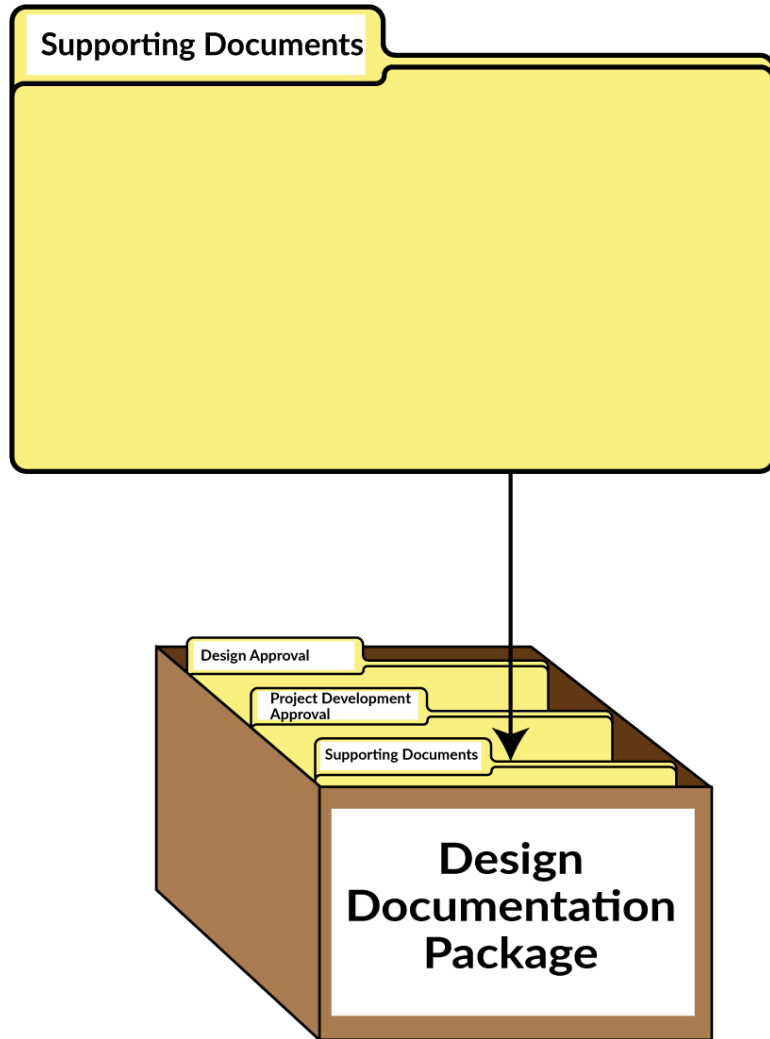
- Contains environmental approval
- Contains all documents changed or added after Design Approval
- Completed around 90% design
- Required prior to advertisement

# Design Documentation – Design-Build



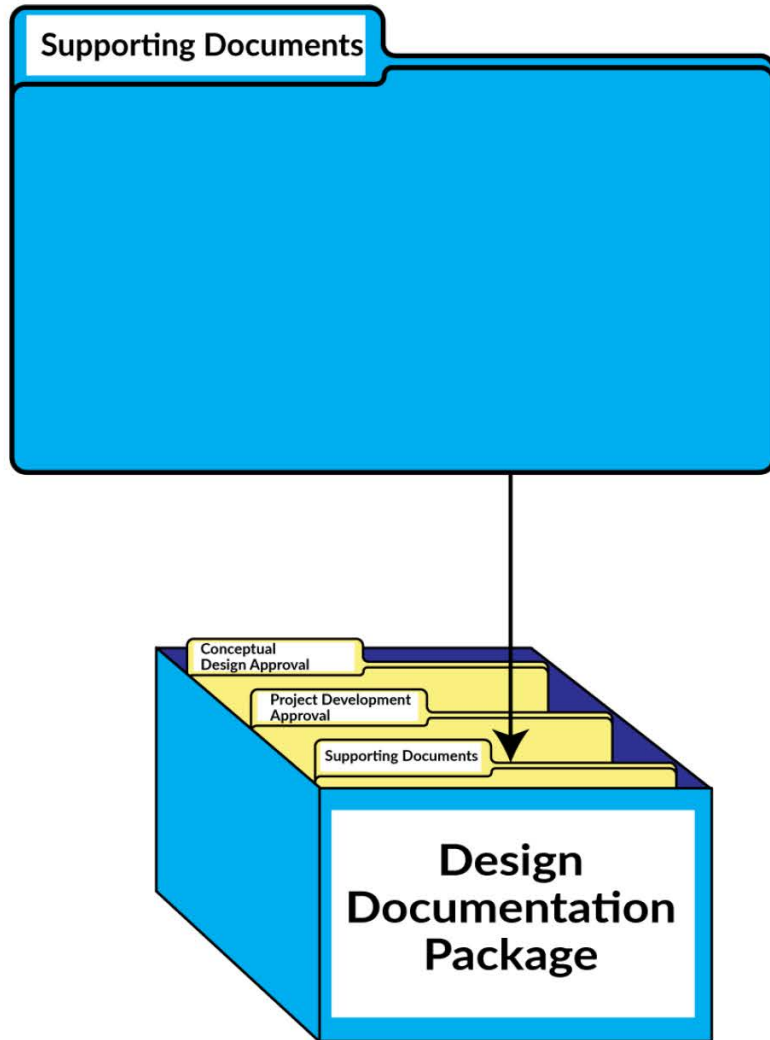
- Completed by the design builder
- Contents the same as design bid build and detailed in the RFP
- Completed prior to project completion

# Supporting Documents – Design-Bid-Build



- Documents can be completed during Design Approval or Project Development Approval
- Only final documents

# Supporting Documents – Design-Build



- Documents can be completed during Design Approval or Project Development Approval
- Only final documents
- If document is completed for Design Approval and then changed for Project Development Approval, there will be two final documents

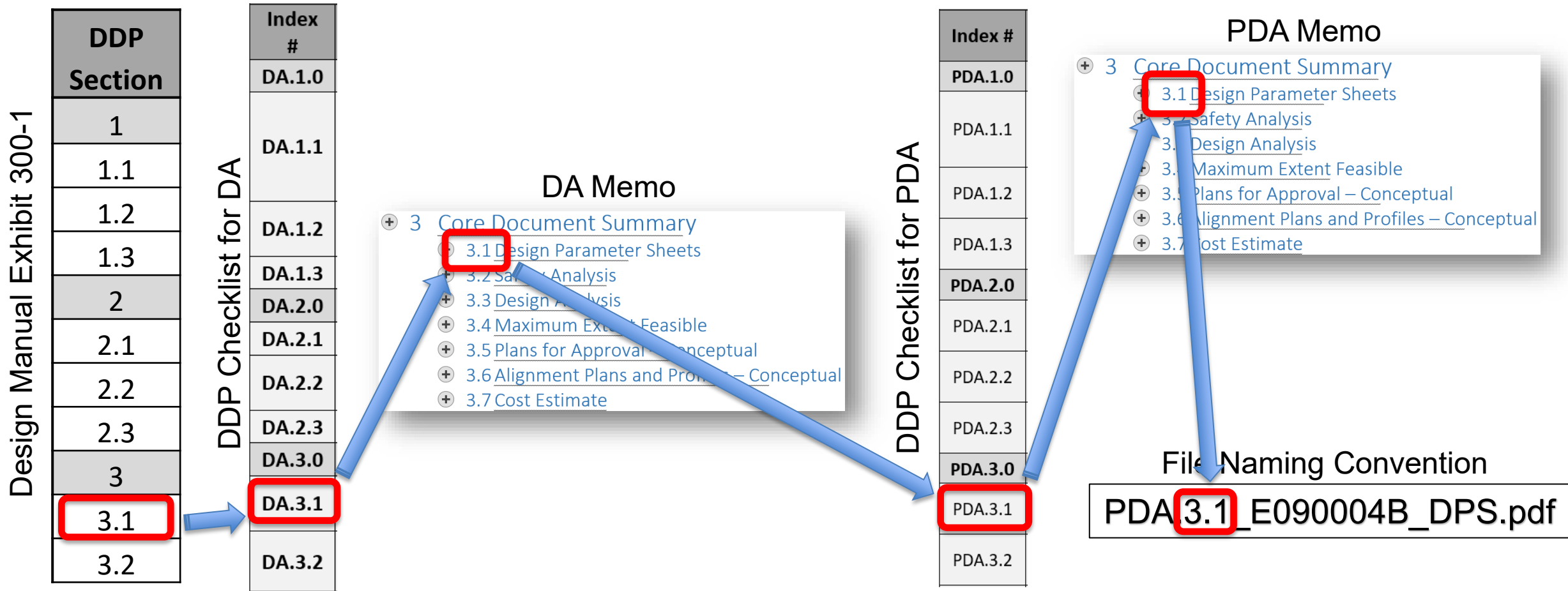
# DDP Organization

## Design Manual Exhibit 300-1

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Definition or Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
3	Core Documents					
3.1	Design Parameters Sheets	R	U	R	R	U
3.2	Safety Analysis	R	U	R	R	U

# DDP Organization

Organization carries through the entire DDP process



# Approval Authorities

## Design Manual Exhibit 300-2

Valid for 3-Years

Project Type	BOD Approval	Design Analysis Approval [1]	Design Approval and Project Development Approval
Project of Division Interest (PoDI)	[2]	[2]	[2]
<b>Interstate</b>			
All Projects	HQ Design	FHWA [3] HQ Design	HQ Design
Preservation Projects	HQ Design	FHWA [3] HQ Design	Region
<b>National Highway System (NHS)</b>			
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]	Region ‡	HQ Design	Region
<u>Projects on managed access highways within incorporated cities and towns outside curb or EPS</u>	<u>City/Town</u>	<u>HQ LP</u>	<u>City/Town</u>

# Approval Authorities

## Design Manual Exhibit 300-3

Item	Approval Authority		
	Region	HQ	FHWA
<b>Program Management</b> ←			
Project Profile		X [10]	
Work Order Authorization		X	X [1]
<b>Public Hearings</b> ←			
Corridor Hearing Summary		X [2]	
Design Hearing Summary		X [3]	X [8]
Limited Access Hearing		X [4]	
<b>Access Control</b> ←			
Limited Access Break: Interstate		[7]	X
Limited Access Break: non-Interstate		X	
<b>Environmental Document</b> ←			
Environmental Review Summary	X		
NEPA – Environmental Impact Statement (EIS)		[7]	X
NEPA – Categorical Exclusion (CE)	X		
NEPA – Environmental Assessment (EA)		[7]	X



## Definitions

**MINIMUM:** The least dimension allowed

**MAXIMUM:** The greatest dimension allowed

**DESIGN UP:** Start with lowest dimension first

**DESIRABLE:** Try to achieve this level

# Design Manual

M 22-01.21

September 2022

[Division 1](#) – General Information

[Division 2](#) – Hearings, Environmental, and Permits

[Division 3](#) – Project Documentation

[Division 4](#) – Surveying

[Division 5](#) – Right of Way and Access Control

[Division 6](#) – Soils and Paving

[Division 7](#) – Structures

[Division 8](#) – Hydraulics

[Division 9](#) – Roadside Development

[Division 10](#) – Traffic Safety Elements

[Division 11](#) – Practical Design

[Division 12](#) – Geometrics

[Division 13](#) – Intersections and Interchanges

[Division 14](#) – HOV and Transit

[Division 15](#) – Pedestrian and Bicycle Facilities

[Division 16](#) – Roadside Safety Elements

[Division 17](#) – Roadside Facilities

Engineering and Regional Operations  
Development Division, Design Office

# Levels of Documentation

**CONSIDER:** To think carefully about, especially in order to make a decision.

Engineer of Record determines HOW or IF it is documented

**DOCUMENT** (verb): Including a short note to the DDP that explains a decision.

Engineer of Record determines HOW it is documented

**JUSTIFY:** Preparing a memo to the DDP identifying the reasons for the decision.

A Design Decision is written. Use the Design Analysis Template.

Design Decisions follow the same process as a Design Analysis but are only approved by the Engineer of Record.

# Changes to Approved Documents

- Errata
  - Typo or error corrections
  - Cannot change conclusion
- Supplement
  - Additional information
- Amend
  - Changes marked on original
  - Limited in scale
- Supersede
  - Original document is replaced

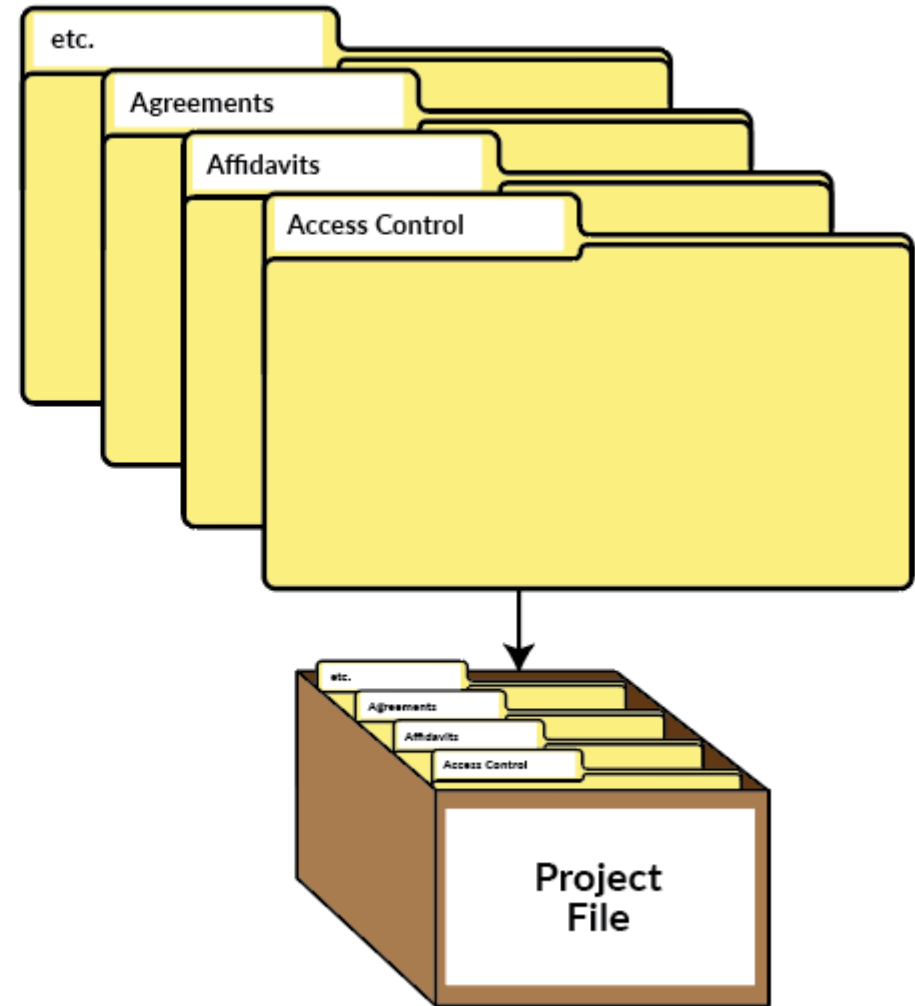
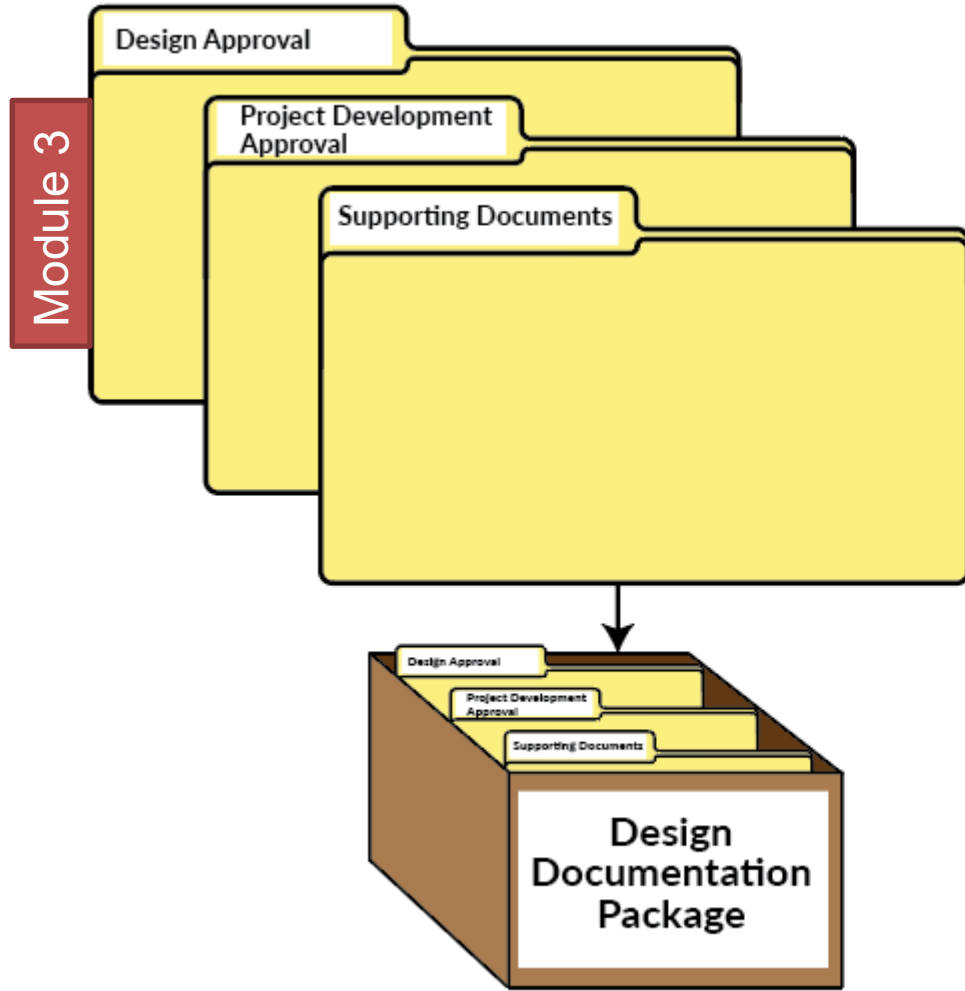
Re-approval  
not required

Same  
approval  
required as  
original  
document

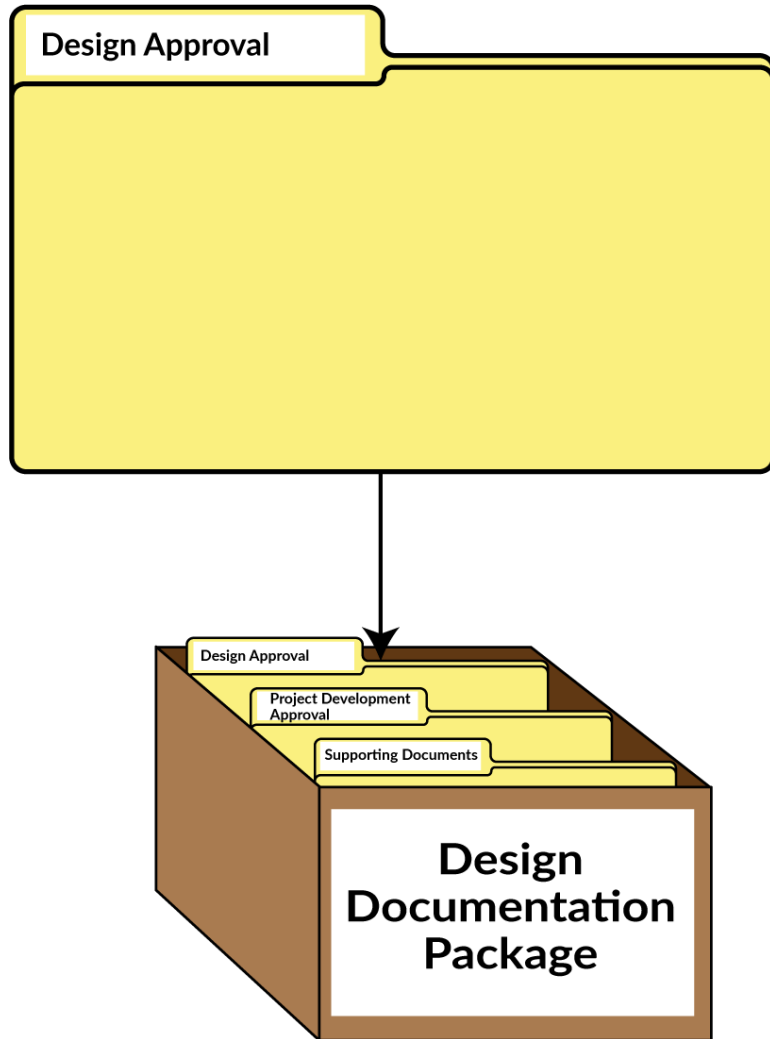
# **Design Documentation**

## **Design Approval**

# Design Documentation



# Design Approval Section



## Design Approval Sections:

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

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	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 Documents **						
2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	C	R	R	C	R	
	· Intersection/Channelization Plans						
	· Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	R	N/A	

# DA.1: Introductory Documents

DDP Section	Item Abbr.	Document	Design-Bid-Build			Design-Build	
			DA	PDA	Combined DA/PDA	CDA	PDA
1	Introductory Documents						
1.1	TOC	Table of Contents	R	U	R	R	R
1.2	Memo	Memorandum	R	U	R	R	R
1.3	VM	Vicinity Map	R	U	R	R	R

Introductory Documents are the same for DBB and DB



# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A

# DA.1.1\_TOC: Table of Contents

## Table of Content = DDP Checklist

Checklist available on [ASDE Design Support Website](#)

Design-Bid-Build checklist

For design-bid-build projects, use the [Design-Bid-Build Design Documentation Package checklist \(DDP\) \(DOCX 27KB\)](#) to determine the contents of the DDP.

For design-build projects, use the [Design-Build Design Documentation Package checklist \(DB-DDP\) \(DOCX 55KB\)](#). The content of the DDP is fixed for every project and retained for 75 years.

Design-Build checklist

# DA.1.1\_TOC: Table of Contents

- Read the Instructions Page
- Check the Version #.#  $\longrightarrow$  *DDP Checklist Version 1.4 – October 2022*
- Instructions Page is deleted
- **Red Text** is deleted
- On DDB project use the DA, PDA, or Combined DA/PDA page

# DA.1.1\_TOC: Example

[Insert Project Name]

COMBINED DA/PDA				
Index #	Item Abbr.	Description	Required?	Comments
<b>PDA.1.0</b>		<b>Introductory Documents</b>		
PDA.1.1	<b>TOC</b>	<b>Table of Contents</b>	Required	<i>Print this checklist with the "In DA?" column complete and "Notes" included as appropriate. Include this checklist as the Table of Contents.</i>
PDA.1.2	<b>Memo</b>	<b>Memorandum</b>	Required	<i>See the Memorandum Templates on the <a href="#">Design Support website</a>.</i>
PDA.1.3	<b>VM</b>	<b>Vicinity Map</b>	Required	
<b>PDA.2.0</b>		<b>Project Summary Documents</b>		
PDA.2.1	<b>PP</b>	<b>Project Profile</b>	Required	
PDA.2.2	<b>ERS</b>	<b>Environmental Review Summary</b>	Required	
PDA.2.3	<b>BOD</b>	<b>Basis of Design</b>	Required	<i>If BOD exempt, include email from the appointing authority.</i>

# DA.1.1\_TOC: Example

XL 1234: SR 999 / Smith Creek Fish Passage

<b>COMBINED DA/PDA</b>				
<b>Index #</b>	<b>Item Abbr.</b>	<b>Description</b>	<b>Required?</b>	<b>Comments</b>
<b>PDA.1.0</b>		<b>Introductory Documents</b>		
PDA.1.1	<b>TOC</b>	<b>Table of Contents</b>	Required	Included
PDA.1.2	<b>Memo</b>	<b>Memorandum</b>	Required	Included
PDA.1.3	<b>VM</b>	<b>Vicinity Map</b>	Required	Included
<b>PDA.2.0</b>		<b>Project Summary Documents</b>		
PDA.2.1	<b>PP</b>	<b>Project Profile</b>	Required	Included
PDA.2.2	<b>ERS</b>	<b>Environmental Review Summary</b>	Required	Included
PDA.2.3	<b>BOD</b>	<b>Basis of Design</b>	Required	Project received a BOD exemption. Email approving the exemption is included.

# DA.1.1\_TOC: Example

Some items have “Choose an item.”

For example, the Combined PA/PDA has these are dropdowns. Select “Choose an item.” and pick the appropriate item.

PDA.3.0		Core Documents		
PDA.3.1	DPS	Design Parameter Sheets	Required	Included
PDA.3.2	SA	Safety Analysis	Required	Included
PDA.3.3	DA	Design Analysis	N/A	No design analysis on this project.
PDA.3.4	MEF	Maximum Extent Feasible	N/A	No MEFs required on this project.

# DA.1.1\_TOC: Example

What happens if you have three design analyses?

PDA.3.0		Core Documents		
PDA.3.1	<b>DPS</b>	<b>Design Parameter Sheets</b>	Required	Included
PDA.3.2	<b>SA</b>	<b>Safety Analysis</b>	Required	Included
PDA.3.3	<b>DA</b>	<b>Design Analysis</b>	Yes	There are three design analyses on this project.
	3.3.1	Design Analysis #1 Lane and Shoulder Width		
	3.3.2	Design Analysis #2 Off-Ramp Taper		
	3.3.3	Design Analysis #3 Superelevation		
PDA.3.4	<b>MEF</b>	<b>Maximum Extent Feasible</b>	N/A	No MEFs required on this project.

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



# DA.1.1\_Memo: Memorandum

Memorandum template available on [ASDE Design Support Website](#)

To complete the DDP checklist, you will need the following:

- [Design Approval and Project Development Approval memorandum \(DOCX 39KB\)](#) (for design-bid-build projects)
- [Conceptual Design Approval memorandum \(DOCX 37KB\)](#) (for design-build projects)
- [Design Clear Zone Inventory Form \(XLSX 21KB\)](#)
- [Design Parameters \(XLSX 33KB\)](#)
- [Design Analysis Template \(DOCX 31KB\)](#)
- [Plan for Approval Checklist \(DOCX 28KB\)](#)

Design-Bid-Build  
Memorandum

Design-Build  
Memorandum

The [Project File checklist \(PF\) \(DOCX 21KB\)](#) contains project documentation that is deemed necessary by the project engineer, but is not contained in the DDP. Project File items are retained for three years after the final contract voucher.

# DA.1.1\_Memo: Memorandum

- Check the Version ## on the cover page

**SIGNATURES**

Template  
Version 2.2

- **Red Text** is deleted
- Where it says “Choose an item.” select from the dropdown

Current Version  
is 2.2

Choose an item.

Choose an item.

DESIGN APPROVAL

PROJECT DEVELOPMENT APPROVAL

COMBINED DESIGN APPROVAL AND PROJECT DEVELOPMENT APPROVAL

# DA.1.1\_Memo: Memorandum

Memorandum is built using Microsoft Word outline

- ⊕ Choose an item. MEMORANDUM
- ⊕ Project Description
- ⊕ 1 Introductory Documents
- ⊕ 2 Project Summary Documents
- ⊕ 3 Core Document Summary
  - ⊕ 3.1 Design Parameter Sheets
  - ⊕ 3.2 Safety Analysis
  - ⊕ 3.3 Design Analysis
  - ⊕ 3.4 Maximum Extent Feasible
  - ⊕ 3.5 Plans for Approval – Conceptual
  - ⊕ 3.6 Alignment Plans and Profiles – Conceptual
  - ⊕ 3.7 Cost Estimate
- ⊕ 4 Environmental Documentation
- ⊕ 5 Supporting Documents Summary
- ⊕ 6 Other Approvals and Justifications
- ⊕ 7 Other Items

—

# DA.1.1\_Memo: Memorandum

Signatures are on the first page

For DB projects, there is no signature on the stamp

SIGNATURES		Template Version 1.2
ENGINEER OF RECORD	REGION APPROVAL	
<p>This document has been prepared under my direct supervision in accordance with RCW 18.43 and appropriate WSDOT manuals.</p> <p><i>PE stamp must be electronically signed using a digital representation of your handwritten signature per WAC 196-23. Include a date stamp with the electronic signature.</i></p>	<p>Apply electronic signature using Adobe or Bluebeam including name and date.</p> <p><i>[insert title]</i></p>	
<p>Name, Title, Company, &amp; Address:</p>	ASSISTANT STATE DESIGN ENGINEER APPROVAL	
	<p><i>Consult Design Manual Chapter 300. If ASDE approval is not required, simply type "Not Applicable per Design Manual Chapter 300." in this box.</i></p>	
	FHWA APPROVAL	
	<p><i>Consult Design Manual Chapter 300. If FHWA approval is not required, simply type "Not Applicable per Design Manual Chapter 300." in this box.</i></p>	

See Exhibit 300-2

# DA.1.1\_Memo: Memorandum

The memorandum template has extensive instructions on what is addressed in each section

## NOTE TO READERS

This Choose an item. consist of several documents that are individual files. The final versions of these individual files have been stored on the Region network drive at [\*\*\*insert file directory\*\*\*] and given a file name in accordance with Design Bulletin #2021-01. These files will be uploaded into the WSDOT Enterprise Content Management system and then deleted from the Region network drive.

This memorandum provides an executive summary of the entire Choose an item. as required by Design Manual Exhibit 300-1 and the Design Documentation Package (DDP) Checklist. The structure of this memorandum follows the structure of the DDP Checklist that was used for this project. The DDP Checklist can be found in the project documentation as file Choose an item.\_WIN#\_TOC.pdf. The items listed in the DDP Checklist were developed under my supervision or under the supervision of a licensed professional as required by Design Manual Chapter 300 and Executive Order 1010.

# DA.1.1\_Memo: Memorandum

The memorandum template has extensive instructions on what is addressed in each section

## 3 Core Document Summary

*The following sections and their numbering line up with the index numbering that you will use for the DA/PDA from Exhibit 300-1 of the Design Manual and the [DDP Checklist](#). Using this numbering system will make it easy to connect the highlights you are including in this DA/PDA memorandum with the detail that can be found later in the DA/PDA. If a particular section below is not applicable, write a statement on why it was not applicable rather than just stating not applicable.*

### 3.1 Design Parameter Sheets

*The [Design Parameters Sheets](#) compare a design element dimensions (e.g. Width Tangent Roadway) between Existing, Design Manual, and Proposed. Provide a high clip discussion of any design elements that were unique on how they were chosen. List the design elements that do not meet Design Manual Guidance and indicate that there is a Design Analysis for each of these elements in Section 3.3 of the DA/PDA.*

# DA.1.1\_Memo: Memorandum

If there is more than one item under a topic, add sub bullets

## 3.3 Design Analysis

*List all of the design analyses for the project. Provide a high clip summary of each. Indicate if the approval was FHWA, HQ Design, or Region.*

3.3.1 Design Analysis #1

3.3.2 Design Analysis #2

3.3.3 Design Analysis #3

# Design Approval

Vicinity Map covered in WSDOT EEDS Manual

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	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 Documents **						
2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	C	R	R	C	R	
	· Intersection/Channelization Plans						
	· Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	R	N/A	



# Design Approval

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	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 Documents **						
2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	C	R	R	C	R	
	· Intersection/Channelization Plans						
	· Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	R	N/A	

# DA.2: Project Summary Documents

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
2	Project Summary Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					

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

Introductory Documents are the same for DBB and DB

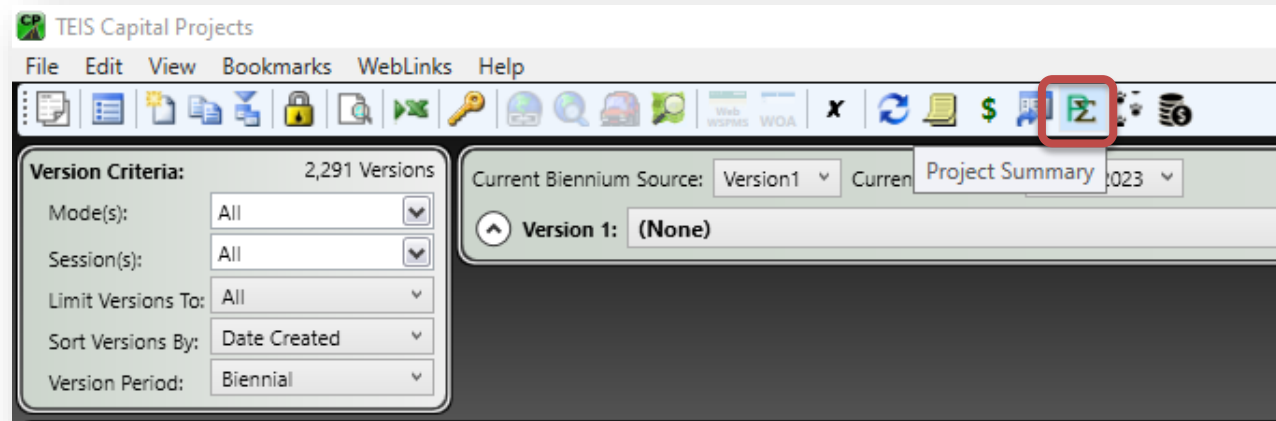
# DA.2.1: Project Profile

Get the Project Profile by selecting Project Summary



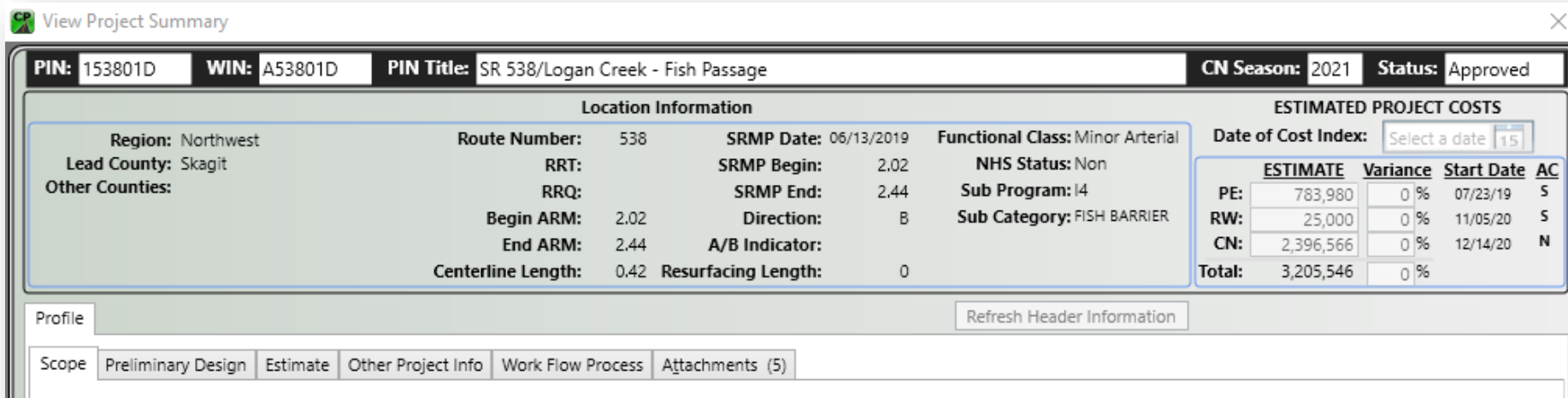
TEIS Capital Projects v4.0

App



TEIS is available to all WSDOT employees

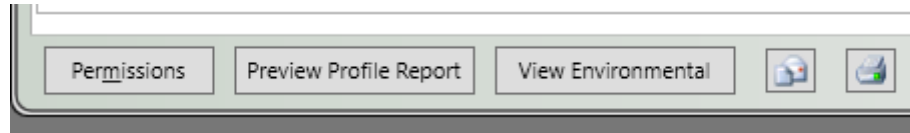
Find your project in the project list that appears




# DA.2.1: Project Profile



Select Preview Profile Report in the bottom left of the screen



The Project Profile Report will appear



## Project Profile Report

---

**PIN / Title:** 153801D SR 538/Logan Creek - Fish Passage **WIN:** A53801D

**Type of Work:**

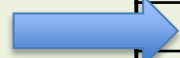
Region: Northwest	Route: 538	SRMP Date: 6/13/2019	Func Class: Minor Arterial	Date of Cost Index:	
Lead County: Skagit	RRT:	SRMP Begin: 2.02	NHS Status: Non	<b>Est</b>	<b>Var</b>
Other Counties:	RRQ:	SRMP End: 2.44	Sub Prog: I4	<b>StartDate</b>	<b>AC</b>
	Begin ARM: 2.02	Direction: B	Sub Cat: FISH BARRIER	PE: 783,980	0%
	End ARM: 2.44	A/B Indicator:		RW: 25,000	0%
	Centerline Length: 0.42	Resurface Len: 0		CN: 2,396,566	0%
				Tot: 3,205,546	0%

**SCOPE**

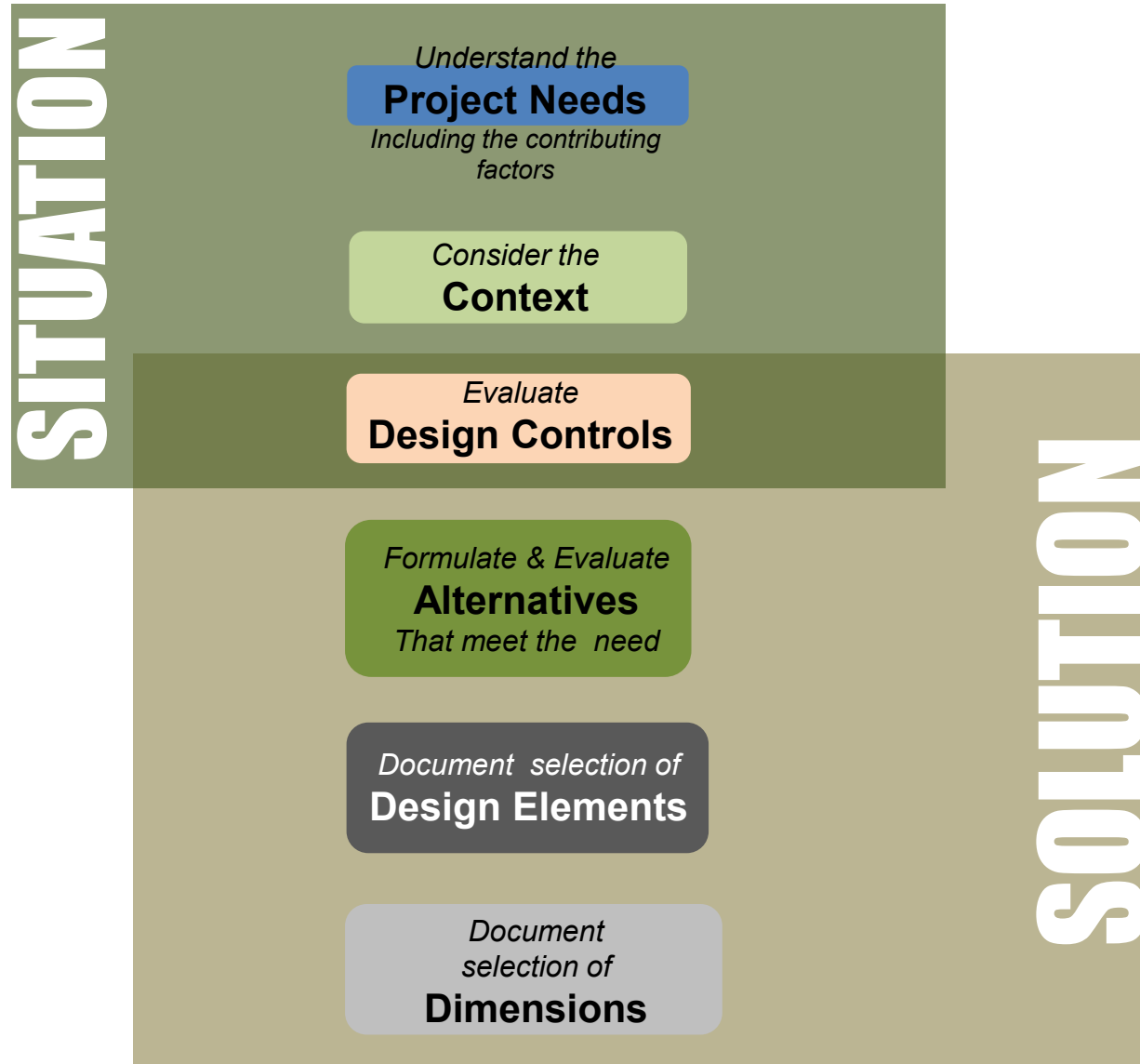
<b>Project Purpose:</b>	This project proposes to replace dual steel culverts passing Logan Creek under SR 538 at MP 2.18 with a new structure designed in accordance with stream simulation methodology to remove the barrier for migratory fish passage.
<b>Need or Deficiency:</b>	The dual steel arch culverts are a barrier to migratory fish.
<b>Description of Work:</b>	Remove and replace dual steel arch pipe with a 15' x 104' box culvert. A stream simulation design will include stream bed gravel similar to the existing stream channel.
<b>Project Delivery Method:</b>	Design Bid Build

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



# DA.2.2: Basis of Design



# DA.2.2: Basis of Design

- Current Version is 2.2
- New form incorporates the complete streets

# DA.2.2: Basis of Design

Referenced Documents

Use Chicago Style Referencing

## Related Documents and Technical Reports

*Insert a list of documents and reports that were integral to the origination of this project. Use Chicago style referencing, a Chicago Citation Generator is available here: [Free Chicago Citation Generator \[Updated for 2022\] \(mybib.com\)](https://mybib.com).*



# DA.2.2: Basis of Design



General Project Information								
Route Information	SR	NHS (Y/N)	<u>Functional Class</u>	<u>City</u>		<u>County</u>		Clear Purpose and Need
Project Information	Begin SRMP	End SRMP	Budget	Funding Sub-Program	Posted Speed	<u>AADT</u>	<u>Truck %</u>	
Important Project History or Background								
Future and Related Projects								
Major Environmental Considerations								

# DA.2.2: Basis of Design

*Understand the*  
**Project Needs**  
*Including the contributing factors*

**BASELINE NEEDS:**  
 Need(s) that triggered the project or are brought by a funding partner

Section 1) Project Needs	
<b>Baseline Needs (BN)</b>	
<p><b>BN1 – TITLE</b></p> <p>Background: <i>Write a short paragraph providing the background behind why this is a baseline need for the project. Make sure you address what are the contributing factors to this baseline need. If this project is a preservation project that would normally be BOD exempt per DM 1100.04(1)(a), state such here and mark the metric and target as "N/A".</i></p> <p>Metric: <i>What are you going to measure? This needs to be a simple statement or a few words.</i></p> <p>Target: <i>What is the project's target for the above metric? Keep this simple.</i></p>	<p><b>METRIC and TARGET</b> for each baseline need. Targets may be quantitative or qualitative</p>
<p><b>BN# – TITLE</b></p> <p>Background: <i>Write a short paragraph providing the background behind why this is a baseline need for the project. Make sure you address what are the contributing factors to this baseline need.</i></p> <p>Metric: <i>What are you going to measure? This needs to be a simple statement or a few words.</i></p> <p>Target: <i>What is the project's target for the above metric? Keep this simple.</i></p>	

Baseline need(s) – must be addressed by the project

# DA.2.2: Basis of Design

Understand the **Project Need**  
Including the contributing factors

All projects are now assessed to determine if complete streets applies

Complete Streets Needs	
<p><b>Does Complete Streets apply to the project?</b>    <input type="checkbox"/> No    <input type="checkbox"/> Yes</p> <p><i>Refer to the Complete Streets Project Screening Worksheet. If the result of the worksheet was a complete streets analysis was required, then check Yes and provide highlights of the Project Screening Worksheet in this box. Leave the remainder of the Complete Streets Model Process for Sections 2 and 4 of the BOD. If Complete Streets is not applicable, check "no" and insert a statement as to why and delete the next two rows of this BOD. If the Complete Streets Model Process results in a "no" that involved a determination by the Regional Administrator (see <a href="#">PDM #22-03</a>), summarize the decision here and have the Regional Administrator sign in the "Region Approver" box on the signature sheet of this BOD (Page 1).</i></p>	
<p><b>Complete Streets for Pedestrians</b> <i>Delete this cell if you are not a Complete Street project.</i></p> <p>Background: <i>Write a short paragraph providing the background information for the project for pedestrians.</i></p> <p>Metric: Pedestrian Level of Traffic Stress (PLTS)</p> <p>Target: <i>2 or better</i></p>	<p><i>Delete this cell if you are not a Complete Street project.</i></p>
<p><b>Complete Streets for Bicyclists</b> <i>Delete this cell if you are not a Complete Street project.</i></p> <p>Background: <i>Write a short paragraph providing the background information for the project for bicyclist. Delete this cell if you are not a Complete Street project.</i></p> <p>Metric: Bicycle Level of Traffic Stress (BLTS)</p> <p>Target: <i>2 or better</i></p>	<p><i>Delete this cell if you are not a Complete Street project.</i></p>

If it applies, fill out these sections.

If complete streets does not apply, delete these two rows and fill out the appropriate parts of Section 2 of the BOD.

# DA.2.2: Basis of Design

**CONTEXTUAL NEEDS:**  
Non-baseline needs that will  
be used to rank alternatives

**METRIC and TARGET**  
for each need.  
Targets may be  
quantitative or qualitative

## Contextual Needs (CN)

**CN# – TITLE** ... add CN1, CN2, etc. If no contextual needs are identified, insert "N/A" for the TITLE.

**Background:** Write a short paragraph providing the background behind why this is a contextual need for the project. Make sure you address what are the contributing factors to this contextual need. If there are no contextual needs identified, state such in this background section and put "N/A" for the metric and target.

**Metric:** What are you going to measure? This needs to be a simple statement or a few words.

**Target:** What is the project's target for the above metric? Keep this simple.

**Contextual Needs – may or may not be addressed**

# DA.2.2: Basis of Design

Understand the  
**Project Need**  
Including the contributing  
factors

SAFETY ANALYSIS  
See Safety Analysis Guide

Safety Analysis
Was a Safety Analysis performed <input type="checkbox"/> No <input type="checkbox"/> Yes
<i>If YES, enter the title and date. If NO enter why it was not needed. See DM Chapter 321 and the Safety Analysis Guide.</i>

Place Safety Analysis in the  
Design Approval

# DA.2.2: Basis of Design

Understand the  
**Project Need**  
Including the contributing  
factors

Ask for existing variance from  
your ASDE

## Existing Variance

Are there existing Design Variances within the Project Limits?  No  Yes

If YES, can this project correct any of the existing design variances?

*Request a list of known variances from your ASDE. Go through this list and see if you have an opportunity to correct or change the elements associated with the design variance.*

If there are any existing  
variances, discuss if they  
can be corrected here.

- Design Exceptions
- Design Deviations
- Design Analyses
- Contact your ASDE for a list of existing design variances

Consider the Context

# DA.2.2: Basis of Design

List your Multidisciplinary Team Members: Maintenance, Construction, Local Agencies, Community Stakeholders, etc.

Section 2) Context			
Roadway _____ MP _____ to MP _____			
<i>[Duplicate this section as necessary to reflect distinct segments with different context]</i>			
<b>Multidisciplinary Team Members</b>	<p>List the agencies, community stakeholders, and divisions involved in determining the context for this project. Include the partners from Step 3 of the Complete Streets Model Process.</p>		
<b>Community Engagement</b>	<p>Describe past and planned community engagement.</p> <p>For Complete Streets projects, seek feedback from the affected community (as part of normal M3 coordination) on preliminary concepts developed by the predesign team. Incorporate M3 and community feedback as appropriate.</p> <p>Provide a summary here of how that feedback influenced the final alternatives documented in Section 4.</p>		
<b>Freeway</b>	<input type="checkbox"/> Rural <input type="checkbox"/> Urban		<input type="checkbox"/> Interstate <input type="checkbox"/> Non-Interstate
<b>Non-Freeway</b>	Existing	<input type="checkbox"/> Rural <input type="checkbox"/> Suburban <input type="checkbox"/> Urban <input type="checkbox"/> Urban Core <i>See DM Chapter 11</i>	
	Future	<input type="checkbox"/> Rural <input type="checkbox"/> Suburban <input type="checkbox"/> Urban <input type="checkbox"/> Urban Core	

Described your community engagement

Land Use Context

# DA.2.2: Basis of Design

If a Complete Street, skip these sections ... but don't forget the canned text in the comments

If it is not a Complete Street, complete these sections

Bicycles – Complete Street? <input type="checkbox"/> No <input type="checkbox"/> Yes <i>If you are a Complete Street, select "Yes" and skip this section.</i>					
Accommodation	Prohibited	Low	Med	High	Involve Multidisciplinary Team Members
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments	<i>Describe any special design considerations that apply. If this is a complete street project, state "This project has been identified as a complete street and bicycle accommodation is taken into consideration in Sections 1 and 4 of the BOD."</i>				
Pedestrians – Complete Street? <input type="checkbox"/> No <input type="checkbox"/> Yes <i>If you are a Complete Street, select "Yes" and skip this section.</i>					
Accommodation	Prohibited	Low	Med	High	Involve Multidisciplinary Team Members
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments	<i>Describe any special design considerations that apply here. If this is a complete street project, state "This project has been identified as a complete street and pedestrian accommodation is taken into consideration in Sections 1 and 4 of the BOD."</i>				



# DA.2.2: Basis of Design

Freight						
Classification	T-1	T-2	T-3	T-4	T-5	See <a href="#">Truck Freight Classification</a>
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments	<i>Coordinate with Multidisciplinary Team Members. Describe any special design considerations that apply here. If the project will be a complete street, confirm that freight is accommodated during alternatives development.</i>					
Transit						
Fixed route type	None	Local	Limited Stops	Express	Transit Agencies	
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>List all transit agencies that operate within the project limits.</i>	
Future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Comments	<i>See DM 1102.03(5). Coordinate with Multidisciplinary Team, describe special design considerations. If the project will be a complete street, confirm that transit vehicles and riders are accommodated during alternatives development.</i>					

- See [Truck Freight Classification](#)
- Talk to Local Transit Agency

# DA.2.2: Basis of Design

Section 3) Design Controls	
Roadway _____ MP _____ to MP _____ <i>[Duplicate this section as necessary to align with the Context described in Section 2]</i>	
<b>Design Year</b>	<i>Design year and how it was determined (see DM 1103.02).</i>
<b>Design Vehicle</b>	<i>Describe the intersection design vehicles for all intersections that will be modified by the project. State the Design Vehicle for each leg of the intersection (see DM 1103.03(4)).</i>  <i>Describe the mainline design vehicle used for determining lane widths.</i>  <i>See DM 1310.02(5) for more information about accommodating vs. designing for vehicles.</i>

DESIGN YEAR  
with selection  
rational

DESIGN VEHICLE  
for intersections and lane width  
determination

# DA.2.2: Basis of Design

Terrain	<input type="checkbox"/> Level <input type="checkbox"/> Rolling <input type="checkbox"/> Mountainous            See <a href="#">WSDOT State Highway Log</a>	
Access Control	Existing	See <a href="#">Access Master Plan Database</a>
	Planned	See <a href="#">Access Master Plan Database</a>
	Proposed	
Target Speed	<i>Report the Target Speed(s) to be used on the project and describe how it was determined (see DM 1103.05).</i>	

# DA.2.2: Basis of Design

Formulate & Evaluate  
**Alternatives**  
That meet the need

## Section 4) Alternatives

Alternatives Comparison Table

Alternative ID	Description	Cost	Operations	Safety	Baseline Needs ↓	BN1 Name	BN# Name (Add columns for more BNs)	Complete Streets Needs ↓	Pedestrian LTS	Bicycle LTS	Route Directness Index	Contextual Needs ↓	CN1 Name	CN2 Name (Add columns for more CNs)	Other Impacts ↓	Other Impacts	Other Impacts
A		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
B		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
C		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
D		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
E		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate

Add or delete columns as necessary.

Legend:  
 ○ = Worst  
 ◐ = Worse  
 ◑ = Average  
 ◒ = Better  
 ● = Best

A brief title of the alternative

Basic metrics common on all projects

Baseline Needs rated

Complete Street Rated

Contextual Needs rated

Impacts vs Needs

Legend

# DA.2.2: Basis of Design

Formulate & Evaluate  
**Alternatives**  
That meet the need

Alternative ID	Description	Cost	Baseline Needs ↓	BN1: Fish Passage	Complete Streets Needs ↓	Pedestrian LTS	Bicycle LTS	Contextual Needs ↓	CN1: Maintenance Clearance	CN2: Stormwater Retrofit	CN3: Mobility	CN4: Safety Performance	CN5: Wildlife Connectivity	Other Impacts ↓	Adjacent Property Impacts	Construction Schedule
A	Full-Span Voided-Slab Bridge – 6' Maintenance Clearance (Preferred)	\$\$\$	↓	Met	↓	LTS <sub>3</sub>	LTS <sub>3</sub>	↓	●	●	●	●	●	↓	●	●
B	Full-Span Voided-Slab Bridge – 3' Freeboard Clearance	\$\$	↓	Met	↓	LTS <sub>3</sub>	LTS <sub>3</sub>	↓	◐	●	◐	●	◐	↓	◐	◐
C	Three-Sided Buried Structure	\$\$\$\$	↓	Met	↓	LTS <sub>3</sub>	LTS <sub>3</sub>	↓	◐	●	◐	●	◐	↓	◐	◐

A brief title of the alternative

Basic metrics common on all projects

Baseline Needs rated

Complete Street Rated

Contextual Needs rated

Other Impacts

Formulate & Evaluate  
**Alternatives**  
 That meet the need

# DA.2.2: Basis of Design

Alternative ID	Description	Cost	Operations	Safety	Baseline Needs ↓	BN1 Name	BN# Name (Add columns for more BNs)	Complete Streets Needs ↓	Pedestrian LTS	Bicycle LTS	Route Directness Index	Contextual Needs ↓	CN1 Name	CN2 Name (Add columns for more CNs)	Other Impacts ↓	Other Impacts	Other Impacts
A		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
B		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
C		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
D		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate
E		Rate	Rate	Rate	Rate	Rate	Rate	Rate	LTS	LTS	Rate	Rate	Rate	Rate	Rate	Rate	Rate

**Cost Summary:**

*Detail.*

**Operations:**

*Detail.*

**Safety:**

*Detail.*

**Baseline Need Summary:**

*Detail.*

**Complete Streets Need Summary:**

*Detail.*

**Contextual Need Summary:**

*Detail.*

**Other Impacts Summary:**

*Detail.*

Preferred Alternative \_\_\_\_ was selected because:

*Detail.*

A summary  
 writeup for each  
 section of the  
 table

Formulate & Evaluate  
**Alternatives**  
 That meet the need

# DA.2.2: Basis of Design

Alternative ID	Description	Cost	Operations	Safety	Baseline Needs ↓	BN1 Name	BN# Name (Add columns for more BNs)	Complete Streets Needs ↓	Pedestrian LTS	Bicycle LTS	Route Directness Index	Contextual Needs ↓	CN1 Name	CN2 Name (Add columns for more CNs)	Other Impacts ↓	Other Impacts	Other Impacts
A		Rate	Rate	Rate		Rate	Rate		LTS	LTS	Rate		Rate	Rate		Rate	Rate
B		Rate	Rate	Rate		Rate	Rate		LTS	LTS	Rate		Rate	Rate		Rate	Rate
C		Rate	Rate	Rate		Rate	Rate		LTS	LTS	Rate		Rate	Rate		Rate	Rate
D		Rate	Rate	Rate		Rate	Rate		LTS	LTS	Rate		Rate	Rate		Rate	Rate
E		Rate	Rate	Rate		Rate	Rate		LTS	LTS	Rate		Rate	Rate		Rate	Rate

**Cost Summary:**

*Detail.*

**Operations:**

*Detail.*

**Safety:**

*Detail.*

**Baseline Need Summary:**

*Detail.*

**Complete Streets Need Summary:**

*Detail.*

**Contextual Need Summary:**

*Detail.*

**Other Impacts Summary:**

*Detail.*

Preferred Alternative \_\_\_\_ was selected because:

*Detail.*

The preferred alternative is stated and a summary of the decision is provided.

## DA.2.2: Basis of Design

- Show what design element will be changing
- See DM Chapter 1105 Design Element Selection
- Column headers should be the project alignments
- Combine similar alignments (i.e. mainlines, ramps)
- Place a X on items you are affecting (or Yes, No, or N/A)
- Use the [Design Parameters Worksheet](#) to show dimensions & locations

Section 5) Design Element Selection						
<i>For each design element below, identify whether or not the design element is included in the preferred alternative for each alignment or location. You can group alignments into a single location if desired. You may need to add or delete columns.</i>						
Design Element	Alignment #1- SR 999	Alignment #2	Alignment #3	Alignment #4	Alignment #5	Alignment #6
1. Lane	X					
2. Median / Buffer	X					
3. Shoulder	X					
4. Streetside / Roadside Zone						
5. Pedestrian Facility						



# DA.2.2: Basis of Design

## For Non-Interstate and Non-WSDOT Projects

- WSDOT Jurisdiction is Curb to Curb
  - [RCW 47.24.020](#)
  - [City Streets as Part of State Highways](#)
- WSDOT BOD
  - Consultant or Local Agency is designing the project on the behalf of the WSDOT
  - Interstate projects
- Summary of Design (SOD) or BOD (recommended)
  - Local Agency/Tribal/Developer projects within WSDOT jurisdiction
  - SOD Not applicable on Interstate projects

# DA.2.2: Basis of Design

**Exemptions: Design Manual Chapter 1100.10(1)(a)(1) and Exhibit 1105-1**

## All Projects

- You can ask your ASDE for a BOD exemption if the only design elements changed are:
  - ADA
  - Clear Zone
  - Roadside Safety Hardware
  - Signing (replacing existing)
  - Delineation (replacing existing in same location)
  - Illumination
  - ITS
  - Signal Hardware

# DA.2.2: Basis of Design

Exemptions: Design Manual Chapter 1100.10(1)(a)(2)

## Preservation Projects

- BOD is not required if you're only changing the following elements:
  - Adjust existing features
    - i.e. monuments, catch basins, manhole covers
  - ADA
  - Cross Slope (Lane or Shoulder)
  - Vertical Clearance
  - Delineation Material
  - Barriers & Terminals

# DA.2.2: Basis of Design

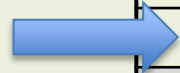
Exemptions: Design Manual Chapter 1100.10(1)(a)(3)

## Safety Projects


- Programmatic projects endorsed by the WSDOT Highway Safety - Panel contact your ASDE for a possible exemption
  - e.g., Intersection Safety Improvement Program treatments, rumble strips, chevron signs, etc.
- Crash Analysis Report (CAR) may suffice for a BOD, contact your ASDE for a possible exemption
- New CARs will contain need and context therefore a BOD will not be required

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	Introductory Documents						
1.1	Table of Contents	R	U	R	R	R	
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1.3	Vicinity Map	R	U	R	R	R	
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2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	C	R	R	C	R	
	· Intersection/Channelization Plans						
	· Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	R	N/A	



# DA.2.3: Environmental Review Summary

 **ERS Standard Report**

PIN/Title: 102045F - SR 20/Haggen Dr to N Skagit St - ADA Compliance WIN: A02045E

WSDOT Approval		
Contributors	Phone	Approval
Kevin Stuber	+1 360-757-5994	Maas, John
Steve Shipe	+1 206-440-4531	
Lindsay Taylor	+1 206-440-4549	
Lindsay Jungbluth	+1 206-440-4506	
Dani Northouse	+1 206-440-4543	
Patrick Svoboda	+1 360-570-6696	
Joelle Blais	+1 360-757-5962	
Jason Cooper	+1 206-440-4525	

4/12/2019  
Regional Environmental manager Date

**Part 4 - Project Description**

Description of Work: Evaluate and update/alter curb ramps as necessary to meet ADA accessibility criteria per WSDOT Design Manual guidance.

Needs & Purpose: Upgrade ADA ramps to meet regulatory guidelines.

Statement of Purpose: Provide ADA ramps that meet regulatory guidelines.

Project Location  
SR: 020 Begin MP: 59.74 End MP: 61.05 WSDOT Region: Northwest  
County/Counties: Skagit





Right of Way  
Will ROW be needed for this project?  
Will  People and/or  Businesses be relocated and/or displaced? No  
Will early acquisition be necessary? No  
ROW Notes: For scoping purposes it was assumed that construction easements would be required for 25% of ramps addressed.

Section, Township, Range: Sect. 6, T. 34 N., R. 4 E., and Sect. 27, 28, 31, 32, 33, T. 35 N., R. 4 E.

1 of 6

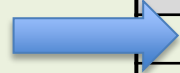
- Completed by the Environmental Office
- Stored in TEIS
- Print to PDF for the DDP

Project Delivery Method: Design Bid Build ADT: 16251 Truck % : 4.5 Speed limit: 30 mph

Permissions Preview Profile Report **View Environmental**   Basis Of Design Not Required:  Environmental Not Required:   Save  Close

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



# DA.3.1: Design Parameters Worksheet

If there is an “X” in Section 5 of the BOD, Fill out the corresponding section in the Design Parameters Worksheet ... and vice-versa.

General Design Elements	Detailed Design Elements (Parameters)	Changed Elements See Note 1	Physical Feature/Location	Existing Dimension	Design Manual Dimension	Proposed Dimension	Reference/Notes
1. Lane	Number of Lanes	x	HWDX 15+85 to HWDX 25+81.23 ML 71+93.67 to ML 76+79.35	N/A (new DA Off-ramp)	1 lane		DM 1420.01 (Nov. 2015)
	Lane Type	x	HWDX 15+85 to HWDX 25+81.23 ML 71+93.67 to ML 76+79.35	N/A (new DA Off-ramp)	Left-side direct access connection	DM 1420.01 (Nov. 2015)	DM 1420.01(3) (Nov. 2015)
	Width Tangent Roadway	x	HWDX 15+85 to HWDX 25+81.23 ML 71+93.67 to ML 76+79.35	N/A (new DA Off-ramp)	12'	Varies 12' to 14'	See Lane Width Table and See Design Analysis 1
	Width Turning Roadway	x	HWDX 15+85 to HWDX 25+81.23 ML 71+93.67 to ML 76+79.35	N/A (new DA Off-ramp)		DM 1420.01 (Nov. 2015)	See Lane Width Table and Turning Roadway Width Table and see Design Analysis 1
	Lane Reduction						
	OTHER						

Place an “X” here if you affect this element

Insert the location of the feature. Stations or MPs

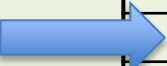
List the Existing, Design Manual guidance and Proposed Dimensions

Reference DM Section or other Reference Notes



# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



# DA.3.2: Safety Analysis Guide

- Will give direction on safety analysis by funding category (I1, I2, P1, P2, etc.)
- Will include a table that details:
  - What Triggers an Analysis
  - Study Area
  - Study Period
  - Scope of an Analysis
  - Methodology
  - Suggested Tools
  - Goals (What we are trying to accomplish by an analysis)
  - Documentation

# DA.3.2: Crash Analysis Report vs. Safety Analysis

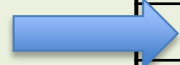
Done Before  
Pre-Design

Crash Analysis Report (CAR)	Safety Analysis
<p><b>Crash Analysis Report (CAR)</b> Only required in I-2 safety projects</p>	<p><b>Safety Analysis</b> Required on other project types</p>
<p>A <b>CAR</b> has all 4 parts:</p> <ol style="list-style-type: none"> <li>1. Describe the existing safety problem.</li> <li>2. Determine the excess number of crashes.</li> <li>3. Determine effective countermeasures</li> <li>4. Compare alternatives to determine a preferred alternative.</li> </ol>	<p>A <b>Safety Analysis</b> has some of these, but not all.</p>
<p>A <b>CAR</b> chooses a preferred alternative.</p>	<p>A <b>Safety Analysis</b> <u>does not</u> choose a preferred alternative.</p>
<p>A <b>CAR</b> needs to be stamped and signed.</p>	<p>A <b>Safety Analysis</b> does not need to be stamped and signed.</p>

Done during  
Pre-Design

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



## DA.3.3: What is a Design Analysis?

[Design analysis class](#) available from the ASDEs in The Learning Center

### **Design Manual 300.03(2)(a)**

“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.”

## DA.3.3: When do I need a Design Analysis?

- Required when specifically stated
- Required for design elements that do not meet a value or fall within a range of values
- The direction may not use “hard” words like “require” or “shall” or “must”
- Constraints sometimes found in Exhibits
- Design analyses known during Design Approval must be completed at that time

# DA.3.3: Design Analysis Approvers

## WSDOT Projects

Classification	Project Type	Approver
Interstate & Projects of Division Interest	All	FHWA Area Engineer* & ASDE
National Highway System (NHS)	All	ASDE**
Non-NHS	Improvement	ASDE**
Non-NHS	Preservation	Region Project Development Engineer**

\*FHWA approval is **only** required for elements related to controlling criteria (possible exception PoDI).

\*\*Design Analysis for elements that are City responsibility must be approved by HQ Local Programs

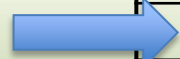
# DA.3.3: Multiple Design Analyses

- Give each design analysis its own index number
  - Design Analysis #1: Lane Width
    - DA.3.3.1
  - Design Analysis #2: Shoulder Width
    - DA.3.3.2
  - Design Analysis #3: Ramp Taper
    - DA.3.3.3



# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A

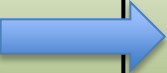


## DA.3.4: Maximum Extent Feasible

- MEF written when an ADA feature cannot be installed as required
- Approved by Region and ASDE, with OEO ADA Coordinator concurrence
- Give each MEF its own index number:
  - MEF #1: Lane Width
    - DA.3.4.1
  - MEF #2: Shoulder Width
    - DA.3.4.2
  - MEF #3: Ramp Taper
    - DA.3.4.3

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	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 Documents **						
2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	C	R	R	C	R	
	· Intersection/Channelization Plans · Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation	N/A	R	R	R	N/A	



# DA.3.5: Plans for Approval

- Basic PFA requirements are found in the PFA Checklist
- From [ASDE Website](#):

To complete the DDP checklist, you will need the following:

- [Design Approval and Project Development Approval memorandum \(DOCX 39KB\)](#) (for design-bid-build projects)
- [Conceptual Design Approval memorandum \(DOCX 37KB\)](#) (for design-build projects)
- [Design Clear Zone Inventory Form \(XLSX 21KB\)](#)
- [Design Parameters \(XLSX 33KB\)](#)
- [Design Analysis Template \(DOCX 31KB\)](#)
- [Plan for Approval Checklist \(DOCX 28KB\)](#)

- A Region may have its own custom checklist
- May be conceptual for Design Approval and Conceptual Design Approval

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A

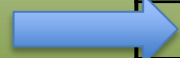


# DA.3.6: Alignment Plans and Profiles

- Conceptual plans
- Only necessary for Design Approval
- Sets right of way limits
- Helps know limits of environmental impact

# Design Approval

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	· Intersection/Channelization Plans					
	· Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A



# DA.3.7: Cost Estimate

- Include the EBASE printout

ITEM NO.	STD. NO.	ITEM DESCRIPTION	UNIT MEAS	UNIT PRICE	QUANTITY	AMOUNT	PRE-QUAL
<b>OTHER ITEMS</b>							
105	7715	FORCE ACCOUNT LOW FLOW CHANNEL GRADING	EST.			5,000.00	A1
106	7715	FORCE ACCOUNT STREAMBED SAND	EST.			10,000.00	A1
107	7725	REIMBURSEMENT FOR THIRD PARTY DAMAGE	EST.			5.00	A1
108	7728	MINOR CHANGE	CALC			-1.00	A1
109	7730	FUEL COST ADJUSTMENT	CALC			1.00	A1
110	7731	STEEL COST ADJUSTMENT	CALC			1.00	A1
111	7732	AGGREGATE COMPLIANCE PRICE ADJUSTMENT	CALC			-11.00	A1
112	7736	SPCC PLAN	L.S.			3,500.00	A1
113	9004	PROJECT PARTNERING	CALC			10,000.00	A1
114		FOUR RAIL BOARD FENCE	L.F.	45.00	238.00	10,710.00	C6
115		DSM	C.Y.	305.00	1,301.00	396,805.00	F2
<b>BASE TOTAL :</b>						<u>6,621,970.20</u>	

PS&E JOB NO: 19X305  
 CONTRACT NC 0000  
 WORK ORDER : XL5238

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
 ESTIMATES AND ANALYSIS SYSTEM  
 \*\*\* PRELIMINARY ESTIMATE - BY ITEM \*\*\*

DATE: 03/02/2020 PAGE: 5  
 TIME: 09:00 VER: 1  
 DOT-RGG100

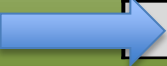


# Design Approval

DDP Section	Document	Design-bid-build			Design-Build		
		DA	PDA	Combined DA/PDA	CDA	PDA	
1	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 Documents **						
2.1	Project Profile	R	U	R	R	U	
2.2	Basis of Design (BOD)						
2.3	Environmental Review Summary						
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	P*	P	
3.5	Plans for Approval	C	R	R	R	R	
	· Intersection/Channelization Plans						
	· Interchange Plans						
3.6	Alignment Plans and Profiles	C	N/A	N/A	R	N/A	
3.7	Cost Estimate	R	U	R	R	N/A	
4	Environmental Documentation					N/A	R

Not Applicable for Design Approval

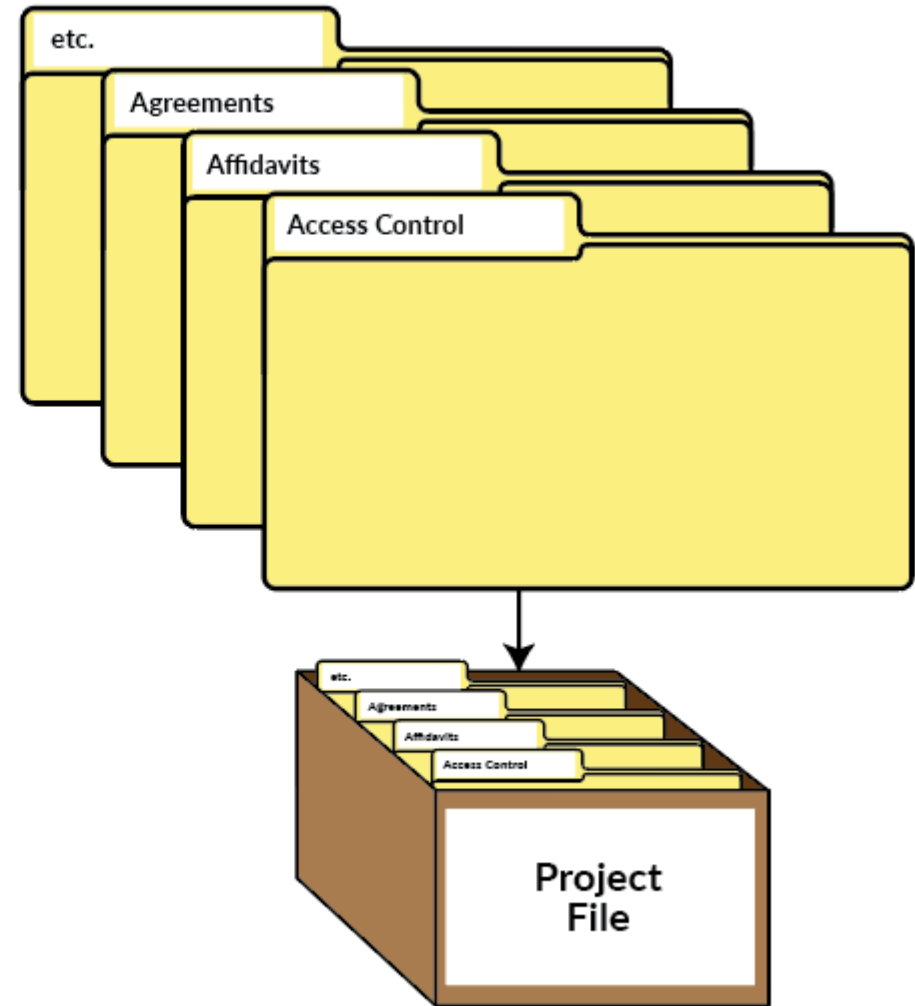
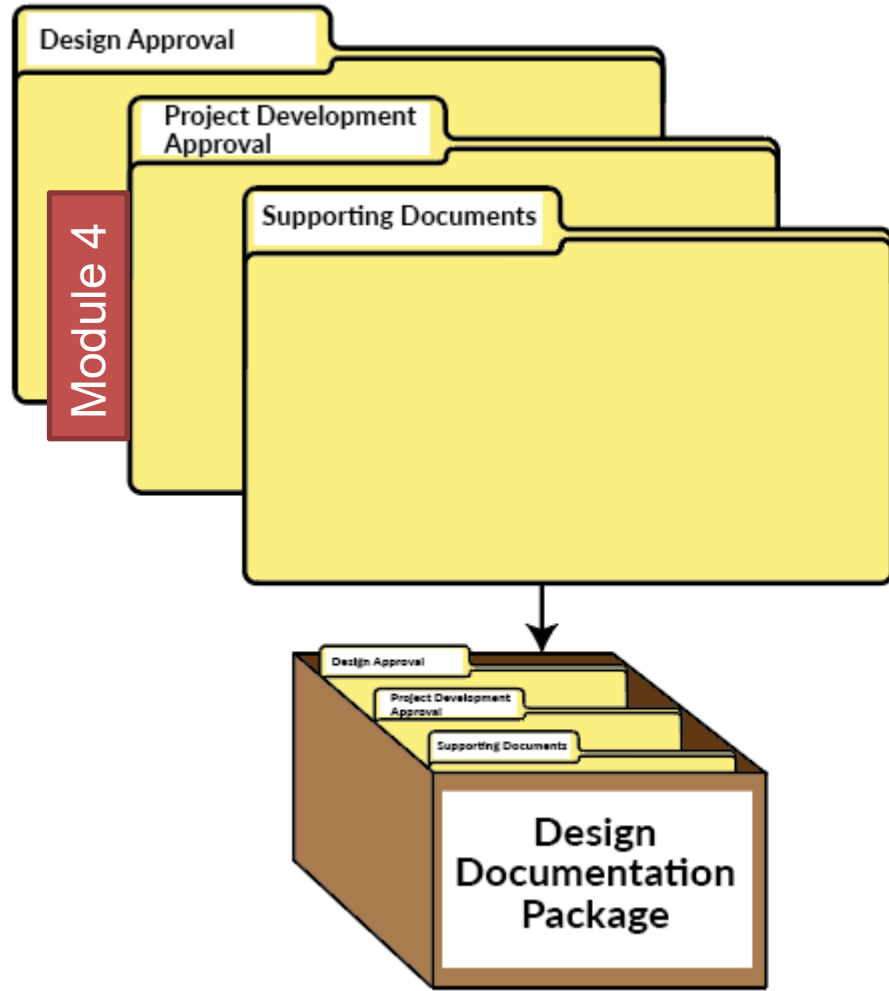
Required for Combined DA/PDA



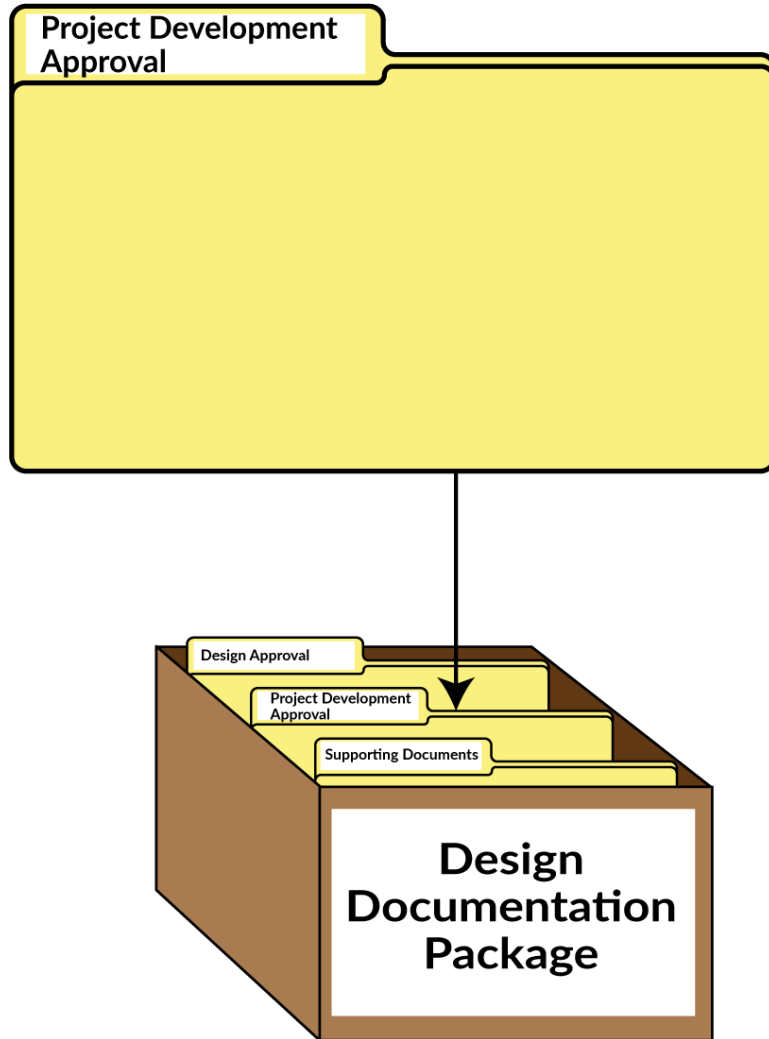
# **Design Documentation**

## **Project Development Approval (PDA)**

# Design Documentation



# Project Development Approval



## PDA Sections:

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

# DDP Organization

## Design Manual Exhibit 300-1

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Definition or Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
3	Core Documents					
3.1	Design Parameters Sheets	R	U	R	R	U
3.2	Safety Analysis	R	U	R	R	U

# Project Development Approval

## Design-Bid-Build

- PDA = Design Approval with completed environmental
- Cannot be granted until ALL project development documents are complete
- Items completed during Design Approval DO NOT need to be reinserted
- Items changed or added after Design Approval ARE inserted

## Design-Build

- Completed by the design-builder
- Environmental done prior to RFP (except progressive design-build)
- Required prior to project completion
- Follow the RFP language

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
2	Project Summary Documents **					
2.1	Project Definition or Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
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	C	R	R	C	R
	Intersection/Channelization Plans					
	Interchange Plans					
3.6	Alignment Plans and Profiles	C	N/A	N/A	C	N/A
3.7	Cost Estimate	R	U	R	R	N/A
4	Environmental Documentation	N/A	R	R	R	N/A
5	Supporting Documents	As Needed See <a href="#">DDP Checklist</a>				
6	Other Approvals and Justifications					
7	Other Items as Deemed Necessary					

- U = Required if Updated after Design Approval
- R = Required
- N/A = Not Applicable

Design-Build different than Design-Bid-Build

# NEPA Approvals



- The following NEPA document must be included:
  - Draft and Final Environmental Impact Statement (EIS) and Record of Decision (ROD), or
  - Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), or
  - Categorical Exempt (CE) Documentation
    - Signed Environmental Classification Summary, or
    - Memorandum excluding the project from CE, or
    - CE Checklist
- The above documents must be originals



# SEPA Approvals



- The following SEPA document must be included:
  - Draft and Final EIS, or
  - Determination of Non-Significance and Checklist, or
  - Categorical Exempt (CE) Documentation
    - Signed Environmental Classification Summary, or
    - Memorandum excluding the project from CE, or
- The above documents must be originals

# Project Development Approval

## DDP Checklist

Many items have “Choose an item.”  
 For example, for Design Analysis select “Choose an item.”  
 and pick the appropriate item.

Column titled “In PDA?”

PDA.3.0		Core Documents		
PDA.3.1	DPS	Design Parameter Sheets	Choose an item.	Final Version.
PDA.3.2	SA	Safety Analysis	Choose an item.	See <a href="#">WSDOT Safety Analysis Guide</a> .
PDA.3.3	DA	Design Analysis	Choose an item.	
PDA.3.4	MEF	Maximum Extent Feasible	Choose an item.	
PDA.3.5	PFA	Plans for Approval	Choose an item.	Approved Intersection/Channelization and/or Interchange Plans.

# Project Development Approval

## DDP Checklist

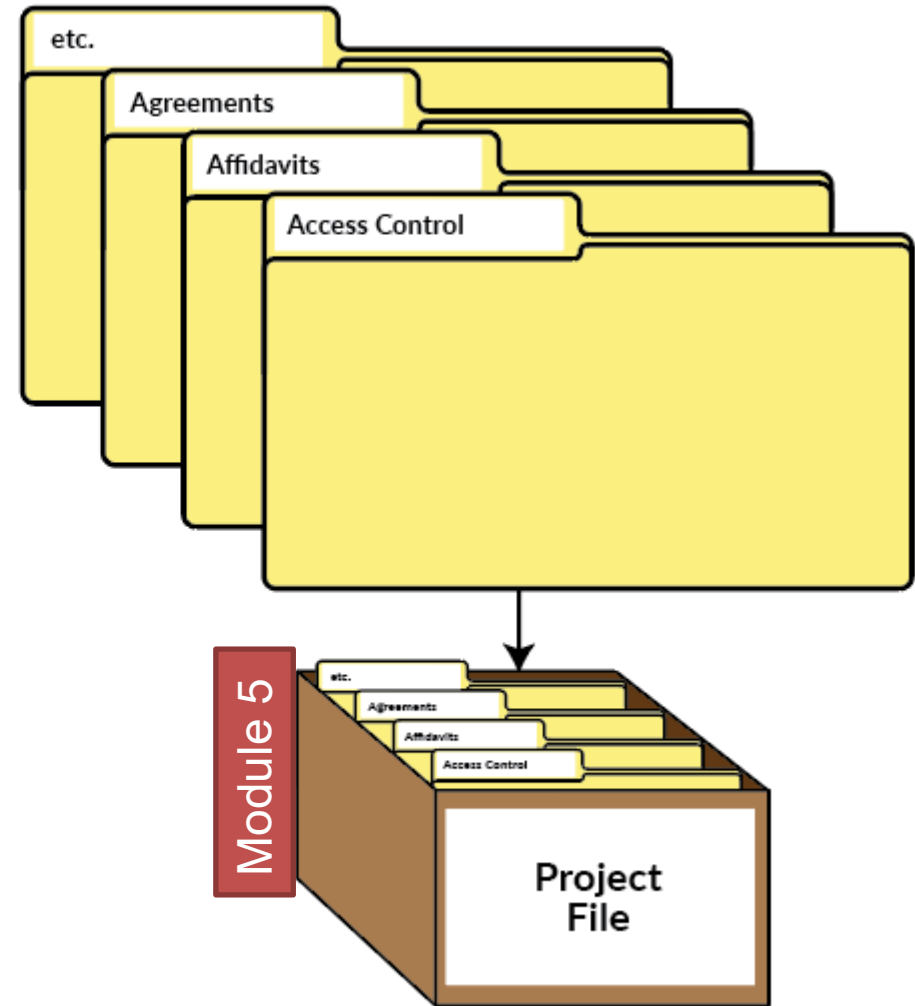
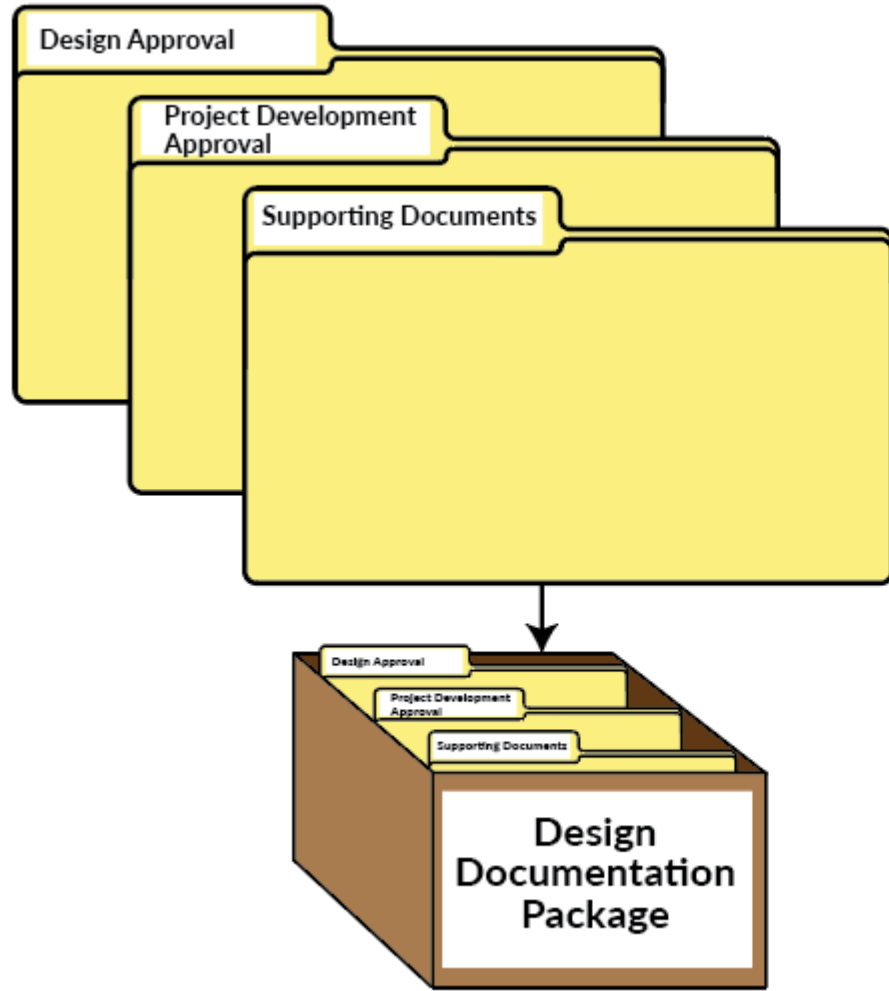
Supporting Documents are added as necessary.  
Check the box “DA”, “PDA”, or “N/A”.

5 - DDP SUPPORTING DOCUMENTS						
Index #	Item Abbr.	Description	Included In			Comments
			DA	PDA	N/A	
SD.5.1	ARR	Access Revision Report & Non-Access Feasibility Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SD.5.2	AH	Access Hearing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SD.5.3	AR	Access Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SD.5.4	<u>LoN</u>	Barrier Length of Need Calculations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
SD.5.5	<u>VertC</u>	Bridge Vertical Clearance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

# **Design Documentation**

## **Project File**

# Design Documentation



# Project File

**The Project File includes other documentation from:**

- Planning
- Scoping
- Program Management
- Traffic
- Utilities
- Maintenance
- Local Agency
- Backup Calculations
- Materials
- Geotech
- Bridge
- Real Estate Services
- Advertisement and award
- Construction
- Environmental

# Project File

The [Project File checklist](#) is a list of documents other than DDP Documents:

## WSDOT Project File Checklist

These are Project File (PF) items that are not retained long term in the Design Documentation Package. See Design Manual 300.03(3) for further information regarding the PF.

References listed below are Design Manual chapters unless otherwise noted (see Reference notes.)

Description	Ref.	Comments/Action Strategy/Approvals
Public Agency Coordination	210	
Affidavits	210	
Prehearing Packets	210	
Public Agency Coordination	210	
Open Houses	210	
Hearings	210	

# Project File

## Comments / Action Strategy / Approvals

Description	Ref.	Comments/Action Strategy/Approvals
Public Agency Coordination	210	
Affidavits	210	
Prehearing Packets	210	
Public Agency Coordination	210	

**This column is a place for you to help future readers understand what is in the project file.**



# Project File

## The Project File is:

### **Scalable:**

- Delete things from the list that are not in your project

### **Not all inclusive:**

- Add anything to the list that is unique to your project

### **A Tool to help construction understand:**

- What is included in the project file
- Why it is included in the project file

# Project File

## Retention Policies

- All Project File documents should be purged **3 Years** after Final Contract Voucher Certification
- DDP items are kept for 75 years

# **Design Documentation**

**Combined DA/PDA**

**File Naming Convention**

**Indexing**

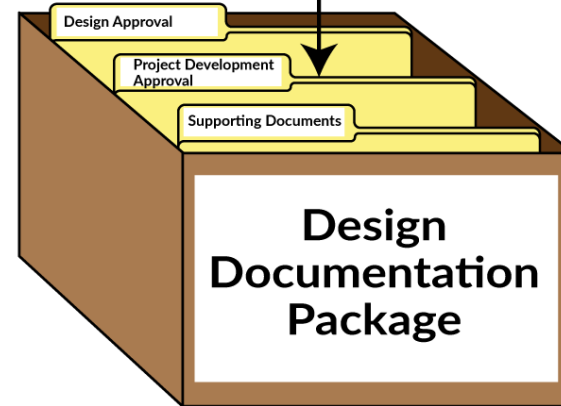
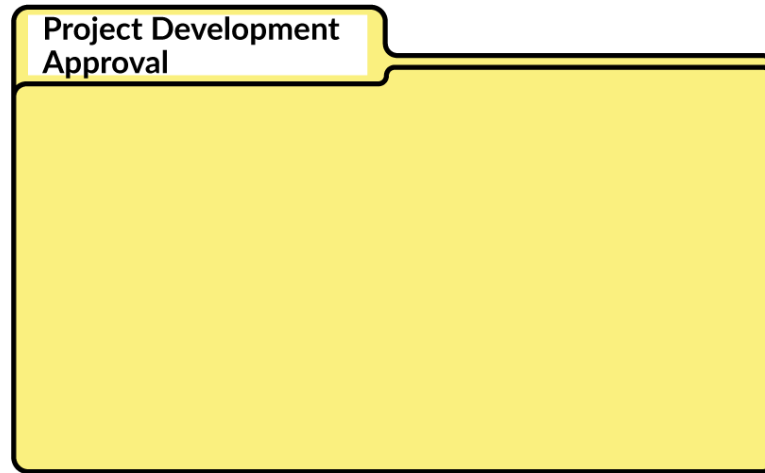
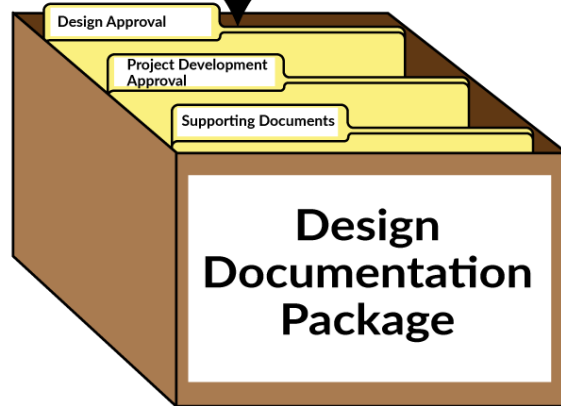
**Enterprise Content Management (ECM)**

**Process Review**

# Design Approval – Combined DA/PDA



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)



# Design Approval – Combined DA/PDA

- Design Approval and PDA may be combined on short or simple projects
- Only available on Design-Bid-Build

DDP Section	Document	Design-bid-build			Design-Build	
		DA	PDA	Combined DA/PDA	CDA	PDA
1	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 Documents **					
2.1	Project Definition or Project Profile	R	U	R	R	U
2.2	Basis of Design (BOD)					
2.3	Environmental Review Summary					
3	Core Documents					
3.1	Design Parameters Sheets	R	U	R	R	U
3.2	Safety Analysis	R	U	R	R	U

# Design Approval – Combined DA/PDA

- Use the Combined DA/PDA section of the DDP Checklist

COMBINED DA/PDA				
Index #	Item Abbr.	Description	Required?	Comments
PDA.1.0		Introductory Documents		
PDA.1.1	TOC	Table of Contents	Required	<i>Print this checklist with the "In DA?" column complete and "Notes" included as appropriate. Include this checklist as the Table of Contents.</i>
PDA.1.2	Memo	Memorandum	Required	<i>See the Memorandum Templates on the <a href="#">Design Support website</a>.</i>
PDA.1.3	VM	Vicinity Map	Required	
PDA.2.0		Project Summary Documents		
PDA.2.1	PP	Project Profile	Required	

# Design Approval – Combined DA/PDA

- Use the same Memo template and choose Combined DA and PDA

Choose an item.

Choose an item.

DESIGN APPROVAL

PROJECT DEVELOPMENT APPROVAL

COMBINED DESIGN APPROVAL AND PROJECT DEVELOPMENT APPROVAL

[Work Order Number] [WIN Number] [PIN Number]

[Month Day, Year]

# Design Approval – Combined DA/PDA

- Follow the approval requirements for PDA

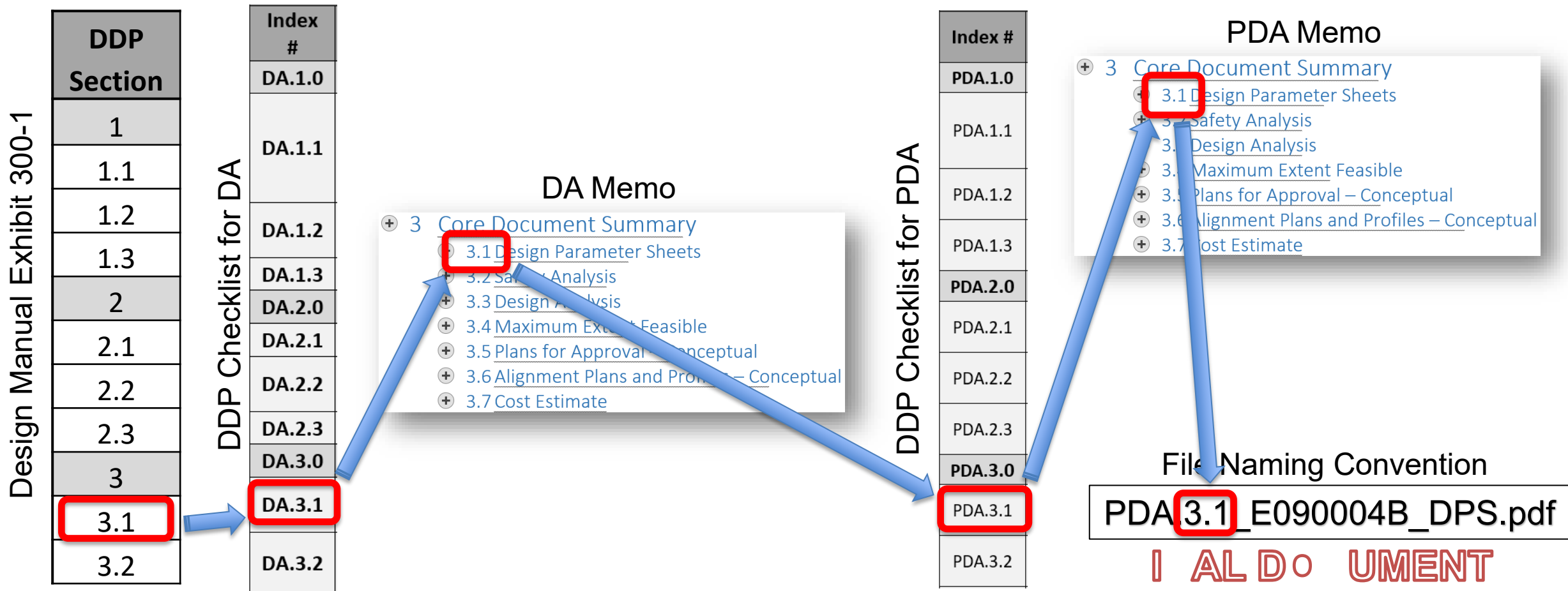
Project Type	BOD Approval	Design Analysis Approval [1]	Design Approval and Project Development Approval
Project of Division Interest (PoDI)	[2]	[2]	[2]
<b>Interstate</b>			
All Projects	HQ Design	FHWA [3] HQ Design	HQ Design
Preservation Projects	HQ Design	FHWA [3] HQ Design	Region
<b>National Highway System (NHS)</b>			
Projects on all limited access highways, or on managed access highways outside of incorporated cities and towns	Region ‡	HQ Design	Region

Exhibit 300-2



# DDP Organization

Organization carries through the entire DDP process



# File Naming

Each document will have the following filename convention in ECM:



Index#\_WIN#\_ItemAbbr.pdf

- Index# = DA#.#, PDA#.#, CDA#.#, or SD#.#. For example PDA.1.1. If there are multiple related elements, add other subsections. For example PDA.1.1.1, PDA.1.1.2.
- WIN# = (Work Identification Number). For example D50117A
- ItemAbbr.= abbreviated name for document. For example TOC = Table of Content.
- pdf – all files will be in pdf format

Example: PDA.1.1\_D50117A\_TOC.pdf

- Abbreviations are found in the [DDP checklist](#)

# File Naming - Example

- To build up a folder on the G drive for SR 501/I-5 to Port of Vancouver project using the project WIN which is **D50117A**. This is a **PDA**. Then create a **pdf** file name for a Table of Contents.
- Use the PDA checklist template for contents

**Index#**   **WIN#**   **ItemAbbr.**   **pdf**

SR 501/I-5 to Port of Vancouver – ADA/ **D50117A**





















COMBINED DA/ <b>PDA</b>				
Index #	Name	Description	Required?	Comments
PDA.1.0      Introductory Documents				
<b>PDA.1.1</b>	<b>TOC</b>	Table of Contents		
PDA.1.2	MEMO	Memorandum		
PDA.1.3	VM	Vicinity Map		

For Table of Content use the index **PDA.1.1** and name the file:

**PDA.1.1** **D50117A** **TOC** **pdf**

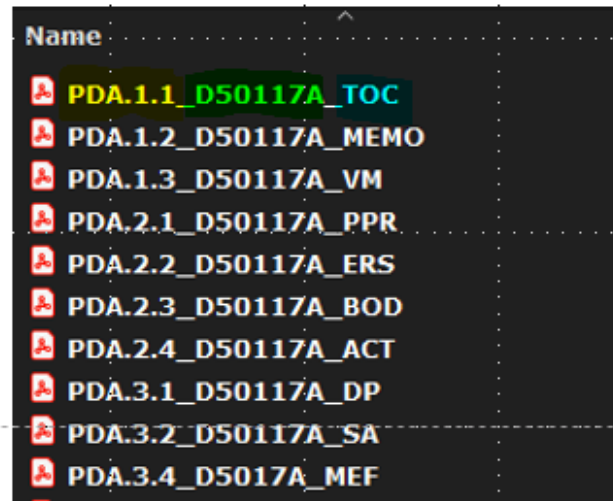
# Design Doc. Folder content

The content of the folder will look like:

Name	Status	Date modified	Type	Size
 PDA.1.1_D50117A_TOC		5/25/2021 12:04 PM	Adobe Acrobat Do...	844 KB
 PDA.1.2_D50117A_MEMO		1/28/2021 11:03 AM	Adobe Acrobat Do...	296 KB
 PDA.1.3_D50117A_VM		9/17/2019 3:31 PM	Adobe Acrobat Do...	122 KB
 PDA.2.1_D50117A_PPR		5/15/2019 11:27 AM	Adobe Acrobat Do...	171 KB
 PDA.2.2_D50117A_ERS		5/25/2021 11:42 AM	Adobe Acrobat Do...	477 KB
 PDA.2.3_D50117A_BOD		1/12/2021 12:24 PM	Adobe Acrobat Do...	357 KB
 PDA.2.4_D50117A_ACT		4/27/2021 4:57 PM	Adobe Acrobat Do...	744 KB
 PDA.3.1_D50117A_DP		4/27/2021 4:57 PM	Adobe Acrobat Do...	650 KB
 PDA.3.2_D50117A_SA		1/5/2021 10:49 AM	Adobe Acrobat Do...	1,206 KB
 PDA.3.4_D5017A_MEF		11/3/2020 2:32 PM	Adobe Acrobat Do...	4,654 KB

# Direction for filing

- See [Design Bulletin #21-01](#)
- For projects starting PE phase **September 2021 or later**, utilize the new file naming structure and file all DDP documents in ECM.



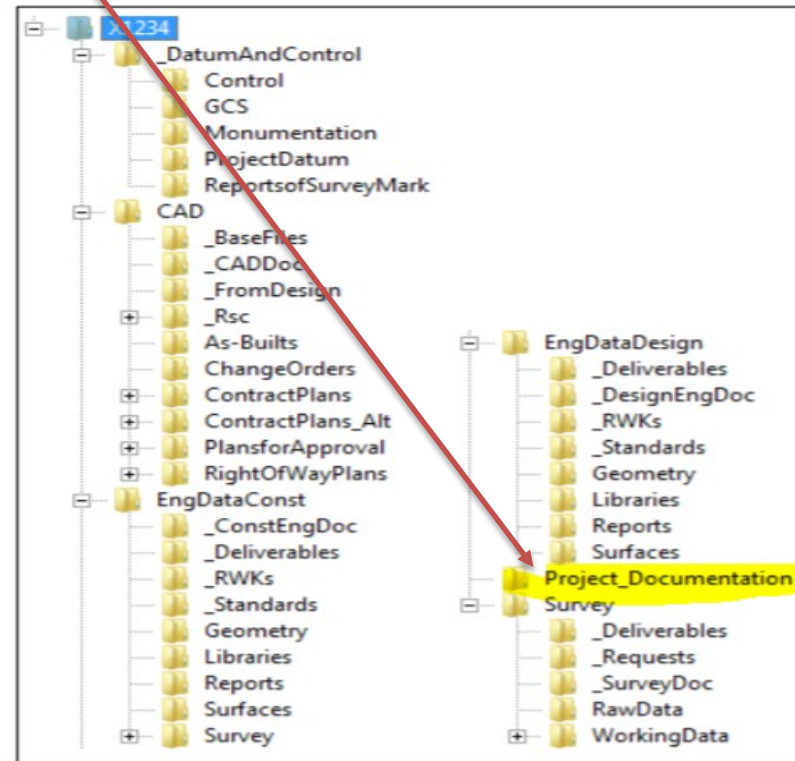
- Any projects that has a PE phase **before September 2021**, the DDP may be filed as a standalone document in ECM. For Legacy Design Documentation, use LDD for the item abbreviation



# EEDS Design Doc. file location

All files will be stored on the project folder following the EEDS manual protocol for **Design Documentation**.

Exhibit 3-1 Standard CAE Folder Structure



# ECM Archiving

## Goals:

- Understand regional needs and develop **directory structure for electronic documentation filing**
- Archived files in pdf format
- Develop digital archiving process for records
- Develop quality control process for digitally scanned documents
- Present Metadata for each record
- **Search by words and not just filenames.**

In order to achieve these goals, the content of the DDP must have a **uniform file format and file structure.**

# Data input in ECM Production

Coordinate with Region ECM power user to help you search and file documents. The power user will use <https://wsdotecm/capture/> to file documents as shown below

The screenshot shows the LINX web application interface for document capture. The form on the left contains the following fields:

- Work Item Number: D50117A
- Work Order Number: XL5707
- Project Name: SR 501/I-5 to W 26th Ave Ext Vic Including Couplet
- Discipline: Combined DA/PDA
- Document Type: Table of Contents
- Document Description: PDA.1.1\_D50117A\_TOC
- Document Date: 5/25/2021
- Status: Final
- File Name: PDA.1.1\_D5011A\_TOC.pdf
- File Import Path: C:\Users\shbyhs\OneDrive - Washington State Depar

A red arrow points from the text "New File Name" (highlighted in a blue box) to the "Document Description" field. A "Submit" button is visible at the bottom of the form.

The table on the right is titled "COMBINED DA/PDA" and lists document types for "SR 501/I-5 to Port of Vancouver – ADA/ D50117A".

COMBINED DA/PDA				
Index #	Name	Description	Required?	Comments
PDA.1.0 Introductory Documents				
PDA.1.1	TOC	Table of Contents		
PDA.1.2	MEMO	Memorandum		
PDA.1.3	VM	Vicinity Map		
PDA.2.0 Project Summary Documents				
PDA.2.1	PPR	Project Profile		
PDA.2.2	ERS	Environmental Review Summary		
PDA.2.3	BOD	Basis of Design		
PDA.2.4	ACT	Alternatives Comparison Table		
PDA.3.0 Core Documents				
PDA.3.1	DP	Design Parameter Worksheets		
PDA.3.2	SA	Safety Analysis		
PDA.3.3		Design Analysis	N/A	
PDA.3.4	MEF	Maximum Extent Feasible	Yes	See SD.7.10 MEF attachments



# ECM Portal output

Use the following link <https://wsdotecm/portal> to search for a document in ECM.

WSDOT ECM Portal

Search Indexes

1 Rows Returned - Limit set to 1000 rows. Sort Order: None

Vendor Viewer  Imaging Viewer  Windows Default Application

Text Wrap Titles  Text Wrap Rows  Show Results Tool Tip

<input type="checkbox"/>	View	Region	WIN	Project Name	Work Orders	Phases	Discipline	Document Type	Document Description	Document Date	Received Date	Is Administrative Record	Is Attorney-Client Privilege	Is Construction Final Record
<input type="checkbox"/>		SW	D50117A	SR 501/I-5 to W 26th Ave Ext Vic Including Couplet - ADA	XL5707	PE	Combined DA/PDA	Table of Contents	PDA.1.1_D50117A_TOC	05/25/2021				

**New File Name**

Project Design Search

# Process Review

**What** - Review of region project development and PS&E processes

**Why** - To provide reasonable assurance that projects meet established policies and procedures

**Who** - WSDOT (ASDE) and possibly FHWA (Area Engineer)

**When** - Annually

# Design & PS&E Process Review

## Focus Areas

- Determined by the ASDEs

## What could be Reviewed?

- Design Documentation Package
  - Basis of Design
  - Alternatives Comparison Table
  - Design Parameters Worksheet
  - Design Analyses and/or Maximum Extent Feasible
  - Basis of Estimate
- Project Plans and Specifications
- Estimate Backup and Engineer's Estimate
- Region Quality Management Plan

## When is it Reviewed?

- Projects that have been awarded within the last year

# Document Review Process

## Plan

- Identify focus areas
- Work with Region to select projects
- Region gathers Design Documentation Package

## Conduct

- Short introductory meeting with PE and Design Team Leader
- ASDE and FHWA Area Engineer go through documentation
- Design Team Leader answers questions and clarify issues
- Provide informal feedback and discuss any findings

## Report

- Draft report prepared and sent to Region for comments & input
- If a discrepancy is identified, Region to report steps for mitigation
- Report is completed and finalized
- Recommendations are forwarded to Region for implementation

# Need Help?



# Contact Info and Assignments

ASSIGNMENTS					
<b>ASDE</b>	Joanna Lowrey 360-705-7272	Daniele Dunjic 360-705-7237	Jim Mahugh 360-705-7245	Rafael Reyes 360-705-7253	Kevin Miller 360-705-7236
<b>Liaison</b>	N/A	N/A	Samih Shilbayeh 360-705-7589	N/A	N/A
<b>Region &amp; Mega Project Assignments</b>	Olympic and Gateway	SW SC Ferries	SnoKing 405 Sound Transit	NC MBA Eastern	SnoKing 520

# The End

# THANK YOU!

Don't forget to demonstrate where to find the training slides on the Internet.