Choose an item.

**[Project Title]**

**[Design Analysis or Design Decision Name and Number]**

[State Route], MP [Begin] to MP [End]

[Enter multiple SR and MP as necessary]

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

[Month Day, Year]

**WASHINGTON STATE DEPARTMENT OF TRANSPORTATION**

Choose an item.

[City], Washington

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

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| **SIGNATURES** | | | | | | | | | | | | | | | | | | Template  Version 1.3 | | | |
| ENGINEER OF RECORD | | | | | | | | | | | REGION APPROVAL | | | | | | | | | | |
| This document has been prepared under my direct supervision in accordance with  RCW 18.43 and appropriate WSDOT manuals.  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. | | | | | | | | | | | For Design Analysis, see Design Manual Chapter 300, Exhibit 300-2 or 300-4. For Design Decisions, see 300.03(2). If signature is not required, simply state:  “Not Applicable per Design Manual Chapter 300.”  in this box. | | | | | | | | | | |
| *[insert title]* | | | | | | | | | | |
| ASSISTANT STATE DESIGN ENGINEER APPROVAL | | | | | | | | | | |
| For Design Analysis, see Design Manual Chapter 300, Exhibit 300-2 or 300-4. For Design Decisions, see 300.03(2). If signature is not required, simply state:  “Not Applicable per Design Manual Chapter 300.”  in this box. | | | | | | | | | | |
| FHWA APPROVAL | | | | | | | | | | |
| Name, Title, Company, & Address: | | | | | | | | | | | For Design Analysis, see Design Manual Chapter 300, Exhibit 300-2 or 300-4. For Design Decisions, see 300.03(2). If signature is not required, simply state:  “Not Applicable per Design Manual Chapter 300.”  in this box. | | | | | | | | | | |
| Choose an item. **METADATA** | | | | | | | | | | | | | | | | | | | | | |
| PROJECT TITLE | | |  | | | | | | | | | | | | | | | | | | |
| NAME | | |  | | | | | | | | | | | | | | | | # | |  |
| REPORT TYPE | | | Choose an item. | | | | | REGION | | | | Choose an item. | | | | Report Date | | | | 5/5/2020 | |
| Work Order # | | |  | | | PIN # | | | |  | | | | WIN # | | |  | | | | |
| SR | |  | | Begin MP | | | | |  | | | | End MP | | | |  | | | | |
| SR | |  | | Begin MP | | | | |  | | | | End MP | | | |  | | | | |
| SR | |  | | Begin MP | | | | |  | | | | End MP | | | |  | | | | |
| **Elements Considered (Check all that apply)** | | | | | | | | | | | | | | | | | | | | | |
|  | Acceleration Length | | | |  | | Horizontal Sight Distance | | | | | | |  | Reserve Area Width | | | | | | |
|  | Access | | | |  | | HOV Elements | | | | | | |  | Shoulder Width - Inside | | | | | | |
|  | BAT Lane Element | | | |  | | Intersection Sight Distance | | | | | | |  | Shoulder Width – Outside | | | | | | |
|  | Bridge Rail | | | |  | | Lane Transition Rate | | | | | | |  | Stopping Sight Distance | | | | | | |
|  | Buffer Width | | | |  | | Lane Width | | | | | | |  | Superelevation | | | | | | |
|  | Clear Zone | | | |  | | Maximum Grade | | | | | | |  | Superelevation Runoff | | | | | | |
|  | Design Speed | | | |  | | Ramp Spacing | | | | | | |  | Turning Roadway Width | | | | | | |
|  | Fill/Ditch Slope | | | |  | | Ramp Width | | | | | | |  | U-Turn Width | | | | | | |
|  | Gore Slope | | | |  | | Ramp Width Shoulder | | | | | | |  | Vertical Alignment | | | | | | |
|  | Horizontal Alignment | | | |  | | Reserve Area Taper | | | | | | |  | Vertical Sight Distance | | | | | | |
|  | [Insert Other Element] | | | |  | | [Insert Other Element] | | | | | | |  | [Insert Other Element] | | | | | | |

*Notes*

***Multiple elements or location*** *within one document: Sometimes it may make sense to “group” interrelated issues into one document. If you do this, you need to be very organized in how you do it. Also, EXPLAIN why the issues are being grouped into one document. Don’t just group unrelated issues into one document just to write one document instead of multiple documents.*

*This is* ***not a standalone document****. This is a change from how we used to write up similar documents (such as deviations) in the past. This document will be part of the DDP along with other key documentation such as the Basis of Design. Considering this, provide only a brief description of the project, and only provide that background information relevant to the decision(s) being documented.*

***Be concise:*** *for everything you enter into the template, you should be able to answer the question:” how does this relate to the specific decisions being discussed?” If you can’t answer the question, delete the text.*

*Remove the DRAFT watermark in the background and all RED TEXT when the document will be submitted for signature.*

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| **Section 1: Background** |
| **Briefly describe the project:**   * A sentence or two, or at most a short paragraph describing what the project is. * For large complicated projects, you can defer details to another document that will be in the DDP, such as the Basis of design. For example, you could say:   *“This project replaces the existing I-5 bridge over the Columbia River with a new bridge along with associated major work. See the Basis of Design for details”* |
| **Provide any background information important to understanding the decision(s):**   * Provide any history that may be relevant to the issue(s) to be discussed * You are “setting the stage” here for the discussion to follow. * Background is NOT where you get into what the decisions that are documented will be…that comes in Section 2 * If safety is affected by the alternatives of this Design Analysis/Decision, describe the existing safety context. |
| **Related documents (such as a Basis of Design):**   * List any signed Basis of Design or other major design documentation documents that it is important to know of * By listing documents such as the Basis of Design, you can minimize or eliminate the need to provide that information here. You may also say “see the Basis of Design”. |

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| **Section 2: Decision Description** | | | | | | | |
| **Describe the decision(s) that will be discussed. Identify the design elements that are involved, including the locations. Identify the proposed dimensions and how they compare to Design Manual Guidance.** | | | | | | | |
| **This design document is referencing the** Choose an item. **version of the WSDOT Design Manual.** | | | | | | | |
|  | *ID #* | *Design Element* | *Location* | *Guidance* | *Proposed* | *Shown on*  *(Sheet #)* |  |
|  | W1 | Lane Width | LE-Line Sta. 123+45 to 130+00 | 12 ft | 11 ft. | Appendix 1, pg. 5 |  |
|  | W2 | Lane Width | LE 130+00 to LE 150+00 | 12 ft | 11.5 ft. | Appendix 1, pg. 6 |  |
|  | SD1 | Stopping Sight Distance | LW 50 +00 to 75+00 | 570 ft. | 520 ft. | Appendix 1, pg. 1 |  |
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| **Details**   * Start by filling out the summary table, above * You can choose any system you want to establish an ID# for the line….it is just important to give it an identifier for later discussions * Clearly, thoroughly and accurately identify the affected design elements to be discussed * Identify the specific locations that apply * Identify the proposed dimensions and identify what the Design Manual recommendations for the dimensions are * Identify WHY this is being documented (ie element dimension selected from a range of choices, choice of a dimension outside of the range given in the Design Manual, etc.) * For each line of the table, consider providing a clear call out to where the reader can quickly find a graphic or plot clearly showing the design element and location. This will greatly expedite the review * Detailed discussion can follow the table * This Details section is your opportunity to site applicable DM sections and dates, for each row (ID#).   For example:  *W1) Design Manual (date) section xxx, requires a dimension of 12 ft.*  *W2) Design Manual (date) section xxx, requires a dimension of 12 ft.*  *SD1) Design Manual (date) Exhibit 1260-1 requires a stopping sight distance of 570 ft.* | | | | | | | |
| **If guidance other than the Design Manual was used describe it here**   * For example; was the AASHTO “Green Book” guidance consulted? If so, describe how it affected the decision. | | | | | | | |

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| **Section 3: Options Evaluation and Decision** |
| **Location or Area:**   * Sometimes this template will cover multiple locations…perhaps 3 different ramps for example. If so, it will likely make sense to separate out each major location, as it is very likely that the considerations (metrics) will be different at different locations * If your document is only covering one location, you can get rid of this box |
| **Discuss the evaluation methodology. Describe the metrics/considerations that will be used to choose between options. Describe methodology (quantitative or qualitative) and any performance targets. The performance metrics, methods and targets you choose will be part of your performance trade-offs “story”.**  NOTE: It is required that you have an operations and safety metric.   * This should be a SHORT, concise section * Simply looking for: HOW ARE YOU GOING TO CHOOSE BETWEEN OPTIONS? * This is where you LIST and EXPLAIN the CONSIDERATIONS/METRICS that will be used to choose between options * For example, if you are going to choose to “minimize impact to adjacent businesses”, or choose to “minimize environmental impacts” then these would be metrics to list. * You can explain any “weighting” that will be applied…for instance, you can say that although 7 metrics will be used to choose between options, safety and mobility will have the highest weights attached during evaluation…you don’t need to weight things quantitatively either…you just can say that some metrics are weighted higher… * Describe METHODS. For example, will any quantitative analysis be included for safety or mobility?   While we always want to keep our project baseline needs in mind, to have an awareness of what we are there to fix, often the project baseline needs (or contextual needs, for that matter) will NOT be a major player in the specific decision being documented on this template. For example, if your project baseline need is to improve mobility on I-5 between Tacoma and Federal Way, that baseline need will likely not be relevant when discussing why you cannot provide the required sight distance on one of your on-ramps…. ONLY include project baseline or contextual needs if they are directly involved in the decision being discussed. |

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| *Options*  *Comparison*  *Table* | **Associated Issues (identified in Section 2) \*** | **Metrics / Considerations** | | | | | | |
| *Safety Performance* | *Operational and Mobility Performance* |  |  |  | *Maximizes sight distance* | *Avoids impacting property A* |
| ***OPTION 1*** | *W1, W2,* |  |  |  |  |  |  |  |
| ***OPTION 2*** | *W1, W2,* |  |  |  |  |  |  |  |
| ***OPTION 3*** | *W1, W2,* |  |  |  |  |  |  |  |
| *\* In this column, list those issues that were identified in Section 2 that are relevant at this location.* | | | | | | | | |
| **Detailed Description of the options evaluated as follows:**   * Option 1: Short description of this option. Include enough information to understand the differences between the options considered. * Option 2: Short description of option 2. * Option 3: Short description of option 3. | | | | | | | | |
| **Discuss the performance tradeoffs shown in the table, and compare the performance of the options:**   * Discuss the trade-offs without reaching a conclusion on which option is best…that comes below… * This can be a fairly lengthy section, if necessary | | | | | | | | |
| **Discuss any mitigating measures added to address performance trade-offs:**   * Clearly identify mitigating measures … * It may not be possible to get the desired performance in a category, but the performance may be mitigated by doing low cost countermeasures, such as adding signing | | | | | | | | |
| **Preferred Option and reasoning for selecting the preferred option:**   * …Considering what we’ve said above…option X is the preferred option. | | | | | | | | |

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| **Section 4: Attachments** |
| * **Vicinity Map** * ***[add items as necessary]***   **A NOTE ON PLAN SHEETS: Take the time to at least TURN OFF ALL UNRELATED LEVELS….clutter may not bother someone intimately familiar with the project, but for a reviewer with limited time and limited familiarity with the project, anything on the sheet that is not directly related to the discussion in the narrative is distracting and counterproductive.** |