ODOT DESIGN-BUILD PROJECT PERFORMANCE SPECIFICATIONS WRITING GUIDE
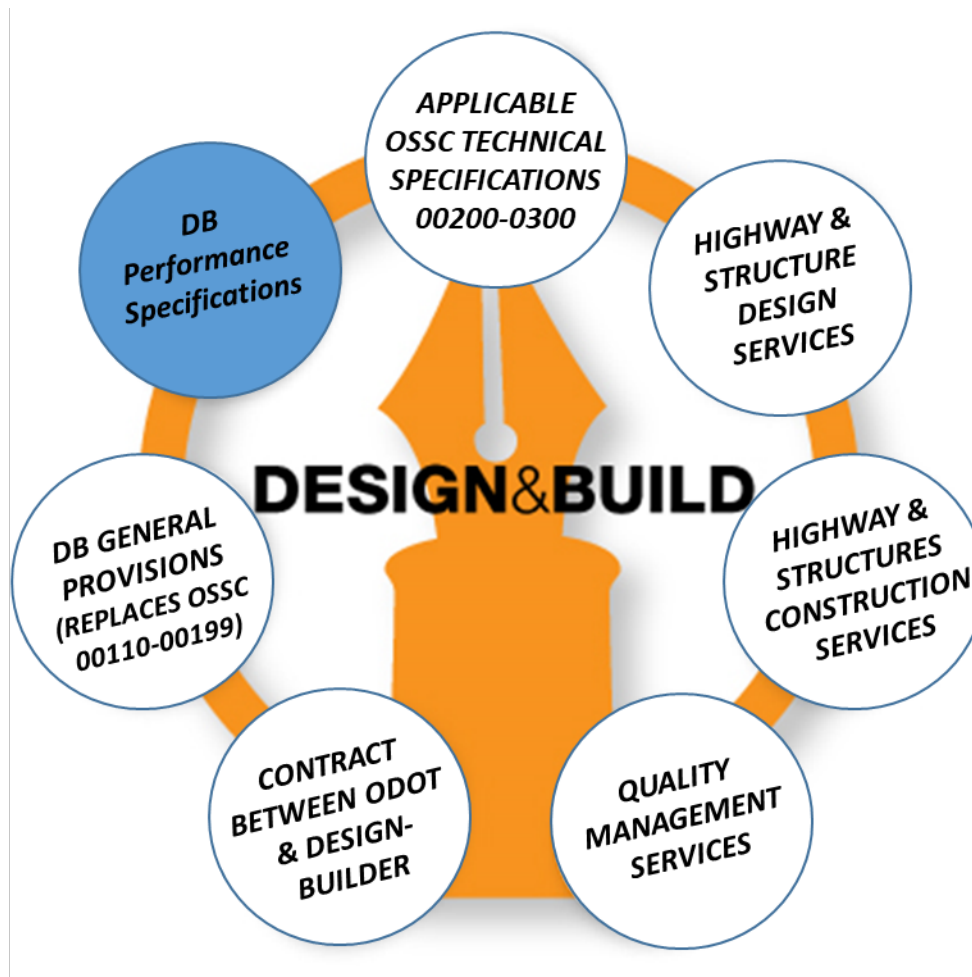

Figure 1 – DB Contract Documents and Services

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REVISIONS TO THE GUIDE

The ODOT Alternative Delivery Program publishes and updates this Design-Build Project Performance Specifications Writing Guide, and welcomes any comments and suggestions for revisions, corrections, and/or additions.

Comments or suggestions may be submitted to the ODOT Alternative Delivery Program at the following:

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1. Introduction

This document provides guidance to ODOT Design-Build (DB) project team members in preparing project-specific performance specifications.

2. DB Performance Specifications

The DB performance specifications are specifications that define the both design and construction required results in terms of minimal performance attributes, as opposed to specifying the required materials and means and methods to be used to achieve the required results.

DB Performance specifications define the design performance requirements and criteria that must be met by the Design-Builder while allowing the Design-Builder the latitude to develop the specific means and methods for accomplishing the specified level of performance.

DB Performance specifications should focus on defining the problem, not specifying the solution. Particular attention should be directed to defining the design requirements and performance requirements and criteria appropriate for a project scope of work. DB Performance specifications may not be required for all of the project components and elements, but they should be limited to those components or elements for which ODOT is willing to give the Design-Builder flexibility to solve complex project problems with innovative and cost-effective solutions. Allowing flexibility for other project components or elements such as striping, median barriers, and signing is unlikely to produce significant benefits. Consequently, it is appropriate to specify standard practices and processes for such elements in other DB contract documents.

The DB Performance specification documents may include some aspects that are prescriptive in nature that prescribe specific design criteria, materials or means and methods need to comply with project constraints and commitments. Prescriptive requirements and criteria may be utilized in performance specifications only when ODOT needs to fulfill third party commitments and meet specific design and construction requirements. Prescriptive requirements and criteria are conveyed through detailed explanation of the materials and the rules, means and methods that the Design-Builder must use to comply with when designing and constructing specific project components and elements.

DB Performance specifications typically have the following four essential elements:

2-a. Attributes

The critical elements of the work that are of importance to the owner and the means by which the performance characteristics are identified. (Example - pavement structure attributes may be measured in terms of ride-ability (smoothness), durability, and skid resistance).

2-b. Performance Requirements

A statement of the desired qualitative results with an emphasis on measurable outcomes that align with project objectives, while leaving the details on how to achieve them to the Design-Builder. (Example – The Bridge shall be configured to have no more than three spans and to have no more than two piers in the water).

2-c. Design Requirements

Definitive statements of performance for a particular requirement, usually a statement of results desired at particular times in the life of the project component (such statements or requirements should not be repeated in other contract documents). The statement should specify the minimum acceptable technical standards and any special requirements not included in the standards that define the limits within which the design shall be developed and conducted, such as "The Design-Builder shall design Structures in accordance with the ODOT Bridge Design Manual." (Another example - Bridges shall be designed and constructed for a minimum 75-year service life (without significant, non-routine maintenance required) and shall meet Agency 4R design Standards.)

2-d. Substantiation of Performance

A statement of what is required and how and when actual performance will be measured or how predicted performance will be determined. Inclusion of quantifiable indicators of performance or conditions or targets to verify that the Design-Builder is in conformance with the contract requirements. (Example - The Design-Builder shall verify the existing ACP thickness by coring the existing ACP to be incorporated into the final pavement at 250-foot intervals. The Design-Builder shall submit the core thickness and condition information to the Agency Engineer for Review and Comment as a supplement to the Pavement Design Report.)

ODOT's DB performance specifications cover the following engineering technical disciplines.

- DB141.11 – Structures
- DB141.12 – Geotechnical
- DB141.13 – Hydraulics
- DB141.21 – Roadway Geometrics
- DB141.22 – Drainage
- DB141.23 – Guardrails and Barriers
- DB141.24 – Highway Illumination and Electrical
- DB141.25 – Permanent Traffic Control
- DB141.26 – Pavement
- DB141.27 – Landscaping and Aesthetics
- DB141.28 – Surveys and Mapping
- DB141.29 – Intelligent Transportation Systems
- DB141.30 – Traffic Analysis
- DB141.31 – Temporary Traffic Control
- DB141.51 – Environmental Compliance
- DB141.52 – Public Information and Involvement
- DB141.56 – DBE, Workforce Diversity, and Mentoring
- DB141.57 - Maintenance During Construction

3. Writing Style Guidance

The following writing style guidance should be followed when preparing performance specifications for an ODOT DB project:

1. Make **all** project-specific edits to the template performance specifications (including filling in blanks, deleting orange instructions) as **TRACKED CHANGES**

2. DB Performance specifications are written in the same format and manner as the ODOT Oregon Standard Specifications for Construction General Conditions Part 00110 through 00199. In the case of DB, the General Conditions are replaced by a unique set of the General Provisions (Sections DB110 through DB199).

3. DB Performance specifications are written in an active voice and indicative mood style to clearly identify the responsible party (i.e., "The Design-Builder shall…" and "The Agency will…"). Definitions for the defined terms cited below (shown in quotes and capitalized) are included in DB110.20.

4. DB Performance specifications are not to be written in the imperative mood style that is used in the ODOT Oregon Standard Specifications for Construction Parts 00200 through 03000 ("DB Standard Technical Specifications").

5. The term "Agency" represents ODOT. (The term "ODOT" is replaced with "Agency".)

6. The term "Agency Engineer" represents ODOT's designated representative. "Engineer" is replace with "Agency Engineer", except for when referring to the Design-Builder's design engineers, who are referred to as "Professional(s) of Record".

7. The term "Design-Builder" represents the entity awarded the contract. (The term "Contractor" is replace with term "Design-Builder".)

8. The term "Design-Build Project Manager" represents the Design-Builder's designated representative.

9. "The Agency **will**…" terminology is used to describe activities that will be performed by ODOT.

10. "The Design-Builder **shall**…" terminology is used to describe activities that will must be performed by the Design-Builder.

11. "The Design-Builder's submittal **must**…" terminology is used to describe requirements for the Design-Builder's work products and submittals.

12. Table naming format is Table DB###.##-X. "###.##" is the performance specification subsection number and "X" is table number, example Table DB141.51-3.

13. Section versus Subsection numbering for DB specifications:

    a. "Section" refers to the full section (Section DB141 - Performance Specifications series)

    b. "Subsection" refers to a specific subsection within the series (DB141.11(c) Requirements)

14. "DB Standard Technical Specifications" are defined as the Oregon Standard Specifications for Construction Parts 00200 through 03000. Terms:

    a. Section – "DB Standard Technical Specification, Section 00305"

    b. Subsection – "DB Standard Technical Specification 00305.05"

15. DB Special Provisions supplement or modify the DB Standard Technical Specifications.

    a. Section – "DB Special Provisions, Section 00305"

    b. Subsection – "DB Special Provisions 00305.00"

16. When referencing websites, please name the document or process followed by "available at the [website name] (see DB110.05(e)). Example: *"ODOT Qualified Products List (QPL) available at the ODOT Construction Section - Qualified Products website (see DB110.05(e))"*

17. Clearly identify the roles and responsibilities of both the Agency and the Design-Builder for any added submittal or meeting requirements. For example:

    a. Clearly define the purpose and minimal content requirements for all submittals, and whether submittals are for Agency "Acceptance" or Agency "Review and Comment".

    b. Include submittal time requirements ("At least X Calendar Days before…") for draft (if applicable) and finals submittals.

18. Do not make changes to the template formatting, organizational structure, section and subsection numbering or defined terms. Notify ADS (or include notes in the comments) if any necessary corrections to the templates are identified.

19. DB Performance specifications include references to DB General Provisions, Attachment A – Engineering Data and DB General Provisions, Attachment C – Reference Documents.

    a. Engineering Data – Project-specific information provided by the Region project team that is to be used as a basis for the Design-Builder's design and construction of a project. As described in DB141.00(a)(4), the Design-Builder may rely upon information provided as "Engineering Data" in the performance of the Work. Examples of project specific engineering data include, but are not limited to:

- Project Constraints map

- Project map

- Basic Configuration elements summary

- Environmental permits

- Geotechnical reports

- Right-of-Way plans

    b. Reference Documents – Project-specific documents and information provided by the Region project team for informational purposes only. Reference information does not represent project contract requirements and are not to be relied on by the Design-Builder (see DB141.00(b)(1)). Examples of project specific reference information documents include, but are not limited to:

      1. Historical documents

      2. Hydraulics technical memo

      3.   Proof of concept plans

20. When modifying the lists of applicable Standards at the beginning of each DB Performance Specification:

    a.   Utilize the exact title for all publications, but **<u>do not</u>** reference the edition unless the Design-Builder is required to use a specific version other than the current version. The Contract includes language in DB141.00(a)(1) that specifies that the version of all references, manuals, publications, etc. applicable to the Contract is the version that is current on the date of project advertisement.

    b.   Note that Section DB141.00 includes a list of 'universal Standards' that span across multiple disciplines. This was done to avoid repeating these same Standards within multiple Performance Specifications. If a Standard is included in the list under DB141.00, there is no need to also add it under the listed Standards in subsequent DB141.XX Performance Specifications.