

INTRODUCTION

PREFACE

The *Bridge Design Manual* provides a reference for those involved in preparing ODOT bridge design products. The purpose of the manual is to:

- Explain the responsibilities of those preparing contract plans and specifications for bridges and other structures.
- Provide guidance in design criteria, analysis methods and detailing practices for the preparation of plans, specifications and cost estimates for bridges and other structures.

An effort has been made to make the *Bridge Design Manual* informative, comprehensive, and accurate. It is a guide to acceptable ODOT practices. The manual is not a legal document. There is no substitute for sound engineering judgement.

Bridge Design Manual users are encouraged to submit comments, corrections, and proposals for new or revised materials.

Any comments or questions about the *Bridge Design Manual* should be directed to:

Bridge Design Practice Coordinator
Oregon Department of Transportation
Technical Services – Bridge Engineering Section
355 Capitol Street N.E., Room 301
Salem, OR 97301-3871

(503) 986-4200

ORGANIZATION OF THE MANUAL

The *Bridge Design Manual* is divided into five main sections.

- Table of Contents
- Introduction
- Section 1: Design and Detailing Practices
- Section 2: Drafting Practices
- Index

The word “Section” and a number always refer to a section, subsection, etc., of this *Manual* unless another reference is specifically called out. So, you will see Section 2, Section 2.1, Section 2.1.1, Section 2.1.1.1, and Section 2.1.1.1(1).

Except for the “Introduction”, each Section has:

- Main body of text.
- Appendix.

The page numbers of the Section’s main body of text are prefixed with the Section number. Thus, for Section 2, the page numbers are 2-1, 2-2, etc. The first page of the Section 2 Appendix is A2-1.

ORGANIZATION OF THE MANUAL (continued)

Tables, charts, and examples of forms are all identified as alphanumeric “Figures”. The figure number refers to the specific section number where the figure is mentioned:

- Figure 2.1.1A is the first, or in some cases, the only figure mentioned in Section 2.1.1 and inserted in or closely after the Section 2.1.1 text.
- Figure A2.3.2A is in the Section 2 Appendix and mentioned in Section 2.3.2.

For the sake of brevity or in order to use a familiar term in place of an unfamiliar “official” version, some editorial liberties have been taken when referring to organizational names or titles:

<u>Manual</u>	<u>Official</u>
Bridge Section	Bridge Engineering Section
Roadway Section	Roadway Engineering Section
Traffic Section	Traffic Management Section
Team Supervisor	Managing Engineer, Administration Manager
Front Office	Room 301
Front Office Staff or Personnel	Project Support Team
Region Tech Center	Regional Technical Centers

The phrases “Transportation Building”, “our building”, or “this building” all refer to the ODOT Building on the Capitol Mall. When a room or floor number is mentioned without further identification, assume the reference is to a room or floor in the ODOT Headquarters Building.

REVISING THE MANUAL

In-House Revision Procedure

(1) An Idea Is Born - Discuss your suggestion for revising or making additions to the *Bridge Design Manual* with your Team Supervisor and the Bridge Design Practice Coordinator. If it is agreed the item should be proposed, your supervisor will assign you or another person to develop a written proposal.

Please note:

<p><u>Only</u> the Bridge Design Practice Coordinator is to circulate communications concerning matters of or revisions to design practices.</p>
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Design practice is any policy, procedure, or information that will affect some or all of those involved in the preparation of contract documents for ODOT.

(2) Put It in Writing - Research and develop a written proposal using three general subject headings:

- Problem Statement.
- Analysis/Research Data.
- Proposal

Check your finished product by reviewing the following guiding comments:

- The existing problem is clearly stated.
- Research and analysis of the problem and potential solution are thorough and understandable.
- The proposed solution is well thought-out, is supported by facts, and does, in fact, solve the problem. Has the impact on other areas been considered? Have the details been coordinated with other units or organizations that may be involved or affected?
- No questions that need to be answered before implementation should remain.

In-House Revision Procedure (continued)

(3) Review and Approval - After reviewing a written proposal for completeness, the Design Practice Coordinator will either:

- Accept, without further review, manual corrections for inclusion in the *Bridge Design Manual* or
- Distribute a copy with due date and attached Design Practice Approval form for review and comments.

After reviewing the returned Approval forms, the Coordinator will see that one of the following is done:

- Proposals approved by the all will be forwarded through the approval process.
- Proposals needing more research or clarification will be returned to the originator for revision and re-submittal.

Approved proposals, if appropriate, will then be forwarded to the FHWA (Federal Highway Administration) for review, comments and approval.

Any FHWA comments on a proposal will be reviewed and given a final approval.

(4) Implementation of Approved Revision - After a proposal has final approval, the Coordinator will prepare a revised *Manual* page for inclusion in the manual. A vertical line in the right-hand margin of a revised page indicates the text that has been revised or added. The word "REVISION" and the year are printed in the bottom margin to the right. This system is similar to that used by AASHTO to revise its standard specifications.

Proposals will be incorporated electronically into the Bridge Design Manual on the Bridge Design Web Page as soon as practical.

Proposed Revisions From Outside Sources - Suggested revisions and additions from *Bridge Design Manual* users outside of ODOT are welcome. They should be submitted directly to the Design Practice Coordinator at the address shown in the Preface.

If a proposal from an outside source is accepted, the Coordinator will process it according to steps (3) and (4) of "In-House Revision Procedure".

Regardless of whether or not a proposal is accepted, the Coordinator will reply in writing to the person making the submittal.