

Design Standards Letter

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Section/Plan No.: Sections 2-01, 2-02, 2-03, 2-04, 2-06, 4-01, 4-03, 4-05, 4-07, 4-08, 4-09, 5-02, 5-03, 6-03, 7-02, 7-03, 8-02, 8-03, 8-04, 9-04, 9-10, Figures 1-01.2, 2-01.1, 2-02.2, 2-03.1, 4-03.5, 4-05.6, 4-05.9, 4-05.10, 4-05.11, 4-05.12, 4-07.2, 4-10.1, 5-03.4, 5-03.5, 5-03.6, 5-03.7, 5-03.8, 5-04.1, 5-04.2, 5-04.3, 5-04.4, 5-04.5, 5-04.6, 5-04.7, 6-03.1, 6-03.2, 6-03.3, 6-03.4, 6-03.8, 6-03.5, 7-02.13, 8-02.9, 8-03.13, 8-03.15, 8-03.16, 8-03.17, 8-03.31, 8-04.10, 8-04.11, 8-04.14, 8-04.15, 8-04.17, 8-04.23, 9-04.3, 9-10.2

Subject: Project Development Manual Revisions

Body

Questions concerning the Project Development Manual revisions should be directed to General Headquarters, Design Standards Section, Dan Tschirgi (573) 526-2924 or David Silvester (573-526-2903).

NOTE	EXPLANATION
1	The following revisions are effective April 1, 2002.
ITEM	DESCRIPTION OF REVISION
Volume I Table of Contents	Revision dates changed for appropriate sections.
Figure 1-01.2	Revised titles of Microstation design forms D-50, D-51, and D-53 to properly reference the function of each of the typical sections.
Section 2-01	Subsection 2-01.2 revised to have two copies of the Request for Environmental Services (Figure 2-02.2) submitted approximately two months prior to preparing a conceptual study report.
Figure 2-01.1	Figure updated to list copies for GHQ Design and GHQ Project Operations
Section 2-02	Subsection 2-02.1 revised to have two copies of the Request for Environmental Services (Figure 2-02.2) submitted upon initiation of a Location Study Report.
Figure 2-02.2	Revised heading such that the Request for Environmental Services is submitted to the State Design Engineer.
Section 2-03	Subsection 2-03.2 revised to have two copies of the Request for Environmental Services (Figure 2-02.2) submitted at least two months prior to the prelocation study meeting date.
Figure 2-03.1	At their request, removed Department of Health and Human Services from the

Figure 2-03.1 (cont.)	list of agencies to be notified of a hearing. City and county health agencies should still be included in the notification of local agencies, as outlined in Subsection 2-03.4(1).
Section 2-04	Subsections 2-04.2(1), 2-04.2(2), 2-04.2(3), 2-04.8(2)(a), and 2-04.8(3)(a) revised to have two copies of the request for Environmental Services (Figure 2-02.2) submitted at the appropriate time prior to an Environmental Impact Statement, Environmental Assessment, or detailed design.
Section 2-06	Subsection 2-06.6 revised to have two copies of the Request for Environmental Services (Figure 2-02.2) submitted with the approved preliminary plan.
Section 4-01	Subsection 4-01.4(1) revised to have two copies of the request for Environmental Services (Figure 2-02.2) submitted to initiate cultural resources and environmental work on proposed borrow areas to be acquired by the Commission.
Section 4-03	Several revisions were made. In Subsection 4-03.2(1), the design criteria listed to be on the title sheet may not be necessary for all projects, but criteria should not be arbitrarily deleted from the title sheet. In Subsection 4-03.2(7) the length of project is clarified by removing the references to state or federal length. Guidance is added to Subsection 4-03.16 for setting contract time with regard to paving activities, since the October 1 paving cutoff date has been removed from the specifications effective July 1, 2002. Finally, Subsection 4-03.17(1)(f) is updated to reflect the name of the form where a conflict of interest is reported with final plan submittal.
Figure 4-03.5	The costs of the new location survey marker components and the larger "Show Me Progress" sign assembly are added to the form. Costs for the copperweld, plate, and concrete right-of-way markers are removed.
Section 4-05	The references to "limited access" right-of-way in Subsections 4-05.1(1) and 4-05.5 are updated to definitions previously made in Subsection 4-02.3. In Subsection 4-05.8(2) the figure for Potentially Appropriate and Inappropriate Sites for Roundabouts was incorrectly referenced. It is now correctly referenced as Figure 4-05.7.
Figures 4-05.6, 4-05.6, 4-05.9, 4-05.10, 4-05.11, and 4-05.12	These roundabout figures have minor revisions and corrections. Figures 4-05.6, 4-05.9, and 4-05.11 have minor corrections. Shading was added to 4-05.10 to show examples of sight line areas that must be kept free from obstructions. Figure 4-05.12 was revised to show the raised bicycle platform between the pedestrian crossings, instead of extending through the crossings.
Section 4-07	The maximum superelevation on structures in Subsection 4-07.3(3)(a) was removed because it is the same as the maximum superelevation on all urban freeways in Figure 4-07.1.
Figure 4-07.2	Note 1 for 4-lane minor arterial street was revised to reference Subsection 4-09.25 for sidewalk criteria.
Section 4-08	Subsection 4-08.3(1)(b) was revised to define small quantities of borrow, less than 100,000 cubic yards, as acceptable for contractor furnished borrow. Also, the contractor certification for borrow area clearance must be submitted to the Resident Engineer.
Section 4-09	Additional surface maintenance examples are given in Subsection 4-09.7(2) that do not require guardrail height adjustment.

Figure 4-10.1	In the Title Sheet, as Figure 4-10.1 and on District microstation servers, Pavement Marking has been added to the index of plan sheets.
Volume II Table of Contents	Revision dates changed for appropriate sections.
Chapter V Table of Contents	Made revisions to correspond to Section revisions.
Section 5-02	Removed reference to Bridge Field Check and Bridge Field Check Memorandum. Updated reference to GHQ Bridge.
Section 5-03	In Subsection 5-03.9, added description of Form BR 105R (Figure 5-03.3) page 5. In Subsection 5-03.9(2), added reference to new Figure 5-03.8.
Figures 5-03.4 and 5-03.5	Channel sections have been removed from these updated example profile sheets and moved to a new Figure 5-03.8.
Figure 5-03.6	Example stream crossing plan has been updated.
Figure 5-03.7	Title of figure has been changed from Field Check Memorandum to Bridge Memorandum, and the memorandum has been revised.
Figure 5-03.8	New figure shows channel sections that have been removed from Figures 5-03.4 and 5-03.5.
Figures 5-04.1, 5-04.2, 5-04.3, 5-04.4, 5-04.5, 5-04.6, and 5-04.7	Figures have been updated with new examples.
Chapter VI Table of Contents	Made revisions to correspond to Section revisions.
Section 6-03 Section 6-03 (cont.)	Please read carefully. It was determined that a large quantity of Type 1 base is economically available in Missouri. Where the purpose of a Type 5 base was not as a drainage layer, the Section has been revised throughout to use Type 1 base instead of Type 5 base under all light duty pavements unless 2 foot rock base is specified. For heavy duty pavements on stabilized permeable base, Type 1 base should also be used. Subsection 6-03.7 has also been revised to properly reference the function of the typical sections on Microstation design forms D-50, D-51, and D-53.
Figures 6-03.1, 6-03.2, 6-03.3, 6-03.4, and 6-03.8	Revised to show Type 1 base instead of Type 5 base under all light duty pavements and heavy duty pavements on stabilized permeable base that are not on 2 foot rock base.
Figures 6-03.5	Added "Dual Lane and Two-Way Traffic Facilities" to title of figure for clarification and replaced shoulder type with reference to Subsection 6-04.2.
Chapter VII Table of Contents	Made revisions to correspond to Section revisions.
Section 7-02	In Subsection 7-02.6, corrected reference to early acquisition process to Figure 7-02.18. In Subsection 7-02.9(6), changed title of contract submittal form for Chief Counsel's Office.
Figure 7-02.13	Revised memorandum format.

Section 7-03	Reformatted outline of Section. Updated ASTM references.
Chapter VIII Table of Contents	Made revisions to correspond to Section revisions.
Section 8-02	Revised Subsection 8-02.11 to include description, appropriate situations for use, and costs of video detection systems.
Figure 8-02.9	This figure, also Microstation design form D37C, was revised to include video systems in the detector schedule table.
Section 8-03	In Subsection 8-03.4 and 8-03.4(4), changed reference from Figure 8-03.31 to Standard Plan 903.03. Subsections 8-03.4(3), (4) and (8) and Subsection 8-03.9 (7) are revised to remove references to single direction breakaway assemblies.
Figures 8-03.13, 8-03.15, 8-03.16, and 8-03.17	Revised procedure and design details for overhead sign trusses to include Type A and Type C traffic barrier pedestals.
Figure 8-03.31	The data on this figure has been incorporated into Standard Plan 903.03, so the figure is being deleted.
Section 8-04	Subsection 8-04.2(6) revised for dimensions of enlarged "Show Me Progress Sign" and to include the "As Promised" banner to be affixed to the sign when the project is completed. Subsection 8-04.5 has been substantially revised by the Pavement Marking Quick Action Team. Please read carefully. The available types of pavement marking are explained in more detail and a chart to aid in selection of appropriate marking (Figure 8-04.23) is added.
Figures 8-04.10, 8-04.11, 8-04.14, 8-04.15, and 8- 04.17	These figures still showed signs on moveable barricades. These figures were revised to indicate portable mount is the approved method. Also, added Speed Limit/Work Zone (54/25) combination signs to several sheets in Figure 8-04.15.
Figure 8-04.23	New pavement marking selection chart. Please review carefully.
Chapter IX Table of Contents	Made revisions to correspond to Section revisions.
Section 9-04	Subsection 9-04.3 revised to remove plastic netting from types of ditch protection. Netting is no longer used.
Figure 9-04.3	Removed plastic netting from figure.
Section 9-10 and Figure 9-10.2	Revised reference in Subsection 9-10.12 and all sheets in Figure 9-10.2 to reference Standard Plan 703.38 for culvert extensions.
Microstation Design Form D37C	As indicated above for Figure 8-02.9, added video systems to the detector schedule table.
Microstation Design Forms D51 and D53	Shoulder and roadbed widths adjusted to be consistent with AASHTO criteria. Also, note associated with fill slope revised to explain minimum distance from toe of fill to shoulder. All typical cross sections will be revised to contain this note in the future.

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