

Design Standards Letter

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Section/Plan No.: D1-02, D1-03, D2-01, D2-02, D2-03, D2-04, D2-06, D4-01, D4-02, D4-03, D4-08, D4-09, D5-05, D6-07, D7-02, D8-01, D8-02, D9-02, D9-04

Subject: Sections 1-02, 1-03, 2-01, 2-02, 2-03, 2-04, 2-06, 4-01, 4-02, 4-03, 4-08, 4-09, 5-05, 6-07, 7-02, 8-01, 8-02, 9-02, and 9-04

**Leveling Course Special Sheets
D-29 through D-71**

Body

Enclosed are English and Metric revisions to the Design Division's *Project Development Manual* for the above noted sections. Except where noted, all revision or new dates are 4-1-99. Revisions are summarized as follows:

Contents, Volume I. Revision date changed to 4-1-99 for the Contents sheet and Sections 1-02, 1-03, 2-01, 2-02, 2-03, 2-04, 2-06, 4-01, 4-02, 4-03, 4-08, and 4-09.

Table of Contents, Chapter I. Section and figure titles were changed or added accordingly.

Figure 1-01.2. This figure was extensively revised. Removed all the D-sheets which correlated to old mainframe programs. Revised the titles of all the typical sheets (D-50 through D-71). These revised titles better describe each typical sheet.

Section 1-02, Project Initialization and Program Estimating. Subsection 1-02.8 was revised to state that a written request for an estimate should be made to the district right of way manager.

Section 1-03, General Procedures. Subsection 1-03.4 was revised to explain the contracts and processes involved with employing consultants. Please review this subsection carefully. Subsection 1-03.7, second and third paragraphs, were revised to change the title of the urban agreement to municipal agreement, and also added the new county agreement to the text.

Figures 1-03.5 and 1-03.6. These new figures are the municipal (DE-11) and county (DE-10) agreements, respectively. These documents can be found on the LAN networks at P:\CONTRACT\DE\DE11.SAM and P:\CONTRACT\DE\DE10.SAM.

Figure 1-04.1. This figure was not revised, but rather cleaned up for better readability.

Table of Contents, Chapter II. Section and figure titles were changed or added accordingly.

Section 2-01, Conceptual Study. All occurrences of conceptual study letter were changed to conceptual study report. Subsection 2-01.2, fourth paragraph, was revised to state that a written request for environmental services should be on a form provided as Figure 2-02.2.

Figures 2-01.1, 2-01.2, and 2-01.6. The line requesting the posted speed on these reports was removed.

Figure 2-01.9. Added Design ADT in Section B.

Section 2-02, Location Study/Environmental Report. This section has been extensively revised, coinciding with revisions made to Figure 2-02.1. Please review this section carefully.

Figure 2-02.1. This figure was revised into two sections: Purpose and Need, and Alternatives Analysis. Please review Section 2-02 for required data when preparing this report.

Figure 2-02.2. This new figure is the format to be used when submitting a written request for environmental services. An electronic version of this form is available in the Design Forms.

Section 2-03, Public Hearings and Meetings. Subsections 2-03.1 through 2-03.3 were extensively revised. Please review these subsections carefully.

Figure 2-03.7. Figure 2-03.7 was deleted and Figure 2-03.8 was renumbered accordingly. This figure was revised to incorporate the current commissioners. Also added last sentence to last paragraph.

Section 2-04, Environmental Document. In the fourth bullet in Subsection 2-04.8 (3) (a), added last sentence requiring a site plan to accompany the photographs of the buildings.

Section 2-06, Preliminary Plans. In Subsection 2-06.6, fourth paragraph was revised to incorporate Figure 2-02.2.

Table of Contents, Chapter VI. Section and figure titles were changed or added accordingly.

Section 4-01, General. At end of first paragraph in Subsection 4-01.4 (1), added last two sentences concerning the request for environmental services and Figure 2-02.2.

Section 4-02, Right of Way Plans. In fifth paragraph of Subsection 4-02.8, changed 0.005 ha to 0.001 ha to correspond to Figure 4-01.1. Subsection 4-02.11 was extensively revised discussing the request for environmental services and Figure 2-02.2.

Section 4-03, Plans-Specifications-Estimates. Added Subsection 4-03.19 concerning communications between MoDOT personnel and the public, particularly any bidding parties. **Please review this material closely.**

Figure 4-04.1. The table portions of this figure were revised in the areas of the typical section drawing numbers. In the footnotes section of the figure, footnote (18) was renumbered with the deletion of footnote (17).

Section 4-08, Grading. Revised Subsection 4-08.3 (1) (b) to address the request for environmental services and Figure 2-02.2.

Section 4-09, Miscellaneous. First paragraph of Subsection 4-09.6 (4) was revised to advise districts to request variances with respect to fence location to the Design Division regarding installed or relocated fence. Also revised Subsection 4-09.14 (2) stating that the clear zone may be modified in areas of horizontal curvature by using correction factors given in Table 3.2 of the Roadside Design Guide.

Contents, Volume II. Revision date changed to 4-1-99 for Contents sheet and Sections 5-05, 6-07, 7-02, 8-01, 8-02, 9-02, and 9-04.

Section 5-05, Bridge Rehabilitation and Miscellaneous Structures. In Subsection 5-05.2, changed Design Division to Preliminary Studies Division.

Section 6-07, Bituminous Construction Materials. Revised Subsection 6-07.1 to state that resurfacing quantities should be designated by megagrams (tons) for the components of each mixture. Revised Subsection 6-07.6 (3) to increase the thicknesses of the SP250 courses under a SP125 course to a range of 75-115 mm (3 - 4 1/2").

Table of Contents, Chapter VII. Section and figure titles were changed or added accordingly.

Section 7-02, Local Public and Private Utility Adjustments. Subsection 7-02.9 (5) was revised to incorporate the new county agreement. References to numerous figures were changed due to the renumbering of those figures (see below).

Figures 7-02.6 and 7-02.7. Changed the form number in the upper left corners to reflect the CCO's new designation. Renumbered Figure 7-02.9 to 7-02.7.

Figure 7-02.8. Renumbered Figure 7-02.11 to 7-02.8.

Figures 7-02.9 and 7-02.10. Changed the form number in the upper left corners to reflect the CCO's new designation. Also changed the reference to urban agreement to county/municipal agreement on both figures. Renumbered Figure 7-02.12 to 7-02.9 and Figure 7-02.18 to 7-02.10.

Figures 7-02.11 through 17. These figures were renumbered accordingly.

Table of Contents, Chapter VIII. Section and figure titles were changed or added accordingly.

Section 8-01, Highway Lighting and Section 8-02, Traffic Signals. These two sections have been extensively revised . In Section 8-02, references to numerous figures were changed due to the renumbering of those figures (see below). Please review carefully.

Figure 8-01.11. Table 8-01.4 was revised with new data and Table 8-01.9 was revised to update to current policy.

Figures 8-02.9 and 8-02.10. These figures have been revised to incorporate the new or revised D-37 and D-38 series sheets. The D-37A, 37B and 37C sheets all have minor revisions. The wiring diagram, which used to be on all the D-38 sheets, was removed from those sheets and used to create the new D-37D sheet. The D-38 sheet is to be used for pretimed controllers. The D-38A through 39E are to be used with actuated controllers. Check with district Traffic personnel for assistance in completing these sheets.

Figures 8-02.11 through 16. These figures were renumbered accordingly.

Figures 8-03.9 through 8-03.21. These figures were converted into a MicroStation format and metricated.

Figure 8-04.5. Temporary median crossover note on Sheet 1 was changed to temporary median opening.

Figure 8-04.13. On Sheet 1, added last note stating that the channelizing devices located downstream of the taper are optional.

Section 9-02, Hydrologic Analysis. Revised the formulas in Subsection 9-02.5 (1) (a) 1.

Section 9-04, Erosion Control and Energy Dissipation. Revised Subsection 9-04.8 to eliminate the Iowa type stilling basin. This section was also metricated.

Figures 9-04.1, 9-04.2, and 9-04.3. These figures were converted into a MicroStation format and metricated.

Figures 9-05.1 and 9-05.2. These figures were converted into a MicroStation format and metricated.

Figures 9-06.13 through 9-06.17. These figures were converted into a MicroStation format and metricated.

Figures 9-08.1 and 9-08.2. These figures were converted into a MicroStation format and metricated.

Leveling Course Special Sheets. On Sheet 1, added a column for portable or non-portable mounting. On Sheet 3, added last note stating that the channelizing devices located downstream of the taper are optional (same as Figure 8-04.13). On Sheet 4, revised the third note. All of these sheets are located on the district's MicroStation servers. These sheets will be distributed under separate cover.

D-29 through D-71. With the exception of the D-29, 30, and 34 sheets, all the D-sheets have been revised. The D-32 and 33 sheets were revised with the removal of the catwalk details, and all other references to catwalks. The D-37A, 37B, and 37C sheets all had minor revisions. The D-37D sheet is a new sheet with the wiring diagram from the old D-38 series sheets. The D-38 is now used for pretimed signal installations only. The D-38A through 38E are used for actuated signal installations. The D-50 through 71 sheets contain minor to significant revisions. All of these sheets are located on the district's MicroStation servers. These sheets will be distributed under separate cover.

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