



BRIDGE DESIGN MEMORANDUM – DM0724

TO: RPG Structural Engineers
Alternative Delivery Structural Design Engineer
Design Consultants

Date: August 13, 2024

RE: *Bridge Plans Sheet Sizes and Bridge Plans Preparation*

Apply these requirements to all projects where design has not advanced beyond preliminary plans submittal and/or whenever SCDOT Structural Drawings and Details are incorporated into the 95% bridge plans.

SCDOT is moving to a new bridge plans sheet size. All sheets in the bridge plans shall be scaled such that a printed full size bridge plan sheet will measure 22 in by 34 in.

Make the following revisions in the ***Bridge Design Manual***:

Replace the paragraph in Section 6.1.1 with:

The Department only uses 22 in by 34 in size plan sheets for project development. Provide a 2-in left-binding margin and ½-in right, top, and bottom margins around the sheet.

Replace the first paragraph in Section 6.1.2 with:

In the upper right-hand corner of each sheet, provide the sheet number. Number all sheets sequentially including the Title Sheet, which is Sheet 1. If additional sheets are added to the set of plans after the plans are submitted to the Letting Preparation Office for letting, add a letter suffix, A, B, C, etc., to the number of the inserted sheets (e.g., 8A, 8B, 8C). Note this in the Index of Sheets.

Delete Section 6.1.5 and Figure 6.1-3



Replace Section 6.1.6 with:

6.1.6 Structural Drawings and Details

The SCDOT Structural Drawings and Details provide bridge elements that are consistent from project-to-project (e.g., flat slab details, bridge rails). The SCDOT Structural Drawings and Details can be accessed on the Department's website.

Replace the first paragraph in Section 6.1.7 with:

The Department's project drafting is performed using Computer-Aided Drafting and Design (CADD). For more information on CADD software requirements, symbols, line styles, and CADD cells used by the Department, see the CADD Design webpage location on the Department's website.

Replace Item "3e" in Section 6.1.7 with:

- e. *Text Size. See CADD Design webpage location on the Department's website for information on the Department's criteria for text sizes.*

Add Item "3f" in Section 6.1.7 with:

- f. *Notes and Labels. Provide notes and labels in all capital letters.*

Replace Item "4" in Section 6.1.7 with:

- 4. *Scales. Drawings and details should be drawn to scale. When a scale cannot be shown in all practicality, adjustments (i.e., a relative scale) may be used for clarity. The scales used on a set of plans will vary from sheet-to-sheet and may vary from detail-to-detail within a sheet. In general, scales should be large enough to clearly show all dimensions and details necessary for construction of the structure and yet allow the detail or view to fit on a sheet. Do not indicate the scale of the drawing or detail on the plan sheets.*

Replace Item "5" in Section 6.1.7 with:

- 5. *Angles. Express angles in degrees, minutes, and seconds (e.g., 9°07'00").*



Replace the paragraph in Section 6.1.8 with:

With the exception of the Title Sheet, Roadway Typical Section Sheets, Roadway Plan and Profile Sheets, and Existing Bridge Plans Sheets, provide a title block on each sheet in the lower right-hand corner. In the title blocks, provide the drawing title, the county name or names that the project is located in, and the route number for the project. Border sheets with the Department's standard title blocks are located on the CADD Design webpage location on the Department's website.

For the Title Sheet, provide the Structural Engineer of Record's professional engineer seal and design firm's corporate seal (when applicable) in the designated location. Sheets provided for information only need not be sealed by a professional engineer. For all other sheets, provide the Structural Engineer of Record's professional engineer seal and design firm's corporate seal (when applicable) to the left of the title block.

Add Section 6.1.9:

6.1.9 Initial and Revision Blocks

Provide blocks for production initials and revision initials in the bottom left-hand corner of each sheet in the left sheet margin. These initials are important to the plans production process to document the Quality Control/Quality Assurance process performed by the structural design team.

6.1.9.1 Production Initial Block

With the exception of the Roadway Typical Section Sheets, Roadway Plan and Profile Sheets, and Existing Bridge Plans Sheets, provide initials of the draftsman and the drawing checker on each sheet. For sheets where designed elements and components are detailed, provide the initials of the designer and the checker. For sheets where quantities and reinforcing steel schedules are provided, provide the initials of the designer calculating the quantities and the quantities checker. Provide the month and year that the drawing was initiated, the design was performed, and the quantities were calculated in the applicable boxes.

Provide the reviewers initials on each sheet to indicate that the Quality Assurance/Quality Control process was completed by the structural design team.



6.1.9.2 Revision Block

Typically, initials are provided by the draftsman and checker in the lowest blank revision block for the Structural Drawings and Details sheets that are incorporated into the plans where relatively minor changes are required to the content of the sheets. The initials in the production initial blocks as provided in the Structural Drawings and Details are left in place in cases where minor changes are required.

In addition, provide the date that the revisions were made and add "For (Project ID No.)" in the Description of Revision block.

Delete Figure 6.1-5

Replace the paragraph in Section 6.2.1 with:

SCDOT uses Computer-Aided Drafting and Design (CADD) software for producing bridge plans. See the CADD Design webpage location on the Department's website for the Department's CADD criteria for plan development (e.g., cell libraries, levels, text sizes, fonts). All users outside of the Department network should consult with the SCDOT Design Automation Support Unit in the Office of Engineering Support to determine which versions of the software programs are acceptable to the Department. All Consultants submitting bridge plans to the Department must provide PDFs of 22"x34" sheets along with CADD files compatible with the Department's CADD software.

Delete Figure 6.2-2

Delete Section 6.2.5 and Figure 6.2-3

Replace the paragraph in Section 6.3.1.9 with:

In the binding margin, include the date and time the drawing was printed along with the file name. Also, include the user name who printed the sheet.

Please note the changes above in your copy of the SCDOT Bridge Design Manual.



Terry B. Koon, P.E.
Structural Design Support Engineer

TBK:hl

ec:

Julie Barker, Dir. of Preconstruction
Clay Richter, Interim Dir. of Construction
Jeff Terry, Dir. of Maintenance
Brent Dillon, Dir. of Traffic Engineering
Chris Gaskins, Dir. of Alternate Delivery
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