

SIGNING PLAN PREPARATION SIGN DESIGN CALCULATIONS (SDC)

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Overview

This guide is intended to instruct designers on using MDT's Speed Sheet template for the creation and use of MDT's Sign Design Calc Autodesk DWG file and the process of generating MDT's Sign Design Calc (SDC) plan sheets with the use of tools found on the GuideSIGN Design menu ribbon.

Process Guide

Application/Tool(s): AutoCAD / Civil 3D, Transoft GUIDESIGN

Version(s): N/A

Environment: AutoCAD Civil 3D 2026

Released/Revised: 5/27/2026



SUPPORT
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Statement of Need

Standard operating procedure for the creation of Sign Design Calculation reports.

Acronyms/Definitions Used in This Document

SDC – Sign Design Calculations

C3D – Autodesk Civil 3D software

References

Process Reference Title/Subject w/link

Design Manual Reference Title w/link

Other Reference w/link

Revisions

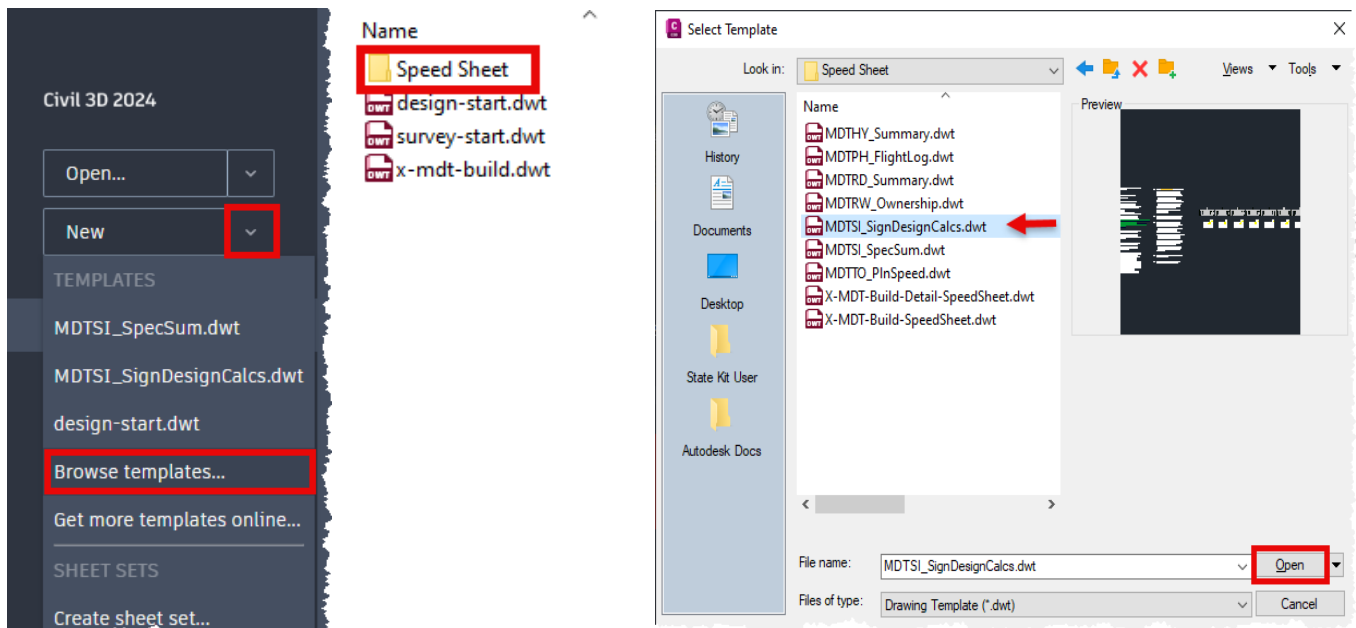
Click to enter a date. Click to enter revision description

Process Description and Examples

Section I. Creating an SDC File

Procedure – Using a Template

1. Start Civil 3D using MDT's **Civil 3D 2026 Montana** desktop shortcut created after installing the MDT State Kit.
2. Create a new file by browsing to the start tab, clicking the drop-down arrow next to NEW, and selecting Browse templates to open the Select Templates window.
 - a. Users can also get to the Select Template menu with the CTRL-N shortcut.
3. When the Select Template dialogue window is open, select the Speed Sheet folder and open **MDTSI_SignDesignCalcs.dwt**.
4. After the new drawing is created from the template, save and rename the file per MDT file naming standards in the project SI – Traffic Signing folder in ACC Forma.



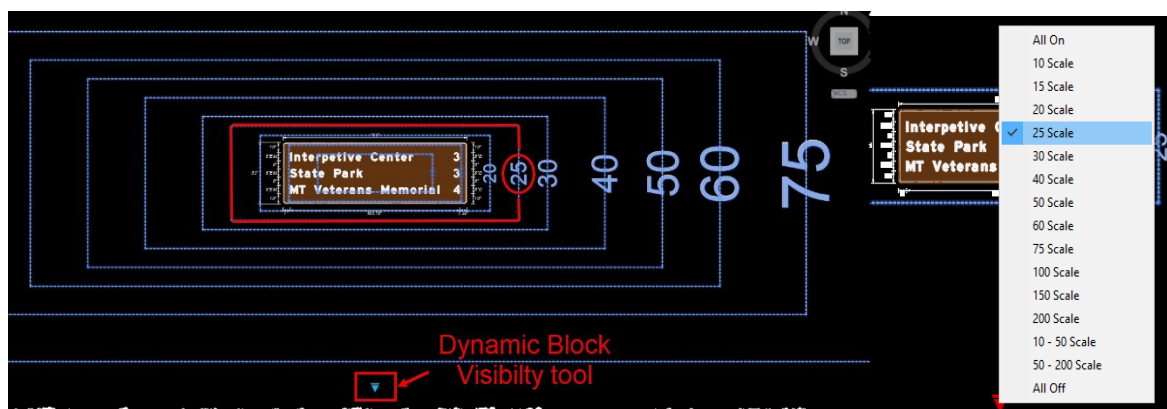
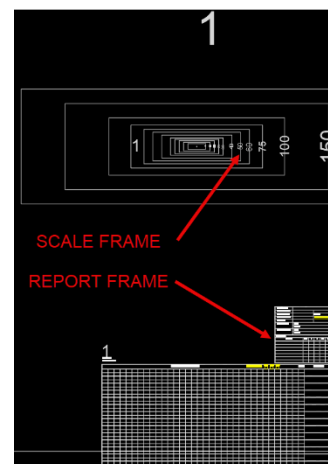
Section II. MDT Scale Frames

Procedure – Selecting the Correct Scale Frame

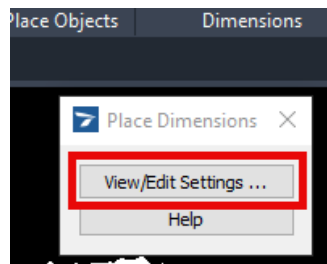
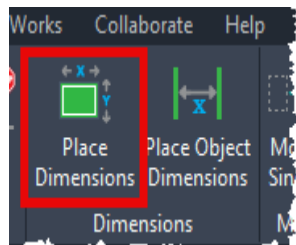
1. Use the tools on the GuideSIGN Design ribbon, Create Sign from Template or Place Panel, to begin the creation of a Sign Panel.
2. Place the panel into the center of the first available “Scale Frame” by utilizing center snap to the circle found in each frame.

- a. Users can also use Geometric Center snap to the center of the scale frame rectangles. **The scale frame and texts do not plot.**

3. Determine which rectangle will encompass the sign panel and dimensions, select the Scale Frame, and click on the Block Visibility triangle. Select the scale (number displayed on the right side of the rectangle) that encompasses the entire panel.

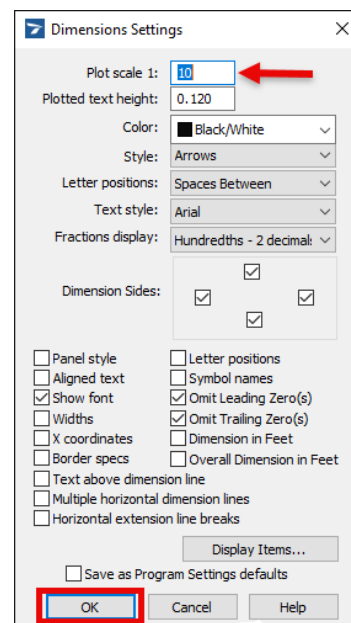


4. After the scale is set and is different than the preset scale setting, the dimension text should be set to match the scale frame scale. Select the Place Dimension tool, and click View/Edit Setting on the dialog box to open the Dimension Setting window.



- When the Dimension Settings window opens, change the highlighted plot scale text to the relevant Scale Frame scale. Click OK to accept and click on the sign panel to set the dimensions to complete the scale frame process.

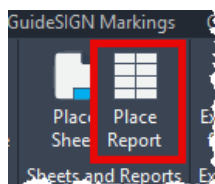
Note: All other settings should have been set in the GuideSIGN Design Program Settings tool. Sometimes the current dimensions will need to be deleted.



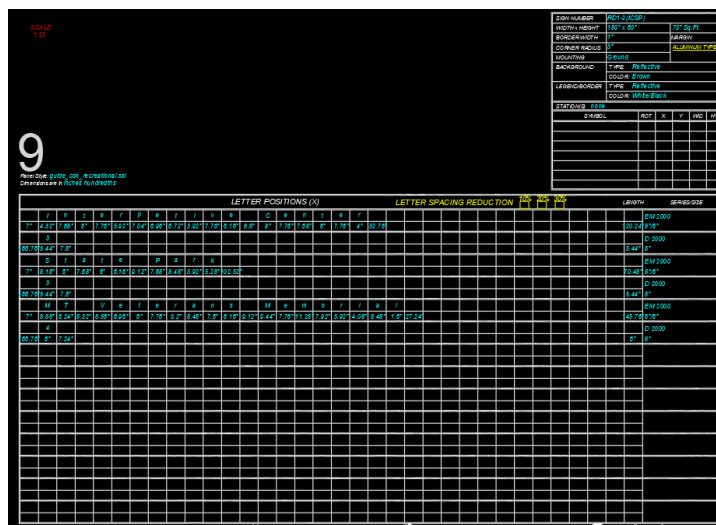
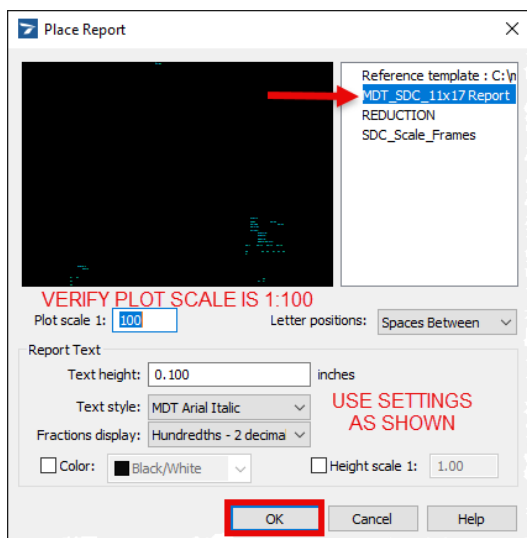
Section III. SDC Report

Procedure – Placing a Report

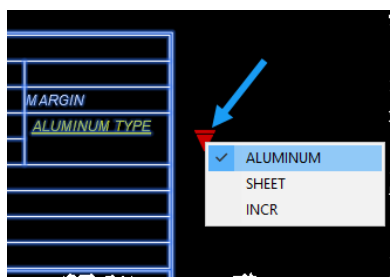
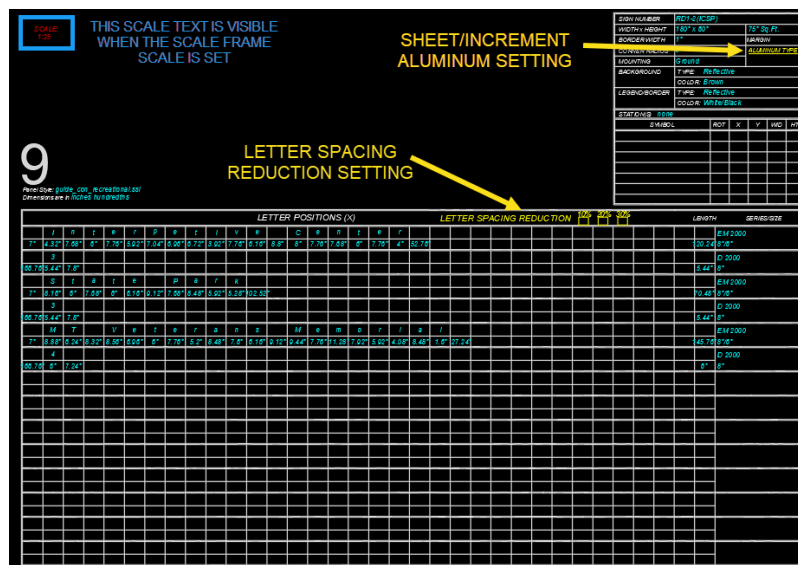
- Select the Place Report tool from the Sheets and Reports panel.



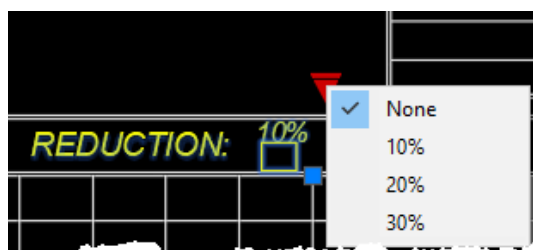
- When the Place Report window opens, Select MDT_SDC_11x17 Report, verify the Plot Scale is set to 1:100, Letter Position set to Spaces Between, Text height set to 0.100, Text Style is MDT Arial Italic, Fractions Display set to Hundredths, and Color and Height scale unchecked. Click OK and select the data point on panel to place the report text.



- After the Report Text has been placed, there are two YELLOW texts found in the Report Frame. These allow the user to set the Aluminum type to either SHEET or INCREMENT. (Typically panel widths up to 48" will be SHEET, and above 48" in width set to INCREMENT). Click anywhere on the Report Frame block and use the Block Visibility tool to Select the appropriate Aluminum type.



- If letter spacing must be reduced for text to fit on a Panel, the amount of spacing reduction can be set to 10%, 20%, or 30%. Select the Yellow Letter Spacing Reduction text block and use the block visibility tool to select the appropriate reduction percentage.

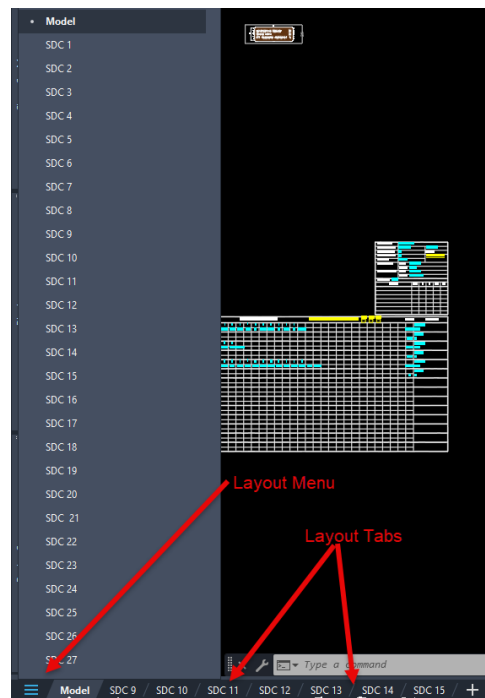


- Repeat this process as needed for up to 50 new sign panels, after 50 panels users will need to create another file.

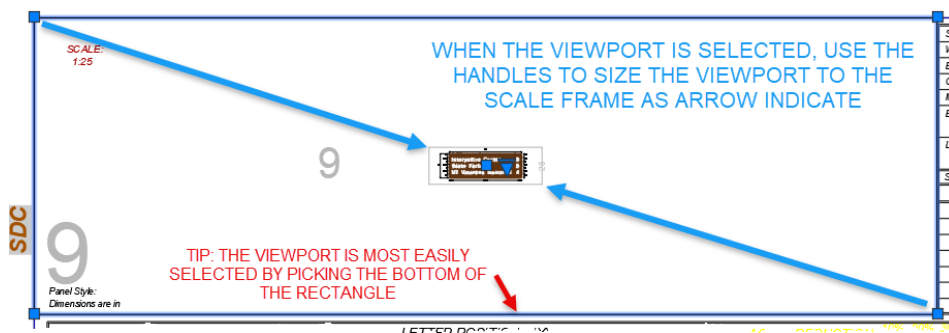
Section IV. SDC Layouts

Procedure – Preparing Sheet Layouts

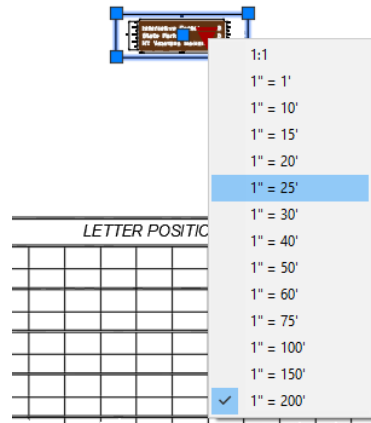
1. Each of the 50 Scale/Report Frames have a corresponding Layout Tab. Select a layout tab located at the bottom of the design window or select a layout using the layout menu found immediately to the left of the Layout Tabs.



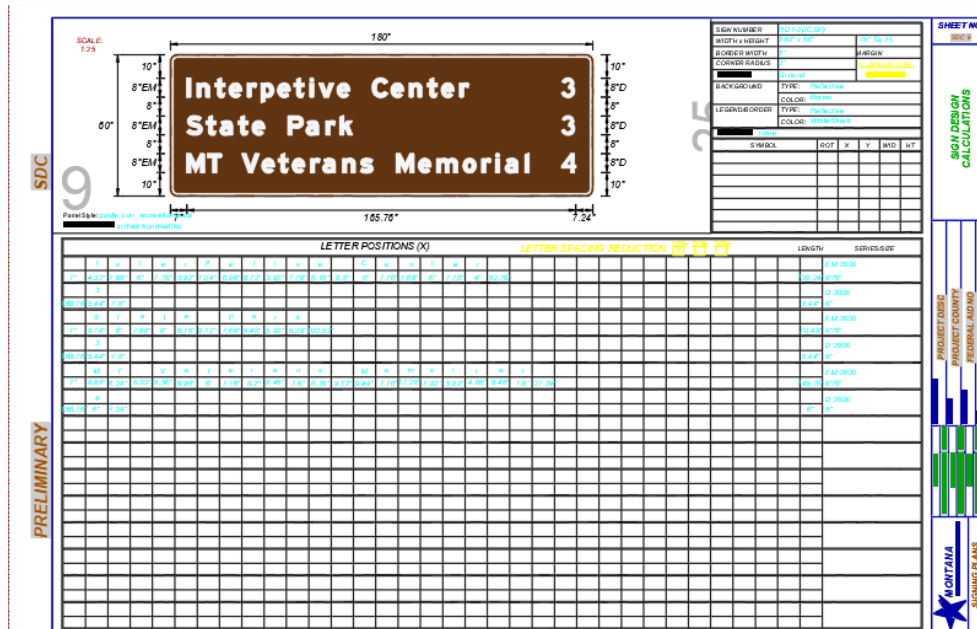
2. When the layout opens, users will see a sign design sheet containing a drawing border, viewport showing the Report Frame, and a viewport for the sign panel in its scale frame. Select the viewport located around the sign by selecting the bottom line.
 - a. When the viewport is selected, use the handles (blue squares at each corner of the viewport rectangle – use Top left and Bottom right) and resize the viewport to the Scale Frame in the view.



- If you can no longer see the viewport scale triangle, zoom in and click on the triangle to set the view port to the relevant scale.



- The viewport will scale up and fill the panel area with the sign panel being appropriately scaled on the drawing sheet. Sometimes the viewport may need some minor placement adjustments if the dimensions overlap the Panel Style text. Note that the viewports, and the grey reference texts will not plot and do not need to be turned off.
- The SDC Layout is now complete.



Section V. Publishing SDC Plan Set

Procedure – Creating a Sheet Set

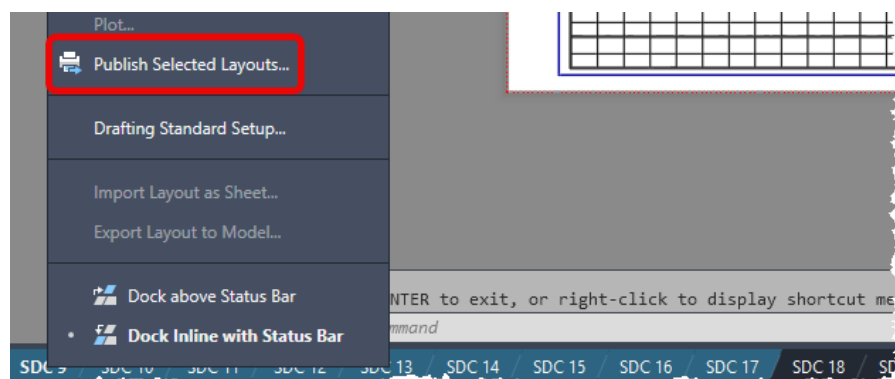
1. To create a sheet set for a plan set follow the steps starting on page 19 in the [Plans Production for Pavement Preservation Projects](#) in Autodesk workflow guide.

Note: The MDT Title block has text fields that tie to data delivered by the sheet set workflow, so it is important users create a sheet set and link their sheets to the created set.

Procedure – Plotting a Plan Set

1. To plot a plan set users can follow the steps starting on page 28 in the [Plans Production for Pavement Preservation Projects](#) in Autodesk workflow guide.

Note: Users can also plot selected layouts by selecting each page tab in the dwg, right click, and select Publish Selected Layouts.



Example of Finished SDC Plot

