MONTANA
Department of Transportation

RIGHT-OF-WAY DRAWING STARTUP PROCEDURE

Contents

Overview

Guide for customizing User Settings and opening the correct version of Civil 3D for Right of Way Plan Production.

Process Provenance

- Date of development: 11/12/2025
- Revision date: *N/A*
- Application/Tool(s): *AutoCAD / Civil 3D*
- Version(s): *Civil 3D 2024*
- Environment(s): *MDT Civil 3D State Kit r2024 v2.21*
- Contact: *Open a Case*

References

State Kit Update Reference -
https://www.mdt.mt.gov/other/webdata/external/ESDC/library/2024StateKit-Gen.pdf

Drawing Startup Procedure

Section I. Opening Civil 3D - State Kit

When running Civil 3D, always open the application from the 'Civil 3D 2024 Montana' shortcut found on the desktop of your PC, or from the start menu.

If you do not have the 'Civil 3D 2024 Montana' shortcut icon, you may need to install, or reinstall the Montana State Kit onto your PC.

1. **Installing and Updating the Montana Civil 3D State Kit**

1. Find and double-click the 'MDT State Kit Updater' shortcut icon from your Desktop or Start menu on your PC.
2. Click 'Refresh' in the bottom right window of the application.
3. Select the instance 'Civil 3D 2024' version in the available Civil 3D Versions.
4. Click 'Install' to download and install the files to your computer.

Please view the ESS CADD State Kit Instructions https://www.mdt.mt.gov/other/webdata/external/ESDC/library/2024StateKit-Gen.pdf for more information.

Section II. Customizing User Settings

Changing the User Profile Settings

Changing the User Profile settings inside of Civil 3D *is not* recommended as many features of the State Kit will no longer be available to be fully used and can lead to undesirable effects to the dwg.

Turning on Auto-Save

Auto-Save is not defaulted to be on when first installing Civil 3D or after a State Kit Update. To set the duration and turn on the auto-save function perform the following tasks:

1. Open the System Options window using the command 'OPTIONS' [OP].
2. On the 'Open and Save' tab in the ribbon under 'File Safety Precautions' group select the 'Automatic save' button. The default and recommended time between saves is 5 minutes.
    a. Note: Unlike MicroStation, there is no 'Save file upon exit' setting.

Restoring a Drawing Saved in the BIM 360 Environment

In the event of a Civil 3D Crash, files saved on BIM 360 can be restored and made current in the drawing by following the procedure:

1. Open BIM 360 from an internet browser (Chrome, Edge).
2. In the Document Management Tab in the project folder, navigate to the drawing to be restored.
3. Click the Version (e.g. V5) to open the version history dialog box.
4. Select the Version to be made Current and select 'Make Current'.
5. Refresh and synchronize references in Civil 3D to reflect changes, be sure to make sure all documents are up to date in ADDocs.

Restoring a Drawing Saved Locally on a Computer or Network Drive.

Files that are saved locally, or not saved at all **IF** Auto-save is enabled are auto-saved at the stored path:

C:\mdoh\StateKit\Civil 3D\Temp

To restore a file that is in the \Temp folder:

1. Navigate to the mdoh\StateKit\Civil3D\Temp folder in Windows File Explorer.
2. On the view tab of Windows File Explorer turn on 'file name extensions'.
3. Change the name of the desired file to be restored from a .bak filetype to a .dwg filetype.
    a. Creating a copy of the .bak file prior to altering the filetype is recommended.
4. In Civil 3D, open the file by navigating to the mdoh\StateKit\Civil3D\Temp folder
5. Save the drawing in the desired file location once opened.

Notes:

2. If there is no .bak file in the Temp store, there is no backup of the file.
3. Immediately after a Civil 3D crash, using the command 'DRAWINGRECOVERY' will open the drawing recovery manager and will notify you of any available backups and let you repair or restore any files that were saved.
4. Whenever possible, utilize BIM 360/ADDocs environments for files over local or network file locations.
5. Save drawings *immediately* after creation.

R/W Design Tools

R/W Layer Filter

To better filter out used layers for R/W Plans and Exhibits, a layer filter group has been created to allow users to sort the 600+ layers across the agency to the roughly 110 layers R/W uses for our drawings.

The layer group can be found inside the 'Layer Properties Manager' palette.

When fully expanded, there are three (3) subgroups inside the main 'Right of Way' group, 'RW-Design', 'RW-PLSS', 'RW-Property'. Each of these subgroups also contain nested groups within them to constrict the available layers to switch between and will be explained below.

When using the filter, the layers are more broad and get more specific as you move downward in the subgroup folders. The 'Right of Way' group contains all the layers within the R/W used layers selections, and each group narrows for the subject matter depicted by the below groups:

R/W-Design Group

Under the RW-Design Group, there are 5 nested folders. All R/W Design layers are under this subgroup.

Access Control

Access Control holds all layers pertinent to existing and new access control.

Design-Labels

The Design-Labels group holds all the layers for design labels.

Design-Linework

The Design-Linework group holds all the layers for design linework.

Parcel-Areas

The Parcel-Areas group holds the parcel hatching layers for the ROARE file. *The layer 'Layer*' is also available in the group to be able to copy a layer and rename it without being removed from the filter group. You will not see by default a 'Layer' in the file/group until a layer is copied.*

X-Layers

X-Layers hold all the additional layers needed for identification and XRef layers.

RW-PLSS

The R/W PLSS group contains all the VL (Survey Land) layers used by R/W for plan production and contains three subgroups.

PLSS-Linework

The PLSS-Linework group contains the 4 interior and exterior found and unfound section line layers.

PLSS-Section Ties

The PLSS-Section Ties group contains the two layers that are used for MDT R/W Plans section tie labels and linework. The section tie notes are set to plot, but the linework is no-plot.

PLSS-Symbols

The PLSS-Symbols group holds all PLSS Township, First, and Second division identification information, and all PLSS corner symbols.

RW-Property

The RW-Property group hold all the existing property labels and linework using the appropriate VL (Survey Land) layers in two subgroups.

Property-Labels

The Property-Labels group contains only identification and symbol layers.

Property-Linework

The Property-Linework group contains only property linework layers.

Useful Tips

The layer groups are set up to be least-to-most restrictive in layer selection so that each user can filter down to the level that makes the most sense based on the work being performed.

Use the filter by selecting the group or work area that you wish to select to, and the layer select dropdown will reflect the choice made by the user.

For example, if the selected group is the Right of Way/RW-Design/Access Control subgroup, only those layers appear in the layer select dropdown menu. *(note: the active layer will always appear in the layer select dropdown menu).*

R/W Layer State

Preface

R/W uses layers that are outside of the RR-work group. These layers, predominately Survey Land (VL) layers, are defaulted to serve Cadastral survey production and not R/W Plans. A *Layer State* overrides the State Kit defaults to serve R/W workgroup plan production, while removing the need to have additional layers added to the State Kit layer list. Fewer layers in the State Kit lead to faster and more efficient drawings, with less resources used on caching (storing) line files on your local computer hard drive. The efficiency improvements result in less crashes and lost work, as well as improving standards and applies to all objects on the layer.

Applying Layer State in Drawings

By default, the 'MDT All Layers (Standard)' Layer State is applied when first creating a drawing using the ‘design-start.dwt’ template.

To activate the 'Right of Way' Layer State, it will need to be activated in every drawing created. First, navigate to the 'Layer' group in the 'Home' Ribbon.

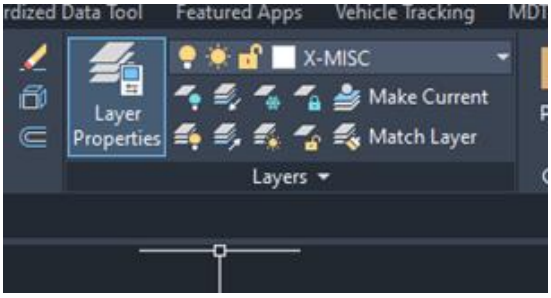

Figure 1. Layer State Location on the Home Ribbon-Layers group

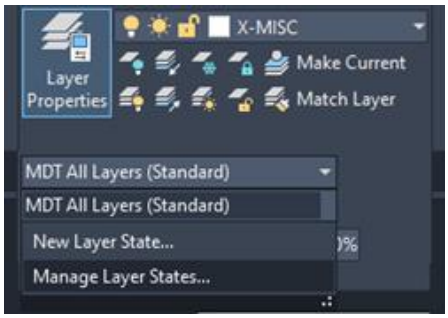

Figure 2. Manage Layer States Dropdown Location

Select 'Layers' and using the drop-down menu, then choose 'Manage Layer States' from the drop down.

In the Layer State Manager window, navigate to 'Import"

Within the 'Import Layer State' window, change the file type to 'Layer states (*.las)' then navigate to 'C:\mdoh\StateKit\Civil 3D\2024\Layers' and select the 'MDT RightOfWay.las' file and then select 'Open'.

A new window, 'Layer State - Successful Import', will open, select 'Restore states' to complete the activation of the layer state.

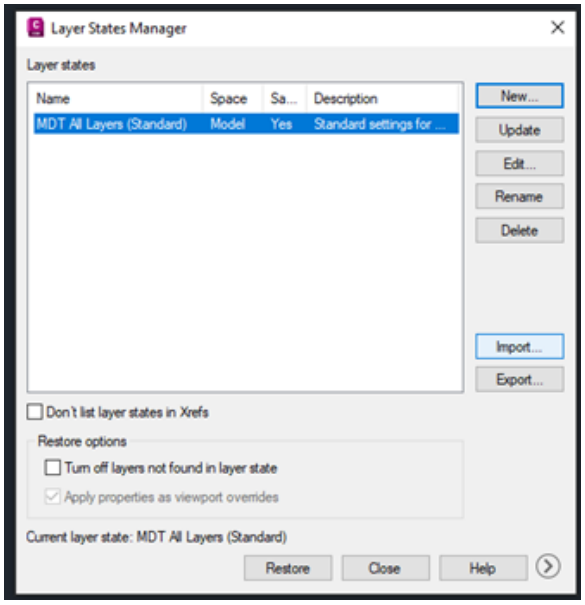

Figure 3. Layer States Manager Home Page

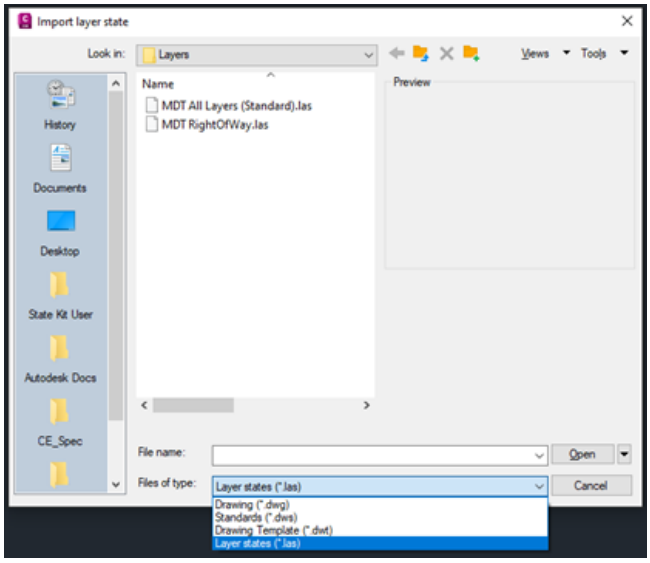

Figure 4. Import Layer States Menu

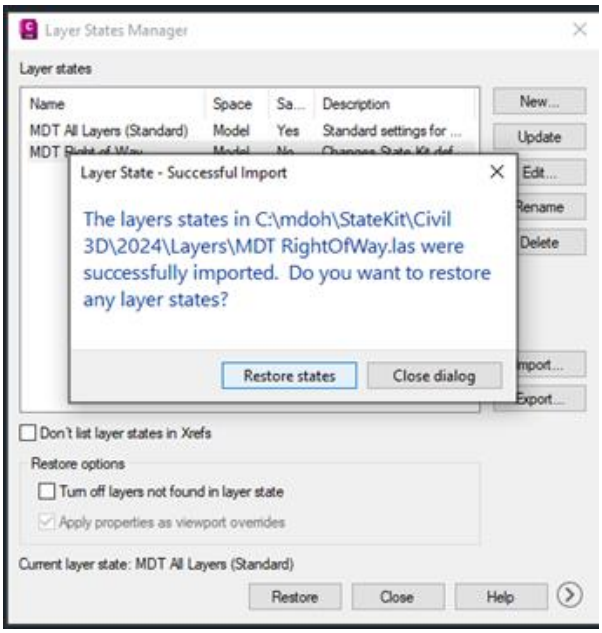

Figure 5. Layer State – Successful Import and Restore States Dialogue Box

The Layer State will apply, changing properties of layers, including color, line thickness, and linetypes.

Note*: Once the user has navigated to the 'C:\mdoh\StateKit\Civil 3D\2024\Layers' folder in the layer states manager, it will be remembered in your workspace.* To import the layer state on future drawings, you will only need to select the 'MDT RightOfWay.las' layer state, select open, and restore states.