MONTANA
Department of Transportation

Project Development & Delivery - Digital Design and Modeling Services

Support Guide

Application/Tool(s): AutoCAD / Civil 3D
Version(s): 13.6.1916.0 Civil 3D 2024.4 Update
Environment: MDT Civil 3D State Kit r2024 v2.0.0
Released/Revised: 9/3/2024



SUPPORT
Open a Case

CIVIL 3D 2022 TO 2024 SUBASSEMBLY UPDATES

ISSUE:

Civil 3D 2024 subassemblies are referenced to an external file called a PKT file. All existing drawings created prior to MDT Civil 3D State Kit r2024 v2.0.0 with subassemblies will be referencing the non-PKT subassemblies from Civil 3D 2022 and earlier.

SOLUTION:

Updating the subassemblies to PKT format is optional but recommended for projects in the early stages of design. Action will need to be taken to maintain use of the non-PKT subassemblies or to replace assemblies with those using PKT formatted subassemblies. Consider each option carefully.

PKT subassemblies support versioning and offer more control with future updates while leveraging enhancements that are expected to resolve many issues that were encountered with previously released subassemblies. All MDT subassemblies have been edited with new coding and functionality in the MDT Civil 3D State Kit r2024 v2.0.0.

Option 1 – Maintain Non-PKT Subassemblies
All non-PKT subassemblies will be fully supported but won't be updated going forward. This is recommended for projects in the later stages of design. To continue using assemblies with non-PKT subassemblies, assemblies will need to be updated to use the code set styles with MDT 2022 prepended to the name.

See "Saving User Customized Civil 3D State Kit Content" for safely storing user customized non-PKT subassemblies.

Option 2 - Replace with PKT Subassemblies

For projects in the early stages of design, subassemblies should be replaced and corridor targets reset. This is done by inserting PKT assemblies to replace existing non-PKT assemblies. It may be necessary to rebuild user-built assemblies by replacing non-PKT subassemblies with PKT subassemblies. MDT non-PKT and MDT PKT subassemblies must not be used together in a single assembly nor is it recommended they be used together on a single project.

PROCEDURE:

Prerequisites:

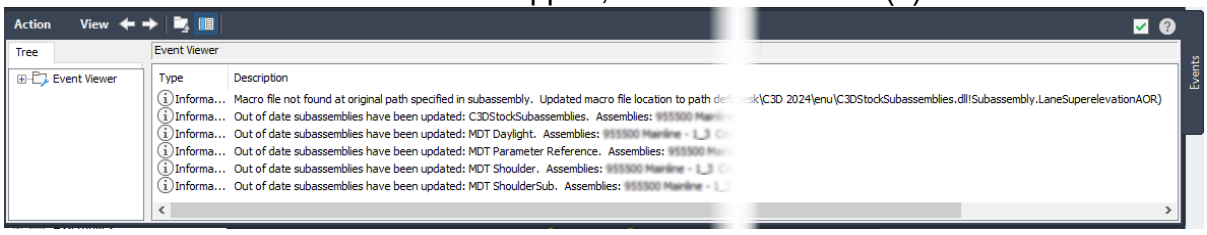
- Civil 3D 2024
- State Kit Updater 2024.1.0.2 or later
- Latest Civil 3D 2024 compatible state kit installed
- Civil 3D 2024 drawing files having non-PKT subassemblies (with updated reference templates – see "Civil 3D 2022 to 2024 DWG Reference Template Updates"

Option 1 – Maintain Non-PKT Subassemblies

1) *Open* Civil 3D using the "Civil 3D 2024 Montana" shortcut.

2) *Open* drawing file having non-PKT subassemblies.

   Note: Re-pathing non-PKT subassemblies should occur upon open and be observed in the Event Viewer. If this doesn't happen, rebuild the corridor(s).



3) *Update* the code set styles used in the corridor, cross sections, and typical sections to use the appropriate "MDT 2022-" code set styles.

   Corridor

   1. *Open* **CORRIDOR PROPERTIES**.
   2. *Select* the appropriate "MDT 2022-" code set style within the **CODES** tab.
   3. *Choose* **APPLY**, then **OK**.
   4. Repeat for each corridor.

Cross Sections and Typical Sections

1. From the "Toolspace" **PROSPECTOR** tab, *expand* **ALIGNMENTS** collection and **SAMPLE LINE GROUPS**.
2. *Right-click* **SECTIONS** and *choose* **SAMPLE MORE SOURCES…**.
3. For each corridor, *select* the appropriate "MDT 2022-" code set style.
4. To apply the code set style changes, remove all sampled source corridors, and *choose* **APPLY**, then **OK**.
5. Repeat steps 1 and 2, adding the sampled source corridor back from the "Available sources" and *choose* **APPLY**, then **OK**.
6. Review the sections for results and adjust as needed.

Option 2 - Replace with PKT Subassemblies

1) *Open* Civil 3D using the "Civil 3D 2024 Montana" shortcut.

2) *Open* drawing file having existing assemblies using non-PKT subassemblies.

3) *Place* new assemblies from the **MDT ASSEMBLIES** tool palette *(MDT Design ribbon > MDT Modeling panel > MDT Assemblies & Subassemblies tool)*.

   Note: Do not delete existing assemblies unless all new assembly changes are made and targets are set in the corridor(s).

4) If rebuilding user-built assemblies, create a new assembly object and place new subassemblies using the MDT Subassemblies palette(s).

5) *Edit* properties and parameter values of new assembly to achieve desired design for corridor. See "MDT Civil 3D State Kit Subassembly and Assembly Guide" for subassembly functionality and parameter settings.

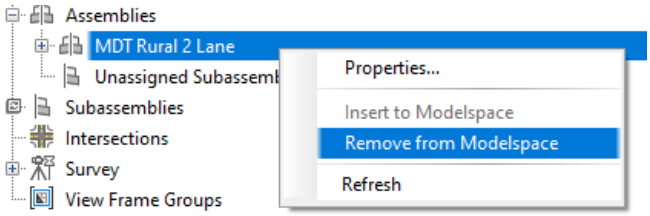
6) *Open* **CORRIDOR PROPERTIES** and navigate to **PARAMETERS** tab.

7) *Click* on the assembly selection dropdown and select a new assembly for all corridor regions and *set* all targets for each region.

8) *Choose* **APPLY**, then **OK**.

9) *Remove* previously used assemblies from modelspace.

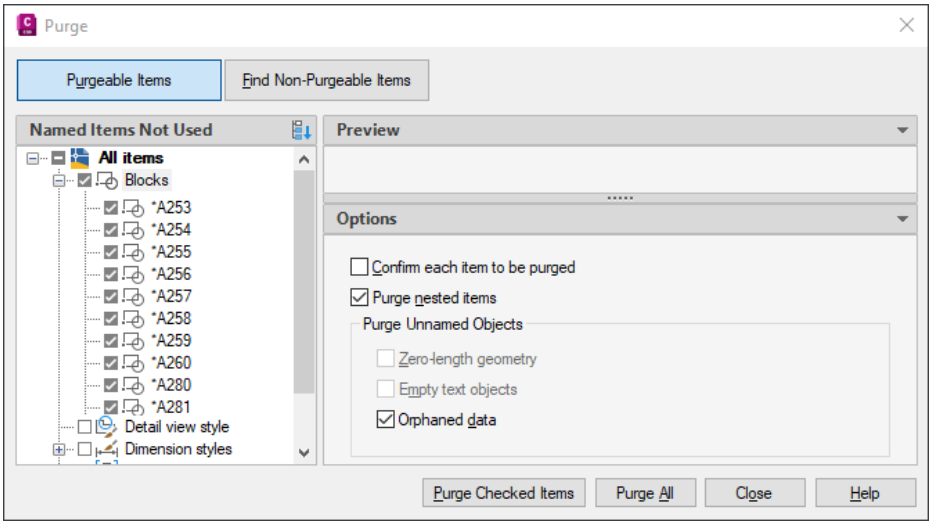
   1. From the "Toolspace" **PROSPECTOR** tab, *expand* **ASSEMBLIES** collection.
   2. *Right-click* each assembly to be removed and *choose* **REMOVE FROM MODELSPACE**



10) *Purge* unused blocks. In the command line, type **PURGE**.

The Purge dialog will open. From the **PURGABLE ITEMS** selection:

1. *Select* the **BLOCKS** checkbox.
2. *Deselect* content not desired to be purged.
3. *Select* options **PURGE NESTED ITEMS** and **ORPHANED DATA**.
4. *Deselect* **CONFIRM EACH ITEM TO BE PURGED**.
5. *Choose* **PURGE CHECKED ITEMS**.



LINKS:

Saving User Customized Civil 3D State Kit Content:
https://www.mdt.mt.gov/other/webdata/external/esdc/library/Support-CustomC3DContent.pdf

Civil 3D 2022 to 2024 DWG Reference Template Updates
https://www.mdt.mt.gov/other/webdata/external/esdc/library/Support-2024RefTemplates.pdf

MDT Civil 3D State Kit Subassembly and Assembly Guide
https://www.mdt.mt.gov/other/webdata/external/ESDC/library/2022StateKit-Asm_Subasm.pdf