MONTANA
Department of Transportation

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MDT Civil 3D State Kit Survey Tools

RELEASE 2024 V2.3.1

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OVERVIEW

This document provides a user focused overview of the **Survey Tools** available for use with the MDT Civil 3D State Kit (hereafter referred to as “State Kit”). Basic functions for use with the State Kit are described to provide users with the fundamentals for processing survey data.

COMPANION DOCUMENTATION

MDT Civil 3D State Kit Overview - Release 2024

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

To Convert a RW5 File into an FBK File

https://help.autodesk.com/view/CIV3D/2024/ENU/?guid=GUID-4B3A7744-0C39-4F05-B464-7F3AE1C5798F

DISCLAIMER

The Survey Tools are verified to work on internal MDT workstations and MDT internal networks. The customizations are also verified to work with a standard “out-of-the-box” Civil 3D installation. Every effort is made to make the Survey Tools compatible with any Civil 3D configuration, but in the event, there are conflicts between the Survey Tools and your Civil 3D configuration, please submit an MDT Digital Design and Modeling Services request for guidance or assistance.

MDT Digital Design and Modeling (CADD) Request:

https://montana.servicenowservices.com/citizen?id=sc_cat_item&sys_id=13ac75551bc1091049e0ed3ce54bcb3d

SURVEY TOOLS

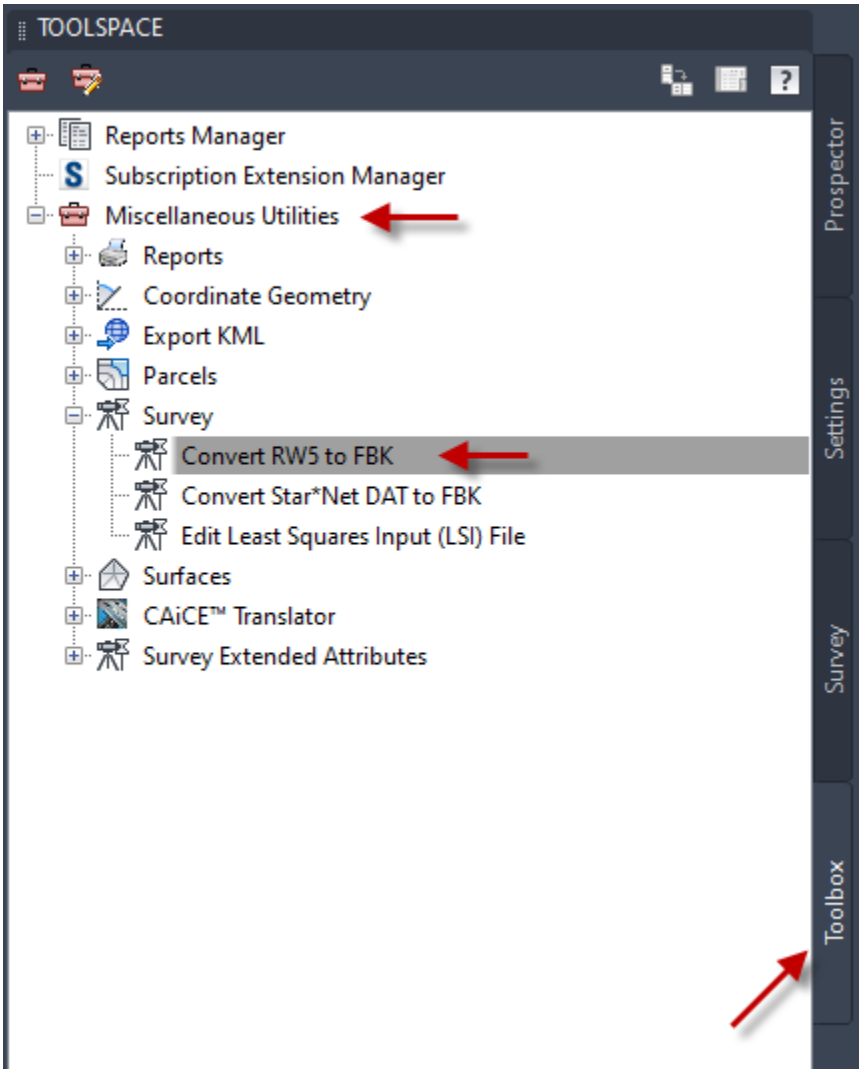
MISCELLANEOUS UTILITIES - SURVEY

Miscellaneous Utilities for Survey are delivered as out-of-the-box utilities with installation of Civil 3D. These tools are useful for MDT to aid in content creation workflows and data processing.

To Convert a RW5 File into an FBK File is available for further information.

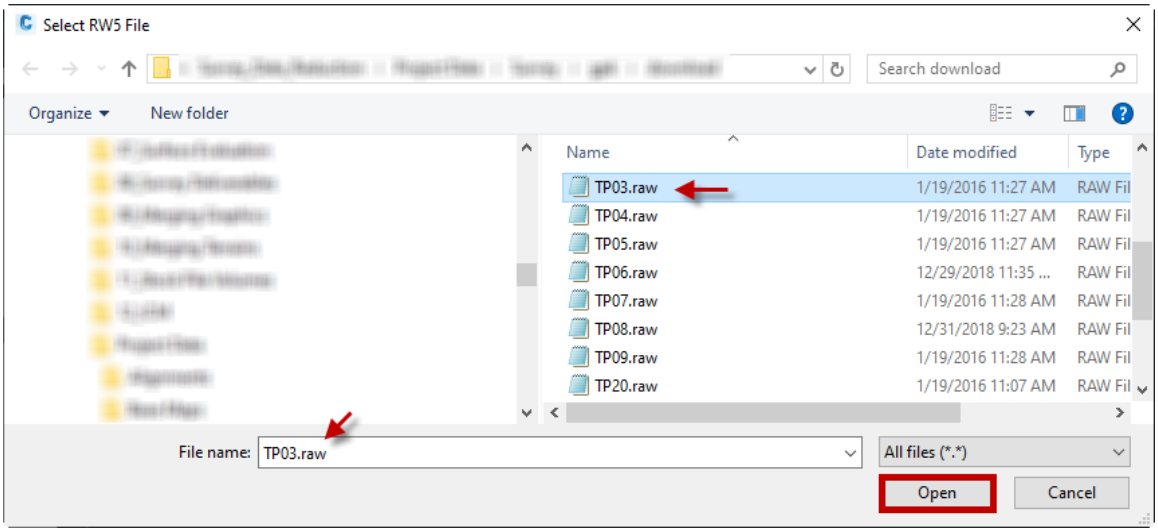
CONVERT THE MDT SURVEYPRO RAW TO CIVIL 3D 2024 FBK

1. Go to the Toolspace > Toolbox > Miscellaneous Utilities.
2. Expand Survey and right click and execute Convert RW5 to FBK.

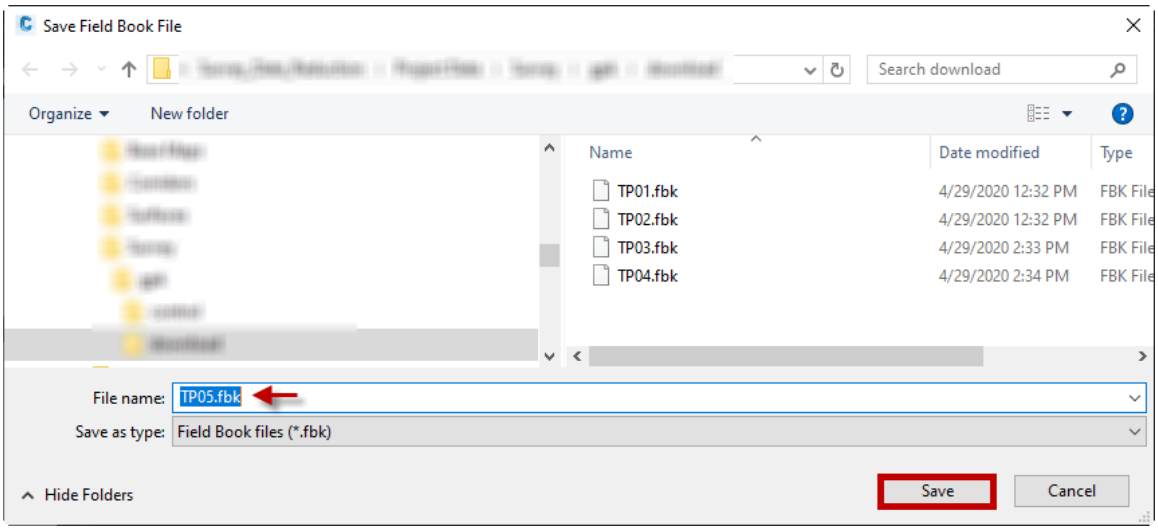


3. From the Select RW5 File dialog change the File name filter from RW5 files (*.rw5) to All files (*.*) and path to the RAW files.

4. Select RAW files one at a time in the dialog and click Open.



5. The Save Field Book File dialog will appear saving the file to a FBK format. Click the Save button. The file will be saved and the dialog will close.

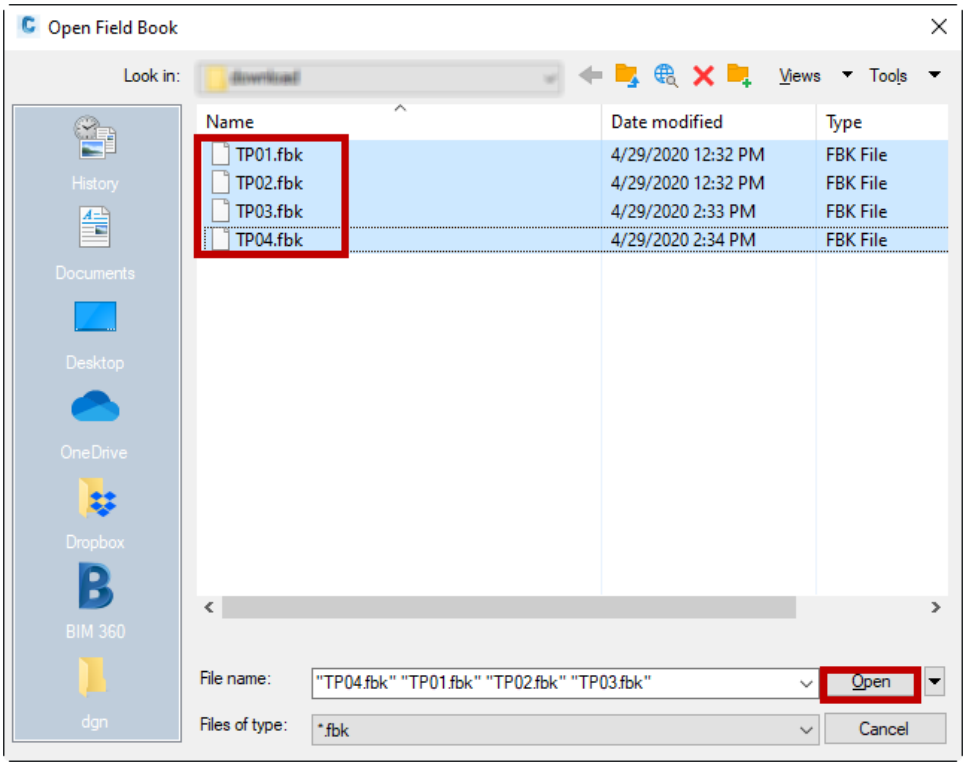


ENHANCE FIELDBOOK

The Enhance Fieldbook tool adds linework codes to fbk files converted from RAW files.

ENHANCE THE FIELDBOOK FILE

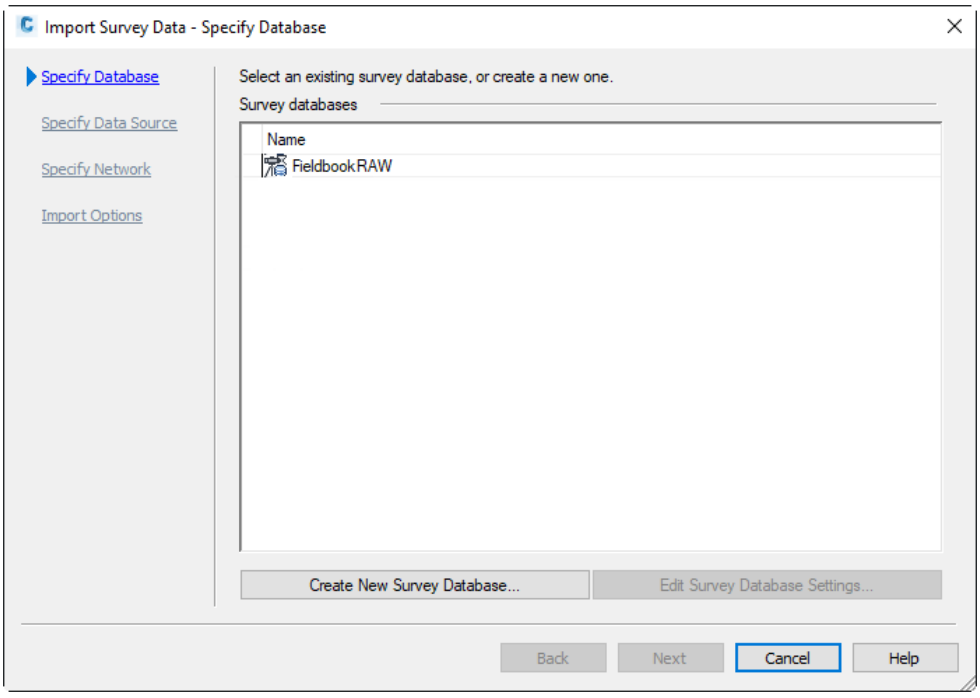
1. Go to the Toolspace > Toolbox > MDT State Kit Tools
2. Expand **Survey Extended Attributes** and right click and execute **Enhance Fieldbook**. The Open Field Book dialog will appear.
3. In the Open Field Book dialog select the FBK files you want to enhance. You can pick multiple files at once. Then click Open.



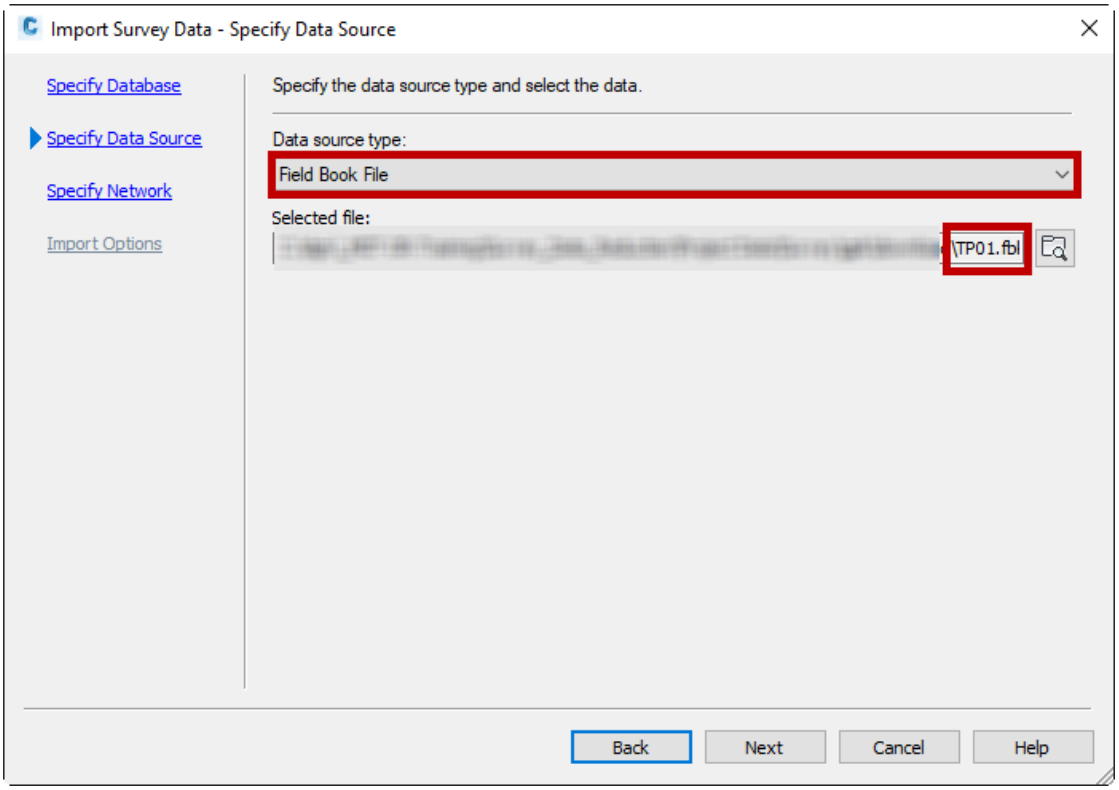
Note: This routine will overwrite the FBK files adding the point code and line codes to the fieldbook.

IMPORT THE ENHANCED FBK FILE

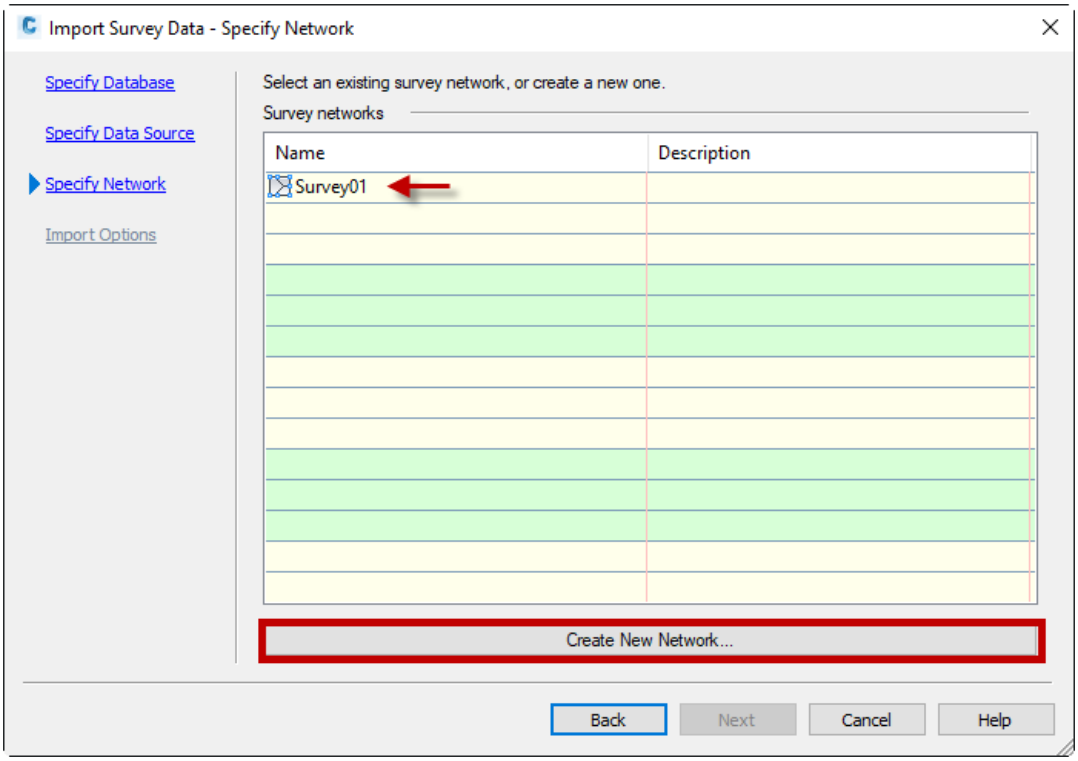
1. Import the FBK using Import Survey Data.



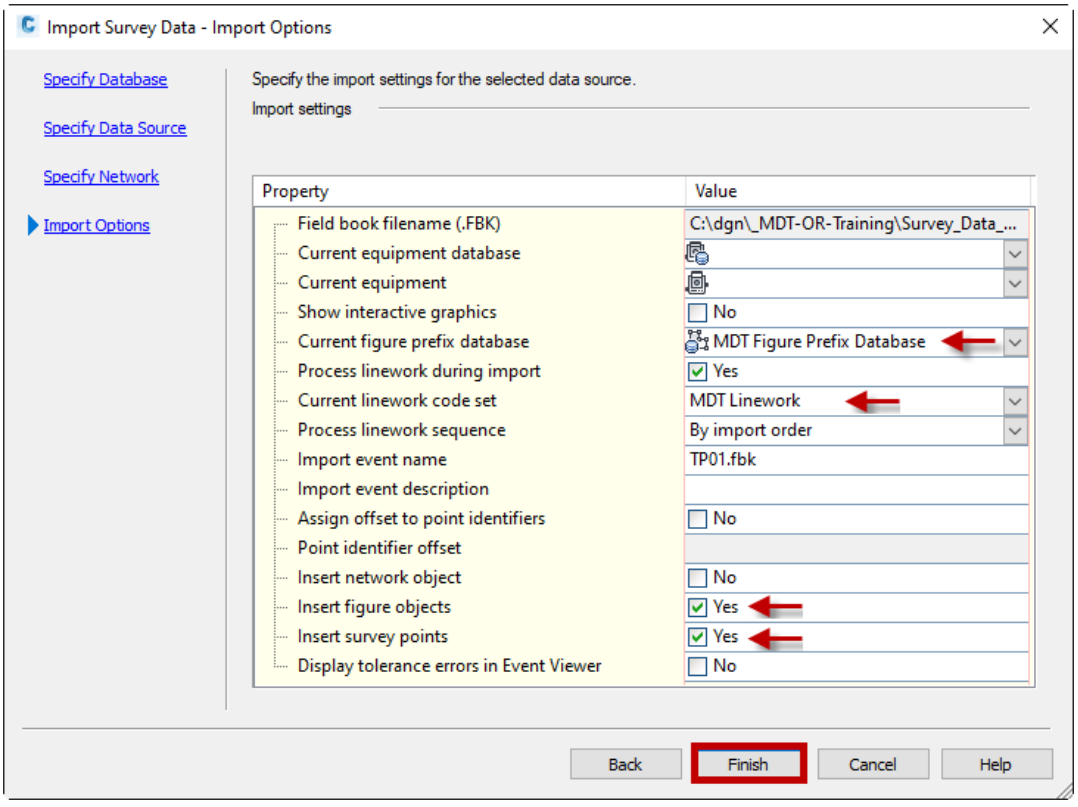
2. Specify the data source type Field Book File and Select the Enhanced FBK file.



3. In the Specify Network setup Create a new Network.



4. In the Import Options setup, set the Current figure prefix database to MDT Figure Prefix Database, set the Current linework code set to MDT Linework. Toggle YES for Insert network object and Insert survey points.



Note: The figure prefix database has both sets of codes in it. For example, "FENCE" and "FN". Fence is used by the CSV file for the point code as well as the figure code. The Fence is used by the FBK for the point code, and FN is used by the fieldbook for the linework. There is a change to the Linework codes to force explicit start and end for the figures. Without this, Fence would be used to create a duplicate set of features that would all be strung together and would shoot between fieldbooks. The figure prefix database has the breakline flag set per the MDT standard.

3RD PARTY MDT STATE KIT TOOLS FOR SURVEY

Survey Extended Attributes is a utility that isn't delivered in the State Kit and only expected to be delivered as out-of-the-box with Civil 3D installation in a future release. MDT Civil 3D State Kit Overview - Release 2024 is available for further information on installation of 3rd Party MDT State Kit Tools.

IMPORT EXTENDED SURVEY ATTRIBUTES

The Import Extended Survey Attributes tool adds Property Set data to points and survey figures from fbk or csv files.

ADD THE ATTRIBUTE SET DATA TO THE POINTS AND SURVEY FIGURES

1. Go to the Toolspace > Toolbox > MDT State Kit Tools
2. Expand **Survey Extended Attributes** and right click and execute **Import Extended Survey Attributes**. The Open Field Book dialog will appear.

Note: This will add the property set data from the first point of a survey figure to the figure itself. It will also read the enhanced fieldbook and add the attributes as property set data.