MONTANA
Department of Transportation

Project Development & Delivery - Digital Design and Modeling Services

Support Guide

Application/Tool(s):	AutoCAD / Civil 3D
Version(s):	13.4.2455.0 Civil 3D 2022.2.6 Update & 13.6.2020.0 Civil 3D 2024.4.3
Environment:	MDT Civil 3D State Kit r2022 v1.25 & MDT Civil 3D State Kit r2024 v2.0.0
Released/Revised:	9/3/2024



SUPPORT
Open a Case

COORDINATE SYSTEM SETTINGS

ISSUE:

The change to assign the NSRS11.MTIF coordinate system in the MDT State Kit templates has caused issues of files within the same project potentially having differing coordinate systems. This has prompted concerns regarding files with data requiring coordinate system transformations, such as ESRI shape files, that may have data shifted if not translated to the correct coordinate system.

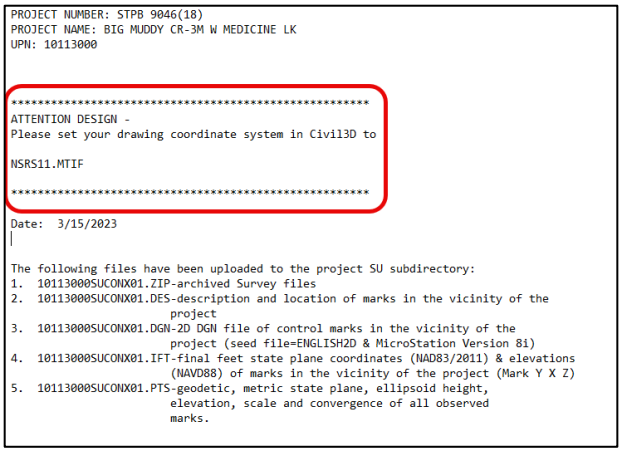
SOLUTION:

Working in a collaborative design environment requires all design teams to be working in the correct coordinate system during the design phase of project delivery. Over the course of the previous several years, there have been adjustments made to state plane coordinate systems making several versions available. To make certain design drawings, especially ones including references, are in alignment with project survey, there will no longer be a default coordinate system set within the Civil 3D templates. Designers will be required to set the coordinate system upon creation of drawing files as part of the initial file set up.

PROCEDURE:

1) The District Automation Specialist (DAS) will access the DI directory on PCMS for the pertinent project. This will be the working directory for all project engineering/topo survey data. The DAS specialist, collaborating with the construction crew performing the survey, will create a readme file for these types of survey. This file will be placed in the DI directory on PCMS.

2) Prior to delivering survey data to design, the DAS will revise and or edit the file by placing the specified coordinate system information to be used by design in the top portion of the file with a section of text stating:
   "ATTENTION DESIGN - Please set your drawing coordinate system in Civil3D to the [coordinate system]."



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PROJECT NUMBER: STPB 9046(18)
PROJECT NAME: BIG MUDDY CR-3M W MEDICINE LK
UPN: 10113000


**********************************************************
ATTENTION DESIGN -
Please set your drawing coordinate system in Civil3D to

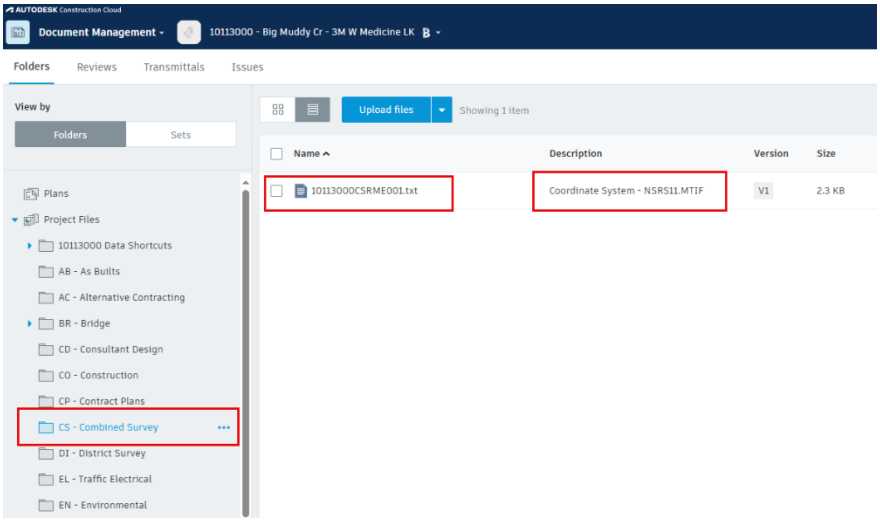
NSRS11.MTIF

**********************************************************

Date:  3/15/2023

The following files have been uploaded to the project SU subdirectory:
1.  10113000SUCONX01.ZIP-archived Survey files
2.  10113000SUCONX01.DES-description and location of marks in the vicinity of the
                        project
3.  10113000SUCONX01.DGN-2D DGN file of control marks in the vicinity of the
                        project (seed file=ENGLISH2D & MicroStation Version 8i)
4.  10113000SUCONX01.IFT-final feet state plane coordinates (NAD83/2011) & elevations
                        (NAVD88) of marks in the vicinity of the project (Mark Y X Z)
5.  10113000SUCONX01.PTS-geodetic, metric state plane, ellipsoid height,
                        elevation, scale and convergence of all observed
                        marks.
```

3) Once this information has been added, the file will be saved. The DAS will merge all pertinent survey data, creating a map file(s) for design known as the “combined survey” or CSMAP file. They will set the coordinate system appropriately in this file. This file along with the appropriate .xml and readme file will be copied to the CS Directory on PCMS and on Autodesk Forma. Once uploaded to the CS Directory on

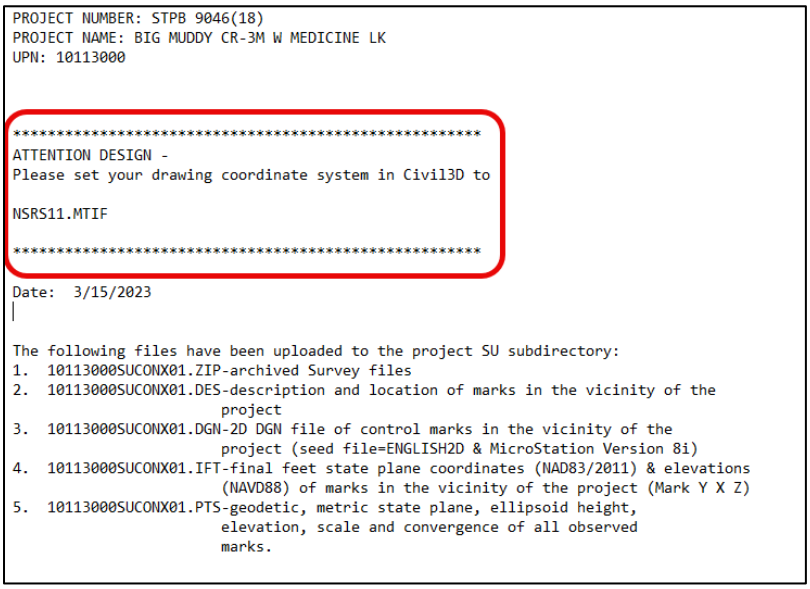


Autodesk Forma, the DAS will edit the file description making note of the coordinate system as shown in the readme file.

4) Starting with the CSMAP file, the coordinate system will be set for each drawing by following the procedure outlined below:

   a. Navigate to Autodesk Forma. Locate and open the text file titled **[UPN#]CSRME001** in the **CS – Combined Survey** directory.

   b. Upon opening the readme file, note the project's listed coordinate system. For this example, the project coordinate system is NSRS11.MTIF.



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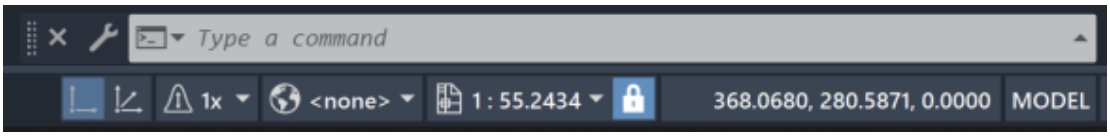
NSRS11.MTIF

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Date:  3/15/2023

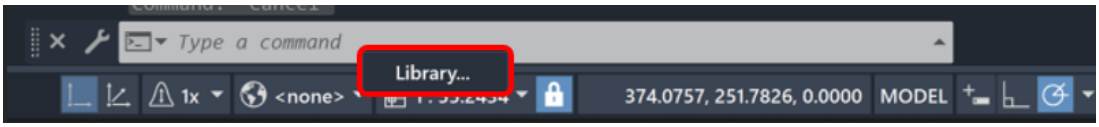
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```

   c. In Civil 3D, open your design file and type the command **MAPSTATUSBAR**. In the command line, select the **Show** option or type **S** followed by the **Enter Key**. A globe icon will appear on the bottom ribbon with the text **<none>**.
   NOTE: This step will only need to be completed once per system update.

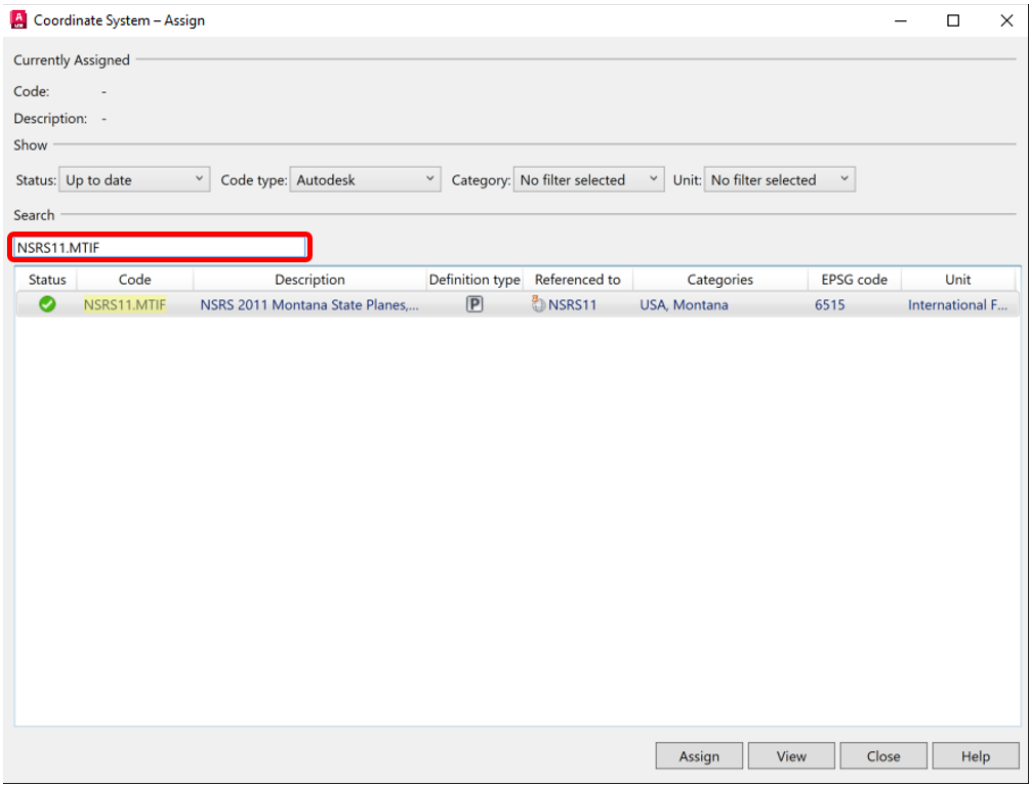




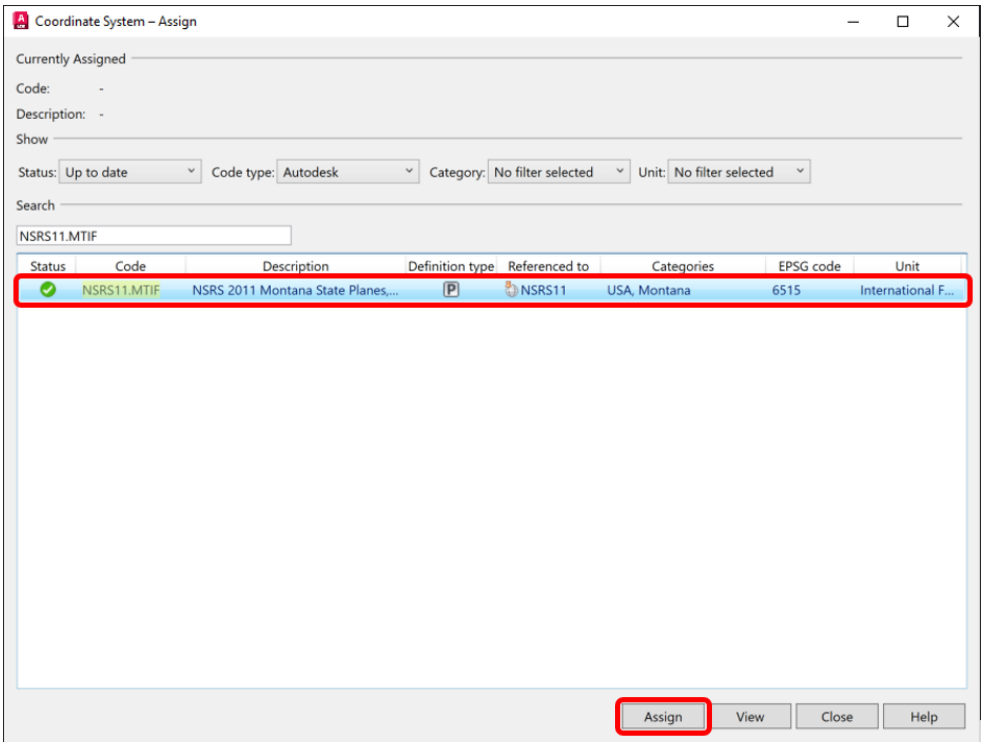
d. Click the drop-down arrow next to the globe icon and select **Library**. A Coordinate System – Assign dialog box will appear.



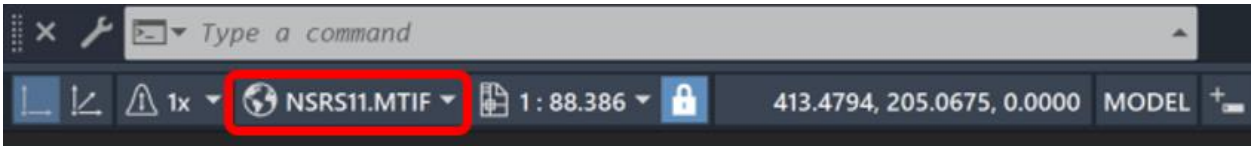
e. In the **Search** field, type in the coordinate system listed in **[UPN#]CSRME001** file (determined in above steps).



f. Select the appropriate coordinate system and click **Assign**.



g. The coordinates icon located on the bottom ribbon will populate to display the assigned coordinate system.



h. Repeat steps the these steps for each drawing in the project.
NOTE: Having drawings with varying coordinate systems within the same project will result in errors when referencing files. All drawings belonging to a project should be set to the coordinate system listed in the **[UPN#]CSRME001** file.

5) An important note when using geographic data and bringing in an external reference (XREF). **DO NOT** check the box “Locate using Geographic Data”.

