AUTODESK® CIVIL 3D® 2022

Setting up Autodesk Civil 3D 2022 - National NRCS

Reedy, James - FPAC-NRCS, NE
State Technology Engineer

Here are steps NRCS CADD users need to take to set up Autodesk Civil 3D 2022:

1. **USER** - Submits installation request through Digital Workplace (Steps to Request Above Core Engineering Software Installation through DWP)
2. **USER & IT ADMIN** - Review Helpful Pre-Installation Recommendations for Civil 3D 2022
3. **IT ADMIN** - Installs both Civil 3D 2022 and the NRCS Civil 3D 2022 Customization 2.0
4. **USER** - Verifies that the customization files have been installed (refer to User Setup NRCS Civil 3D 22)
   a. If the customization files are not present, check to see if NRCS Civil 3D Customization 2.0 is available in Software Center and manually install
   b. IF the customization files aren't there 2 days after Civil 3D 2022 is installed, contact IT for assistance
5. **USER** - Follows instructions for activating a network license (Activating Autodesk Civil 3D 2022 Network License or Activating Expired Trial Autodesk Civil 3D 2022) and sets up Civil 3D 2022 using the User Setup NRCS Civil 3D 22 document
6. **USER** - Upon first launch of Project Explorer and Grading Optimization, follows instructions to activate (Activating Project Explorer for Civil 3D 2022 and Activating Grading Optimization for Civil 3D 2022)
7. **USER** - Sets other personal preferences (refer to Object Highlighting and Layer Isolate document)
8. **USER** - Customizes their own personal template (refer to HowTo - Template Customization 2022)
9. **USER** (If applicable) - Updates survey databases (refer to Steps to Update a Survey Database for Use in Civil 3D 2022)

Steps to Request Installation of "Above Core" software through the OCIO-CEC's DWP
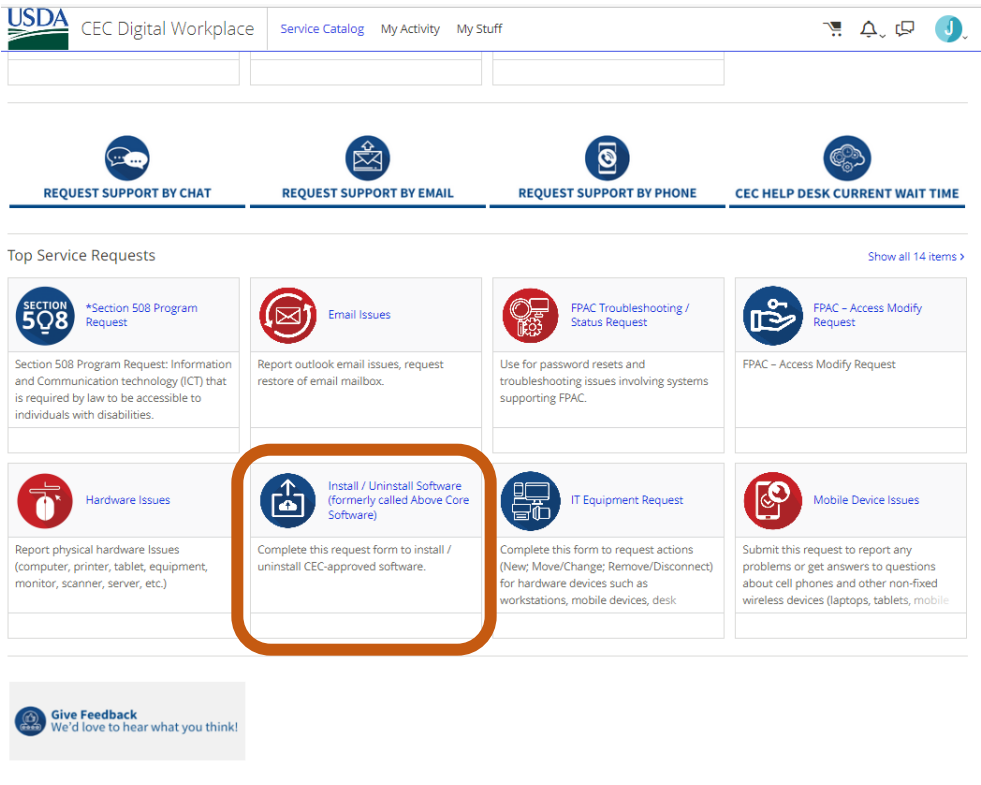
Double-Click the OCIO Help Icon on your desktop
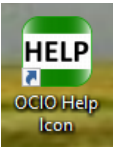
Hover over the Online Help icon and Click Submit DWP Request

You'll be signed in through the single sign-on eAuth process to the *CEC Digital Workplace* home page…

Scroll down to the "Top Service Requests" section and Click "Install/Uninstall Software…"

Select the appropriate action/install options (for yourself, install), and choose either "Yes" or "No" for "Do you need Agency Specific Software". Click the "Name of Software" "Select" dropdown, and in the "Filter:" header, start typing the name of the software (.e.g. "Autodesk", "HEC-HMS", "MAGNET", etc.). You'll have to experiment with the "Yes/No" selection and names to possibly find what you're looking for. If what you're looking for doesn't populate, leave the agency-specific option set to "No", and enter/select "Other" for the name of the software.

‹ Service Catalog   Checkout   ☆ Favorite   ➔ Share

Install / Uninstall Software (formerly called Above Core Software)

Request for   **Quantity**
James Reedy   1

Submit request

Save and close

This service was formerly called "Software Base Install"

Attachments

📄 Attach Files   or drag and drop files here

Supported files:
mp4, csv, msg, jpeg, jpg, doc, rar, ppt, xls, bmp, xlsm, vsd, txt, tif, docx, png, tiff, vsdx, zip, pdf, avi, ai, wmv, pptx, gif, psd or xlsx
Maximum file size:5.00 MB
Maximum file count:3

Is this action for yourself? (required)
⦿ Yes
○ No

Name:
James A Reedy

Company:
USDA-FPAC-NRCS

Region:
NE

Site:
101063 NEBRASKA STATE OFFICE

Site Group:
5344 LINCOLN NRCS/RD STATE OFFICE

Is this for an install or uninstall? (required)
⦿ Install
○ Uninstall

Do you need Agency Specific Software (required)
If you are not sure, select No and do the search. If you do not find the Software title you can select Yes and do the Agency Specific Search.
⦿ Yes
○ No

Agency Specific Software: (required)
The search filter can be used to find your software by clicking on the drop down arrow in the Select field and typing in the first letters of the software .

Select   ▼

Version of Software:

Date of Requested Action

📅

Comment Box

Populate the Software name, version, date, etc. as shown here (this example is for MAGNET Tools). Enter the CRQ # if known (can be found by searching the CEC-OCIO ITR Software SharePoint):

Do you need Agency Specific Software (required)

If you are not sure, select No and do the search. If you do not find the Software title you can select Yes and do the Agency Specific Search.

○ Yes

◉ No

Name of Software: (required)

The search filter can be used to find your software by clicking on the drop down arrow in the Select field and typing in the first letters of the software . If the software is not in the list, select "Other". You will then be prompted to type in the name of the software.

Other ▾

Name of Software not listed (required)

Enter Software Name that not found in list.

MAGNET Office Tools

Version of Software:

7.3

Date of Requested Action

August 8, 2022 9:54 AM	🗓

Comment Box

MAGNET Office Tools CRQ000004236423

Click **Submit request**

User Setup of NRCS Customization for Autodesk Civil 3D 2022 Software
Windows 10 CCE

About

Support files & tools for use with Autodesk Civil 3D 2022 software in support of the National NRCS CAD standards are deployed separately from Civil 3D 2022. After the NRCS customization files are installed, user customization settings need to be completed within the login for each individual user.

Do this first: In Windows Search, search for and open the Control Panel app.
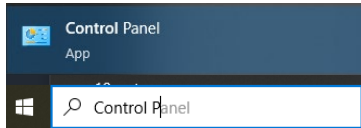
Click *Programs*, then click *Programs and Features*. Filter the "Publisher" column as shown below. Confirm that Civil 3D 2022 and all add-ons/extensions have been installed. If your list of programs does not match this list, the installation may have been interrupted; contact IT for assistance **before** continuing with these instructions.

Do this second: Confirm that the NRCS Customization files have been installed.

Open Windows Explorer and *Browse* to *C:\ProgramData.* Confirm that the *CAD Std 2022* folder exists, and that it contains the following folders:

Browse to *C:\ProgramData\Autodesk\C3D 2022*. Confirm that the *SupportNRCS* folder exists, and that it contains the following folders/files:


If either of those folders is missing or files/folders within either are missing, the NRCS Customization installation process was likely interrupted. Contact IT for assistance or check Software Center to retry the installation.

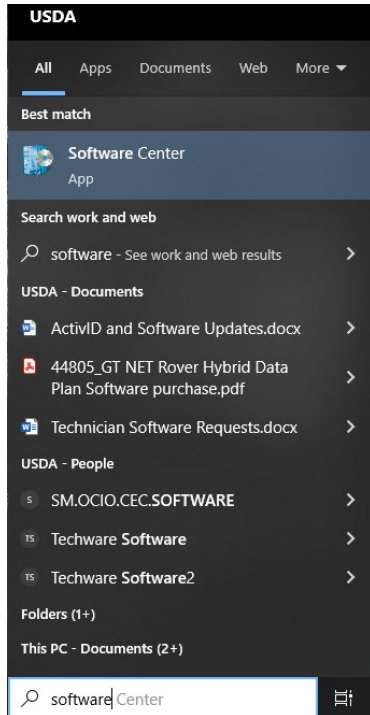**Do this third:** Set Windows Explorer to show hidden folders.
In Windows Explorer click *View*. Then within *Show/hide*, checkmark *Hidden items* & *File name extensions*:
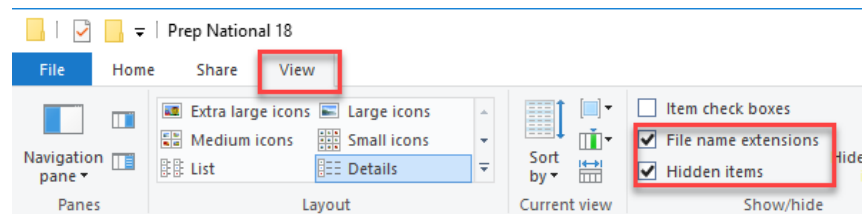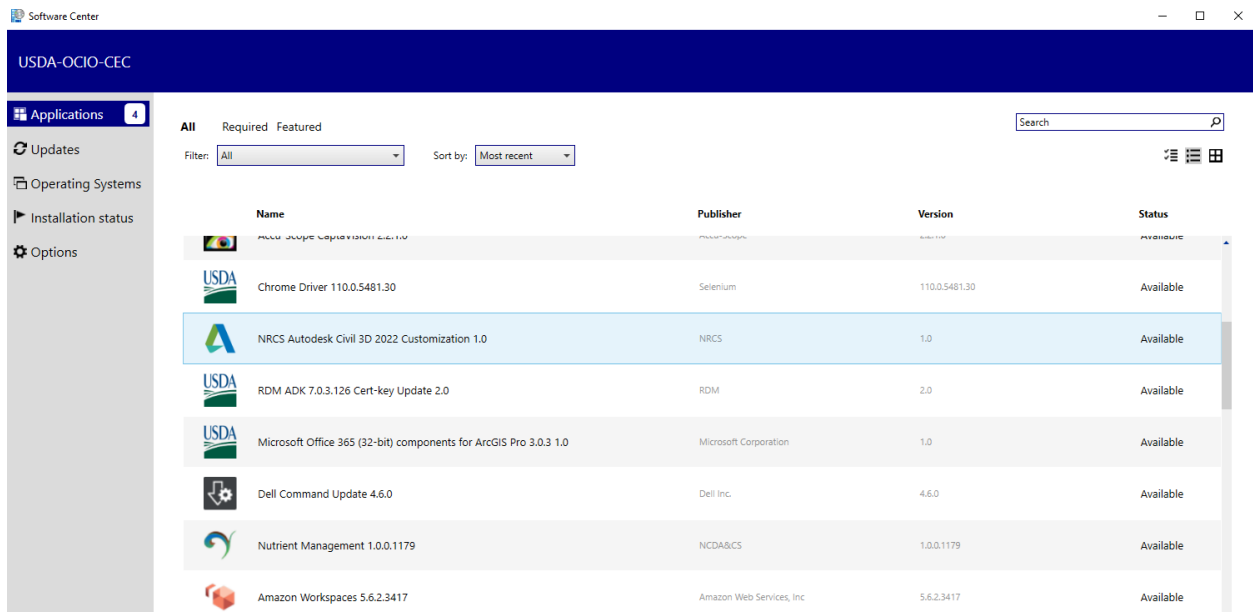
NRCS Customization File

If you don't see the "**Program Data**" folder after the install, you can install it from the software center:

Type in the search bar "**software cente**r" and select it
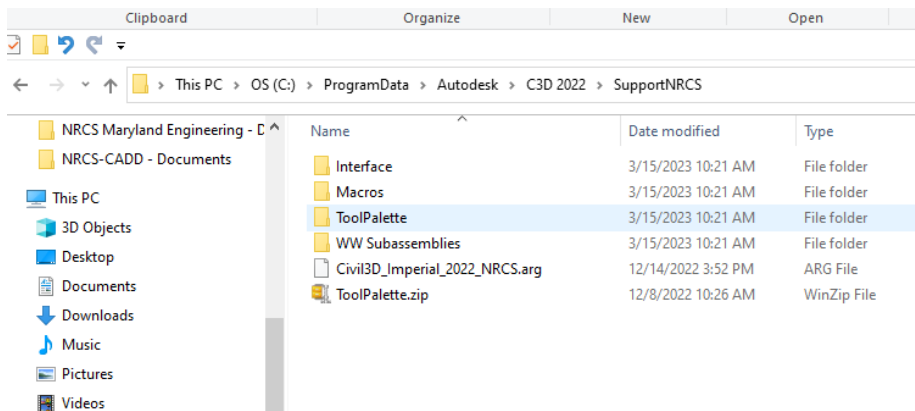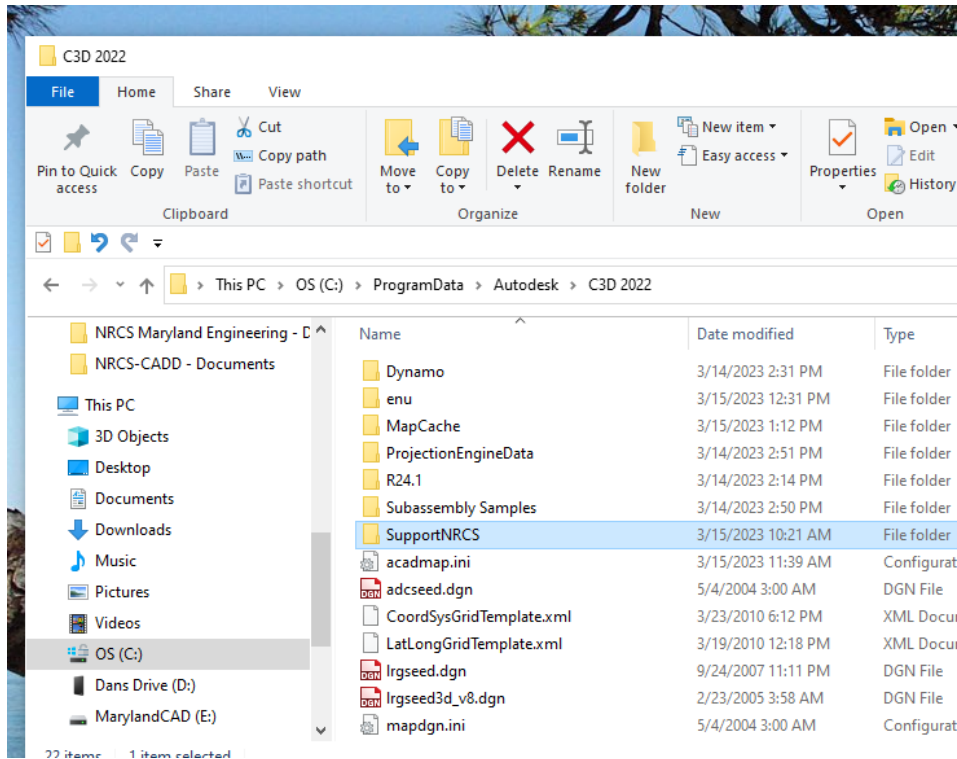

Under **Applications**, you can search for **NRCS Autodesk Civil 3D 2022 Customization 1.0**

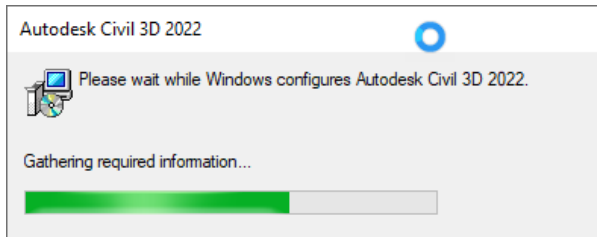Select it and then you can click **Install**

Once completed, you can check in the following file location to verify the file was installed:

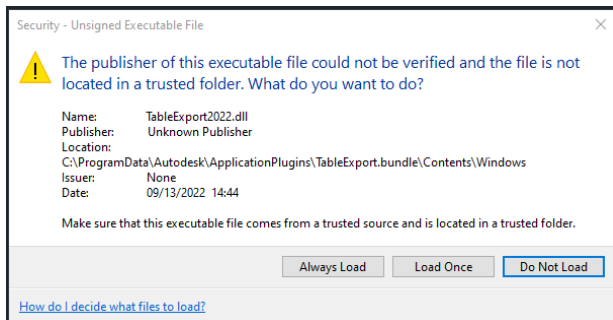**C:/ProgramData/Autodesk/C3D 2022/SupportNRCS**

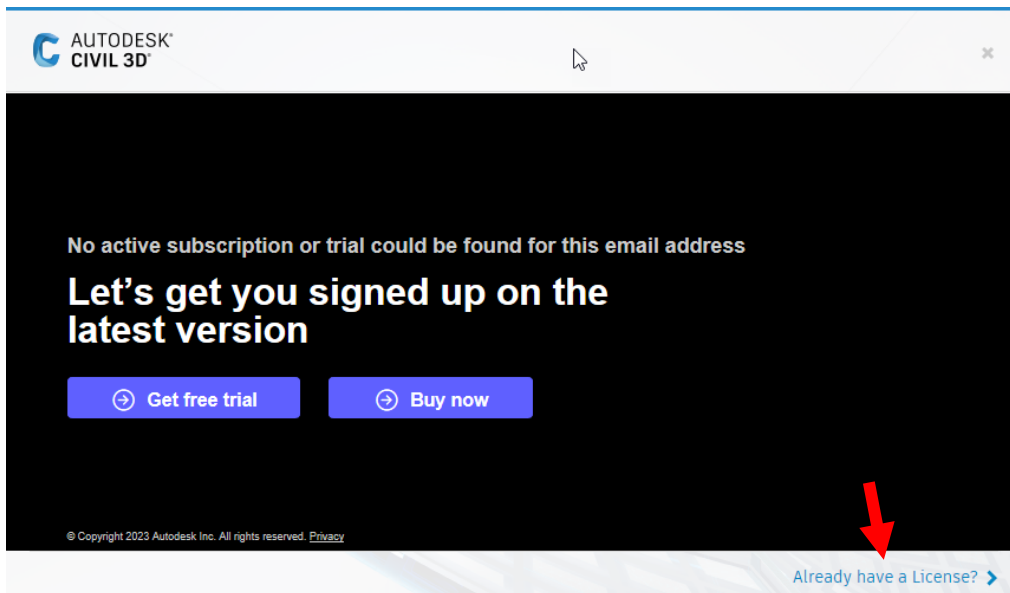**Activating the USDA Network License for Autodesk Civil 3D 2022**
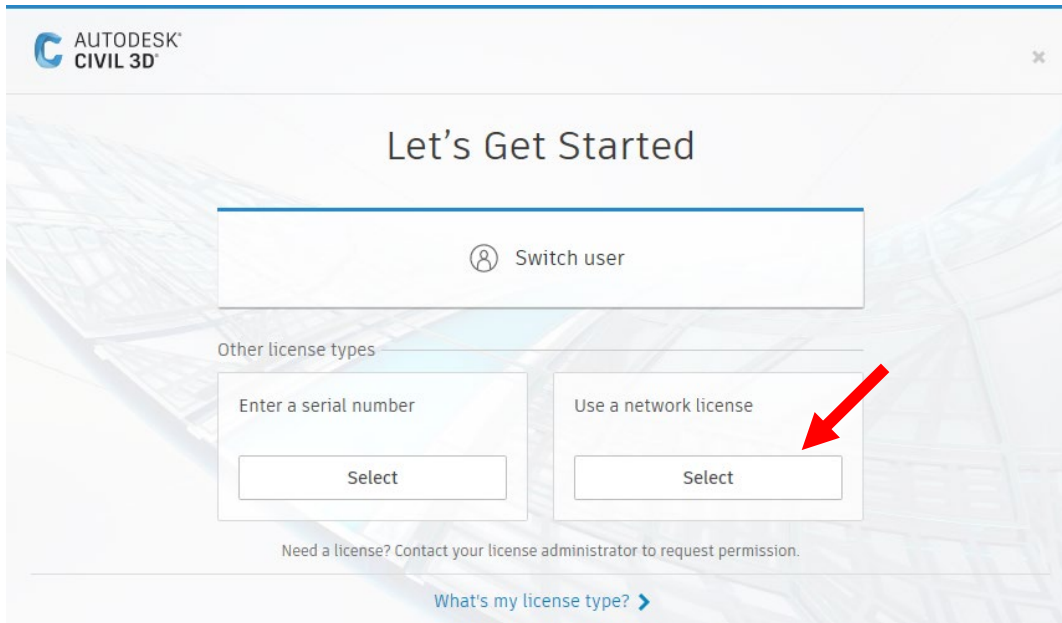
Launch *Civil 3D 2022 Metric*

An "Unsigned Executable File" warning may appear, asking if you want to load the "TableExport2022.dll" file. If it does, click **Load Once**.
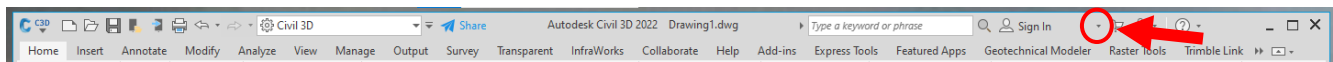

The "No active subscription or trial.." screen will appear. Click **Already have a License?**

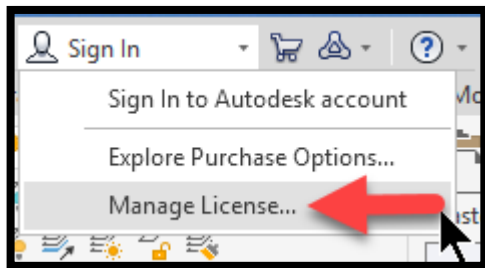On the "Let's Get Started" screen, click **Select** under "Use a network license"
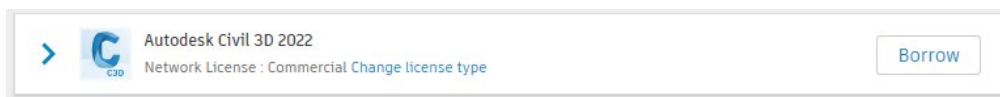

From the top of the Civil 3D 2022 software window click the dropdown ⬚ to the right of Sign In.
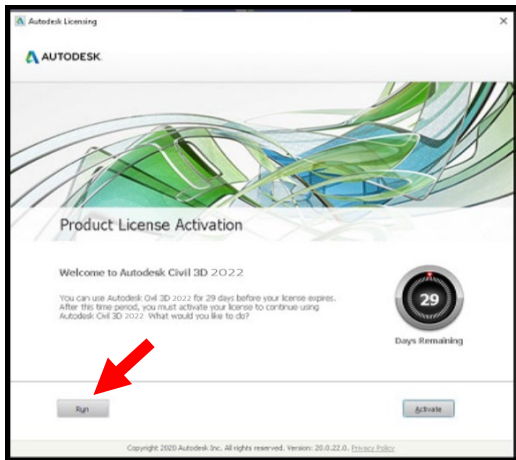

Select "Manage License…"

If │Borrow│ is showing, the network license is running

If the steps and screenshots on these first two pages don't appear or work, continue for other license activation processes that may work.

In some instances, a product license activation or "Start Trial" screen will appear.

 Click **Run.** If you click Activate, just click Close and OK to get back to the product activation screen.

OR click **Start Trial**
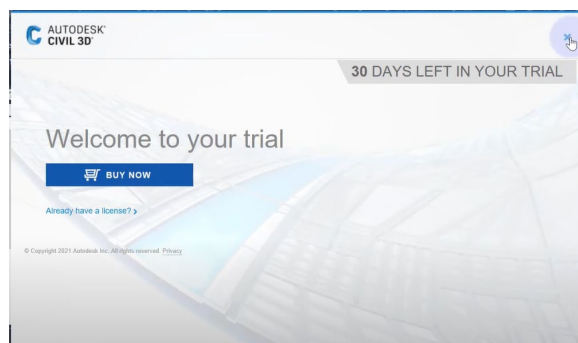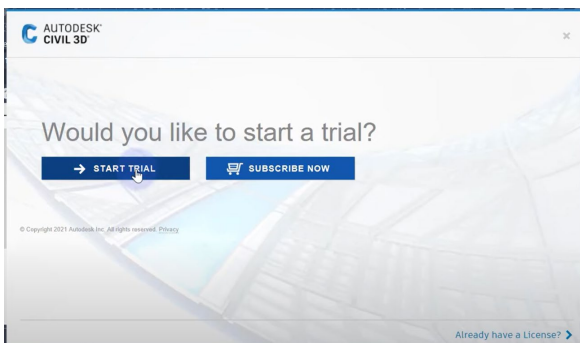
A trial mode of Civil 3D 2022 will start.

From the top of the Civil 3D 2022 software window click the dropdown ⬚ to the right of Sign In.

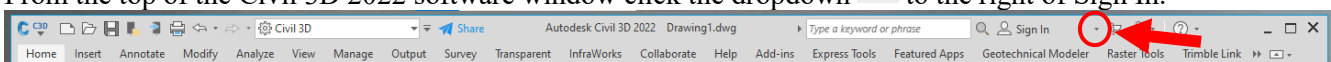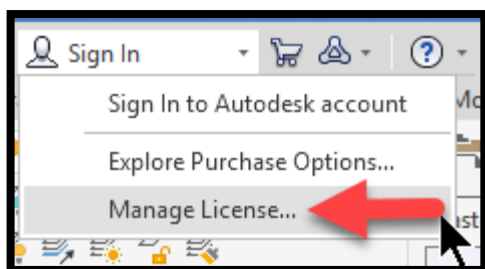Select "Manage License…" from the dropdown list

The License Manager screen will appear. Click **Activate**.

One of these *Let's Get Started* windows will appear.

	Or	
Click the **Select** button in the "Use a network license" section.		Click the **Multi-user** button

Civil 3D will then be connected to the USDA network license manager.

IF after Selecting "Use a network license" the "Specify a license server" screen appears…

	And	

This means the full installation of Civil 3D, add-ons/extensions, and the licensing service files were probably interrupted at some point during the process. Refer to the User Setup document for full details and **contact IT for assistance if it appears the installation is not complete**.

Steps to Activate the Network License if the Autodesk Civil 3D 2022 Trial License has Expired

If you launch Civil 3D 2022 and see a screen noting that your license has expired, you will need to take some extra steps to reset it.
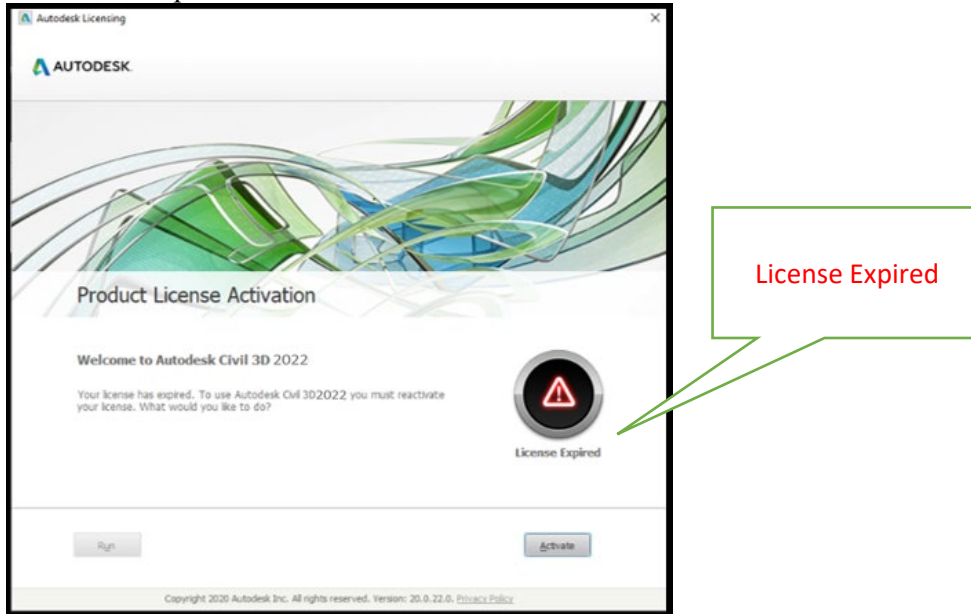
Quit out of Civil 3D 2022.

In the Windows Search box type {cmd} [enter]
The Command Prompt window will open.
Type (or paste) the contents inside these {} at the Command Prompt cursor
{cd /d "C:\Program Files (x86)\Common Files\Autodesk Shared\AdskLicensing\Current\helper"}
[enter]
Type (or paste)
{AdskLicensingInstHelper change -pk 237N1 -pv 2022.0.0.F -lm ""}
[enter]
Close the Command Prompt

Launch Civil 3D 2022 Metric
An Autodesk Licensing screen will appear noting that your trial license has expired:

Click "**Already have a license? >**".

Then a Let's Get Started screen will show up

Click the **Select** button in the "Use a network license" section.

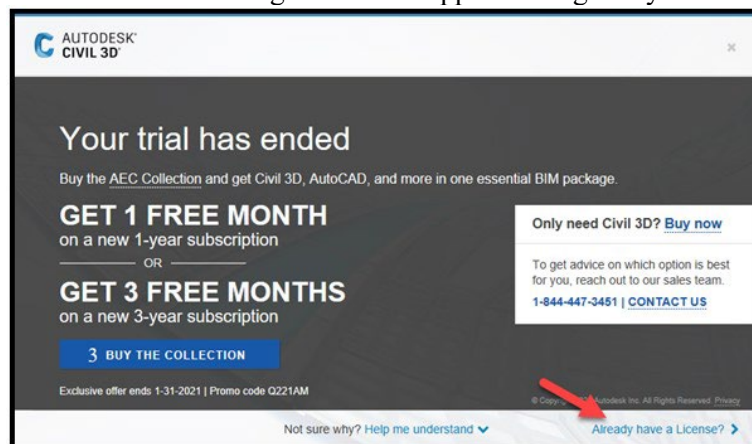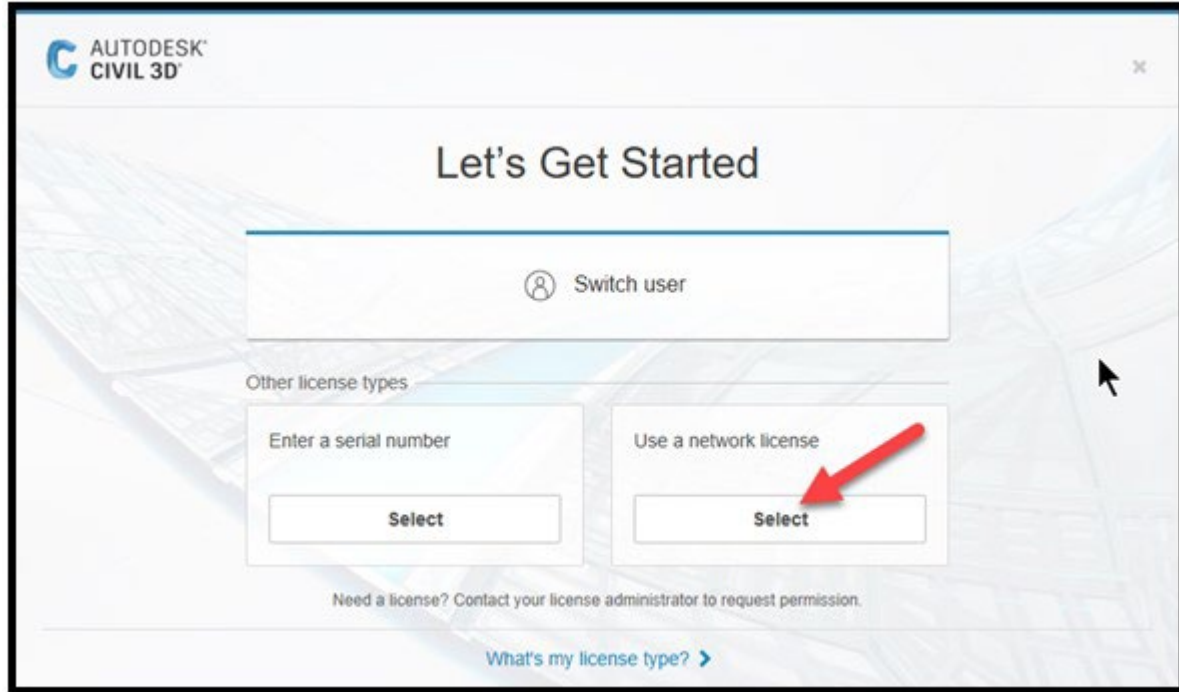Civil 3D will then be connected to the USDA network license manager.

User Setup of Civil 3D 2022 using National NRCS deployment

Note: If a user had launched *Civil 3D 2022 Imperial* prior to the installation of the NRCS customization files, then the user will **first need to <u>reset</u>** Civil 3D 2022 for their login. (See Resetting AutoCAD Civil 3D instructions on the final page.)

1) Launch Civil 3D 2022 **Metric** via *Start… Autodesk Civil 3D 2022 - English…* **Civil 3D 2022** *Metric*.

2) Refer to the "Activating Autodesk Civil 3D 2022 Network License" document, if applicable (and/or "Activating Expired Trial Autodesk Civil 3D 2022" document, if applicable).

2) Type *Options* [Enter] to pull up the Options dialog box. Select the Profiles tab.
    a) Highlight <<C3D_Imperial>> and Click *Rename* and then rename it to
        Original<<C3D_Imperial>>
    b) Click *Apply & Close*.
    c) Click *Import…* then *Browse*: to
        C:\ProgramData\Autodesk\C3D 2022\SupportNRCS
    d) Select *Civil3D_Imperial 2022_NRCS.arg* and Click *Open*.
    e) Rename the Profile name to **<<C3D_Imperial>>** and checkmark *Include path information*. Be sure to include the "<<" and ">>" in the name.
    f) Click *Apply & Close*.
    g) Click *OK* to exit the Options dialog.

3) Quit out of Autodesk Civil 3D 2022 by clicking Exit from the Application Menu.
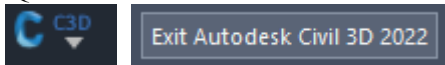
4) Click *No* when asked to save changes to the drawings.

5) Launch Civil 3D 2022 **Imperial** via *Start… Autodesk Civil 3D 2022 - English…* **Civil 3D 2020** *Imperial*

6) If the Autodesk Data Collection and Use window appears, you can decide whether to participate or not. Select your choice and *Click* OK.

7) If the TableExport2022.dll "Unsigned Executable File" warning appears, select *Always Load*.

8) Move your Toolspace to your preferred screen location or click on the Toolspace AutoHide and Properties to change docking, etc.

9) Trimble Link (A - Enable, B - Register or C - Disable). Trimble Link tools can be used to transfer data between AutoCAD and Trimble surveying devices.

    Option A) To **load** the Trimble Link tool (add to the ribbon).
      1. Type CUI, Press *Enter*
      2. Within the Customize tab, Right-click on Partial Customization Files
      3. Click *Load partial customization file*
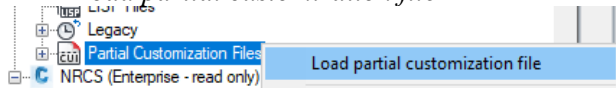
      4. *Browse to C:\Users\first.last\AppData\Roaming\Autodesk\C3D 2022\enu\Support*
      5. Select *TrimbleLink.cuix* to highlight and *Open*
      6. Click *OK* to close the CUI

    Option B) To **register** Trimble Link if you have not registered an earlier version:
      1. Initialize a Trimble Link command from the ribbon. (The following steps will not be needed if registration has already been done.)
      2. An Authorize box will appear. Click *Yes I Agree*.
      3. Click on the link to the Trimble registration page and complete the information.
      4. A registration key will be provided. Or use: **64251726**

5. Enter the registration key into the Authorization code of the Authorize Trimble Link dialog.
6. Click *OK*
7. The Trimble Link tool will be enabled. Click *OK*

Option C) To **unload**/**disable** the Trimble Link tool.
1. Type *CUI*, Press *Enter*
2. Within the Customize tab, expand the Partial CUI files list in the left column.
3. Right-click on TRIMBLELINK
4. Click *Unload TRIMBLELINK.CUIX* file
5. Click *OK* to close the CUI

10) Import the NRCS Waterway subassemblies
From the Civil 3D 2022 ribbon use *Insert… Import…Import Subassemblies…*

Prior to Importing the .pkt files, select *Create New Palette* at the bottom of the dropdown list to make a new tab named ***My NRCS WW***.
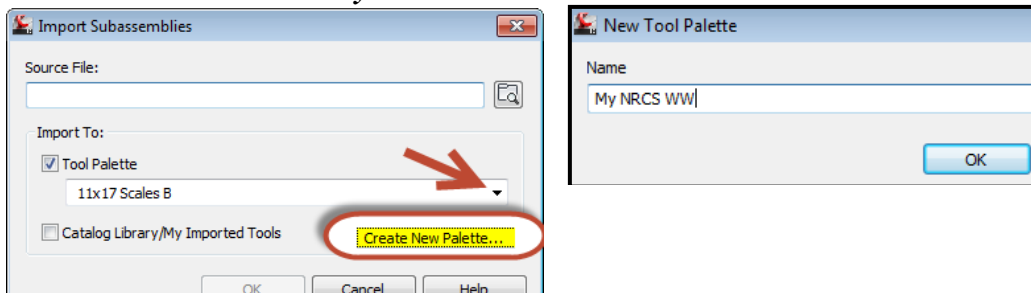
Set the Tool Palette to ***My NRCS WW*** (or select an existing tab, if desired)

At *Source File*, browse to *C:\ProgramData\Autodesk\C3D 2022\SupportNRCS\WW Subassemblies*.
You can select all of the .pkt files using Control+Click. Click *Open*.
Click *Ok*.
The ***My NRCS WW*** tab with the subassemblies will be added to your current Palette.

11) Exit Civil 3D Imperial and relaunch.

Optional: Customizing workspace menus & tool bars

To Toggle on/off the Toolspace, Properties, or Tool Palettes use the ribbon via *Home… Palettes….*

Any of these palettes can be docked or anchored by right clicking on the palette title and clicking the anchoring or docking options.
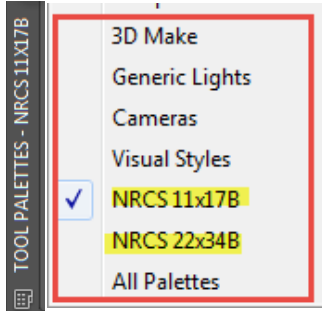
Press Ctrl+ 3 to toggle Tool Palettes on/off. When you Right-Click on the Tool Palette bar you can switch to the NRCS 11x17 or NRCS 22x34 groupings.
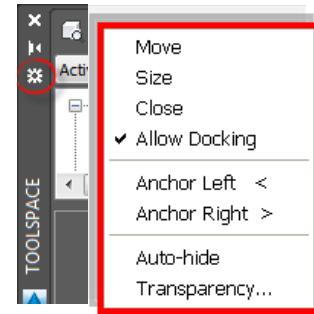
To add the "11x17 MapSymbols B" palette to the NRCS 11x17B palette grouping:
1. Expand/unhide (if auto-hidden) Tool Palettes and right-click ON the tool palette bar
2. Select "Customize Palettes…"
3. <Left-click>-drag the "11x17 MapSymbols B" palette into the **NRCS 11x17B** palette group, in between "11x17 Symbols B" and "11x17 Scales B"
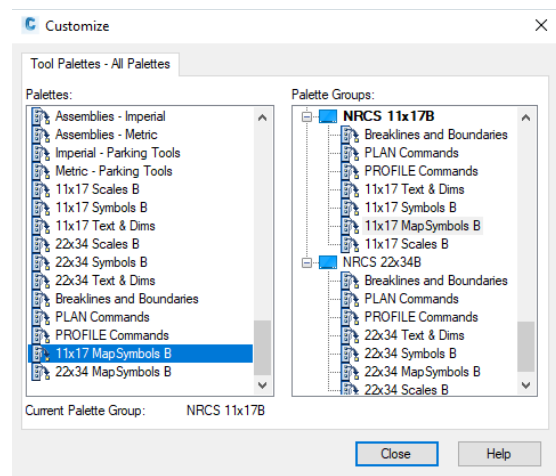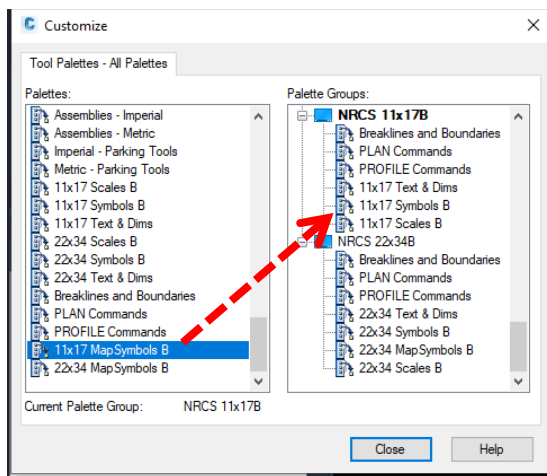
4. Click *Close*
5. Right-click on the "11x17 MapSymbols B" palette tab and select *View Options…*
6. Drag the "Image size:" slider all the way to the left and click *OK*
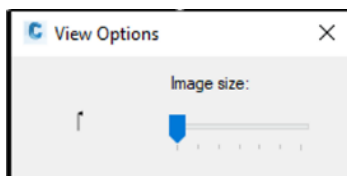
To unload an entire Partial CUI from a profile (this makes them unavailable to all workspaces in the profile):
1. Type *CUI*, Press *Enter*
2. Within the Customize tab, expand the Partial CUI files list in the left column.
3. Right-click on the Partial CUI to be removed (TRIMBLE, TOPCON, etc),
4. Click *Unload CUI file*.
5. Click *OK* to close the CUI.

To enable/disable some menus and/or toolbars in an individual workspace:
1. Type *CUI*, Press *Enter*
2. Highlight the Workspace to be customized in the left column,
3. Click *Customize Workspace* in the right column.
4. Check/Un-Checkmark toolbars or menus under the Main, Partial, or Enterprise CUI list on the left side to make them appear or not appear within the selected workspace.

   For example, if for some reason the NRCS tab isn't showing up in the ribbon, the first thing to check is if "Tabs" is checked for the NRCS (Enterprise) ribbon…
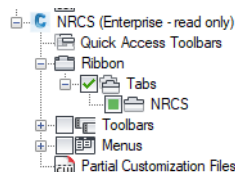
5. Click *OK* when done to save the changes and have them take effect.

To save changes to the location of the palettes in a workspace:
1. Click the Workspace Switching in the Quick Launch toolbar and click *Save Current As*. Then select the current workspace or input a new name. Click *Save*.

To switch workspaces:
1. Click the Workspace Switching in the Quick Launch toolbar and select the desired workspace.
(The software will open next time using the Workspace that is active when you exit out of CAD.)

IMPORTANT NOTE for Topcon MAGNET Tools Users:
The installation order of Civil 3D and Topcon MAGNET Tools is extremely important. If MAGNET Tools is/was installed before Civil 3D, the Topcon ribbon will be present, but the commands will not work.
MAGNET Tools must be uninstalled prior to installing Civil 3D 2022, then reinstalled after.

After installation of MAGNET Tools, upon first launch of Civil 3D 2022, the following prompt will appear, and the Topcon tab will be present in the ribbon.
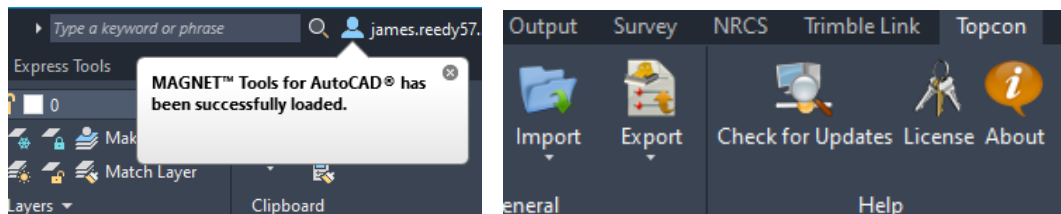
For Reference Only:
NRCS Custom Options settings for Autodesk Civil 3D 2022 on Windows 10

These are settings changes that the NRCS Customization has included:

Type *Options* [Enter] to pull up the Options dialog box. Select the Files tab. Add the following settings
using the Browse or Add buttons if these are not already preset:

Support File Search Path (in addition to default paths)
C:\ProgramData\Autodesk\C3D 2022\SupportNRCS\Macros
C:\ProgramData\Autodesk\C3D 2022\SupportNRCS\Interface
Trusted Locations…
C:\ProgramData\Autodesk\C3D 2022\SupportNRCS\Macros\...
C:\ProgramData\Autodesk\ApplicationPlugins\...
Customization files…
Main Customization file…
C:\User*{user.name}*\appdata\roaming\autodesk\c3d 2022\enu\support\c3d
Enterprise Customization file…
C:\ProgramData\Autodesk\C3D 2022\SupportNRCS\Interface\nrcs_c3d.cuix
Template Settings… Drawing Template File Location…
C:\ ProgramData\CAD Std 2022\Templates
Template Settings… Sheet Set Template File Location…
C:\ ProgramData\CAD Std 2022\Templates
Template Settings… Default Template File Name for QNEW…
C:\programdata\cad std 2022\templates\nrcsc3d2022(11x17)r1.dwt
Tool Palettes File Locations…
C:\Users*{user.name}*\appdata\roaming\autodesk\c3d 2022\enu\support\toolpalette
C:\programdata\autodesk\c3d 2022\supportnrcs\toolpalette\text_blocks_b
C:\programdata\autodesk\c3d 2022\supportnrcs\toolpalette\nrcs_lines
Temporary Drawing File Location…
C:\Users*{user.name}*\appdata\local\temp\
Temporary External Reference File Location…
C:\Users*{user.name}*\appdata\local\temp\
Click OK to have the changes take effect.

<u>Resetting Autodesk Civil 3D 2022 settings for a User</u>

If a user has previously launched Civil 3D 2022 prior to the installation of the NRCS customization files, then the user will first need to **reset** Civil 3D 2022 for their user login.

Reset Civil 3D 2022 user profile the easy way:

1. Click *Start… Autodesk Civil 3D 2022 - English… Reset settings to Default…*
2. At the Reset Settings – Backup Screen you can click **Reset custom settings** unless you know of a need to back them up.
3. At the confirm screen click *OK*.
4. Then Civil 3D launches as plain AutoCAD 2022.
5. Quit out and redo your user customization.

Or

Reset Civil 3D 2022 user profile manually:

Log on to the computer as that user.

1. In the Start menu "Type here to search" box, start typing **regedit**
2. The **Registry Editor** App will appear as a "best match". Click to open the app.
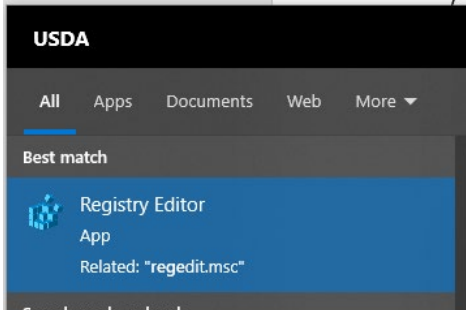
NRCS computers allow this **regedit** change *without* needing an administrator.

3. In the Registry Editor, browse to the following key and delete it:
   HKEY_CURRENT_USER\Software\Autodesk\AutoCAD\R24.1\ACAD-5100:409

5. Close the Registry Editor.
6. Using Windows Explorer, browse to and delete the following user's application folders:
   C:\Users\<user>\AppData\Roaming\Autodesk\C3D 2022
   C:\Users\<user>\AppData\Local\Autodesk\C3D 2022

Object Highlighting & Layer Isolate Settings

AutoCAD has a feature where objects are highlighted when the pickbox cursor rolls over them, providing a preview of which object will be selected when you click it. This does slow down a computer somewhat and can sometimes be a bother.

If you would like to change the settings go to:

Application Menu… Options… Selection

Many users like to uncheck "When no command is active" and leave the other one checked. That means object highlighting occurs only after you've started a command such as move, copy, rotate, etc. Some like to uncheck both.
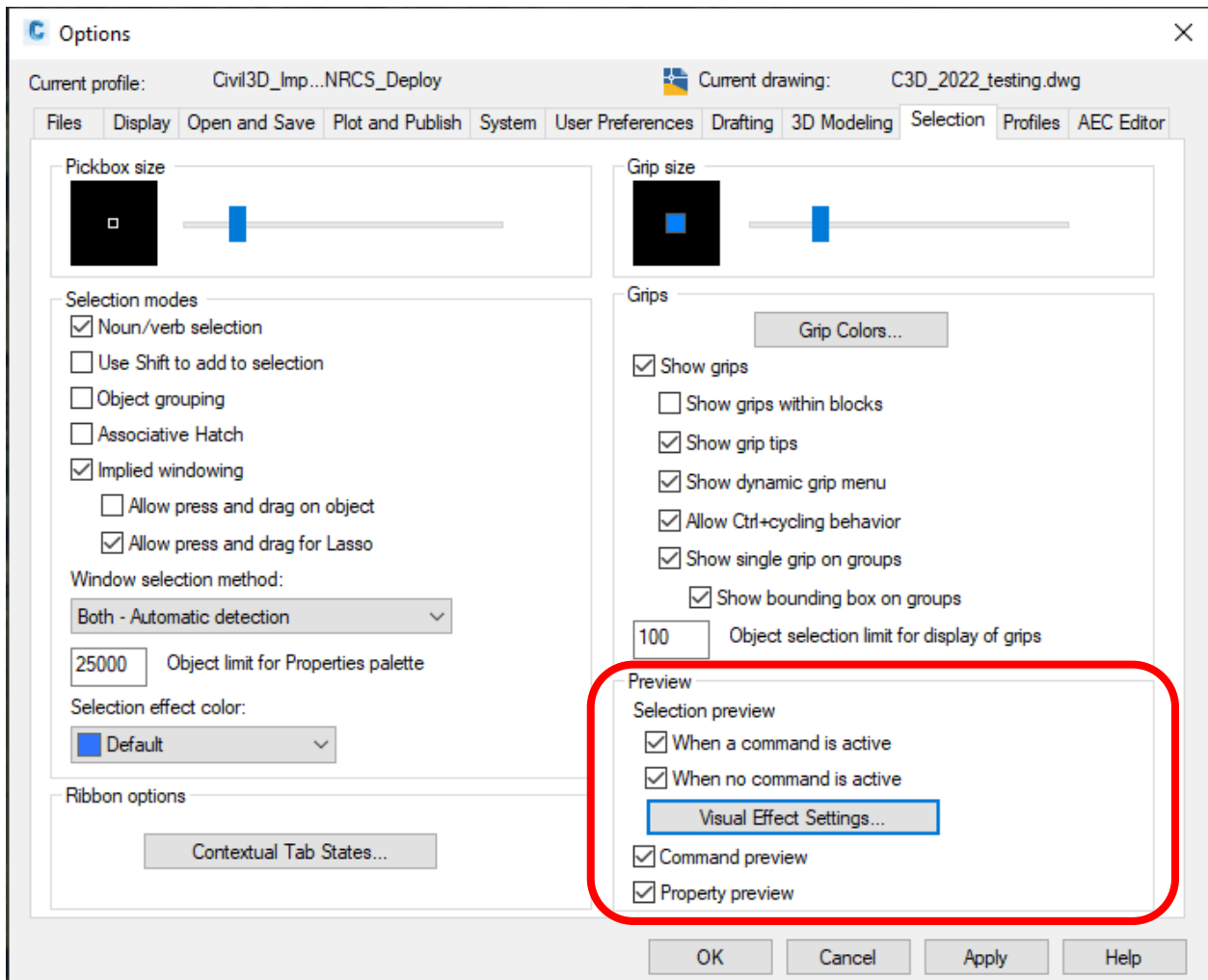
Command preview controls whether you can preview the outcome of the active command (e.g., see fillet curves applied before picking a polyline). Recommend leaving it checked.

Property preview controls whether you can preview the changes to currently selected objects when you roll over drop-down lists and galleries that control properties (e.g., see the chosen color of the selected object before picking it in the Properties color drop-down). Recommend leaving it checked.

Click Visual Effects Settings… to change how the highlighted object is displayed.

The Layer Isolate command can be set to either Lock and fade layers or to Turn off or Freeze layers.

To modify the settings, go to the Home tab of the ribbon, Layers panel, and click Layer Properties

Open the Settings by clicking the gear icon…
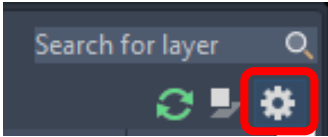
The usual choice is to turn the layers that are not isolated off.
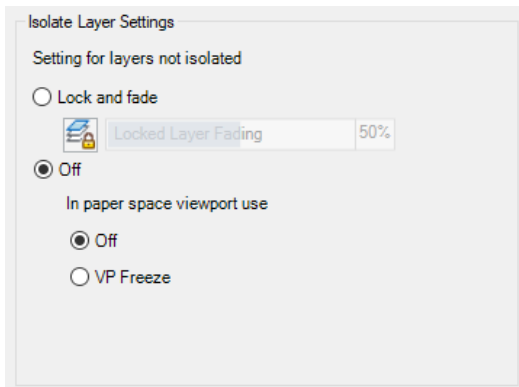
Tip: To quickly isolate every layer in a project one at a time to simply see what's contained on it, use the LayerWalk command.
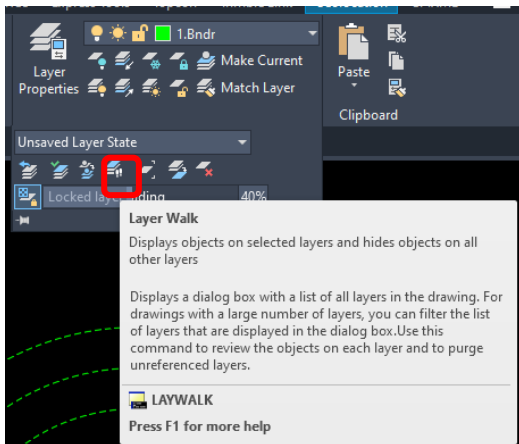
Highlight the first layer in the list, then use the keyboard down arrow key to quickly display only what's on each layer.
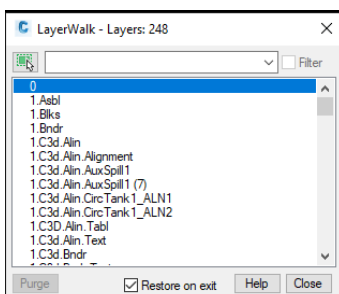
Steps to Activate Grading Optimization for Civil 3D 2022

Launch *Civil 3D 2022 Imperial*
On the *Home* tab of the ribbon select *Grading Optimization*
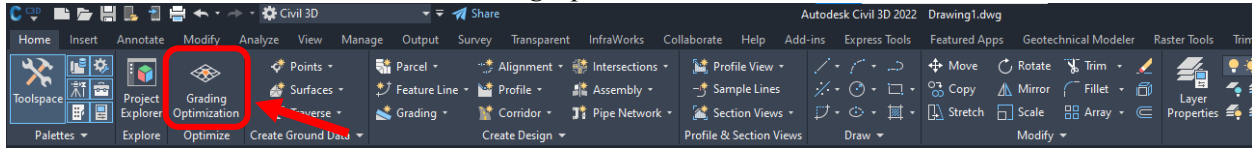
At the trial license screen click "Already have a License? >"
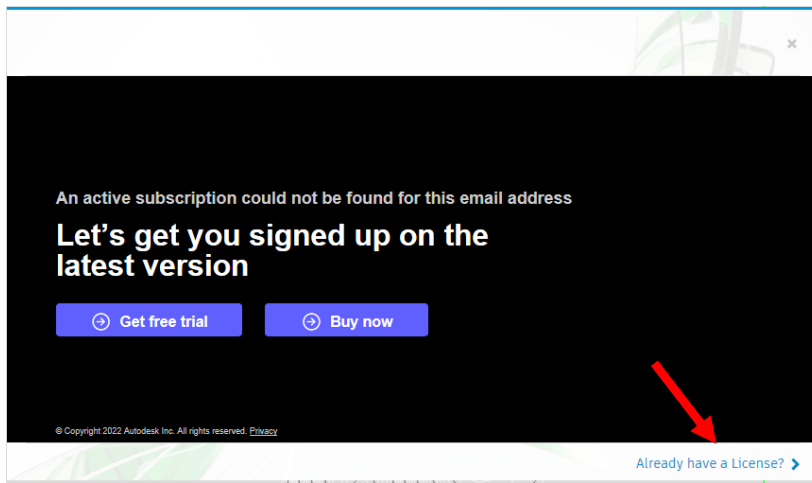
At the Let's Get Started screen go to the Use a Network license area and click Select
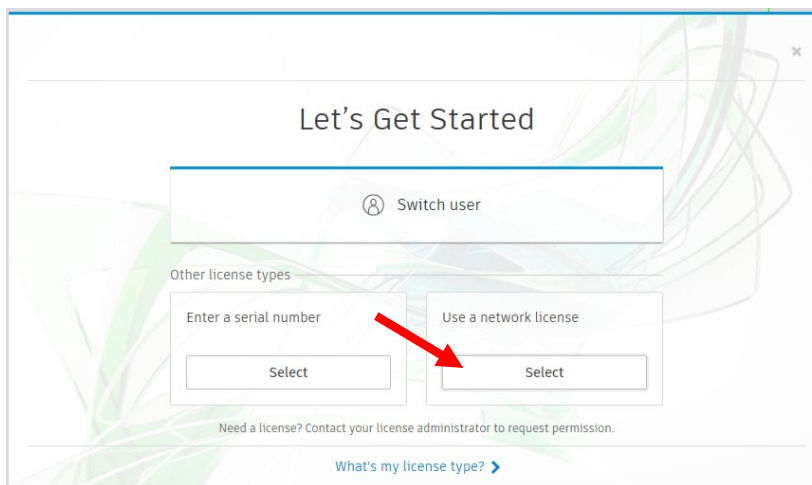
Once activated, Grading Optimization tools are accessed via the *Analyze* tab of the ribbon
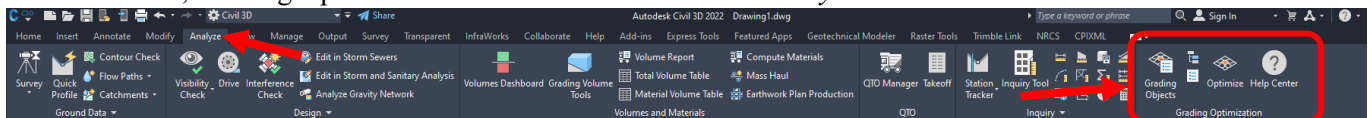
NOTE: Clicking *Grading Objects* will open the Grading Objects Browser and activate ALL tool palettes to access the grading objects…
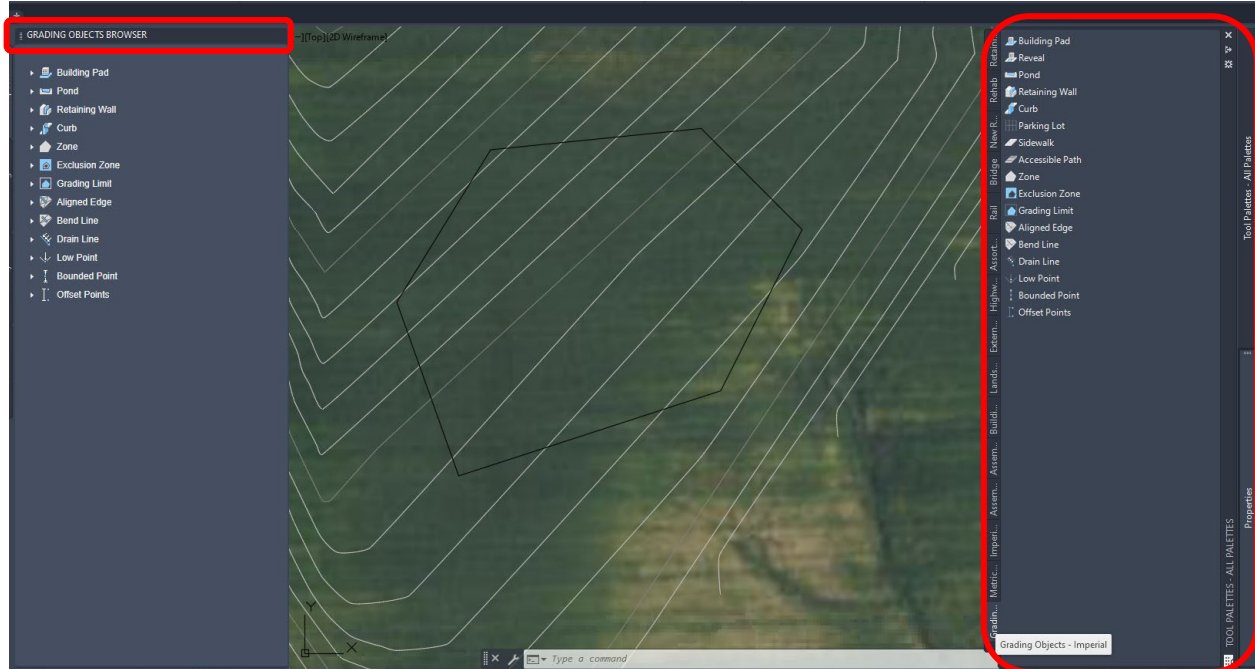
To switch back to the NRCS 11x17B and 22x34B tool palettes, simply hover over and right-click on TOOL PALETTES – ALL PALETTES and select accordingly…
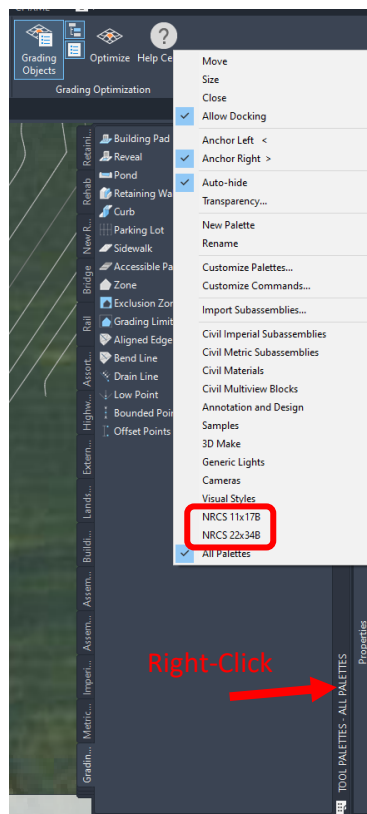
Steps to Activate Autodesk Project Explorer for Civil 3D 2022

Launch *Civil 3D 2022 Imperial*
On the *Home* tab of the ribbon select *Project Explorer* (Moved from previous *Add-Ins* location in 2020).
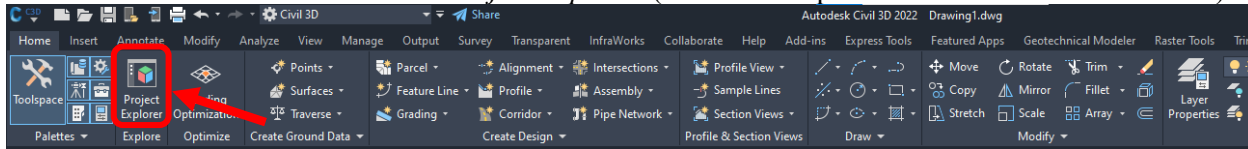
At the trial license screen click "**Already have a License? >**"
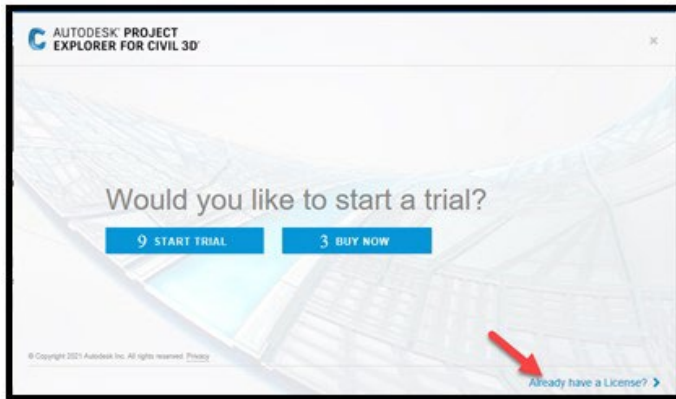
At the Let's Get Started screen go to the Use a Network license area and click Select
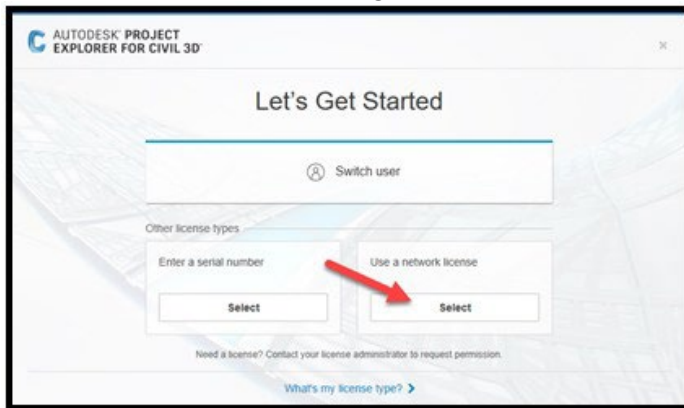
Project Explorer for Civil 3D will open as a separate window in C3D and gives additional tools for reviewing Civil 3D surfaces, alignments, profiles, corridors, generating custom reports, and more.
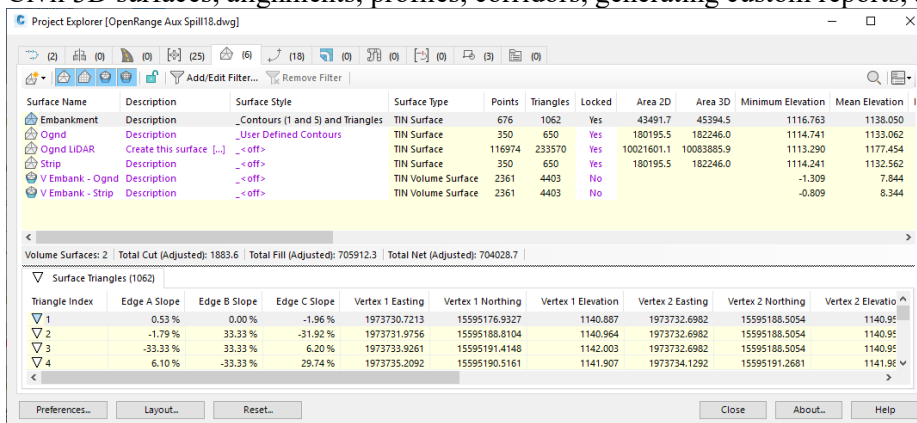
NRCS AutoCAD and Civil 3D 2022 Updates

1. C3D Template Files have been renamed as follows:
   a. **NRCSC3D2022(11x17)R1.dwt**
   b. **NRCSC3D2022(22x34)R1.dwt**
2. Updated **NRCSC3DTitleBlocks.dwt** by adding 11x17 and 22x34 layouts for section sheet production at 1" = 20' scale
3. AutoCAD Standardized Components
   a. Linetype (nrcs.lin)
      i. Created OH (Overhead) linetype with OH for text

      ———— OH ———— OH ———— OH ———— OH ————

      ii. Created Easement linetype
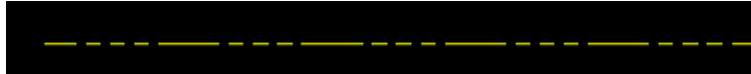
   b. Layers
      i. Added V.Poin.Stak, for proposed staking points (1, Continuous, Proposed Staking Points)
      ii. Renamed W.Plan.Util layer to W.Plan.Util.Ugnd, and updated layer description (this layer already references an underground linetype)
      iii. Added W.Plan.Util.Ovhd and assigned OH linetype
      iv. Added C.Prop.Easmt
      v. Added C.Prop.Setback
   c. Dimension Styles
      i. Removed the following dimension styles from C3D 22x34 (D) DWT

      Ａ 001xB_Dim
      Ａ 001xB_Dim (10 to 1 Vert. Dims. Only)
      Ａ 001xB_Dim (2 to 1 Vert. Dims. Only)
      Ａ 001xB_Dim (5 to 1 Vert. Dims. Only)

   d. Text Styles
      i. Removed the following text style from C3D 22x34 (D) DWT

      Ａ 001xB_Notation(B)

      ii. Added the following text styles to both C3D DWT's
         1. **NRCSC3D2022(11x17)R1.dwt:** 001xB_Notation(A), romans.shx, .063, 22 degrees
         2. **NRCSC3D2022(22x34)R1.dwt:** 001xD_Notation(A), romans.shx, .125, 22 degrees

e. Blocks
    i. The following GIS (Mapping) blocks have been added to the 11x17 and 22x34 tool palettes

bAir Release Valve.dwg	dAir Release Valve.dwg
bExisting Spring Development.dwg	dExisting Spring Development.dwg
bExisting WCS.dwg	dExisting WCS.dwg
bExisting Well.dwg	dExisting Well.dwg
bExisting Windmill and Trough.dwg	dExisting Windmill and Trough.dwg
bExisting Windmill.dwg	dExisting Windmill.dwg
bExistingTrough.dwg	dExistingTrough.dwg
bGAS PUMP.dwg	dGAS PUMP.dwg
bGate valve.dwg	dGate valve.dwg
bHEADWALL.dwg	dHEADWALL.dwg
bHVAC.dwg	dHVAC.dwg
bMAILBOX.dwg	dMAILBOX.dwg
bNarrow.dwg	dNarrow.dwg
bPlanned Pump.dwg	dPlanned Pump.dwg
bPlanned Spring Development.dwg	dPlanned Spring Development.dwg
bPlanned Trough.dwg	dPlanned Trough.dwg
bPlanned WCS.dwg	dPlanned WCS.dwg
bPlanned Well.dwg	dPlanned Well.dwg
bPlanned Windmill and Trough.dwg	dPlanned Windmill and Trough.dwg
bPlanned Windmill.dwg	dPlanned Windmill.dwg
bPROPANE TANK.dwg	dPROPANE TANK.dwg
bSolar Pump.dwg	dSolar Pump.dwg
bSolar Watering Facility.dwg	dSolar Watering Facility.dwg
bSpring.dwg	dSpring.dwg
bWater Monitoring Well.dwg	dWater Monitoring Well.dwg
bWatering Facility.dwg	dWatering Facility.dwg

    ii. Added PivotIrrigation Dynamic Block for a pivot irrigation system

  f. Tool Palette Updates
    i. Created "11x17 MapSymbols B" and "22x34 MapSymbols B" palettes in "NRCS 11x17B" and "NRCS 22x34B" palette groups; added all above new GIS map symbol blocks to the appropriate palette "b" and "d" palettes.

    ii. Placed "PivotIrrigation Dynamic" block in both "11x17 Symbols B" and "22x34 Symbols B" palettes
    iii. Created new "Property Line – Easement", "Property Line – Easement Setback", "Utility Line – Overhead" polyline tools in the PLAN Commands palette. Edited existing "Utility Line" to "Utility Line – Underground".
 4. Civil 3D Standardized Components
  a. Dragged State Arrowhead Sizes
    i. All C3D label styles in **NRCSC3D2022(11x17)R1.dwt** have been updated to have a height of 0.117 (formerly 0.078)

      ii.   All C3D label styles in **NRCSC3D2022(11x17)R1.dwt** have been updated so dragged state leaders are splined, and not straight

     iii.   All C3D label styles in **NRCSC3D2022(22x34)R1.dwt** have been updated to have a height of 0.234 (formerly 0.156)

     iv.   All C3D label styles in **NRCSC3D2022(22x34)R1.dwt** have been updated so dragged state leaders are splined, and not straight

      v.   The 4 items above were done to match NRCS text, multileader and dimension styles

b.   General → Multipurpose Styles → Code Set Styles

      i.   Deleted Corridor Production CSS and updated Corridor CSS to include point codes from NRCS custom waterway subassemblies

      ii.   Deleted Waterway (Corridor Design) and Waterway (Sections with Labels) CSS's, as they duplicate the functionality of the Corridor and Section (With Labels) CSS

     iii.   Updated Section (Corridor Section Editor) CSS to include point codes from NRCS custom waterway assemblies

     iv.   Deleted Section (Drawing Production) as it is duplicated with Section (With Labels) CSS

      v.   Resulting set of CSS's is as follows:
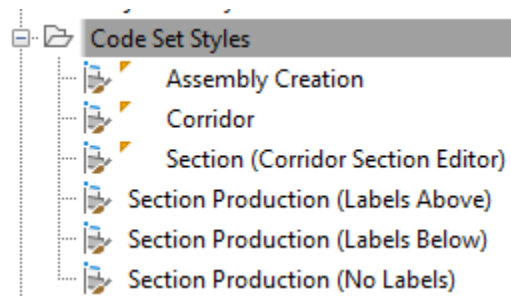
c.   General → Multipurpose Styles → Label Styles → Marker

      i.   Modified Offset (Drawing Production) so the negative value is not shown on a left side offset label. These labels use a L and R as a suffix to indicate the side

      ii.   Removed Offset and Elevation as this is a duplicate for Offset and Elevation (Drawing Production). CSS referencing the old label style were updated accordingly.

     iii.   Resulting set of maker label styles is as follows:
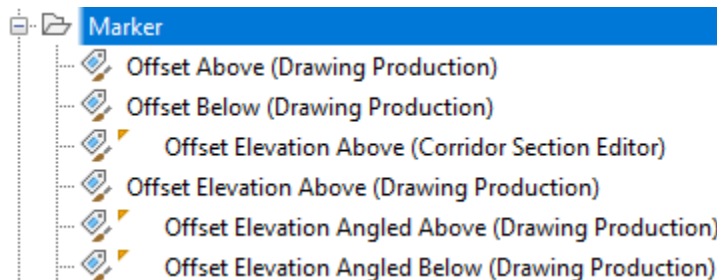
d.   General → Multipurpose Styles → Label Styles → Line

    i. Grade and Elev Start End and Slope and Elev Start End have been updated so the grade is displayed on the middle of the segment
  e. Point → Description Key Sets
    i. Updated Z* code (in Z_Staking Description Key Set), to reference the new V.Poin.Stak layer
    ii. Deleted EDGE* in Edge DKS, as it conflicts with ED*, in the same DKS
  f. Point Groups
    i. Updated EX – Ground (Plain) point group to include GRD and GS point descriptions
    ii. Updated PR – Staking point group to remove *With names matching: z**. Points with description Z* are included in the PR – Staking point group
  g. Surfaces
    i. Added Watershed Analysis surface style
    ii. Added Watershed label styles (watershed details and off)
    iii. Added Watershed table style
  h. Profile View Styles
    i. For both **(11x17)** and **(22x34)** DWT's, the default profile view style was set to A 40Hx10V to align with DWT current annotation scale of 1"=40'
  i. Corridor
    i. Modified ViewEditCorridorSections command settings to assign the Section (Corridor Section Editor) as the default Code Set Style when this command is issued.

5. Custom Applications
  a. AUXSP – Auxiliary Spillway has been updated to provide better instruction on the orientation of the auxiliary spillway. The mirror option has been removed, and labels are now placed in the drawing to indicate the upstream and downstream sides
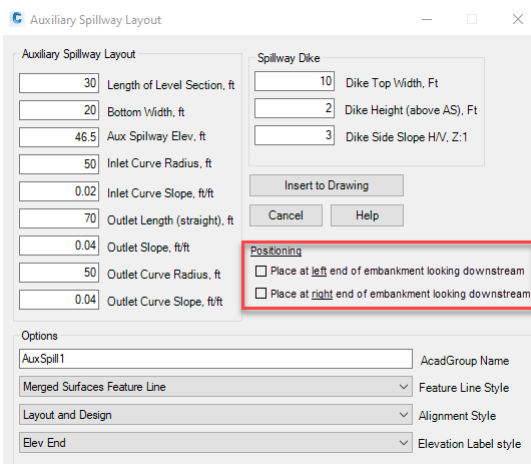
  b. CALCA – Calculate area command now supports C3D feature lines
  c. TOTLEN – Total length now supports a variety of entity types including lines, polylines, splines, circles and arcs