



Natural Resources Conservation Service

# **AutoCAD Civil 3D 2022**

## *Maryland Templates Overview*

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## Natural Resources Conservation Service

# Topics covered:

- **Maryland Templates**
- **Plotting**

## Natural Resources Conservation Service

# Maryland Templates

- **Where do I find them?**
  - On the Maryland Sharepoint Site
  - On the Maryland NRCS Website
  - MD CAD Users Website
- **Why do we have them?**
  - Templates are used to help keep all design formats similar throughout the State
  - They assist the designer with valuable information and a starting point for the BMP(s) being designed
- **How do I use them?**
  - The designer is required to input information into the template to make it site specific
  - Drawing Properties
  - Attributed Blocks



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# Maryland Templates

## Where do I find them?

1. Federal System – Maryland Sharepoint Site
2. Outside the Federal System (MDA Users) – Maryland NRCS Website – Engineering
3. MD CAD Users Website



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# Syncing Maryland Templates

## Federal System

You should have access to the Maryland Sharepoint site. This is where all the most up-to-date templates are located. There are directions that explain how to “Sync” the templates. This will allow you to Click File>“New” and it will open the file location on Sharepoint, allowing you to select the template you want to use. Also, it will explain how to change your QNEW to our Blank Template.

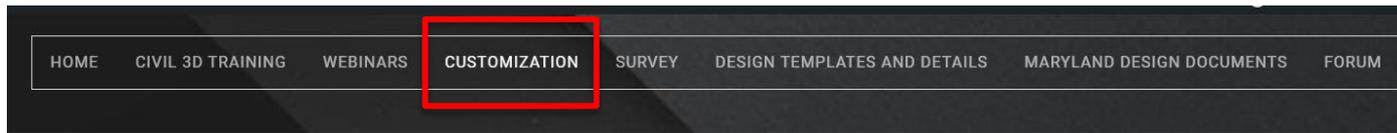


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# Syncing Maryland Templates

## How to Sync Microsoft OneDrive

[www.marylandcadusers.com](http://www.marylandcadusers.com)



Show 10 entries

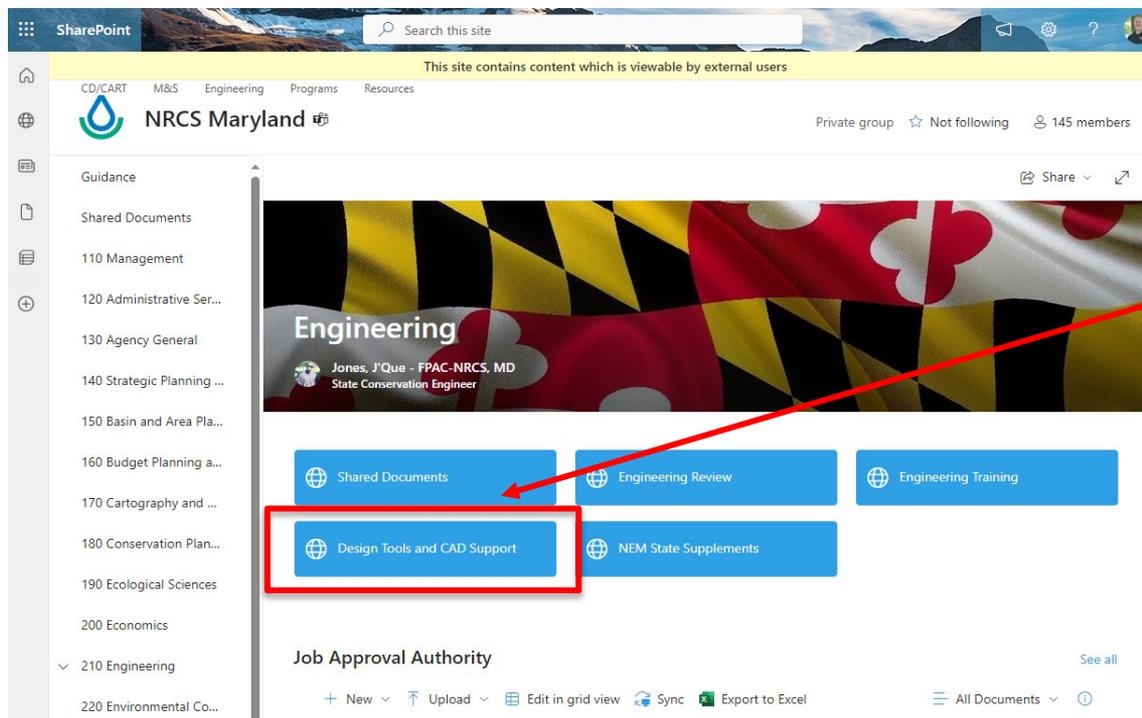
Search: \_\_\_\_\_

Reference ID	Title	Video	PDF	PDF	Revision Date
MD_VID_0001	Session #1 - NRCS Customization - 2020	Video	PDF	PDF-National Setup	9/2020
MD_VID_0002	Session #2 - Maryland Customization - 2020	Video	PDF		9/2019
MD_VID_0003	Session #1 - NRCS Customization - 2022	Video	PDF	PDF-Helpful information for a successful Install	3/2023
MD_VID_0004	Session #2 - Maryland Customization - 2022		PDF		10/2023
MD_VID_0005	Process to request Civil 3D 2022 software "Above Core"		PDF		3/2023

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# Syncing Maryland Templates

## Federal System ([Engineering \(sharepoint.com\)](#))

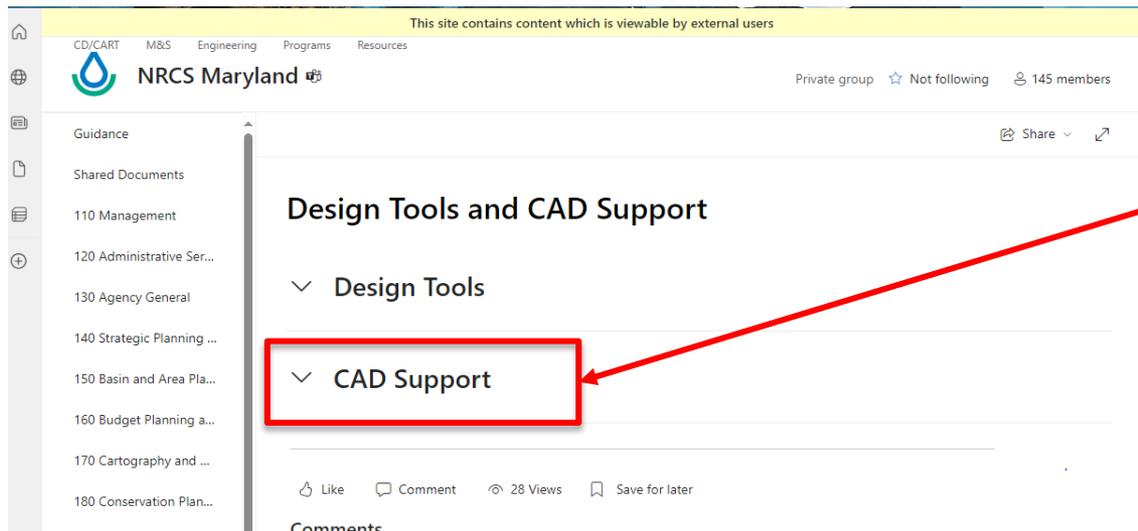


Select "Design Tools and CAD Support"

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# Syncing Maryland Templates

Federal System ([Engineering \(sharepoint.com\)](https://sharepoint.com))



Select "CAD Support"

## Natural Resources Conservation Service

# Syncing Maryland Templates

## Federal System ([Engineering \(sharepoint.com\)](https://sharepoint.com))

This site contains content which is viewable by external users

CD/CART M&S Engineering Programs Resources

NRCS Maryland Private group Not following 145 members

Guidance Share

Shared Documents

110 Management

120 Administrative Ser...

130 Agency General

140 Strategic Planning ...

150 Basin and Area Pla...

160 Budget Planning a...

170 Cartography and ...

180 Conservation Plan...

190 Ecological Sciences

200 Economics

210 Engineering

220 Environmental Co...

230 Equal Opportunity

250 Financial Manage...

260 Public Information

270 Information Resou...

280 International Cons...

290 Resource Inventory

300 Land Treatment Pr...

CAD Support

CAD Support

+ New ↑ Upload Edit in grid view Sync Export to Excel All Documents

Name	Modified	Modified By
0001-0099 Standard Templates	September 19	Moorman, Erinna - FPAC-†
0100-0199 Fencing Details	September 19	Moorman, Erinna - FPAC-†
0200-0299 Outlet Protection Deta...	September 19	Moorman, Erinna - FPAC-†
0300-0399 Water Supply Details	September 19	Moorman, Erinna - FPAC-†
0400-0499 Drainage Details	September 19	Moorman, Erinna - FPAC-†
0500-0599 Waste Storage Details	September 19	Moorman, Erinna - FPAC-†
0600-0699 Stream Crossing Details	September 19	Moorman, Erinna - FPAC-†
0700-0799 Reinforced Concrete ...	September 19	Moorman, Erinna - FPAC-†
0800-0899 Streambank Protectio...	September 19	Moorman, Erinna - FPAC-†
0900-0999 Pipe and Conduit Deta...	September 19	Moorman, Erinna - FPAC-†
1000-1099 Sediment and Erosion ...	September 19	Moorman, Erinna - FPAC-†
1100-1199 Misc Drawings and It...	September 19	Moorman, Erinna - FPAC-†
C3D Support Files	September 19	Moorman, Erinna - FPAC-†

Open "0001-0099 Standard Templates" folder

Natural Resources Conservation Service

# Syncing Maryland Templates

Federal System ([Engineering \(sharepoint.com\)](https://sharepoint.com))

CAD Support > 0001-0099 Standard Templates See all

+ New ↑ Upload 📄 Edit in grid view 🔗 Share 🔗 Copy link **🔄 Sync** ⋮ ☰ All Documents ℹ️

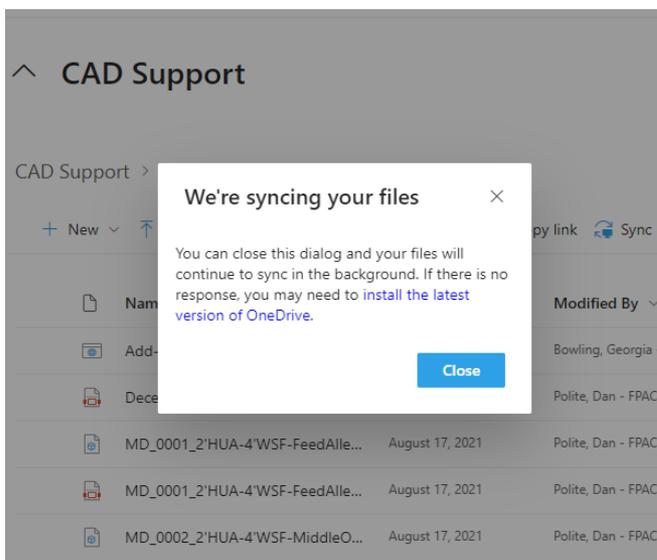
 Name	Modified	Modified By
 Add-A-Plot Style Table Wizard.Ink	September 18	Bowling, Georgia - FPAC-N
 December 2020 Template Update...	January 13, 2021	Polite, Dan - FPAC-NRCS, I

Click on the “Sync” Icon

## Natural Resources Conservation Service

# Syncing Maryland Templates

## Federal System ([Engineering \(sharepoint.com\)](https://sharepoint.com))



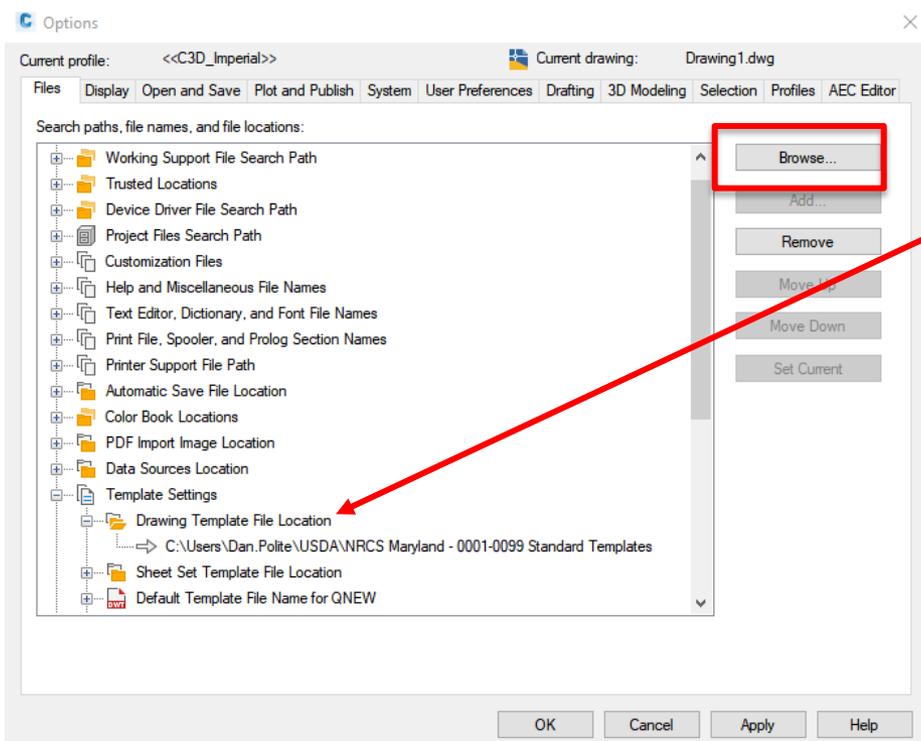
A message will display stating that the files are syncing. This may take a few minutes to complete. There will be an icon located on the bottom right of your screen that will show your one drive syncing.



## Natural Resources Conservation Service

# Syncing Maryland Templates

Once the files have been synced, you will have to open Civil 3D and change the template file location



With Civil 3D open:

On the command line type **“options”**

Select the **Files** tab

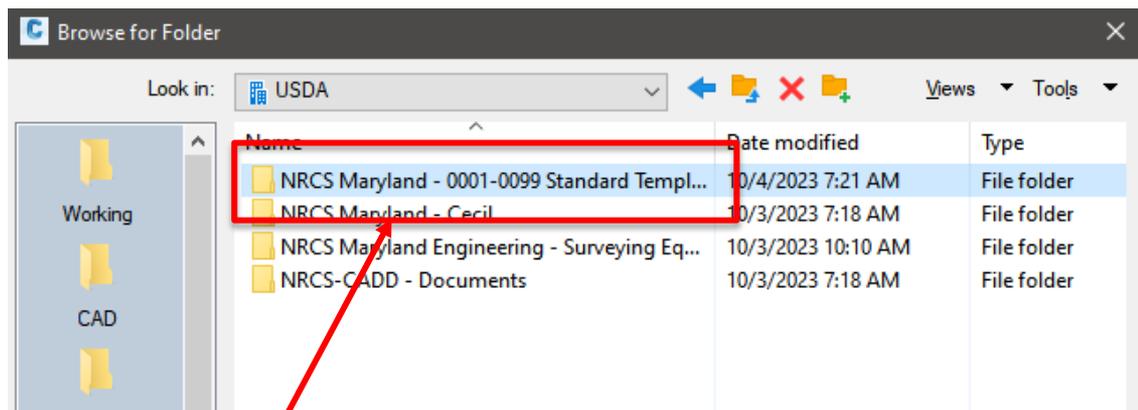
Expand the **Templates Setting** folder

Expand the **Drawing Template File Location**

Select the current location and then select **Browse**

## Natural Resources Conservation Service

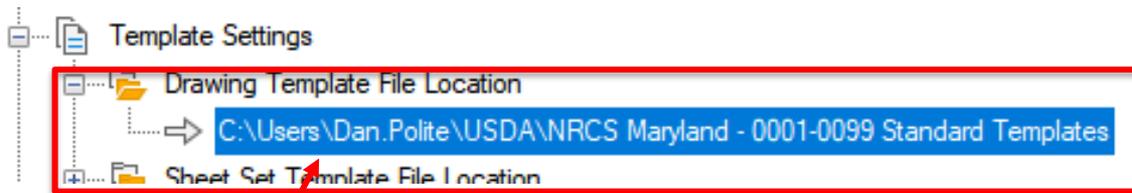
# Syncing Maryland Templates



Browse to the folder labeled **USDA>NRCS Maryland – 0001-0099 Standard Templates**  
 Click **Open**

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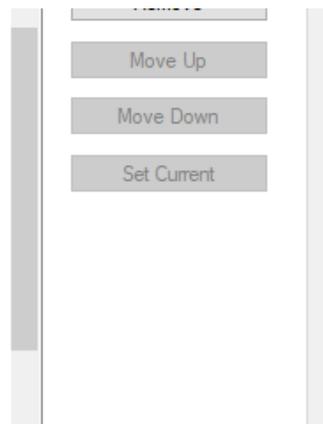
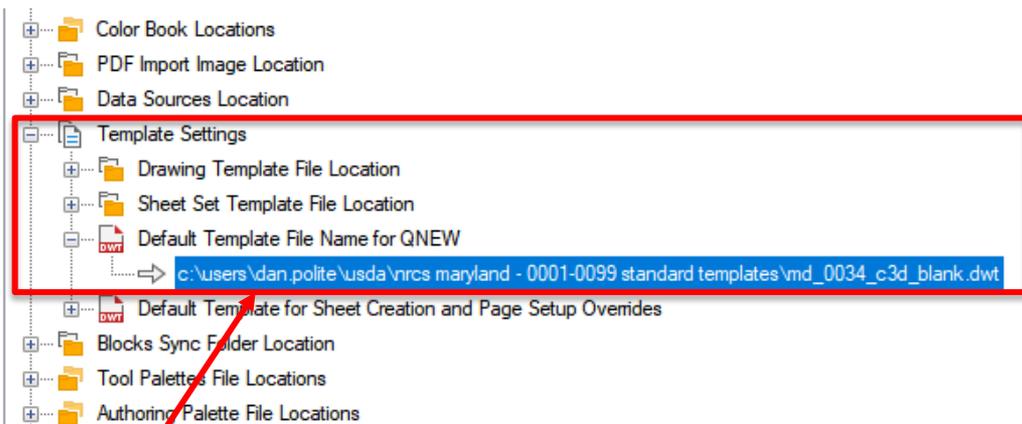
# Syncing Maryland Templates



You should now see the file location that you set

## Natural Resources Conservation Service

# Syncing Maryland Templates



Now you will have to set the file location of **QNEW**

With Civil 3D open:

On the command line type “**options**”

Select the **Files** tab

Expand the **Templates Setting** folder

Expand the **Default Template File Name for QNEW**

Select the existing file that is shown and then select **Browse** and select the document labeled **MD\_0034\_C3D\_Blank.dwt** (it should point you to the same folder that you synced for your templates)

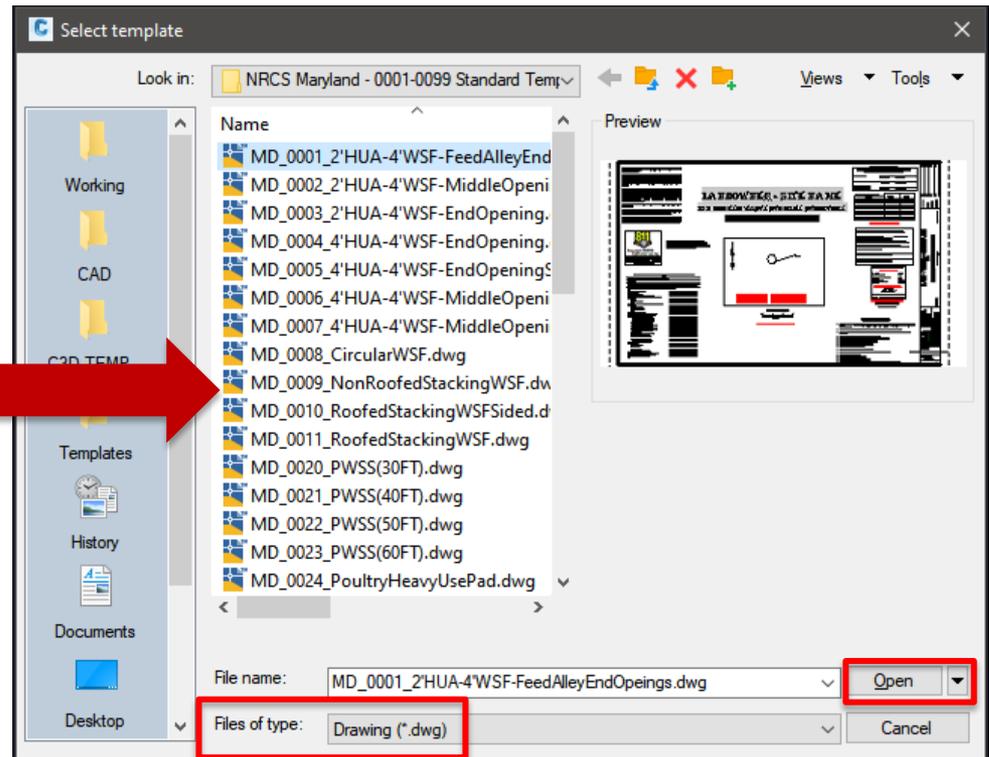
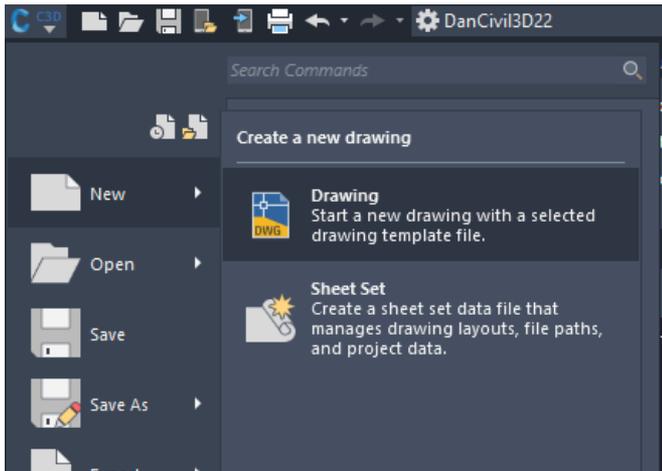
Click **OK**

## Natural Resources Conservation Service

# Maryland Templates

### Federal System

To start a **NEW** drawing,  
 Click  and select  
 New and then “Drawing”  
 Select the drawing you  
 want and select **Open**



If the .dwg drawings don't show up, make sure you change the **file type to .dwg**

## Natural Resources Conservation Service

# Maryland Templates

## Outside the Federal System

You can go to the following location on the Maryland Engineering website: [MD NRCS Engineering](#)

Scroll down to the bottom of the page and select:

### Engineering References

<p><b>ELECTRONIC FIELD OFFICE TECHNICAL GUIDE</b></p> <p>Technical guides are the primary scientific references for NRCS. Partners can find Standard Drawings, Design Guides, and Design Spreadsheets in the eFOTG.</p> <p><a href="#">MARYLAND EFOTG</a></p>	<p><b>DAM SAFETY GUIDELINES AND POLICIES</b></p> <p>Maryland Department of the Environment has developed, adapted or adopted the following documents to support dam owners, engineers and contractors in the shared mission of dam safety.</p> <p><a href="#">DAM SAFETY GUIDELINES AND POLICIES</a></p>	<p><b>MARYLAND'S DESIGNATED USES/USE CLASS MAP</b></p> <p>The interactive map displays the use classes assigned to Maryland's surface waters (rivers, impoundments, and tidal waters) as promulgated in Code of Maryland Regulations (COMAR) Section 26.08.02.08.</p> <p><a href="#">MARYLAND'S DESIGNATED USES</a></p>	<p><b>MARYLAND CAD USERS</b></p> <p>Maryland's AutoCAD Civil 3D Forum site. Share your knowledge, ask questions, and explore Civil 3D topics.</p> <div style="border: 2px solid red; padding: 2px; display: inline-block;"> <p><a href="#">DESIGN TEMPLATES AND DETAILS</a></p> </div>
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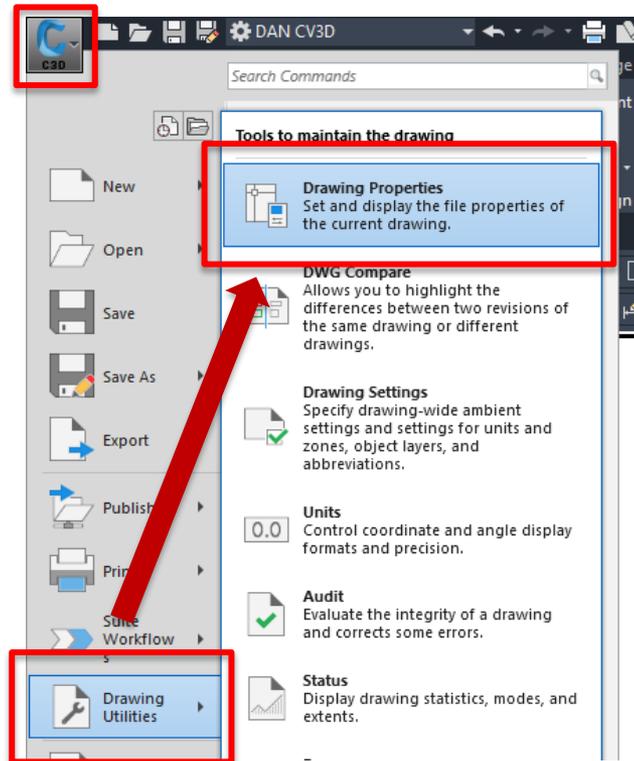
This link will take you to the **Maryland CAD Users Website**

## Natural Resources Conservation Service

# Maryland Templates

## Drawing Properties

- This is used to enter general information into the template



## Natural Resources Conservation Service

# Maryland Templates

**Drawing1 Properties** ✕

General Summary Statistics **Custom**

Custom properties:

Name	Value
Designed By	---
Drawn By	---
Checked By	---
Approved By	---
Designed By Date	---
Drawn By Date	---
Checked By Date	---
Approved By Date	---
County	County
State	Maryland
Drawing Number	MD_0034
TotalNumberOfSh...	2
ProjectSiteName	LANDOWNER - SITE NAME
MainPractice	MAIN PRACTICE
Tract#	Tract #
JobClass	#
City	---
Phone #	PHONE #



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# Maryland Templates

## Title Blocks

- This is the area that describes the design
- You can enter all the information going through the **Drawing Properties**
- Anything that has a grey background (Field) will be associated with the **Drawing Properties**

Sheet 1 of 2	Drawing No. MD 0034	File Name XXXXXXXXXX	 <b>United States Department of Agriculture</b>	<b>LANDOWNER - SITE NAME</b> ####	Designed <input type="text"/> <input type="text"/>	Date <input type="text"/>
			<b>Natural Resources Conservation Service</b>			
TRACT#				<b>JOB CLAR#</b>	Checked <input type="text"/> <input type="text"/>	
					Approved <input type="text"/> <input type="text"/>	
						MD, Maryland

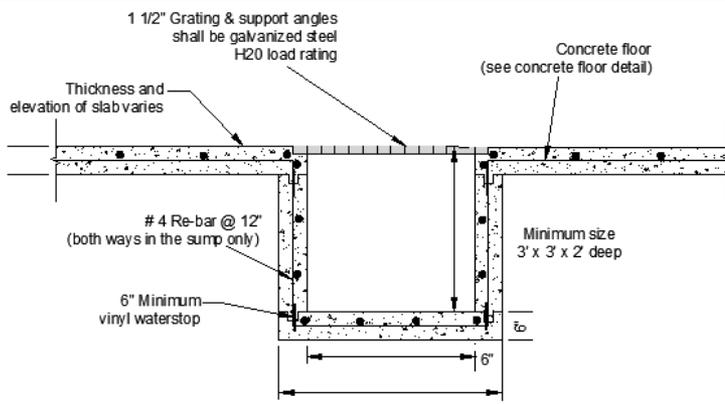
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# Maryland Templates

## Attributed Blocks

- This are blocks located in the templates that you can add site specific information to
- You can tell that they are attributed because there is a **RED** note prompting the user to click on the block

USER TO CLICK ON BLOCK AND ENTER INFORMATION



CONCRETE SUMP DETAIL  
NOT TO SCALE

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# Maryland Templates

## Attributed Blocks

USER TO CLICK ON BLOCK AND ENTER INFORMATION

Enhanced Attribute Editor

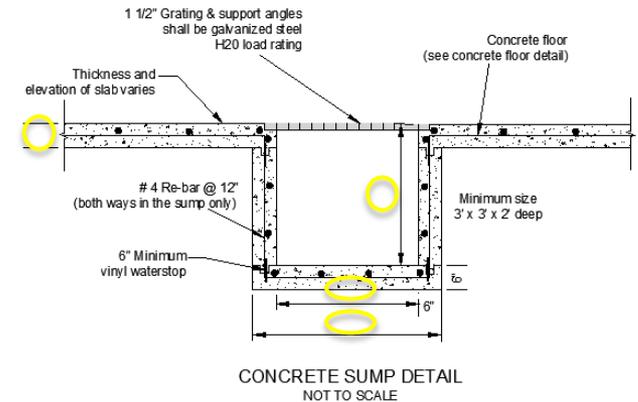
Block: Ag Chem Sump Detail  
Tag: HEIGHT

Attribute Text Options Properties

Tag	Prompt
HEIGHT	ENTER DEPTH OF SUMP
WIDTH	ENTER INSIDE WIDTH OF SUMP
WIDTH	ENTER OUTSIDE WIDTH OF SUMP
THICK	ENTER CONCRETE FLOOR THICKNESS

Value: |

Apply OK Cancel Help

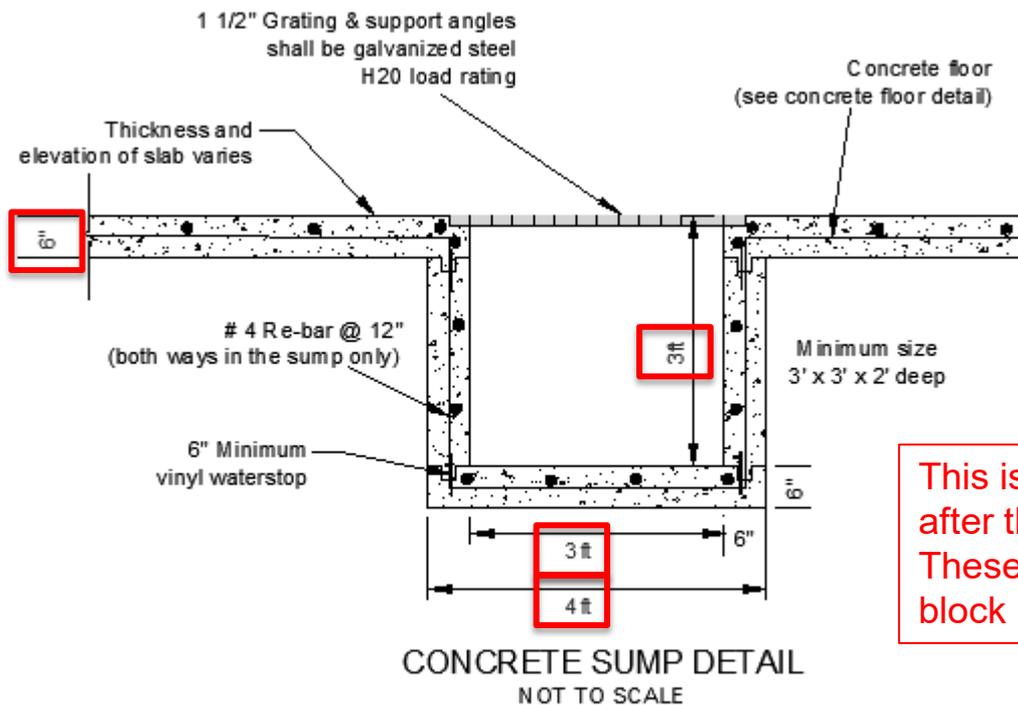


This is the available information that you can add to the block

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# Maryland Templates

## Attributed Blocks



This is what the block will look like after the information has been added  
These value can be moved within the block



## Natural Resources Conservation Service

# Plotting

## Plotting

Once you have your pages set up correctly, you can now plot the design. There are many ways to complete this, but I'm going to explain the process on how to "**PUBLISH**" your project into a .pdf file and then plot it. I will also explain how to make a **Sheet Set** that will add the titles to all your sheets.

### Three ways of publishing your job:

1. Publish Command
2. Sheet Set
3. Export PDF



## Natural Resources Conservation Service

# Plotting

## Plotting

In order to get the drawings to plot correctly, you need to load the “**NRCS BWgray.ctb**” file. This can be found on the Maryland Sharepoint site or on the Maryland NRCS Website to download.

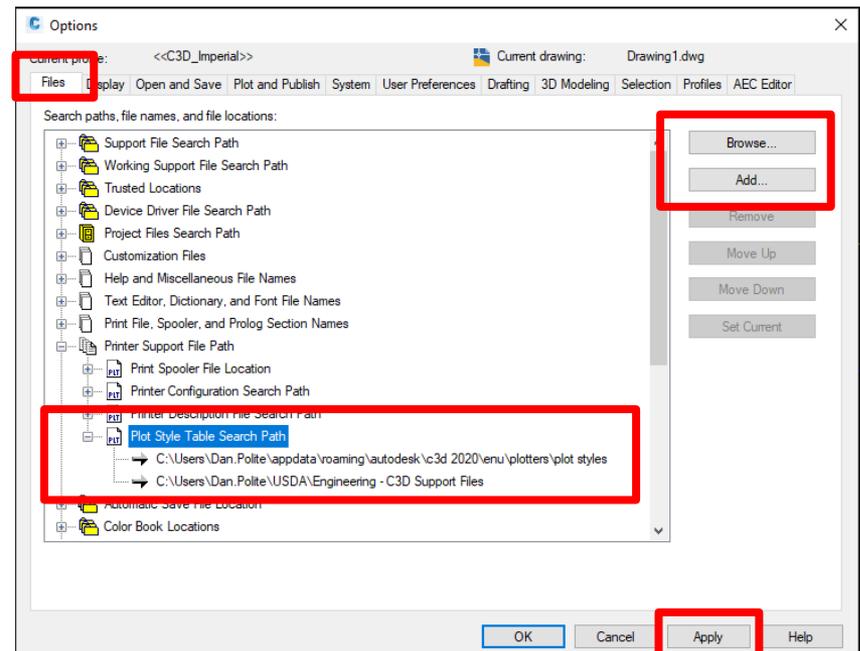
# Natural Resources Conservation Service

# Plotting

## Plotting

How to load the new file:

- Right click in AutoCAD and select **“Options”** or type **Options** in the command line.
- In the Options display, select the **“Files”** tab
- Expand the **“Printer Support File Path”** and then **“Plot Style Table Search Path”**
- Select **“Add”** on the right
- A new path link will appear, select it and then select **“Browse”** and search for **“C:\Users\Your.Name\USDA\Engineering – C3D Support Files”** (this will only work if you are synced to the MD Engineering Sharepoint Site)
- Otherwise you will have to copy and place the ctb file into:  
**“C:\Users\Your.Name\appdata\roaming\Autodesk\c3d2020\enu\plotters\Plot Styles”**
- Click **Apply**



# Natural Resources Conservation Service

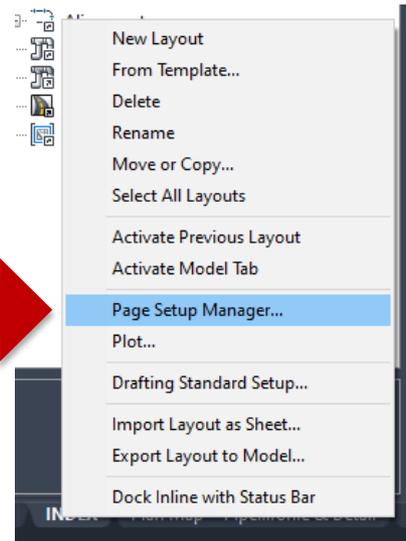
# Plotting

## Plotting

You need to make sure that your .ctb file is set up correctly and your pages are set up correctly before publishing your design.



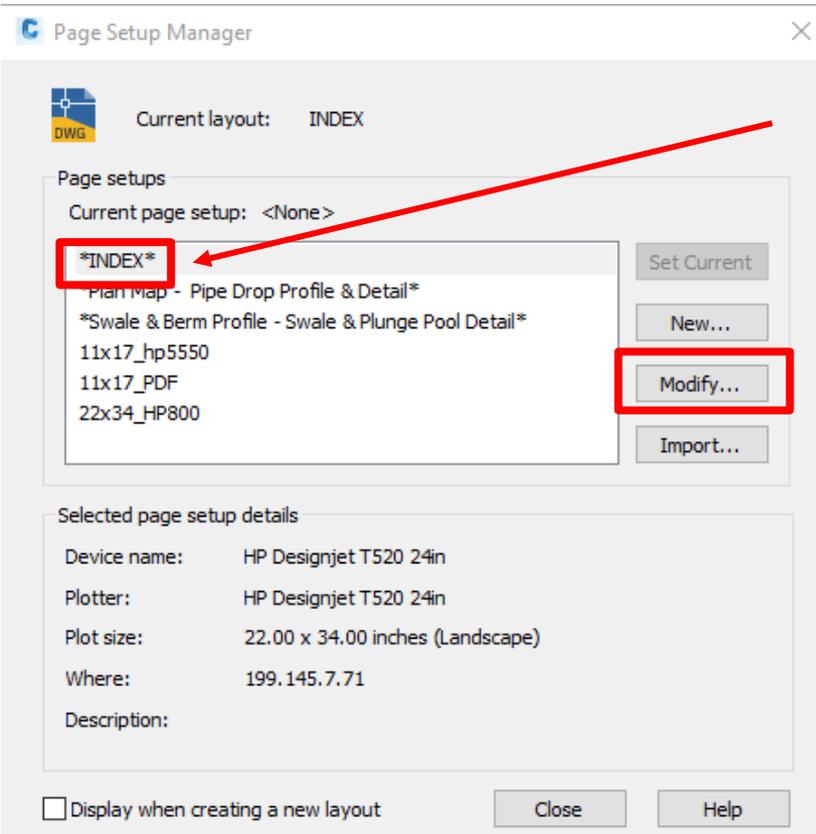
Right click on you **PAGE** tab and then select **Page Setup Manager**



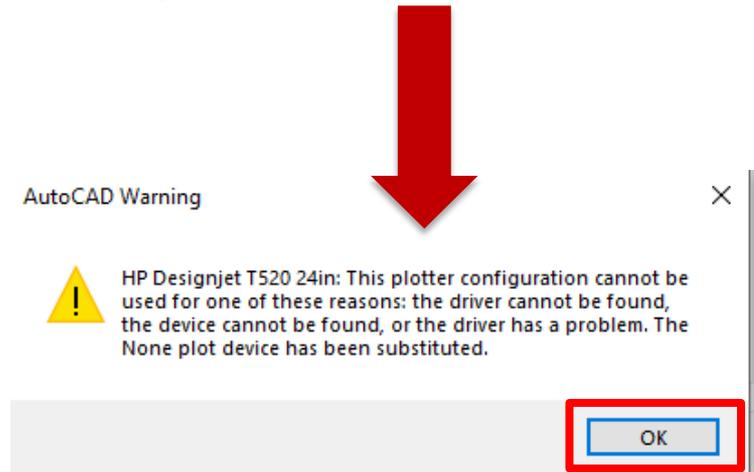
# Natural Resources Conservation Service

# Plotting

## Plotting



Select your page and then  
Select **Modify**



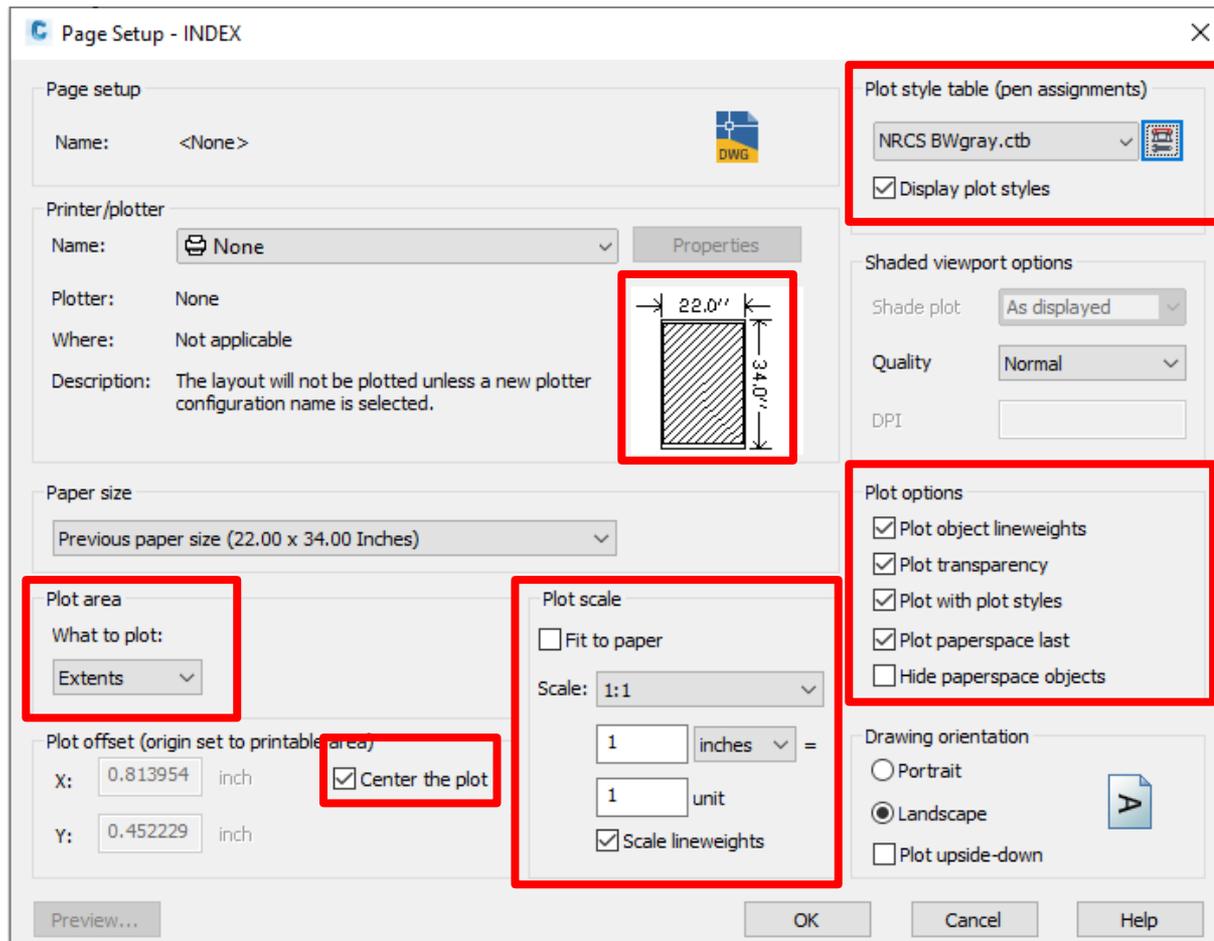
# Natural Resources Conservation Service

# Plotting

## Plotting

Make sure that all the areas shown in **RED** are set to what is shown

**Click OK**



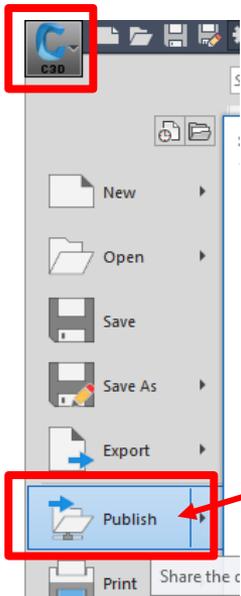


# Natural Resources Conservation Service

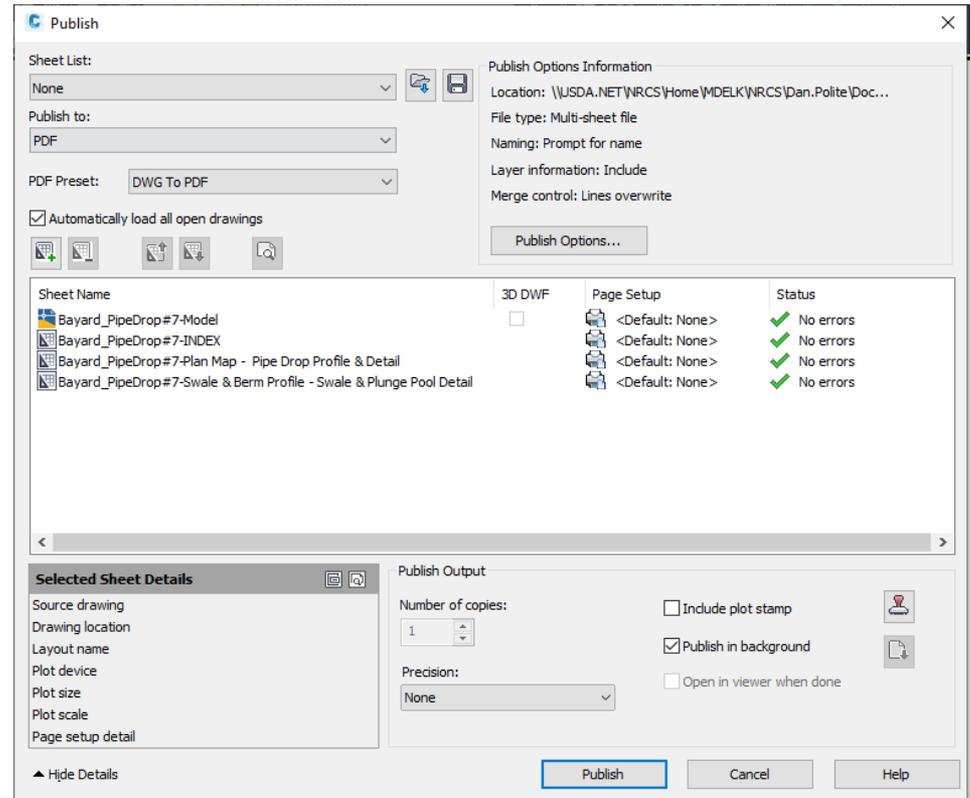
# Plotting

## Plotting

**Publish**— Publish the job to a .pdf file



Select Publish

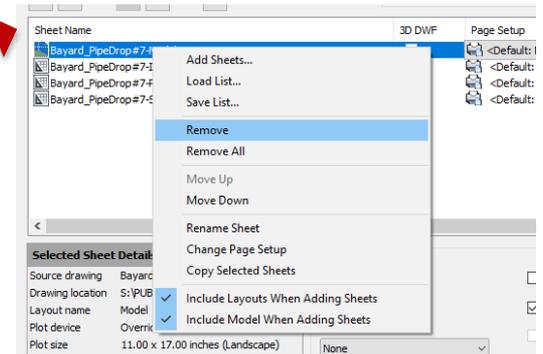
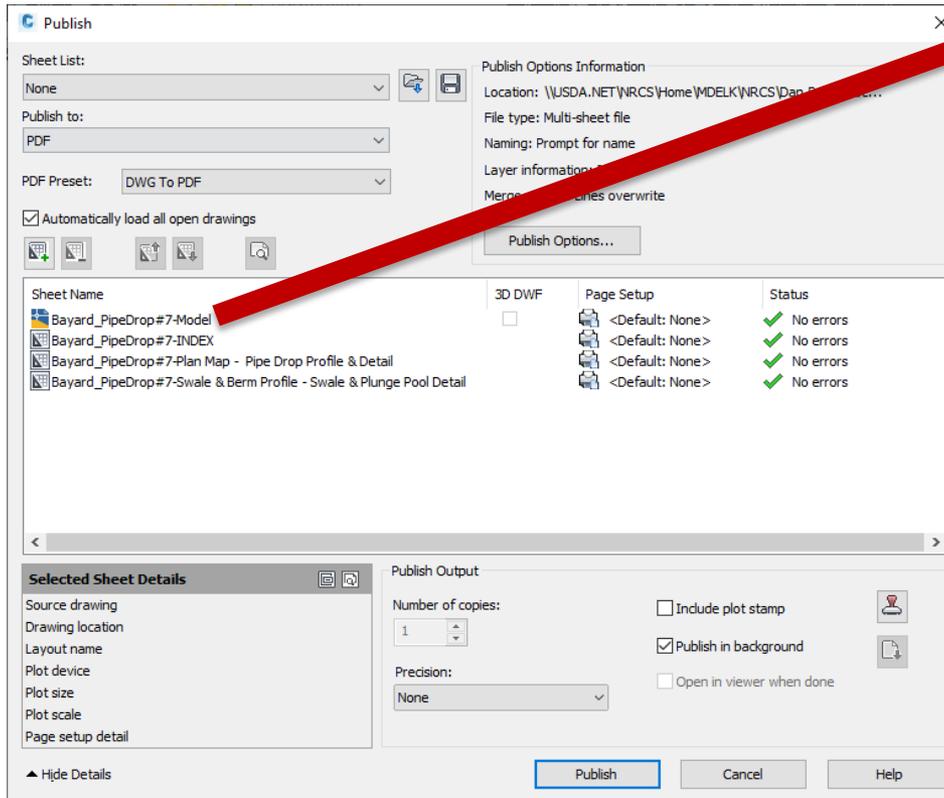


# Natural Resources Conservation Service

# Plotting

## Plotting

## Publish



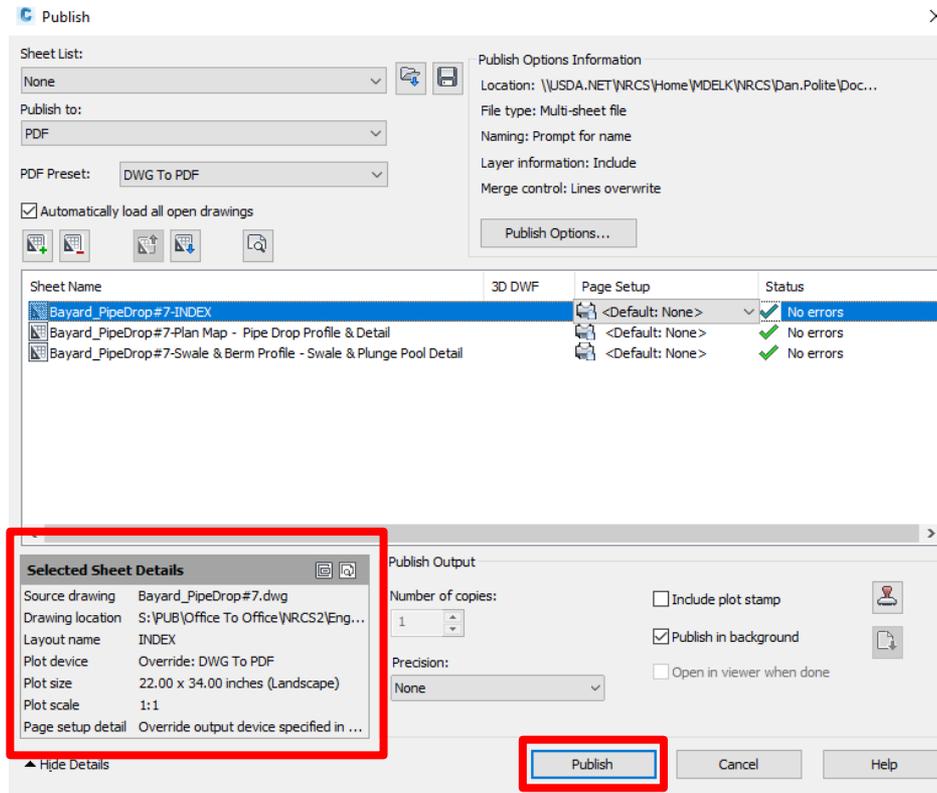
Remove the .dwg file – Model space from the Sheet Name List



# Natural Resources Conservation Service

# Plotting

## Plotting Publish

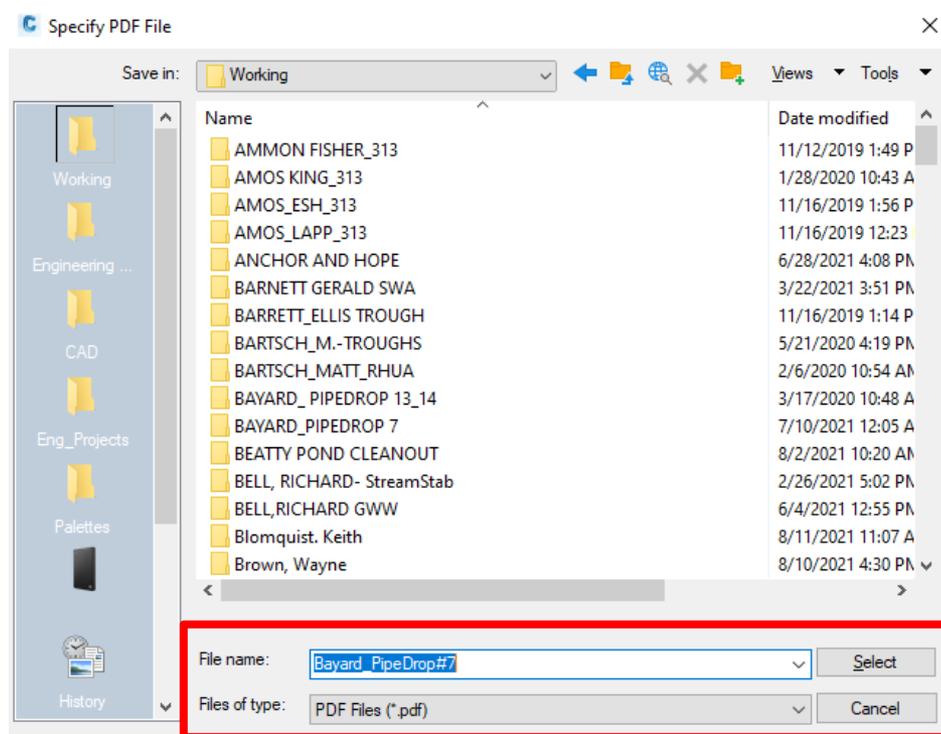


# Natural Resources Conservation Service

# Plotting

## Plotting

## Publish





## Natural Resources Conservation Service

# Plotting

## Plotting

## Publish

Publish - Save Sheet List



Do you want to save the current list of sheets?

Always perform my current choice

Yes

No

Cancel

Your design has now been saved as a .pdf file in the location that you selected



## Natural Resources Conservation Service

# Plotting

## Plotting

**Sheet Set** – You will have to create a “Sheet Set” in order to have the Sheet Titles automatically be placed in the title block

A **Sheet** is a selected layout from a drawing file. You can import a layout from any drawing into a sheet set as a numbered sheet.

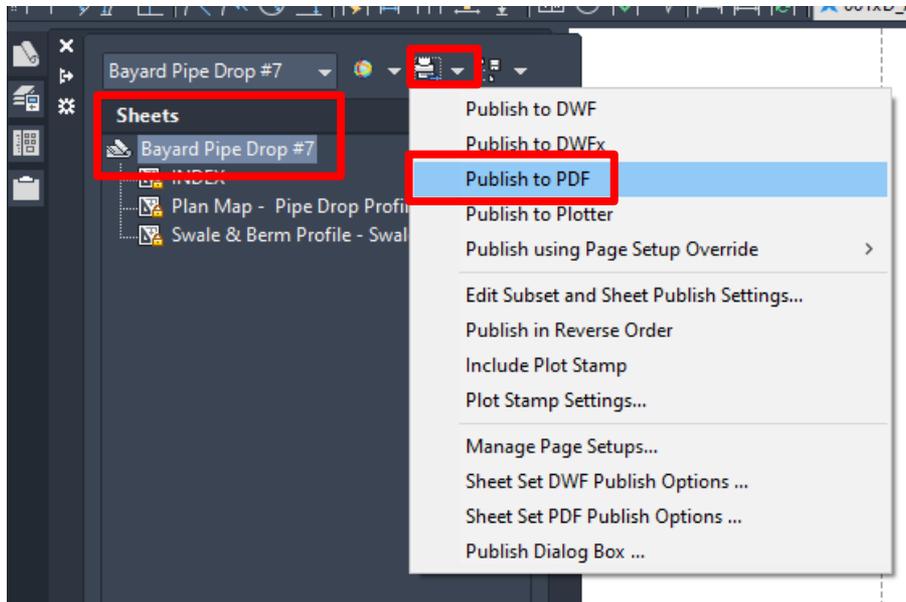
A **Sheet Set** is an organized and named collection of sheets from several drawing files. You can manage, transmit, publish, and archive sheet sets as a unit.

## Natural Resources Conservation Service

# Plotting

## Plotting

**Sheet Set** – If you have created a sheet set you can publish to a .pdf directly from there.

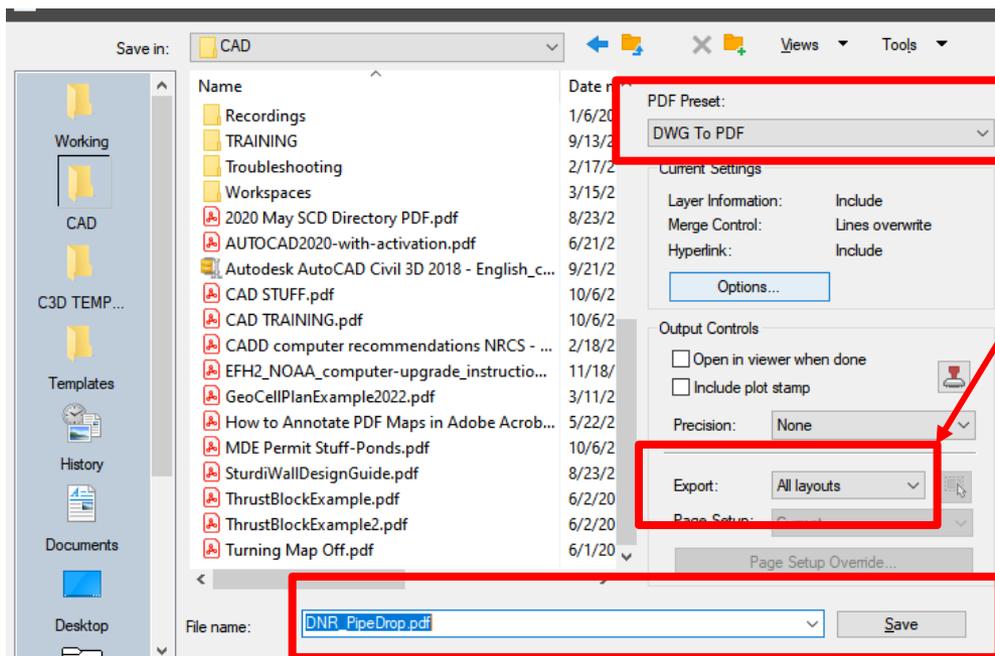


# Natural Resources Conservation Service

# Plotting

## Plotting

**Export PDF**– Once you have completed your drawing you can plot it by typing in the command line “**exportpdf**”



You can select current layout or all layouts

Select the file location and click Save. You must have your page setup correctly for this to work for each layout

## Natural Resources Conservation Service

# Things to Know

- If you have a question – ASK!
- There are always multiple ways to do the same thing – use the one(s) that work best for you
- Keep in mind the goal of what you are using AutoCAD/Civil 3D for
- Use help sources
- This program can be as simple or as complicated as you would like it to be
- Spend time using the program and, whenever possible, with other people who use the program

# Natural Resources Conservation Service

ONE KEY SHORTCUTS [SEE PRINTABLE KEYBOARD STICKERS ON PAGE 11]



**Q** QSAVE / Saves the current drawing.

**A** ARC / Creates an arc.

**Z** ZOOM / Increases or decreases the magnification of the view in the current viewport.

**W** WBLOCK / Writes objects or a block to a new drawing file.

**S** STRETCH / Stretches objects crossed by a selection window or polygon.

**X** EXPLODE / Breaks a compound object into its component objects.

**E** ERASE / Removes objects from a drawing.

**D** DIMSTYLE / Creates and modifies dimension styles.

**C** CIRCLE / Creates a circle.

**R** REDRAW / Refreshes the display in the current viewport.

**F** FILLET / Rounds and fillets the edges of objects.

**V** VIEW / Saves and restores named views, camera views, layout views, and preset views.

**T** MTEXT / Creates a multiline text object.

**G** GROUP / Creates and manages saved sets of objects called groups.

**B** BLOCK / Creates a block definition from selected objects.

**H** HATCH / Fills an enclosed area or selected objects with a hatch pattern, solid fill, or gradient fill.

**J** JOIN / Joins similar objects to form a single, unbroken object.

**M** MOVE / Moves objects a specified distance in a specified direction.

**I** INSERT / Inserts a block or drawing into the current drawing.

**O** OFFSET / Creates concentric circles, parallel lines, and parallel curves.

**L** LINE / Creates straight line segments.

**P** PAN / Adds a parameter with grips to a dynamic block definition.

# Natural Resources Conservation Service

## TOGGLES AND SCREEN MANAGEMENT

### Toggle General Features

Ctrl+d	Toggle coordinate display
Ctrl+g	Toggle Grid
Ctrl+e	Cycle isometric planes
Ctrl+f	Toggle running object snaps
Ctrl+h	Toggle Pick Style
Ctrl+Shift+h	Toggle Hide pallets
Ctrl+i	Toggle Coords
Ctrl+Shift+i	Toggle Infer Constraints

### Toggle Drawing Modes

F1	Display Help
F2	Toggle text screen
F3	Toggle object snap mode
F4	Toggle 3DOsnap
F5	Toggle Isoplane
F6	Toggle Dynamic UCS
F7	Toggle grid mode
F8	Toggle ortho mode
F9	Toggle snap mode
F10	Toggle polar mode
F11	Toggle object snap tracking
F12	Toggle dynamic input mode

### Manage Screen

Ctrl+0 (zero)	Clean Screen
Ctrl+1	Property Palette
Ctrl+2	Design Center Palette
Ctrl+3	Tool Palette
Ctrl+4	Sheet Set Palette
Ctrl+6	DBCconnect Manager
Ctrl+7	Markup Set Manager Palette
Ctrl+8	Quick Calc
Ctrl+9	Command Line

### Manage Workflow

Ctrl+c	Copy object
Ctrl+x	Cut object
Ctrl+v	Paste object
Ctrl+Shift+c	Copy to clipboard with base point
Ctrl+Shift+v	Paste data as block
Ctrl+z	Undo last action
Ctrl+y	Redo last action
Ctrl+[	Cancel current command (or Ctrl+V)
ESC	Cancel current command

### Manage Drawings

Ctrl+n	New Drawing
Ctrl+s	Save drawing
Ctrl+o	Open drawing
Ctrl+p	Plot dialog box
Ctrl+Tab	Switch to next
Ctrl+Shift+Tab	Switch to previous drawing
Ctrl+Page Up	Switch to previous tab in current drawing
Ctrl+Page Down	Switch to next tab in current drawing
Ctrl+q	Exit
Ctrl+a	Select all objects

## Natural Resources Conservation Service

# Questions?

