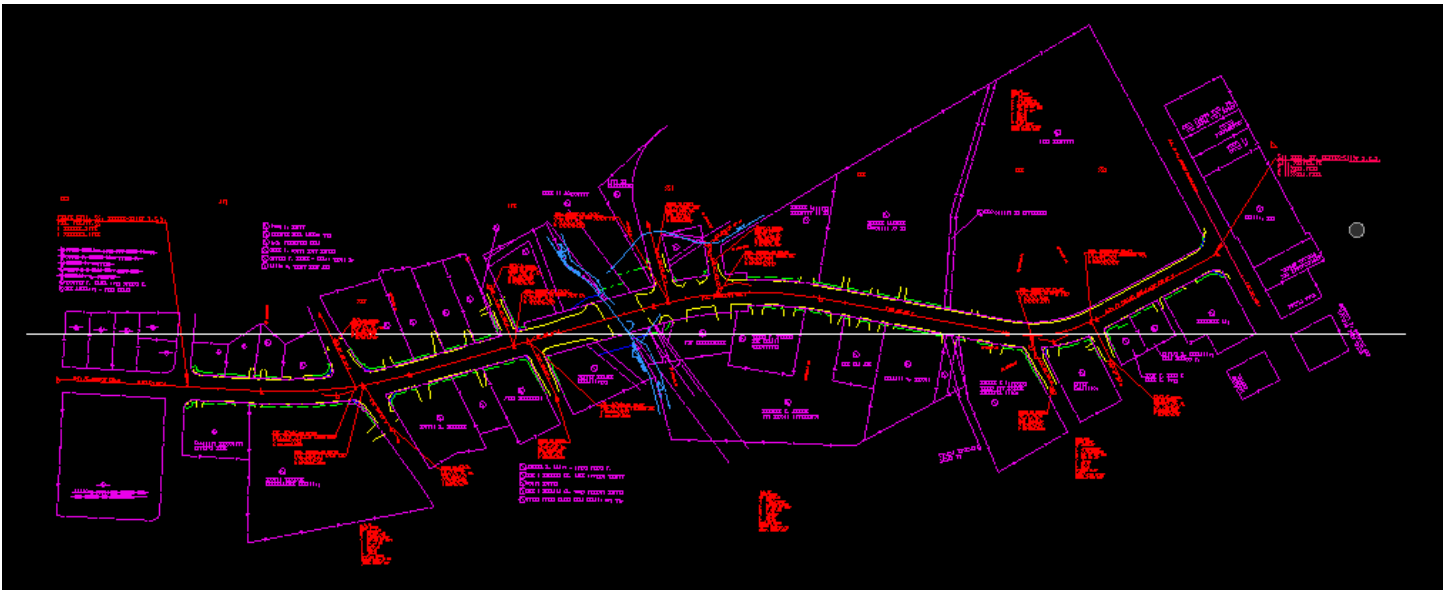# Tutorial for Large Color Plots for Public Hearings and Other Displays

This is for TDOT personnel only and is to be used with the HP Designjet T1300 Series Color Printer

Prior to Printing:

- Create a DGN file that will be used to create the display plot.
  In this example a file called **PublicHearingDisplay.dgn** will be created.
  For Seed type use: **seed2d.dgn**

- Attach all the reference files needed to create a display. These files can include the survey file, proposed file, alignment file, drainage file and the topo file. Note: The topo file used in this example is an MrSID file. For documentation on an MrSID file see the link below.
  http://intranet.tdot.tn.gov/asstchiefengrdesign/Design/v8design/Using%20MrSID%20Image%20Files%20in%20MicroStation.pdf

- Consider the area needed in the plot. In this example a landscape layout view will be created. It is suggested that the view be rotated in MicroStation to get as much of the project on the computer screen as you can. To do this you can place a line through the middle of the project, from one end to the other and then rotate the view to horizontal by that line. Note: The line is placed on a scratch level so it can be kept for later use and should be turn off before plotting. See the example below.
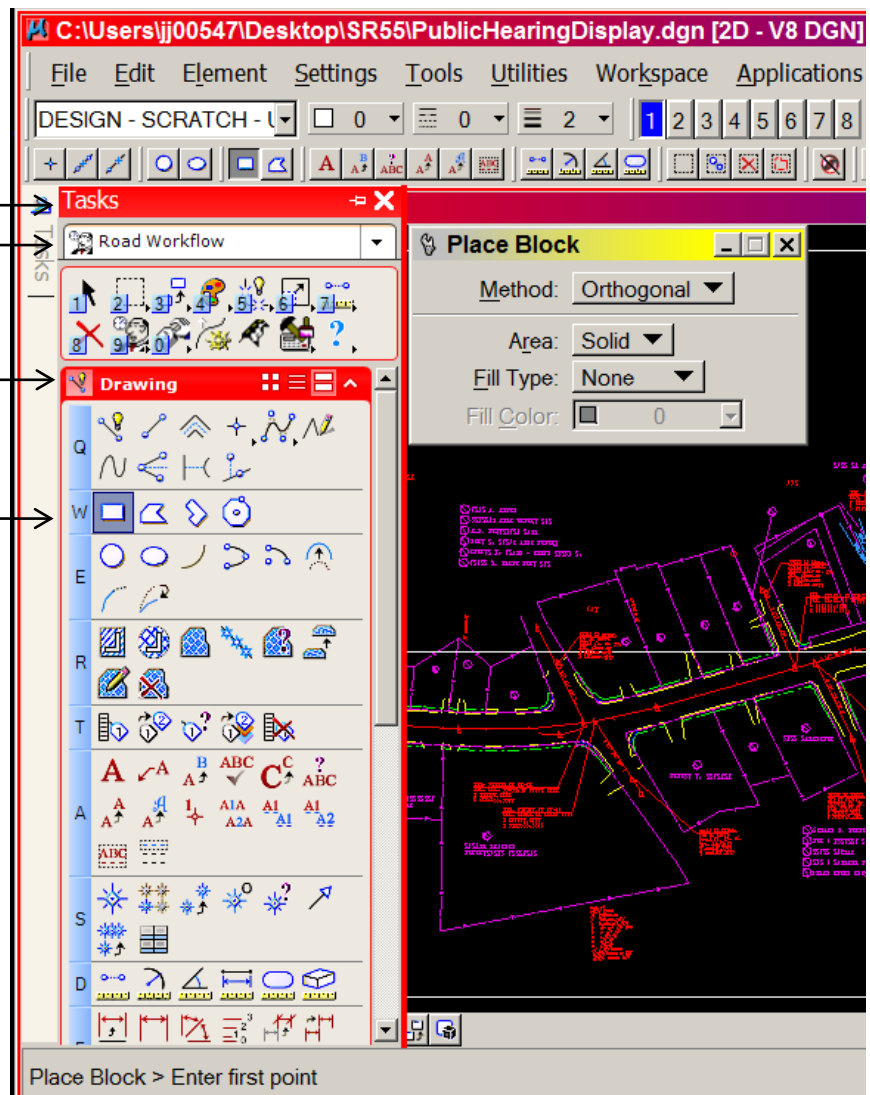

Note in this view the TOPO file is not turned on at this time for ease of working right now.
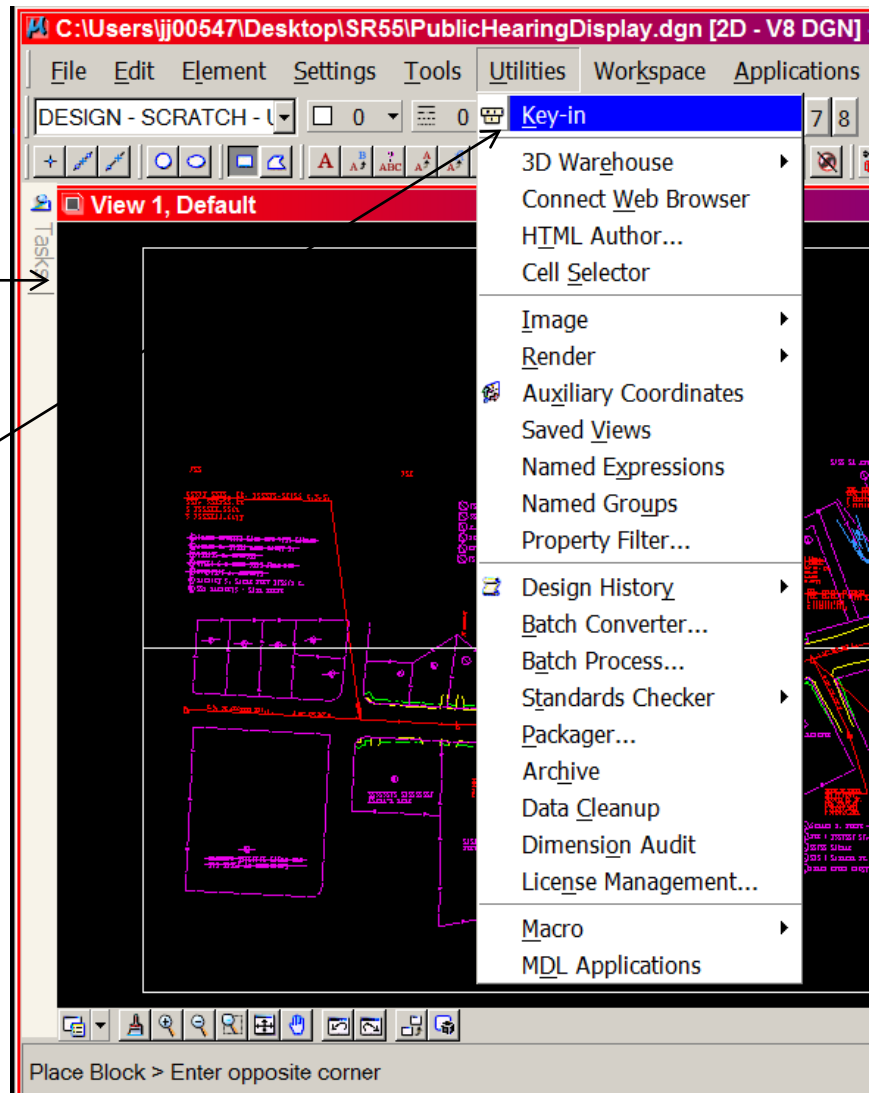
- Add a plot border by placing an Orthogonal Shape on the default level. You can choose any color and line weight for the shape, but what matter is the size. The HP Designjet T1300 uses paper that is 36 inch wide and plots up to 96 inches in length. Note: The paper size must be 1 inch wider and longer than the plot border. To insure a true plotting scale the maximum size for a plot border is 35 inches by 95 inches.

- Choose a plot scale, such as 50:1, 100:1 or 200:1 based on your project for the plot shape.
- The size of the Plotting Shape (in landscape view):
  - ➢ For the height of the shape (the paper width), take the scale you have chosen and multiply by 35 inches to give a plotting height in feet, example for 50 scale it would be 1750 feet, for 100 scale it would be 3500 feet and for 200 scale it would be 7000 feet.
  - ➢ For the width of the shape (the paper length) is based on the length of the project. For this example the line we placed thru the middle of the project was measured to be 4300 feet in length. To get the length in inches of plot needed, divide the length of project by your scale. Example: For 50 scale, divide 4300 feet by 50 and it gives a plotting shape length of 86 inches, for 100 scale a length of 43 inches and 200 scale a length of 21.5 inches.
  - ➢ In the example the Plotting Shape size for 50 scale is 4300 feet by 1750 feet which equals a plot of 86 inches by 35 inches.

- Place a block (Orthogonal Shape) for the Plot Border.

➢ Go to the Tasks Menu,
➢ Roadway Workflow,

➢ Drawing,

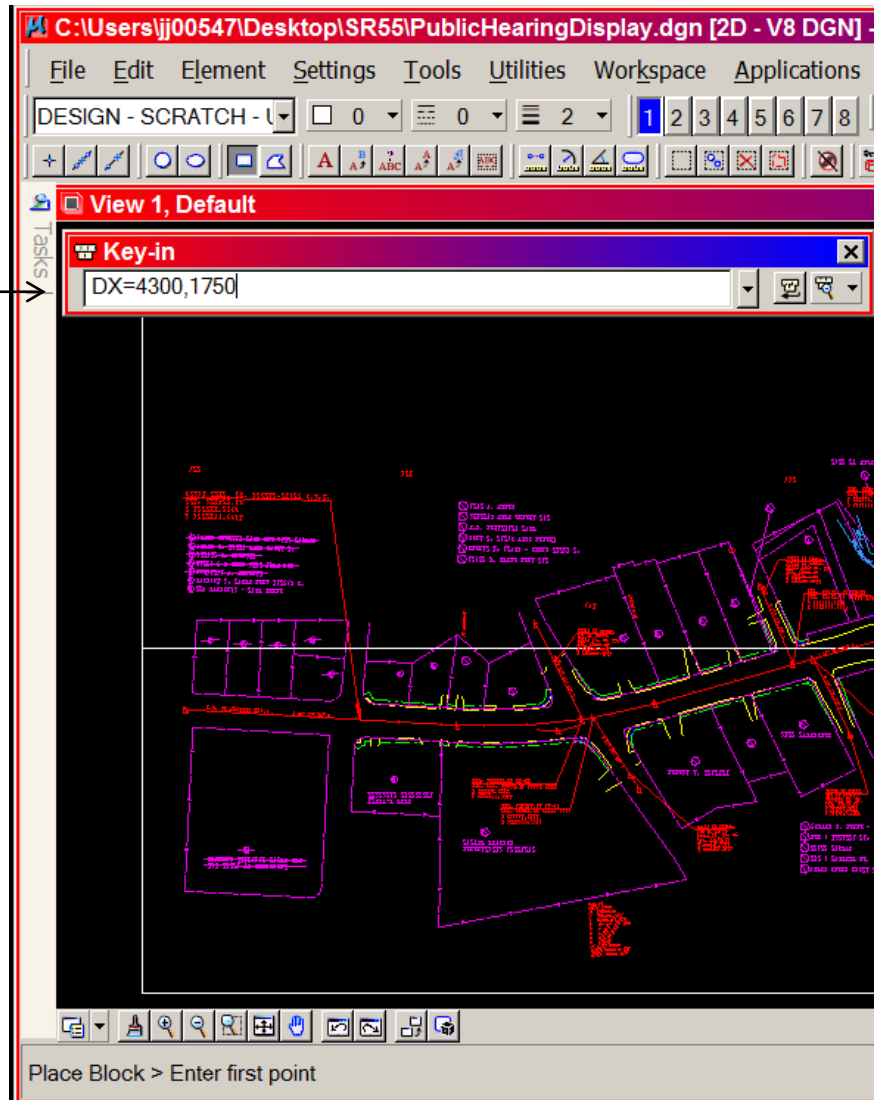➢ Section W and the tool named, "Place Block" and select it.

➢ Place a data point on the screen somewhere in the DGN file,

➢ Then go to Utilities at the Top Main Menu and pulldown the menu to Key-In and select it.

C:\Users\jj00547\Desktop\SR55\PublicHearingDisplay.dgn [2D - V8 DGN]

File Edit Element Settings Tools Utilities Workspace Applications

DESIGN - SCRATCH - U

Key-in

3D Warehouse
Connect Web Browser
HTML Author...
Cell Selector

Image
Render
Auxiliary Coordinates
Saved Views
Named Expressions
Named Groups
Property Filter...

Design History
Batch Converter...
Batch Process...
Standards Checker
Packager...
Archive
Data Cleanup
Dimension Audit
License Management...

Macro
MDL Applications

View 1, Default

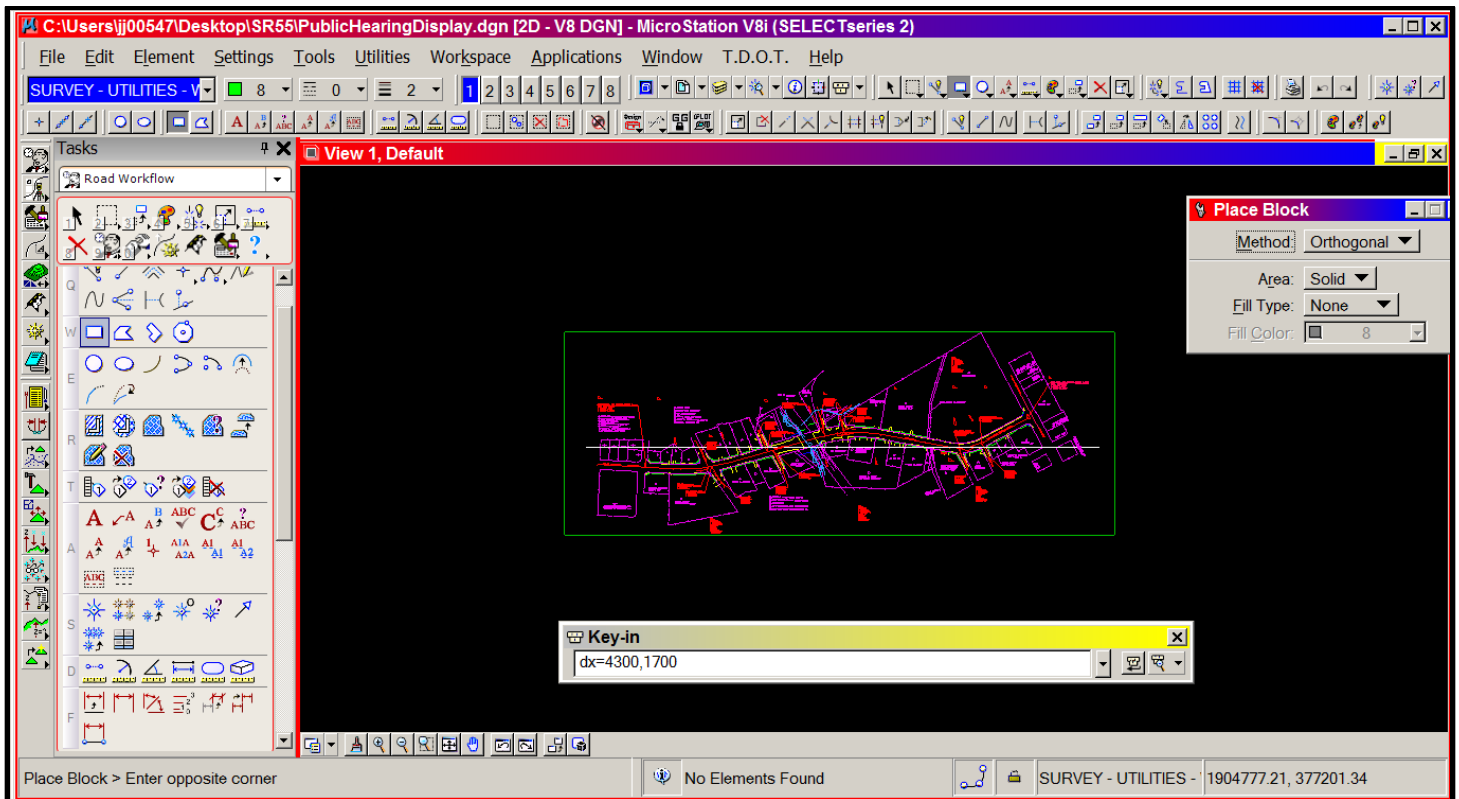Place Block > Enter opposite corner

The Key-In tool box will open.

➢ Click inside the Key-In and type DX=4300,1750 and enter.

You will see a block that is 4300 x 1750 feet in your DGN file.
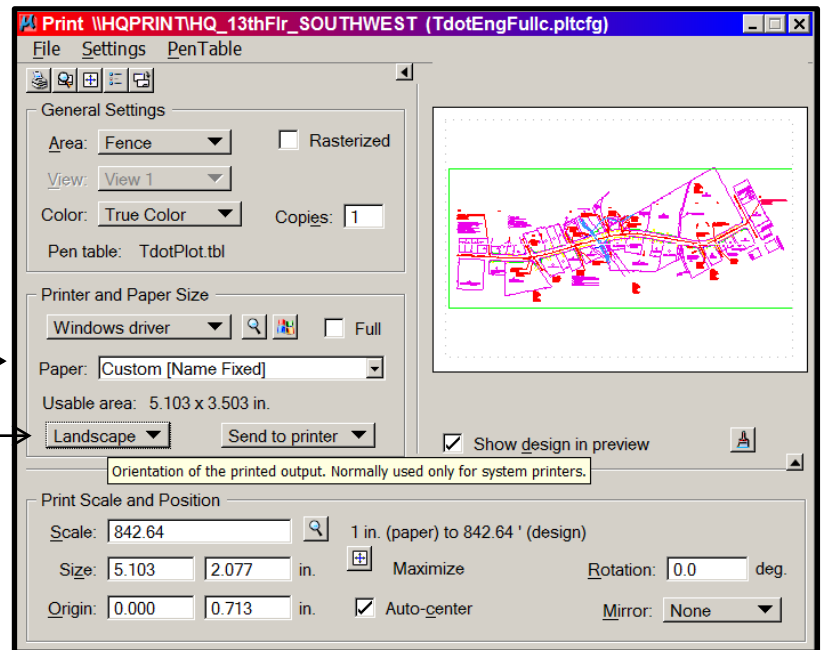Move the block just placed to best fit the plotting area for the project. See example below.

- Place a fence for plotting by placing a fence on the Plot Border Box you just drew.

- Turn off the level that has the line drawn through the middle of the project and turn on the TOPO file.
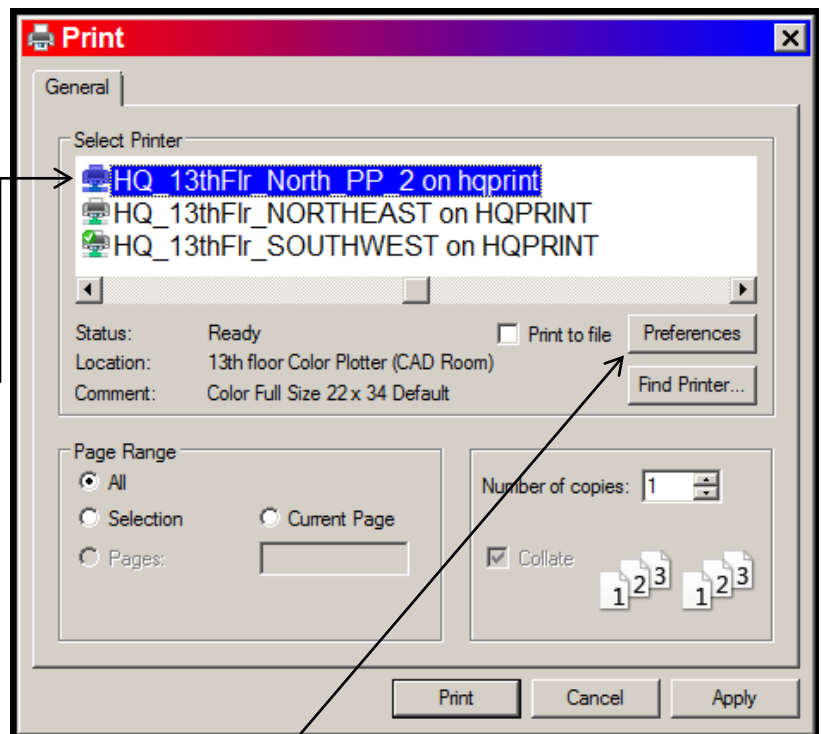
Printing \ Plotting the Large Area

1. **You need to choose the printer and adjust its setup.**

   ➢ In the MicroStation Main Menu at the top under the heading File, pull down the menu and select print.

   ➢ The Printer Dialog Box will open, See example like the one to the right. (The Main Print Dialog Box)

   ➢ In the Printer and Paper Size section, Set the Paper to: Custom [Name Fixed]

   (This is for the first time you create a custom size. The next time you need this custom size use the down arrow to find the size you need)

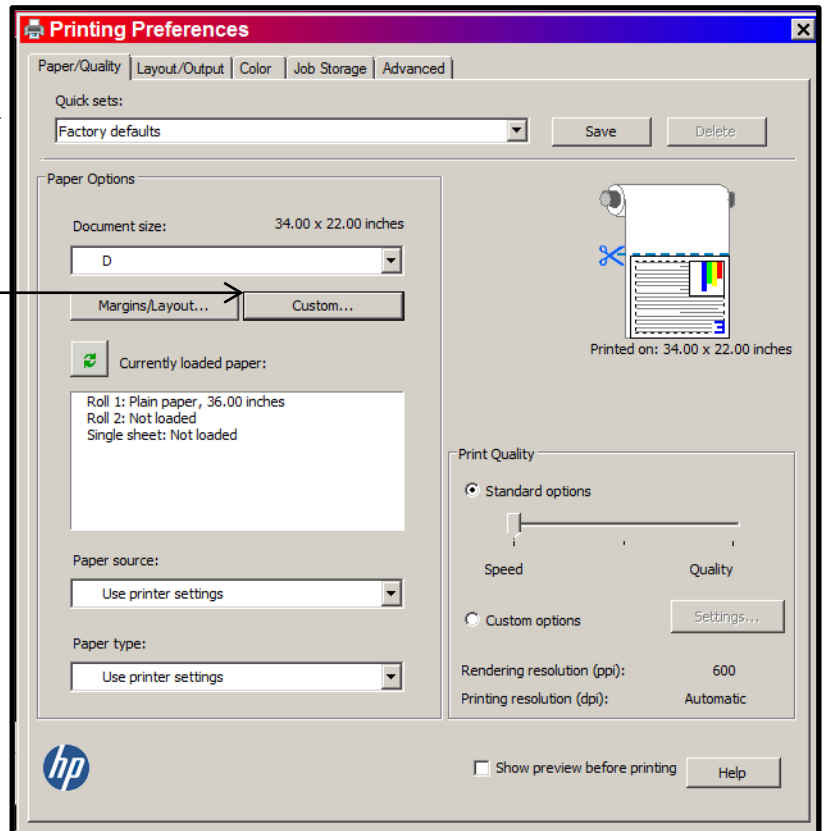   ➢ Change the tool box from Portrait to Landscape.

2. **Select the printer**

   ➢ In the Printer Dialog Box go to File, pull down the menu, and select the Configure Windows Printer. You should get a dialog box like the one to the right.

   ➢ Select the printer from the list that is for the HP Designjet T1300 Series Printer and click on it.
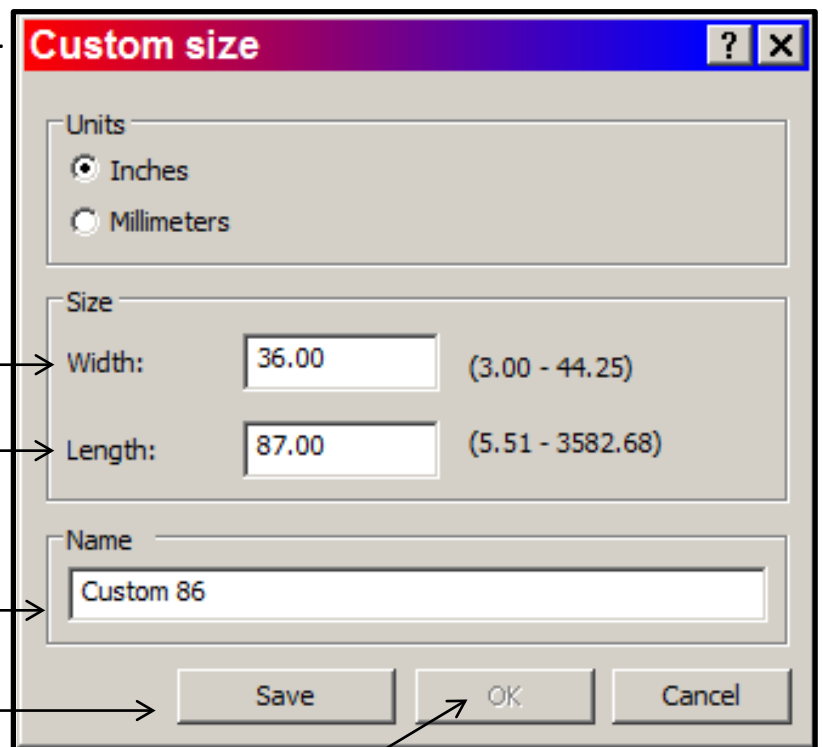
   ➢ Now click on Preferences to set them for your project.

3. Set The Printer Preferences

➢ The Printing Preferences dialog box should be open and it should look like this. ────────➤

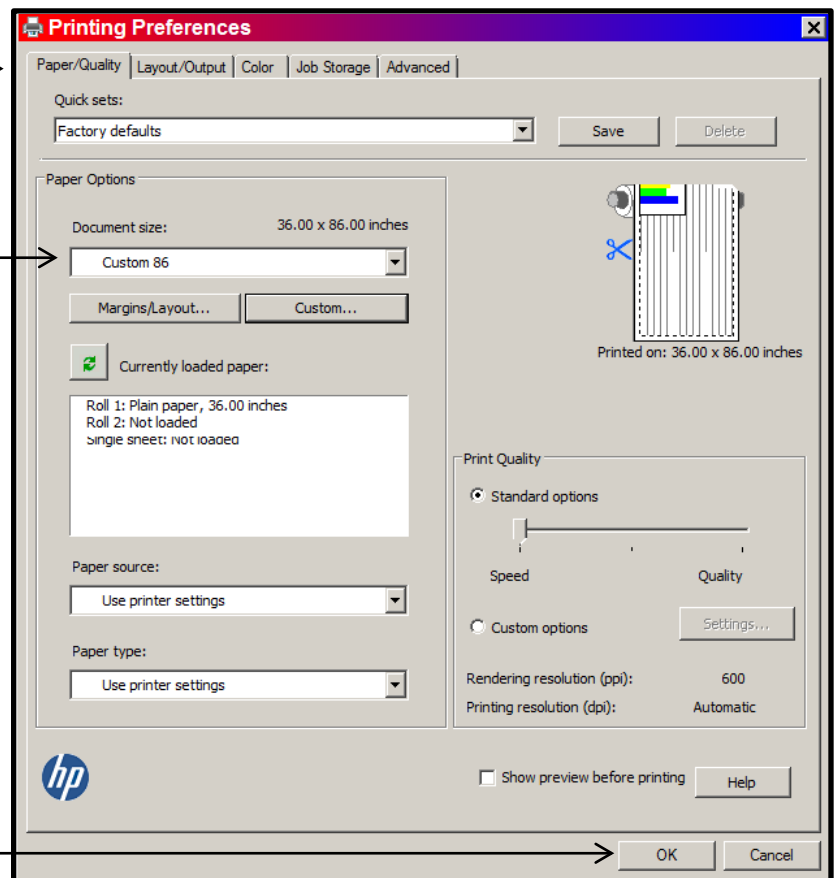➢ To set the printer to plot the size needed, click on Custom.

Printing Preferences

Paper/Quality | Layout/Output | Color | Job Storage | Advanced

Quick sets:
Factory defaults   [Save] [Delete]

Paper Options

Document size: 34.00 x 22.00 inches
D

[Margins/Layout...] [Custom...]

🗘 Currently loaded paper:

Roll 1: Plain paper, 36.00 inches
Roll 2: Not loaded
Single sheet: Not loaded

Printed on: 34.00 x 22.00 inches

Paper source:
Use printer settings

Paper type:
Use printer settings

Print Quality

⦿ Standard options

Speed   Quality

○ Custom options   [Settings...]

Rendering resolution (ppi):   600
Printing resolution (dpi):   Automatic

hp   ☐ Show preview before printing [Help]

➢ You should get a dialog box like this one. ────────➤

Custom size   [?] [X]

Units
⦿ Inches
○ Millimeters

Size

➢ Set the width to the paper width of 36 inches. ────────➤

Width: 36.00   (3.00 - 44.25)

➢ Set the length to the size needed. In this example 87 inches. ────────➤
Note:
This must be set 1" longer than your plot.

Length: 87.00   (5.51 - 3582.68)

Name

➢ Name the plot setting to Custom 86, for a 86 inch plot. ────────➤

Custom 86

➢ Click Save ────────➤   [Save] [OK] [Cancel]

➢ Click OK when it turns on. ────────➤

➢ This will close the Custom Size tool box.

- ➢ The Printing Preferences dialog box should be on the screen. ⎯⎯⎯⟶

Printing Preferences ✕

Paper/Quality | Layout/Output | Color | Job Storage | Advanced

Quick sets:

Factory defaults ▼ | Save | Delete

Paper Options

Document size: 36.00 x 86.00 inches

- ➢ Notice the Custom 86. ⎯⎯⎯⟶

Custom 86 ▼

Margins/Layout... | Custom...

↻ Currently loaded paper:

Roll 1: Plain paper, 36.00 inches
Roll 2: Not loaded
Single sheet: Not loaded

Printed on: 36.00 x 86.00 inches

Paper source:

Use printer settings ▼

Paper type:

Use printer settings ▼

Print Quality

◉ Standard options

Speed — Quality

○ Custom options | Settings...

Rendering resolution (ppi): 600
Printing resolution (dpi): Automatic

hp

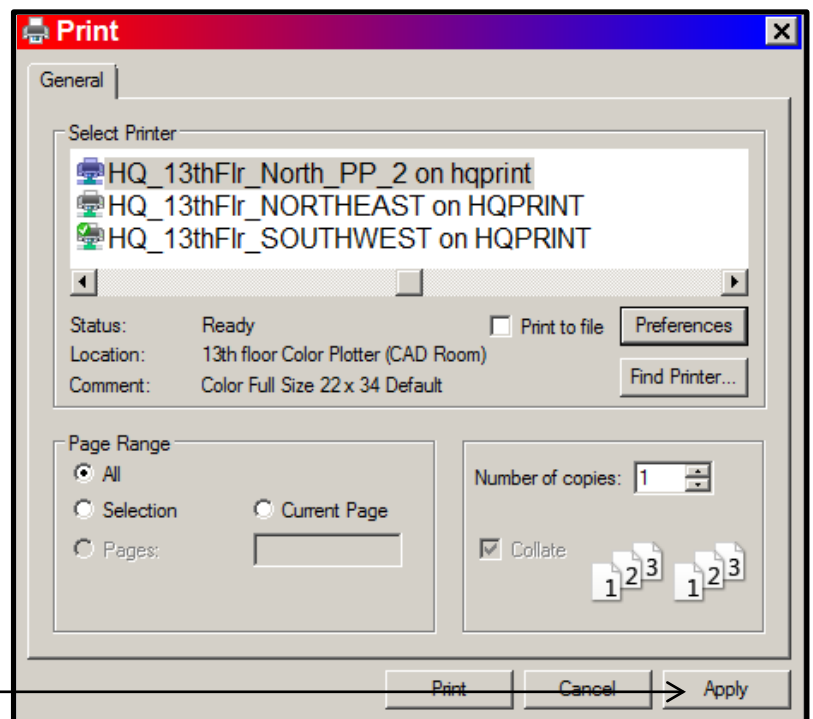☐ Show preview before printing | Help

- ➢ Click OK. ⎯⎯⎯⟶

OK | Cancel

- ➢ This will close out the Printer Preferences tool box.

4. **Apply the changes to the printer**

The Print tool box used for selecting a printer should be on your screen.

Print ✕

General

Select Printer

🖨 HQ_13thFlr_North_PP_2 on hqprint
🖨 HQ_13thFlr_NORTHEAST on HQPRINT
🖨 HQ_13thFlr_SOUTHWEST on HQPRINT

Status: Ready | ☐ Print to file | Preferences
Location: 13th floor Color Plotter (CAD Room)
Comment: Color Full Size 22 x 34 Default | Find Printer...

Page Range
◉ All
○ Selection   ○ Current Page
○ Pages:

Number of copies: 1 ▲▼

☑ Collate
123 123

Print | Cancel | Apply
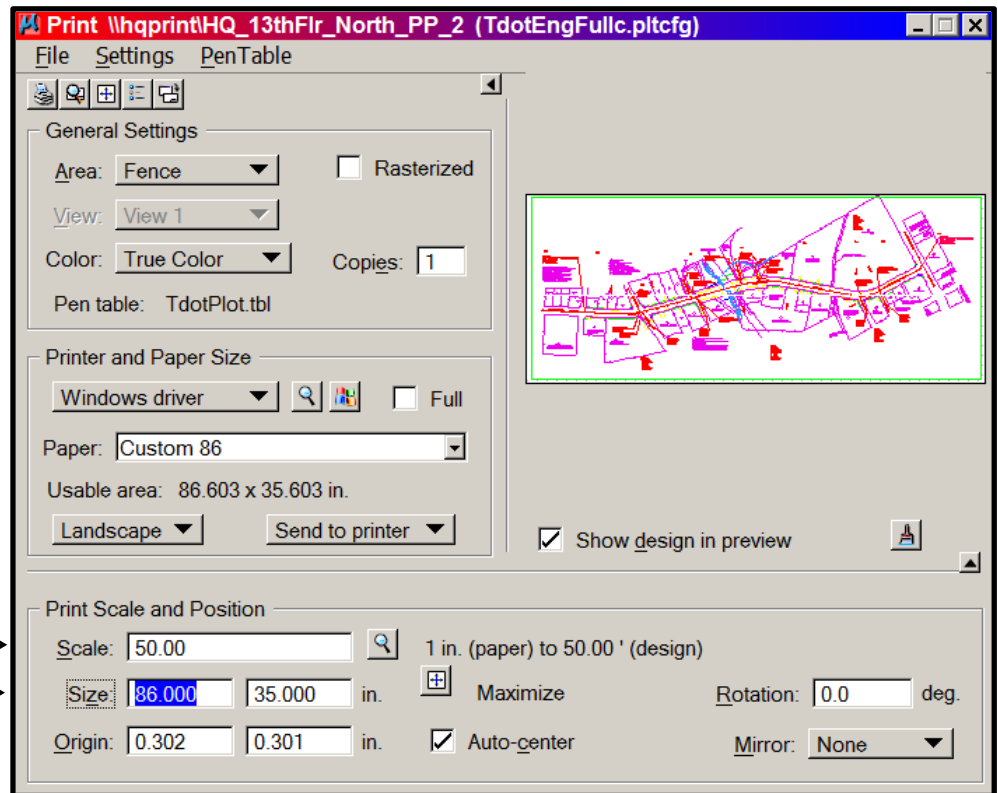
- ➢ Click Apply. ⎯⎯⎯⟶
- ➢ You can exit out of this Print dialog box in the upper right corner by clicking on the X.

5. **Review the Main Print Dialog Box and Adjust it Before Printing**

You should still have this Print dialog box on your screen. (The Main Print Dialog Box)
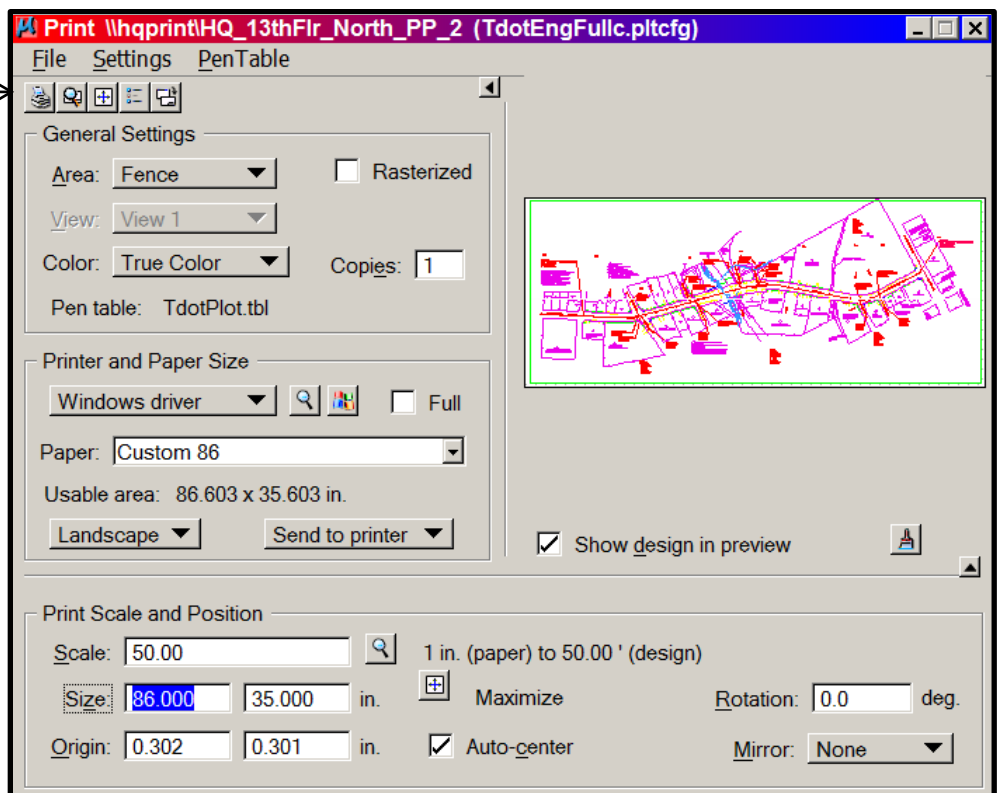

➢ Paper should be set to Custom 86 ⟶

➢ Set the scale to 50. ⟶
➢ This will adjust the size of the plot to 86.000, 35.000 in.

Note: This is the size of the plot border you created; if something is different then something is wrong.

6. **Print the plot**

➢ Click the print button. ⟶

➢ The plot should be printing.