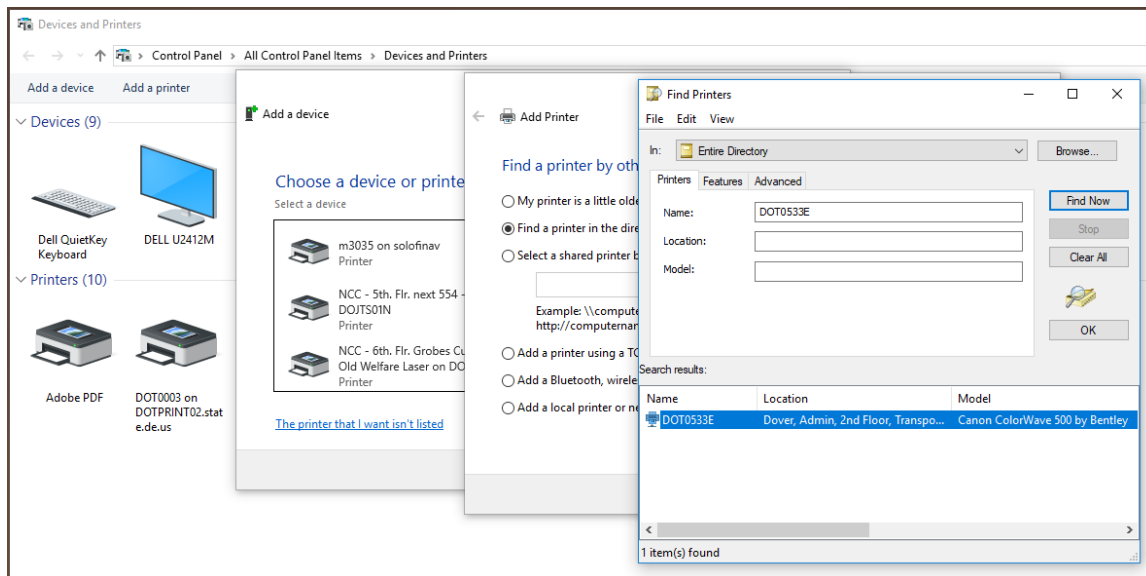




IPARM files (.i) are used to generate either a paper copy or electronic copy of a project sheet file, via the use of the ProjectWise InterPlot Organizer. To generate an IPARM file, follow the workflow and settings listed below. It is important to install the DOT0533E plotter before starting this process. If you already have this plotter installed, skip to step 4.

1. On Windows 10, press the Windows key + R to bring up the **Run** command. Type in *"Control printers"* and hit OK. This will bring up the **Devices and Printers** section of the **Control Panel**.
2. Click on *"Add a printer"*. When the dialog comes up ignore the progress bar and click *"The printer that I want isn't listed"*.
3. Select *"Find a printer in the directory, based on location or feature"* and hit Next. Copy and paste the following text into the *"Name:"* field and hit *"Find Now"*:
DOT0533E

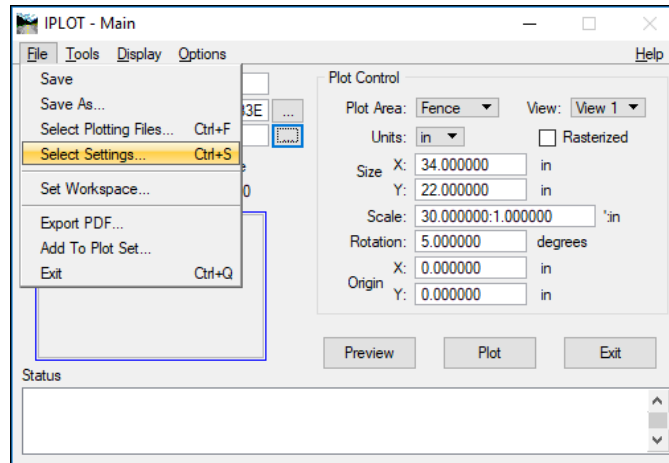


Select the printer from the list and hit OK. Hit *"Next"* and then *"Finish"* on the next window. It is recommended that you do not set as default.

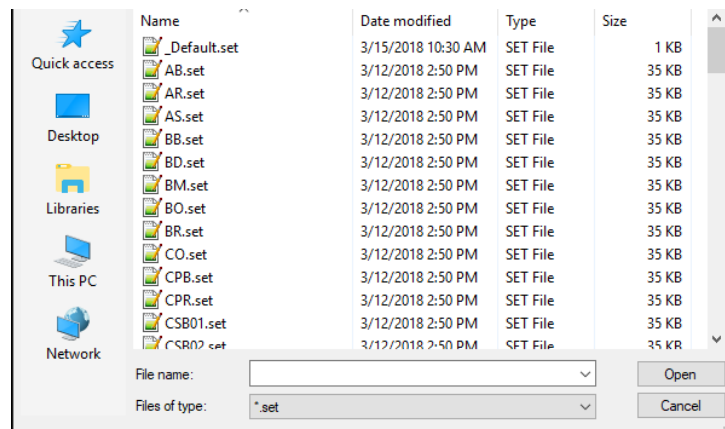
4. Open the MicroStation design file that contains the graphics you would like to plot.
5. If you are in a Design or Drawing model, then you will need to place a fence around the graphics or sheet border that is to be plotted.
6. Choose **File > IPLOT...** from the MicroStation Menu Bar.



7. From the **IPlot - Main** dialog, select the **File > Select Settings...** menu option.



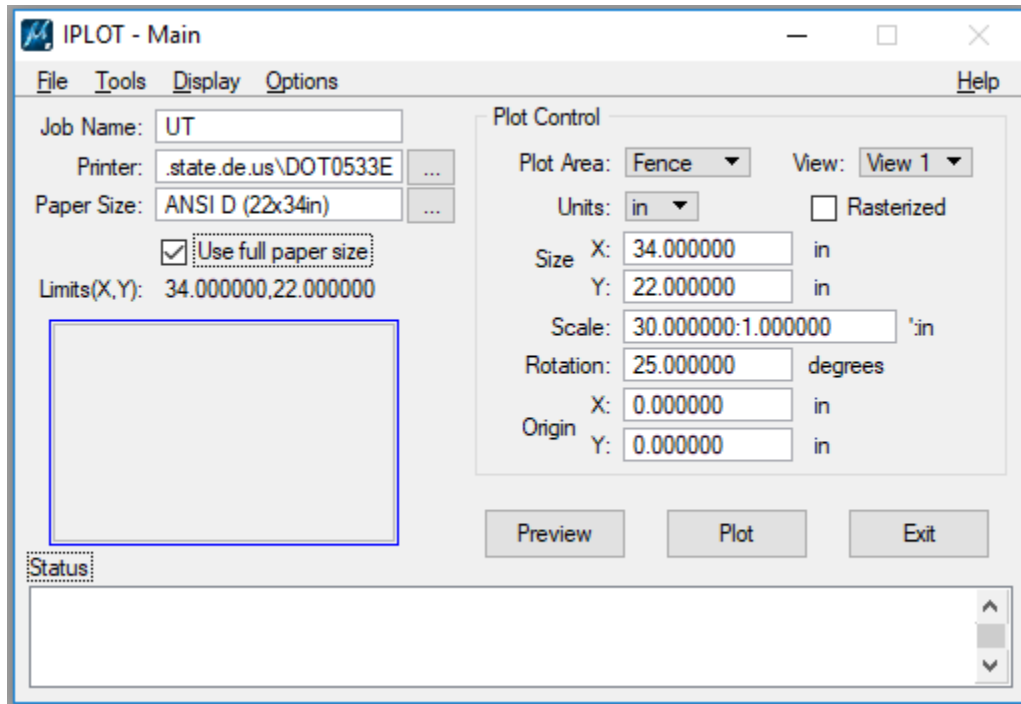
8. This will open the dialog where you select a settings file (.set) for the type of plot you're trying to generate. Select the appropriate settings file and click the **Open** button. Please refer to chapter 7 of the CADD manual for a full list and description of the setting files.



Note, you may see errors in the Status field at the bottom of the IPlot window saying that a level is not valid for this model. This is normal and can be ignored.



IPLOT Standard Entries



Job Name: Enter the name of the IPARM file. Recommended IPARM file naming conventions are found in ***Chapter 2 – Directory and File Naming*** of the CADD Manual.

Printer: The default setting is “\\DOTASCADD04\DOT0533E”. This is the OCE ColorWave plotter that resides in the DelDOT Admin building, near the Survey Section. The plotter DOT0533E is specifically setup for working with iPlot, so if you have other versions of DOT0533 (ie DOT0533A), only use DOT0533E with iPlot.

Paper Size: The default is “ANSI D (22x34in)” but may need to be selected from the list if you do not have DOT0533E setup.

Use full paper size: The default is “***Checked***”. Unchecking this option will introduce printer/plotter margins and will skew your scale.

Plot Area: The default is “***Fence***”, but can be change to whatever is necessary.

View: Not necessary to set to anything unless the ***Plot Area*** entry is set to ***View***.

Units: The default is “***in***”.



Rasterized: The default is set as “*Unchecked*”, and needs to be kept unchecked.

Size - X: Enter the sheet width, in inches. The Size - Y value (height) will adjust automatically as well as the scale entry.

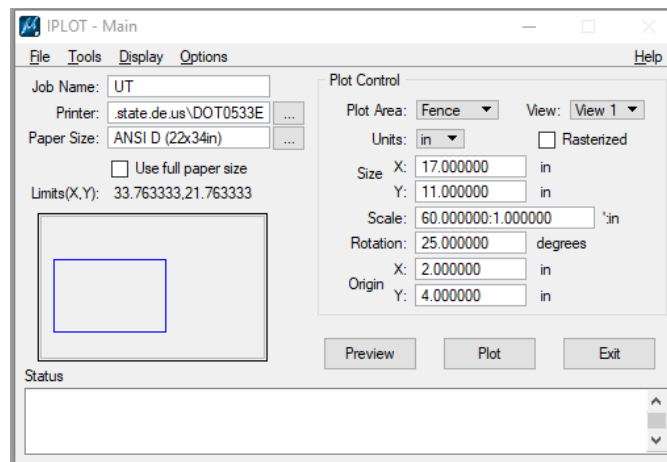
Size - Y: Enter the sheet height, in inches. The Size - X value (width) will adjust automatically as well as the scale entry.

Scale: This will automatically adjust based on the size entries.

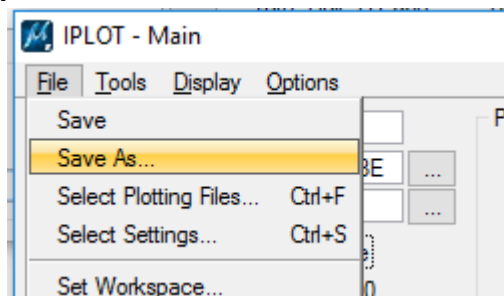
Rotation: Enter the angle that the fence is rotated from the positive x-axis. Angles measured counter-clockwise are to be entered as a negative angle.

Origin X/Y: This is an offset relative to the plotted paper space and is set to “0.00000” for normal printing.

In special cases where you want to only print a smaller section of the full size plan, these values are based on the lower left corner of the sheet. In the below example, a 60 scale plot is being generated 2” from the left edge and 4” from the bottom edge.

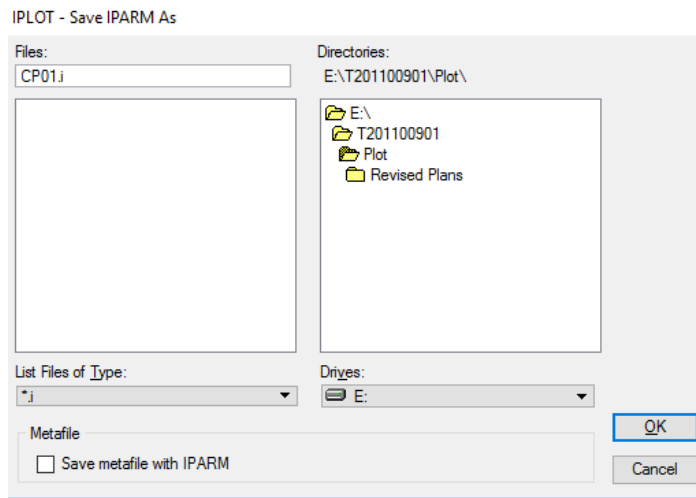


9. Once all of the settings have been adjusted as necessary, to create the IPARM file, select ***File -> Save As...***





10. This opens the **IPLOT – Save IPARM As** dialog. Select the folder to save the IPARM file and click on the **OK** button.



Note, the IPARM (.i) files should be saved in the Plot directory.



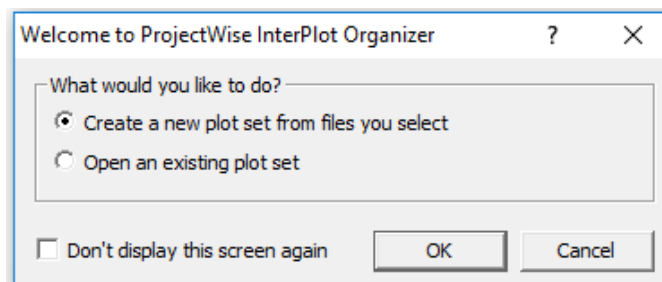
Creating PDFs or Plots from IParm Files Using InterPlot Organizer

Once an IPARM file (.i) has been generated, PDFs or paper plots can be created from this file. To generate an output file from an IPARM file, you must process the file through the **InterPlot Organizer** application, using the following workflow and settings listed below.

1. From MicroStation, select **File -> InterPlot Organizer...** or from Windows, choose **Start > All Programs > Bentley > ProjectWise InterPlot Organizer**.

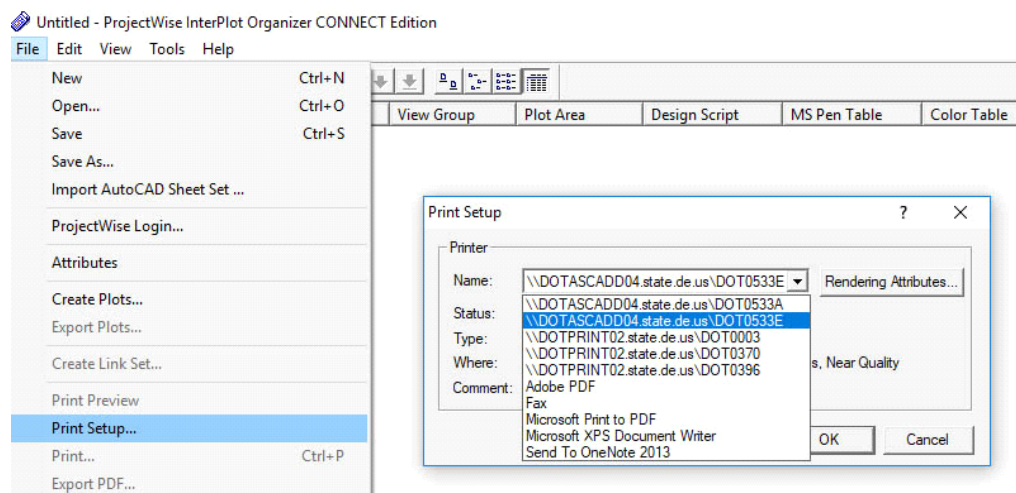
Note, if you encounter any errors saying “*Error loading custom command ...*” you will need to manually uninstall ProjectWise InterPlot Organizer and then reinstall it via the DelDOT CADD Install Script.

2. When the application launches for the first time, you are presented with the following dialog.



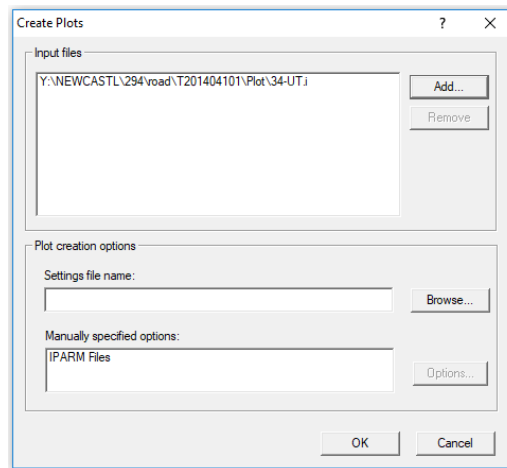
Check “Don’t display this screen again” and hit “OK”.

3. Select **File -> Print Setup...** to open the Print Setup dialog.



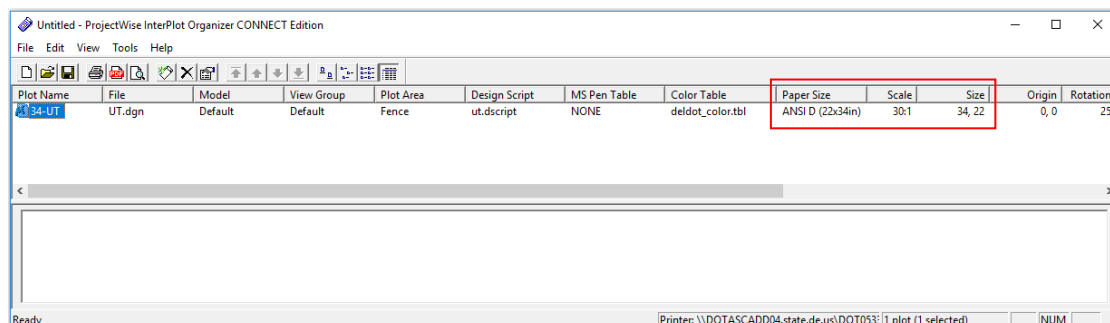


4. From the **Print Setup** dialog, select DOT0533E, or a printer/plotter that will support your document size. Click OK to exit this dialog.
5. To create plots, select **File -> Create Plots...**, that will open the **Create Plots** dialog.



6. To add IPARM files, click the **Add...** button which will open the **Select Files** dialog where you can navigate and select the IPARM file(s) that you wish to plot, then select the **Open** button.
7. The **Create Plots** dialog will list the IPARM files you had selected. By selecting a settings file via the **Browse...** button, you will overwrite any settings files used when creating the IPARM files listed above. It is recommended that this be left blank. Click the **OK** button when you are finished adding IPARM files.
8. The **ProjectWise InterPlot Organizer** window will now have the plots you selected. Verify at this point that the size for each document matches the final plotting size required.

As an alternative to steps 5-7, you can drag and drop .i files directly from **File Explorer** into this window.





If the scale or size is not correct, please confirm you followed step #3.

9. If any changes need to be made to any of the IPARM files (such as size), then select the IPARM file(s) that you want to edit by clicking on the entry under "Plot Name". Right-click the file(s) selected, and click **Properties**. Multiple files can be edited at once.

It is not the intention of this document to fully describe all of the options available in all of the tabs of the **Properties** dialog. From a high level, the following are descriptions of items that can be found in each tab:

a. General

- Design file name, color table, pen table/design script

b. Area

- Plot area definition (Sheet, Fence, Element, etc.)

c. Layout

- Paper size, scale, rotation.

d. Reference Files

- Reference files attached to the master design file

e. Levels

- Levels turned on/off in master and reference files

f. Display

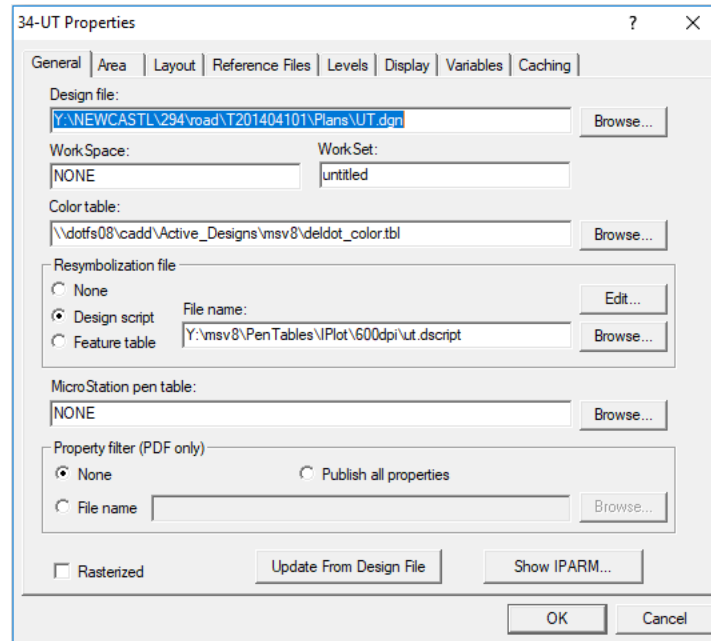
- Display properties turned on/off in master and reference files

g. Variables

- Location to set variables.

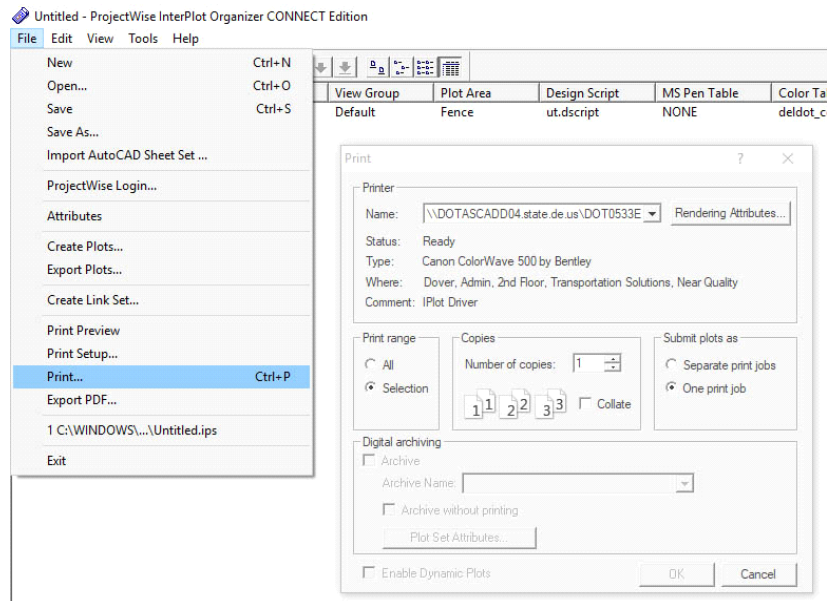
h. Caching

- Location to set cache file location.



When complete with necessary edits, click the **OK** button.

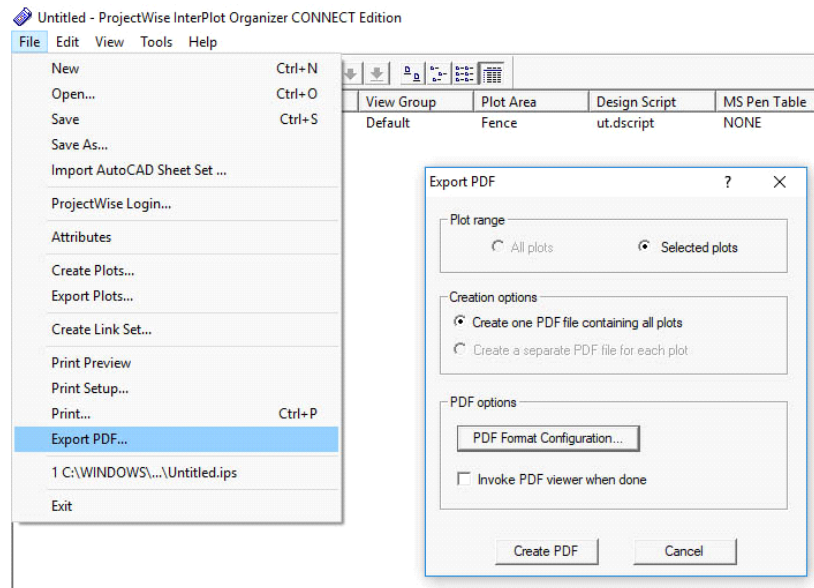
10. When ready to create a plot to an actual device, select **File -> Print...** which will open the **Print** dialog. Verify the printer selection and click **OK** to send the job.



If printing to a plotter not setup for InterPlot (DOT0533E is the only internal plotter setup for this), it is recommended to print to a PDF first.



11. When ready to create a PDF plot set, select **File -> Export PDF...** which will open the **Export PDF** dialog.



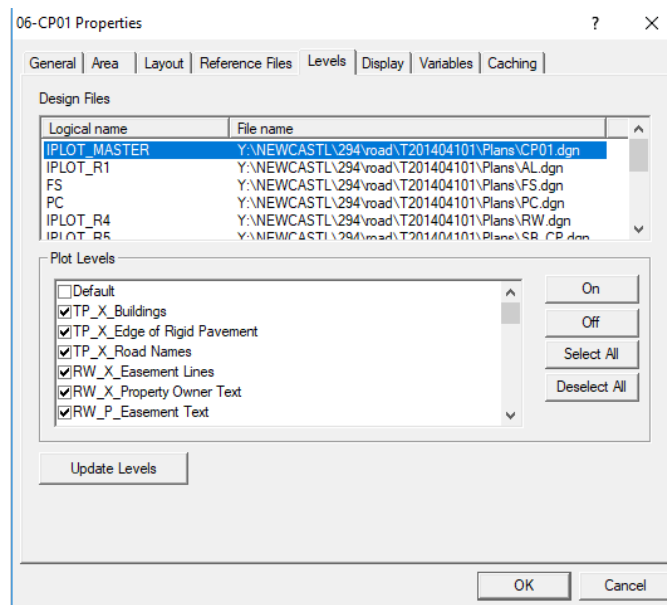
Two options for creating PDFs are available at this point:

- a. **Create one PDF file containing all plots** - Creates a multi-page PDF with the plot files listed (or selected). A **Save PDF File** dialog opens for you to choose the name and location of the PDF to create.
- b. **Create a separate PDF file for each plot** - Creates a single PDF file for each plot listed (or selected). A **Browse for Folder** dialog opens for you to choose the location of where the individual PDF file(s) will be created



Level Management in Plots

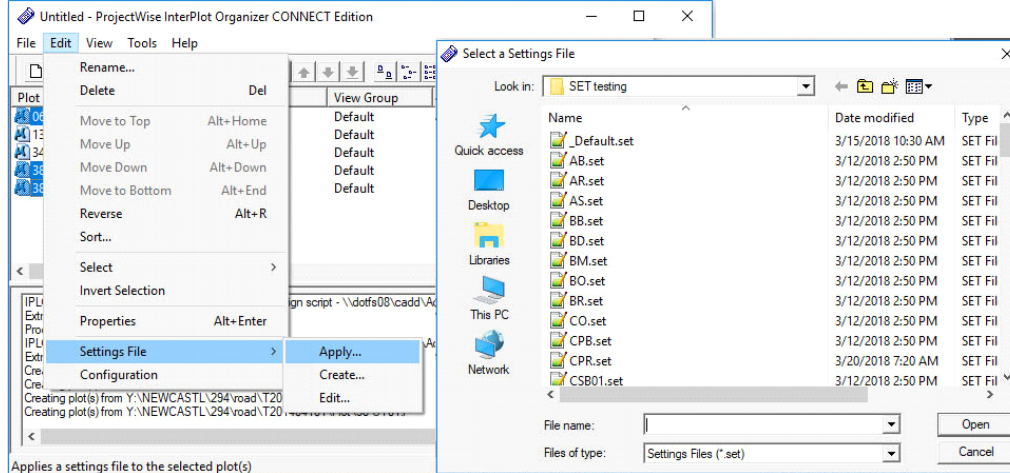
Level display can be now handled by the .set files. You can also manually turn levels on or off under the Levels tab in the properties for the file(s) in the **ProjectWise InterPlot Organizer** main window. Levels that are checked are on and levels that are unchecked are off. You can check and uncheck levels in the dgn (IPLLOT_MASTER) and the references (i.e. IPLLOT_R1, IPLLOT_R2 or the logical name).



It is important to note that when IPARM files are created, not all levels are included in this IPARM, only levels that have been used in this DGN, at the time of IPARM creation. This applies to reference files as well. If new levels are used in this DGN, after creating the IPARM file, you need to reload the settings file used for each sheet.



1. Inside the main **ProjectWise InterPlot Organizer** window select the file(s) you want to update and go to **Edit -> Settings File -> Apply...**



2. When the **Select a Settings File** window opens, navigate to **\\DOTFS08\CADD\Active_Designs\msv8\PenTables\IPlot\Settings** and select the appropriate settings file and select **Open**. Note that, depending on the number of files selected, this may take a moment. For each file selected, InterPlot will sequentially update the levels from the DGN and its references, and then turn all the levels on/off per the settings file used.

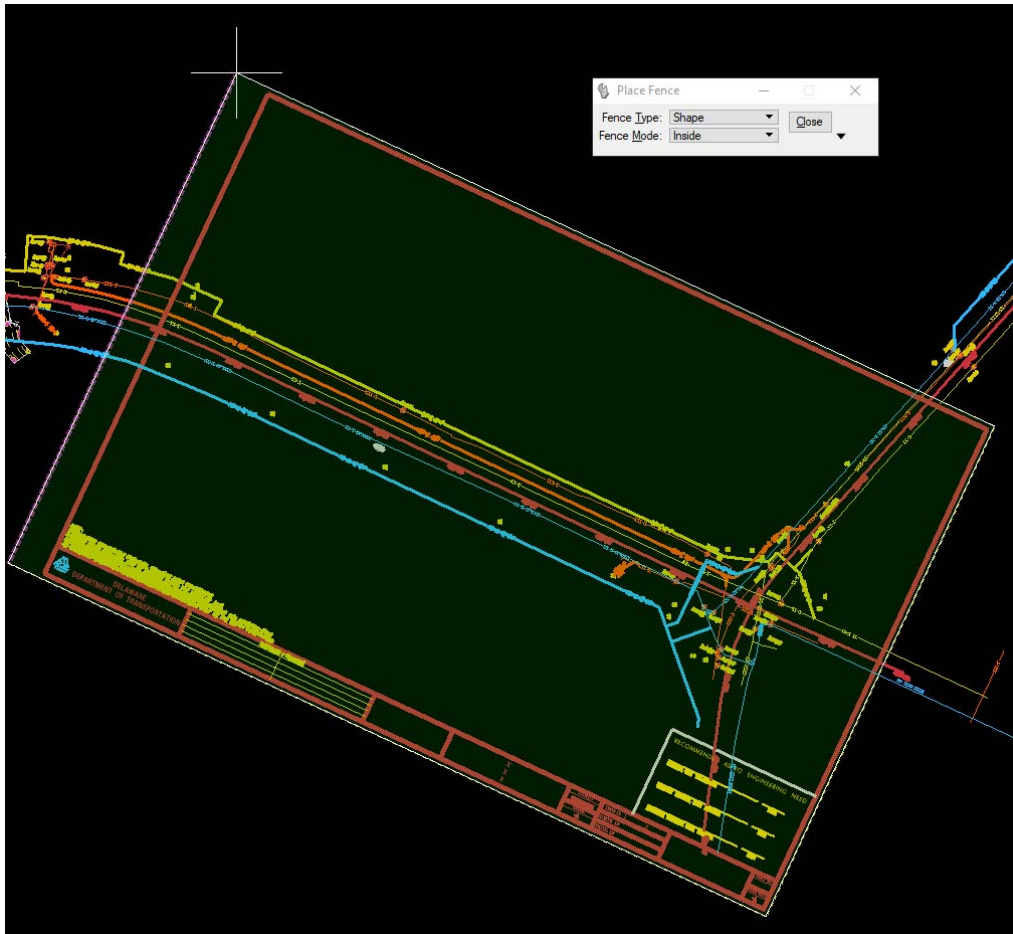
If you have attached new DGNs as references after creating the IPARM (.i) file, you will need to update the .i file from the DGN. To do this, select the plot or plots you would like to update, right click and go to **Properties -> General**. If you have selected one file, you will see a button saying **"Update from Design File"**. If you have multiple files selected, it will be a checkbox, which you will have to check and then hit **"OK"**. You will then need to apply the correct settings files.



Automated creation of IPARM files (.i)

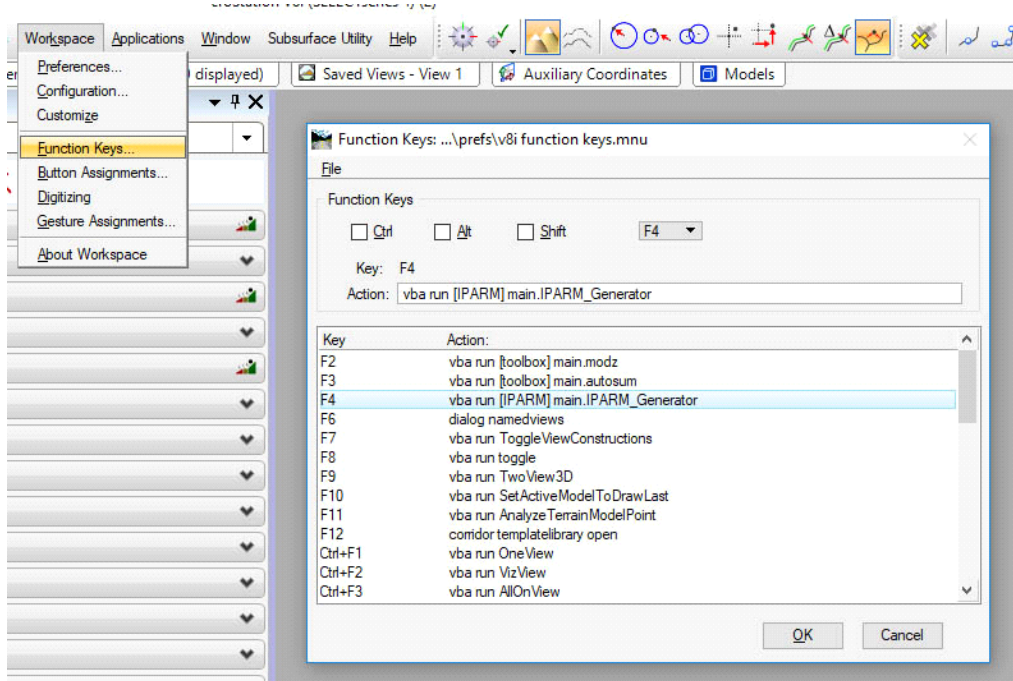
The above process has been automated to reduce the number of steps it takes to create IPARM files (.i). Some setup needs to be done to take advantage of this automation feature.

1. Inside a MicroStation design model, create a fence along the plot border. If using the **"Shape"** fence type, start at the top left corner and go clockwise. If using the **"Block"** fence type, start at the top left corner and end at the bottom right corner.

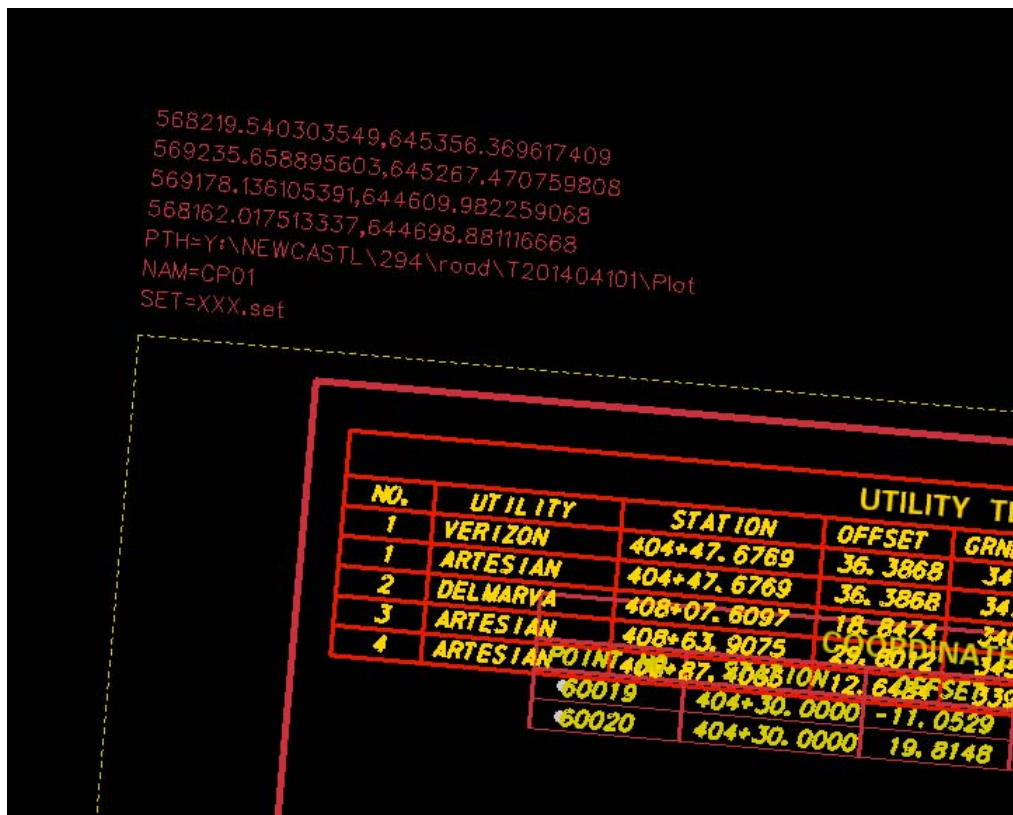


2. Run the IPARM Generator. This can be loaded through the DeIDOT Common menu by selecting **DeIDOT Common -> IPARM Generator -> Run Program....** You will need to run the program multiple times, so it is recommend that you assign it to a function key for quick access.
 - a. To assign the program to a function key, go to **Workspace -> Function Keys...** Copy and paste the following text into the desired function key. In the example below, it has been tied to F4.

```
vba run [IPARM] main.IPARM_Generator
```

- The program will create a **Parameter Block** in the upper left corner.





4. The program can accept the following parameters. If not provided, the default is used.

```
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.88116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=06-CP01
SET=CPR.set
ROT=5
NJA
```

Type	Code	Description
Coordinates	##,##	This contains the northing and easting of each corner of the print area. This should be generated by the program and cannot be omitted.
IPARM save Path	PTH	<p>This is where the IPARM file (.i) will be saved.</p> <p>Default location is the Plot folder within the project directory of the open design file. If this cannot be found, it will be the same location as the design file.</p> <p>Note: MicroStation has a feature within the text editor that looks for character codes and replaces them with pre-assigned values. An example of this code is "\294". MicroStation replaces this with an "H". To get around this, you need additional backslashes "\". The path will then become: "Y:\\NEWCASTL\\294\\road\\T201404101\\Plot\\" Note, once you exit the text editor, you will no longer see the extra backslashes. The recommended font is DelDOT_61.</p>
IPARM name	NAM	<p>This is the name of the .i file.</p> <p>Default name is the same as the DGN.</p>



Settings file	SET	<p>This is the settings file to be used.</p> <p>Default Settings file is _Default.set.</p> <p>It is important to specify the correct settings file, as _Default.set will not setup the correct levels or design script, and you will need to set the correct dscrip inside of ProjectWise InterPlot Organizer.</p>
Rotation	ROT	<p>This is not required and will supersede the rotation of the Parameter Block.</p> <p>If you are working in a rotated view, specifically one rotated to your sheet border, enter "ROT=0". Be aware that this will cause issues if you try to plot in an un-rotated view, so it is not recommended that this be used.</p>
Silent Mode	NJA	<p>This flag determines whether the program will run in Silent Mode.</p> <p>In Silent Mode, the user will not have to interact with any dialog boxes and will not be interrupted if any errors are encountered. If errors are encountered, the default values listed above will be used. All errors and warnings will be logged in the Message Center.</p>

5. Select the **Parameter Block** and run the program again to generate the IPARM file (.i).

Note: If only the coordinates are specified in the **Parameter Block**, the program will create a fence, load **iPlot**, and setup the plotter, sheet size and rotation. The user will need to specify a dscrip. This is useful if you do not want the level display controlled by the settings file.



Creating Multiple IPARM files (.i) from one DGN.

It is possible to create multiple .i files from one DGN. To do this, the user will need to copy the **Parameter Block** for each .i file to be created.

1. Copy the **Parameter Block** off to the side and change the parameters as necessary for each .i file to be created. Do not modify the coordinate values.

```

568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=06-CP01
SET=CPR.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=38-SS01
SET=SS.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=13-GG01
SET=GG.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
NAM=38-UT01
SET=UT.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
NAM=12-RW01
SET=RW.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=23-CS01_01
SET=CSR01.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=25-CS01_02
SET=CSR02.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=27-CS01_03
SET=CSR03.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=29-CS01_04
SET=CSR04.set
NJA
568219.540303551,645356.369617409
569235.658895604,645267.470759806
569178.136105391,644609.982259066
568162.017513337,644698.881116668
PTH=Y:\NEWCASTL\294\road\T201404101\Plot\
NAM=31-CS01_05
SET=CSR05.set
NJA

```

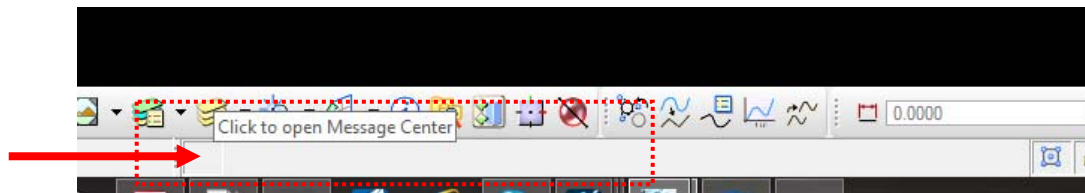
It is recommend that the "**PTH**", "**NAM**", "**SET**" be filled out correctly and tested before attempting to run multiple **Parameter Blocks**. It is also recommend that "**NJA**" be set so that all dialog boxes and error messages are suppressed.

2. Select the **Parameter Blocks** that you want to create plots from and run the program.



It is important to be aware of the following:

1. You do not need to set Level Display On/Off through the DelDOT common menu before running the program, as the program handles this automatically through the settings files. It is important that you specify the correct settings file. Please refer to the CADD Manual for more information on each settings file.
2. If the **"NJA"** flag is set, you will see dialog windows pop up and then disappear, do not attempt to close dialogs or interact with them.
3. The program uses the Message Center to display warnings and errors. If errors occur while the **NJA** flag is set, you will not be notified. It is important to check the Message Center to determine if anything went wrong during the process.



Within the Message Center, clicking on an entry will display additional data about the error that was encountered.

