

# **Chapter 18 Plan/Profile Sheet Development Addendum**

DRAFT

# CREATING PLAN AND PROFILE PAGES

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### **OVERVIEW**

The **default** preference for this dialog has been setup to establish the station range limits for 25 scale plans. There are other preferences for establishing plan and profile pages, plan only, profile only and 50 scale setups. Remember if you chose to do 50 scale then previous prerequisites will need to be redisplay with the **Global Scale Factors** set to **600 absolute scale** (or use **File > Project Options** and select the correct preference).

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## CREATE PLAN OVER PROFILE PAGES

### Step One: Open MicroStation

To begin, double click your **MicroStation V8i** icon and select your project from the project pull down. Open any file.

### Step Two: Create or Open a Profile Drawing

Select **File > Make Sheetz** from the *MicroStation Main Menu*. Create a **Profile.dgn** drawing (if one doesn't already exist) using the no prefix option.

✓ *Refer to Error! Bookmark not defined. for help making drawing files.*

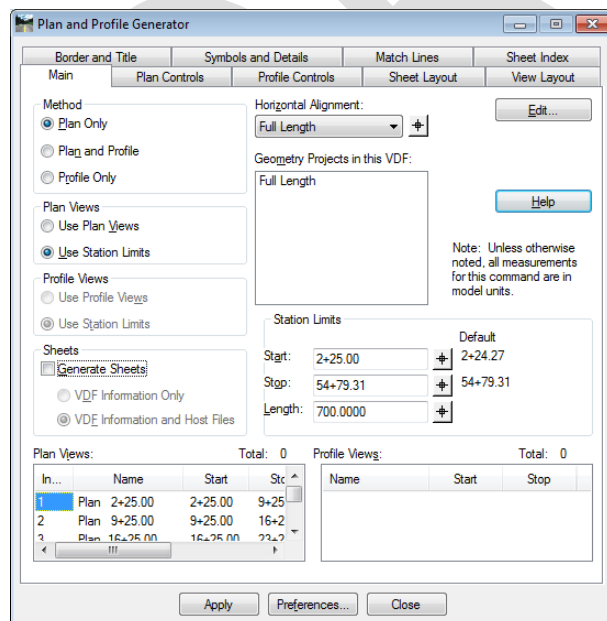
### Step Three: Create Plan Page Layout without Graphics

Not all alignments begin with an even station. For this reason we need to establish how we are going to control the sheet drawing station limits before generating plan over profile drawings. By default we are ready to control station limits for 25 scale drawings. If you intend to do 50 scale plans you will need to click the **Preference** button open the 50 Scale preference sets.

🎵 **Disable** your station lock before you begin the next step.

#### Part One: Main

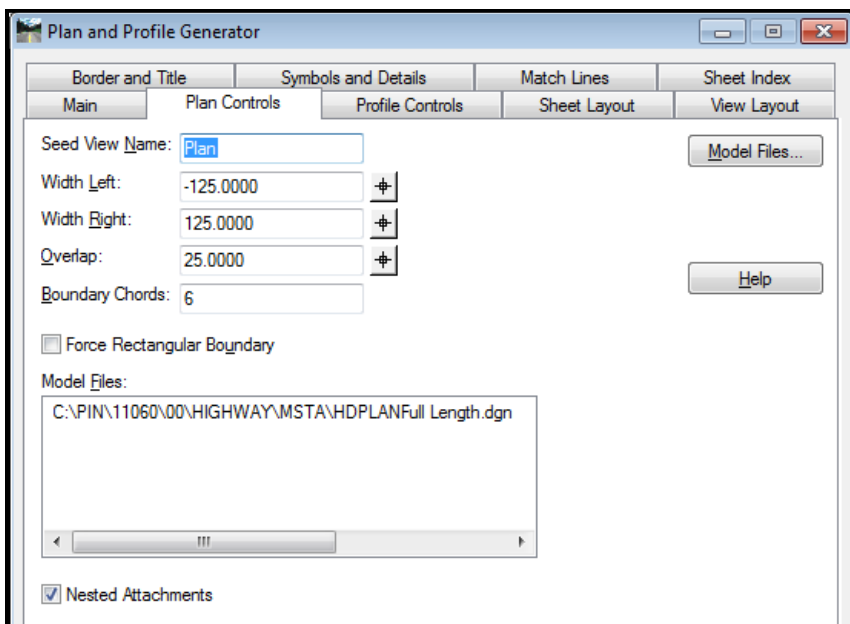
From the *InRoads Main Menu* select **Drafting > Plan and Profile Generator...** (Figure 18-1). In the **Main** tab select your alignment in the **Horizontal Alignment:** area and manage the start and stop limits of your project in the **Station Limits** area of the dialog box. Enable the *Plan Only* option. Disable the *Generate Sheets* option.



*Figure 18-1: Plan and Profile Generator-Main*

## Part Two: Plan Controls

Place focus on the **Plan Controls** tab (Figure 18-2). Select the **Model Files...** button to the right and pick your workgroups source drawing file i.e. (HDPlan.dgn, BDPlan.dgn or etc.).

*Figure 18-2: Plan and Profile Generator-Plan Controls*

Click **Apply**. This will result in creating Plan Views.

## Step Four: Create Plan over Profile Pages

The top of the dialog has multiple tabs with certain settings preset for you. We will need to place some information in a few of these tabs.

🎵 Before you begin reactivate your Station Lock button on the **Locks** toolbar.

Located at the bottom of the dialog box select the **Preferences...** button (Figure 18-3) and load **Plan & Profile 25 scale** by either double clicking or highlighting and selecting **Load**.

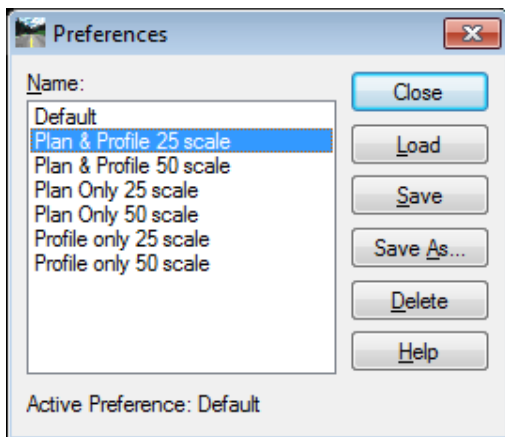


Figure 18-3: Preferences

Press **Close** to return to the Plan and Profile Generator dialog. Enable the **Use Plan Views** option on the **Main** tab of the Plan and Profile Generator dialog

### Part One: Plan Controls

Place focus on the **Plan Controls** tab (Figure 18-4). The path should already be written into the **Model Files...** area for the source drawing file (i.e., HDPlan.dgn, BDPlan.dgn or etc.).

**❗ If the path shown is pointing to something other than your source drawing file you must reset your preferences back to default and redo the instructions give in Step Three: Create Plan Page Layout without Graphics.**

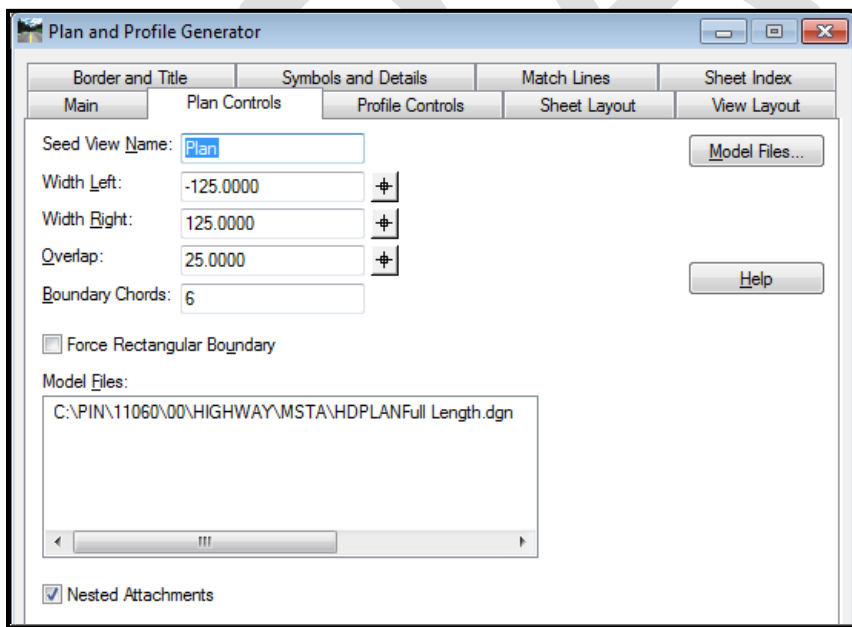


Figure 18-4: Plan and Profile Generator-Plan Controls

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♪ Your source drawing file should have the standard files attached to it. At any time you can attach files to the source drawing and have them display within your plan pages.

✓ *Refer to Error! Bookmark not defined. for more information on Reference Attachments.*

### Part Two: Profile Controls

Place focus on the **Profile Controls** tab (Figure 18-5). Select your **Vertical Alignment:** from the pull down and pick the existing and proposed surfaces for display.

❶ *Remember to also highlight the Surface names (using the Ctrl key) along with placing the X next to the surface names (i.e., Ground and Design). If this isn't done you will get undesirable results in the way your grid will display with your profiles.*

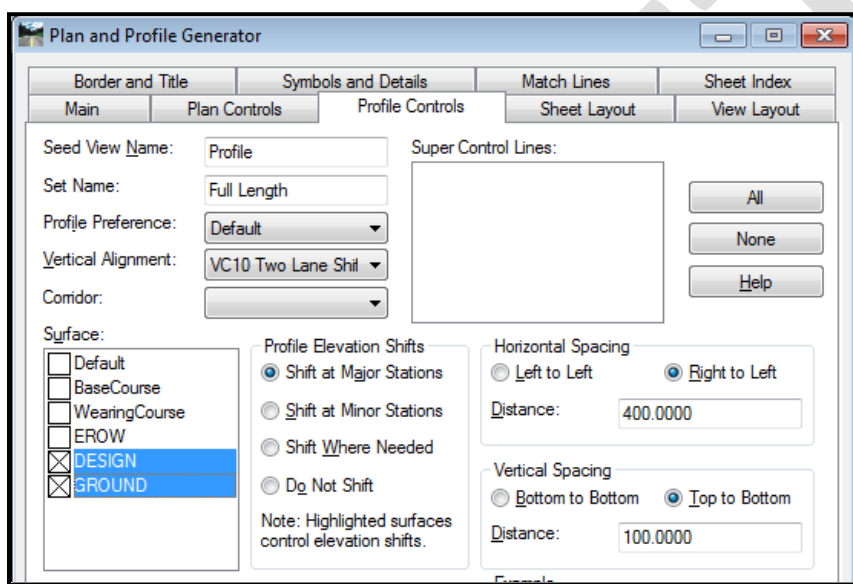


Figure 18-5: Plan and Profile Generator-Profile Controls

### Part Three: Sheet Layout

Place focus on the **Sheet Layout** tab (Figure 18-6). Press the ... button right of the **Host File:** location and select the same file as you did for your plan controls (i.e., HDPlan.dgn, BDPlan.dgn or etc.).

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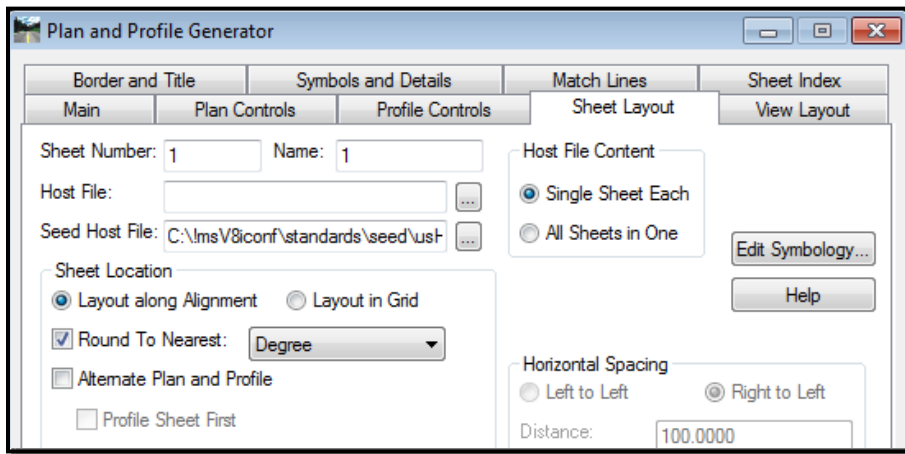


Figure 18-6: Plan and Profile Generator-Sheet Layout

### Part Four: Sheeting Drawings

- Remember to toggle the **Station Locks On** from the **Locks** toolbar prior to sheeting your files. If you have changed the start station of your alignment to be something other than an even 100 foot station and this lock is off, your stationing along the profile will increment at even 100 foot intervals based on the start station.

Click **Apply** at the bottom of the **Plan and Profile Generator** dialog. You will be prompted at the bottom right of the MicroStation screen to **Identify Location**, send a left mouse button to the view 1 window to begin the sheet creation process.

When the sheet creation process finalizes the **Plan and Profile Generator** dialog will reappear. Click **Close** and save your **VDF** file for future use.

- If you do not have a proposed design surface when generating your P & P, you must go back after and display you active vertical alignment to get the vertical to display.

### Part Five: View the Results

Select **File > Open** from MicroStation's main menu and view the sheets (i.e., ??plan1.dgn).

If you are satisfied with the sheet layout, then consider running the *Sheet Renumbering Utility* to place the 3 digit prefixed in front of the file names. Without the 3 digit prefix, the *Border Information* macro can't be run to fill in the border information on each sheet.

- ✓ *For detailed instructions on using the Sheet Renumbering Utility, please refer to Error! Bookmark not defined..*
- ✓ *For detailed instructions on using the Border Information macro, please refer to Error! Bookmark not defined..*

If you are not satisfied with the sheet layout, re-open the *Plan and Profile Generator*, select the *Sheet Index* tab and open the saved VDF file. Adjust the *Plan View* and *Profile View* stations or overlaps on the *Main* tab.

- ✓ *If you need to adjust any of the plan pages for layout, refer to Bentley InRoads help.*



## Part Five: Adjusting Plan Area

### Overview

The viewable area of the plan can easily be adjusted with MicroStation tools and the *Reference File* dialog. There is an element that surrounds the plan view area within the border drawings.

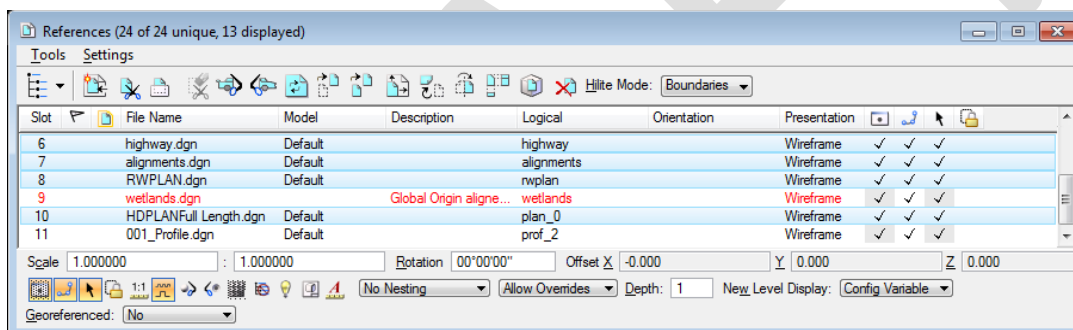
- ♫ The element is color 160 (which plots white) and is a *Construction* element, therefore it will never plot.

### Part One: Export the DGN to 2d

From the *Main Menu*, select **File > Export > 2d**. Use the current name of the DGN, but add a suffix of “\_2d”. The resulting DGN will be flat and ready for use. Open the new 2d file.

### Part Two: Open Reference Dialog

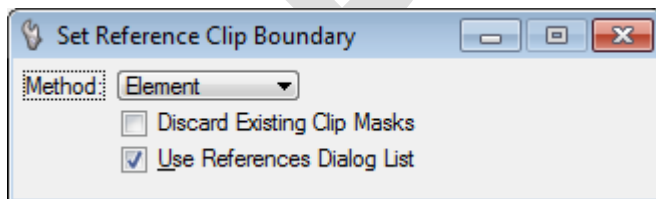
Select **File > Reference (DOT) > Dialog** from the MicroStation main menu. This opens the *Reference* dialog.



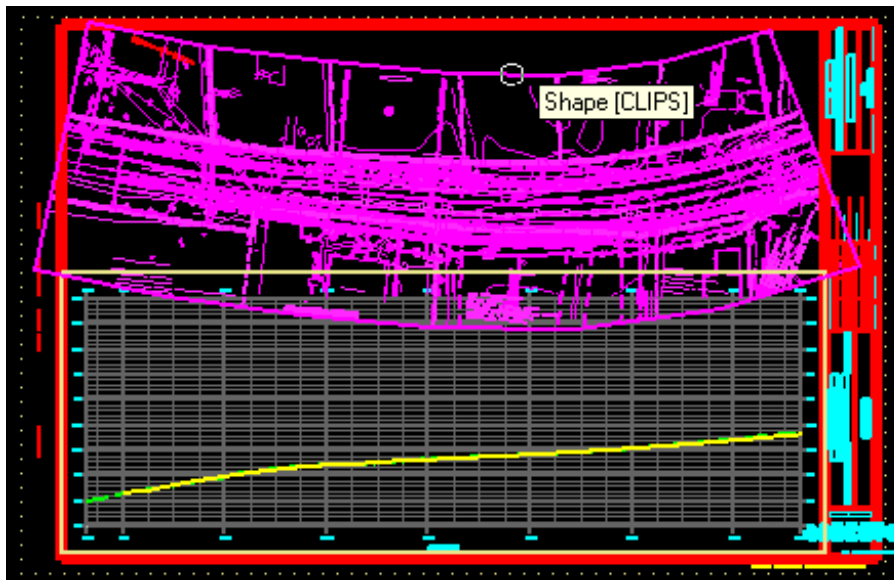
The dialog lists multiple reference files. Select all of the reference files you want to clip, except xxx\_Profile.dgn which contains the profile and its extents.

### Part Three: Set Element as Clip Boundary

Select **HDPLAN.DGN** with a left click. Now select **Tools > Clip Boundary** from the *Reference* file menu. Set the *Method* to **Element** and place a check in the *Use Reference Dialog List* box.



MicroStation prompts you to **Identify Clipping Element**. Click on the light yellow shape surrounding the plan area.



## Part Four: Modify with MicroStation Tools

Now that the *Clip Boundary* element has been established, the element can be modified by moving a vertex with the *Modify Element* tool or by adding or deleting a vertex with the appropriate tool.

### Rotate or Move References (Optional)

To move or rotate the area within the view extents, highlight HDPLAN.DGN in the *Reference* dialog and use the **Tools > Move** or **Tools > Rotate** to reposition the area. This may require that you adjust the *Clip Boundary* afterwards.

## Step Six: Adjust the Clip Boundaries

Adjust the *Clip Boundaries* of each plan sheet that was created.

## Step Seven: Annotating Profiles

Reopen the **Profile.dgn** file that was created earlier. Fit the view.

### Part One: Label Proposed Elevations

From the *InRoads Main Menu* select **Evaluation > Profile > Annotate Profile...** (Figure 18-7). By default we are preset to label the elevations of the proposed vertical design. If you want to label the existing ground elevations also then select the **Preferences...** button and activate the **Proposed and Existing Elevation** option and close the dialog.

Verify your vertical **Profile Set** if you have multiples in the **Profile.dgn** file, set your **Vertical Alignment:** to the vertical design, **Surface:** to the existing ground surface and select **All** under the station ranges listed in the **Profiles:** area.

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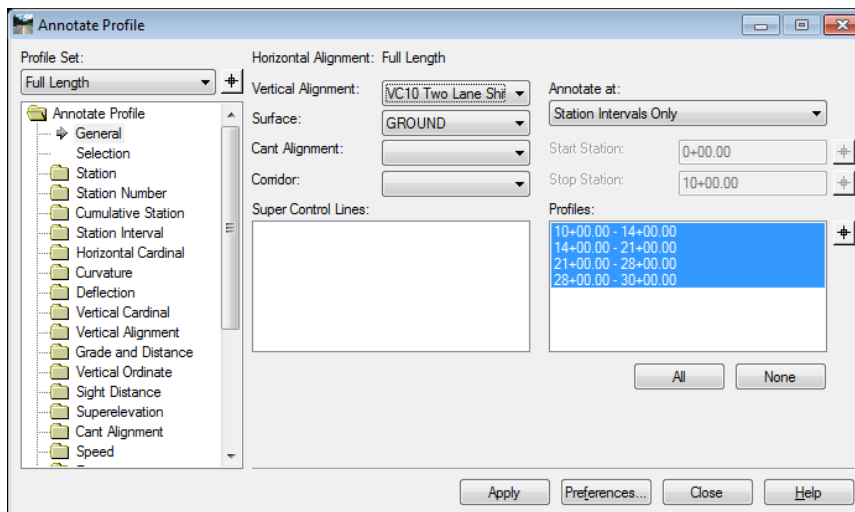


Figure 18-7: Annotate Profile

Click **Apply** and **Close** to exit this dialog.

### Part Two: Label Vertical Annotation

Normally, the Vertical alignment will already be automatically annotated based on the **Geometry > View Geometry > Options** command. If it is not annotated, select **Geometry > View Geometry > Vertical Annotation...** (Figure 18-8). Verify your vertical **Profile Set** if you have multiples in the **Profile.dgn** file. You will see a rectangular outline around the profile set to be annotated.

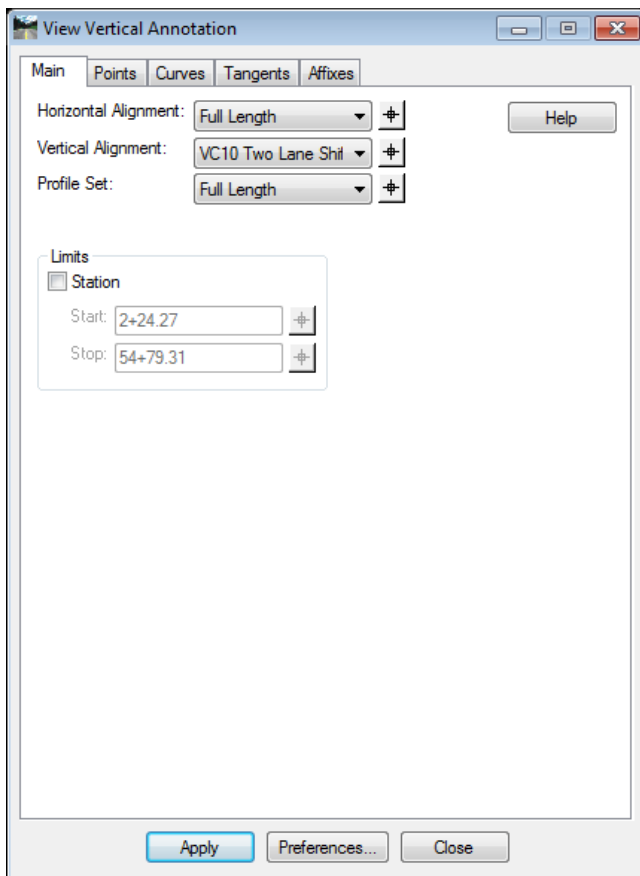


Figure 18-8: View Vertical Annotation

Click **Apply** and **Close** to exit this dialog. There will still be a need to do some clean up through MicroStation tools to fit some of the data into the sheet drawings display area.

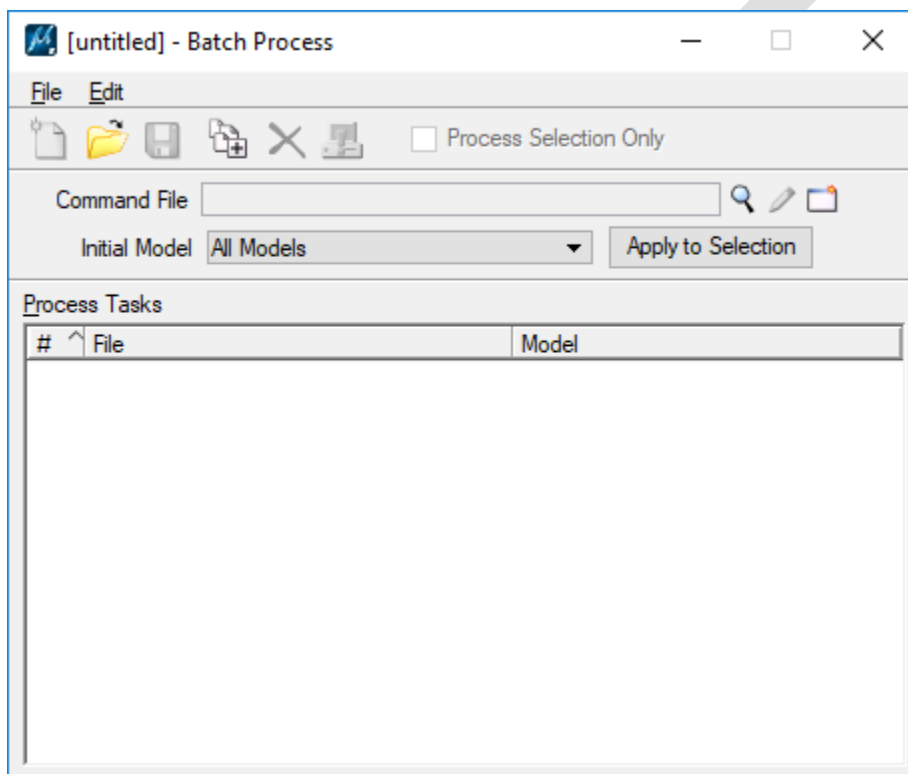
*ADDENDUM (2021-05-20) begins-----*

## Step Eight: Set Annotation Scale

With the individual sheet dgn's created now the "Annotation Scale" needs to be set to the correct scale.

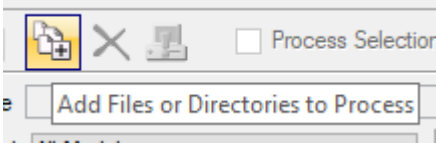
### Part One: open Batch Process

Remain in the Profile.dgn and open the Batch Process command by going to the top menubar **Utilities > Batch Process...** the following dialog box is then displayed.

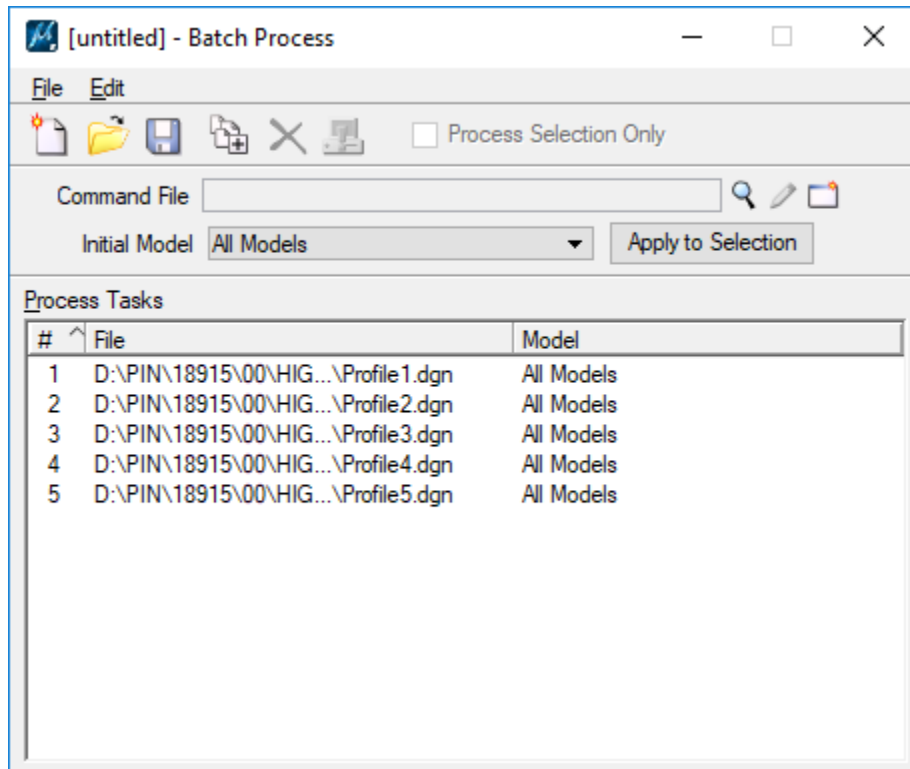


## Part Two: Add Files

This is similar to the Print Organizer dialog box where you Click on the “Add Files or...”

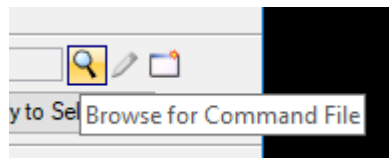


icon add the Profile sheet dgs that you just created.



## Part Three: Load the Command File

After the list of dgs to be edited are listed the **Batch Process** command now needs the **txt** file loaded. The **txt** file contains the Key-In commands that will be applied to each dgn in the list.



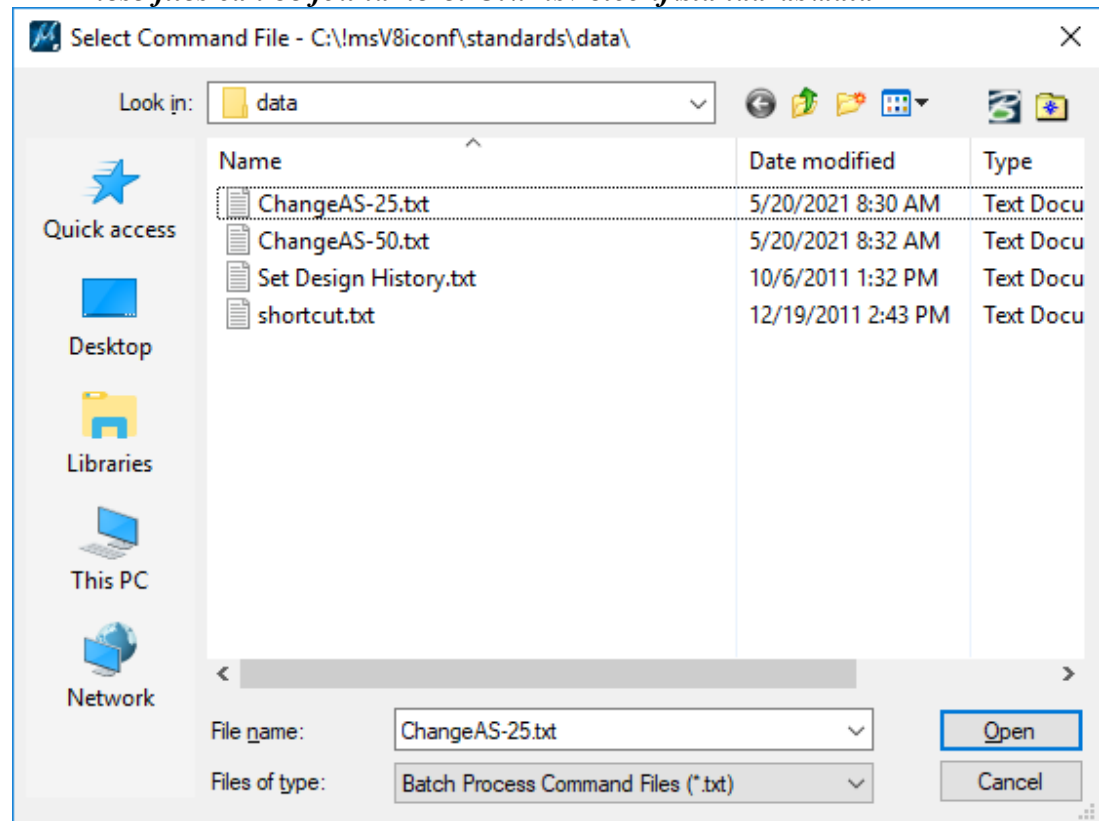
Click on the “magnifying glass” icon and browse to the Command File needed.

- For Profile sheet's at the scale of 1" = 25' use the txt file **ChangeAS-25.txt**
- For Profile sheet's at the scale of 1" = 50' use the txt file **ChangeAS-50.txt**

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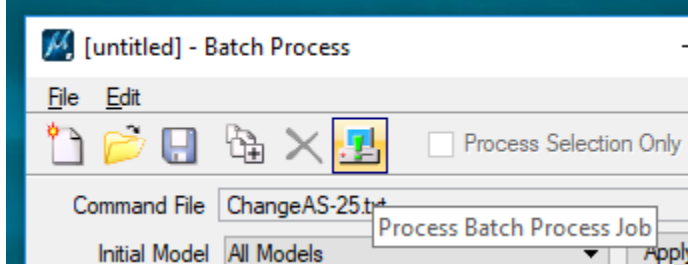
✓ These files can be found here: *C:\!msV8iconf\standards\data*



### Part Four: Run the Batch Process Job

With the dgn's identified and the batch process selected, run the batch process against the selected files.

Click on the **Process Batch Process Job** icon to start the processing.



After the process completes all the dgn files processed will have the Annotation Scale Active and Set.

*ADDENDUM (2021-05-20) ends-----*



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## CREATING PLAN PAGES ONLY

### Step One: Open MicroStation

To begin, double click your **MicroStation V8i** icon and select your project from the project pull down. Open any file.

### Step Two: Create Plans Only

🎵 Before you begin **deactivate** your **Station Lock** button on the **Locks** toolbar.

From the *InRoads Main Menu* select **Drafting > Plan and Profile Generator...** Select the **Preferences...** button at the bottom and load **Plan Only 25 scale**. This will setup some of the settings automatically.

🎵 If you decide to use the **50 scale** option you will need to adjust your **Global Scale Factor** and redisplay your annotation for the alignment and design drawings.

### Part One: Plan Controls

Place focus on the **Plan Controls** tab (Figure 18-9). Select the **Model Files...** button to the right and pick your workgroups source drawing file (i.e., HDPlan.dgn, BDPlan.dgn or etc.).

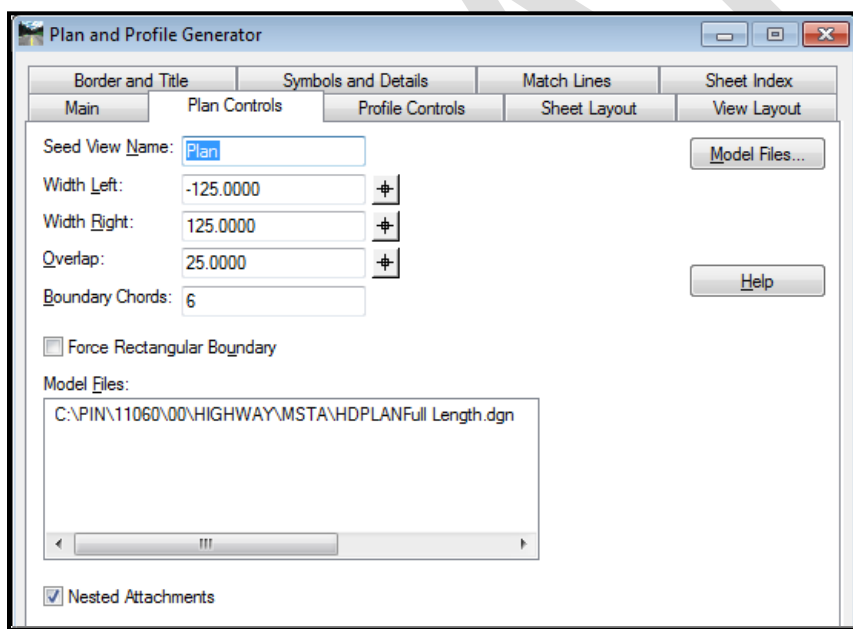


Figure 18-9: Plan and Profile Generator-Plan Controls

🎵 Your source drawing file should have the standard files attached to it. At any time you can attach files to the source drawing and have them display within your plan pages.

✓ **Refer to Error! Bookmark not defined. for more information on Reference Attachments.**

## Part Two: Sheet Layout

Place focus on the **Sheet Layout** tab (Figure 18-10). Press the ... button right of the **Host File:** location and select the same file as you did for your plan controls (i.e., HDPlan.dgn, BDPlan.dgn or etc.).

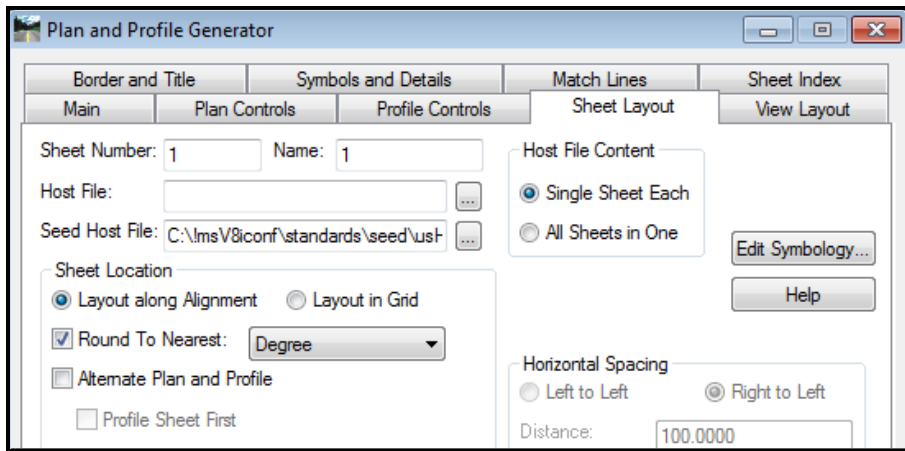


Figure 18-10: Plan and Profile Generator-Sheet Layout

## Part Three: Sheeting Drawings

Click **Apply** at the bottom of the **Plan and Profile Generator** dialog to begin the sheet creation process. When the sheet creation process finalizes you will be left in the last sheet created.

**ADDENDUM (2021-05-20) begins-----**

## Step Three: Set Annotation Scale

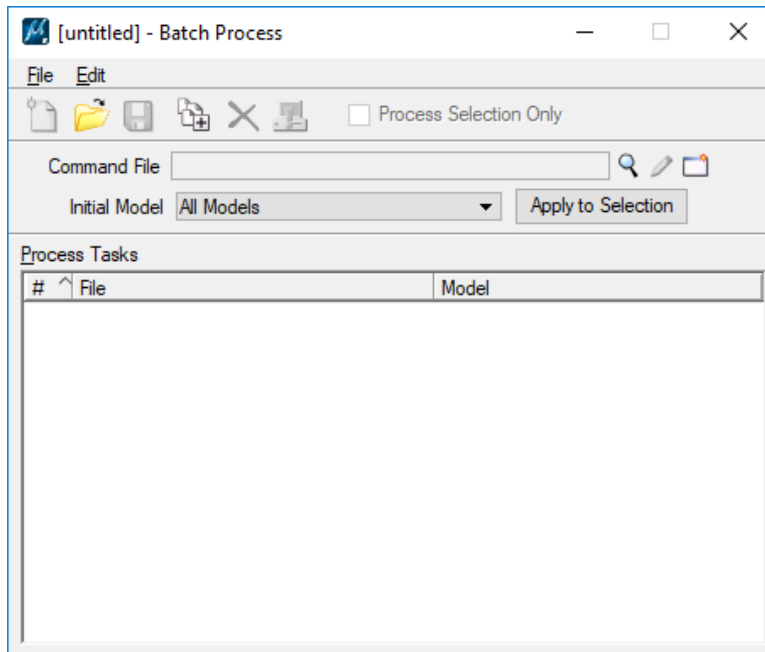
With the individual sheet dgn's created now the "Annotation Scale" needs to be set to the correct scale.

### Part One: open Batch Process

Remain in the Profile.dgn and open the Batch Process command by going to the top menubar **Utilities > Batch Process...** the following dialog box is then displayed.

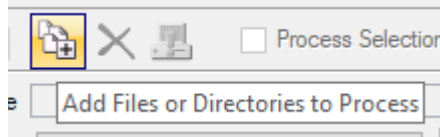
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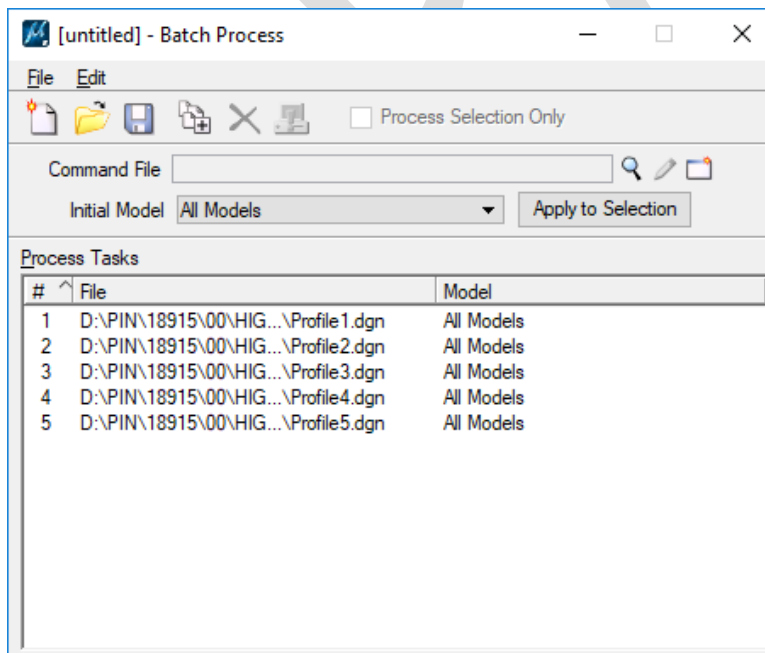


### Part Two: Add Files

This is similar to the Print Organizer dialog box where you Click on the “Add Files or...”

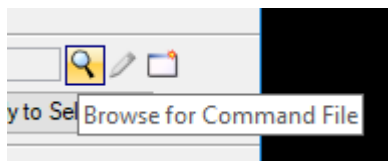


icon add the Profile sheet dgs that you just created.



### Part Three: Load the Command File

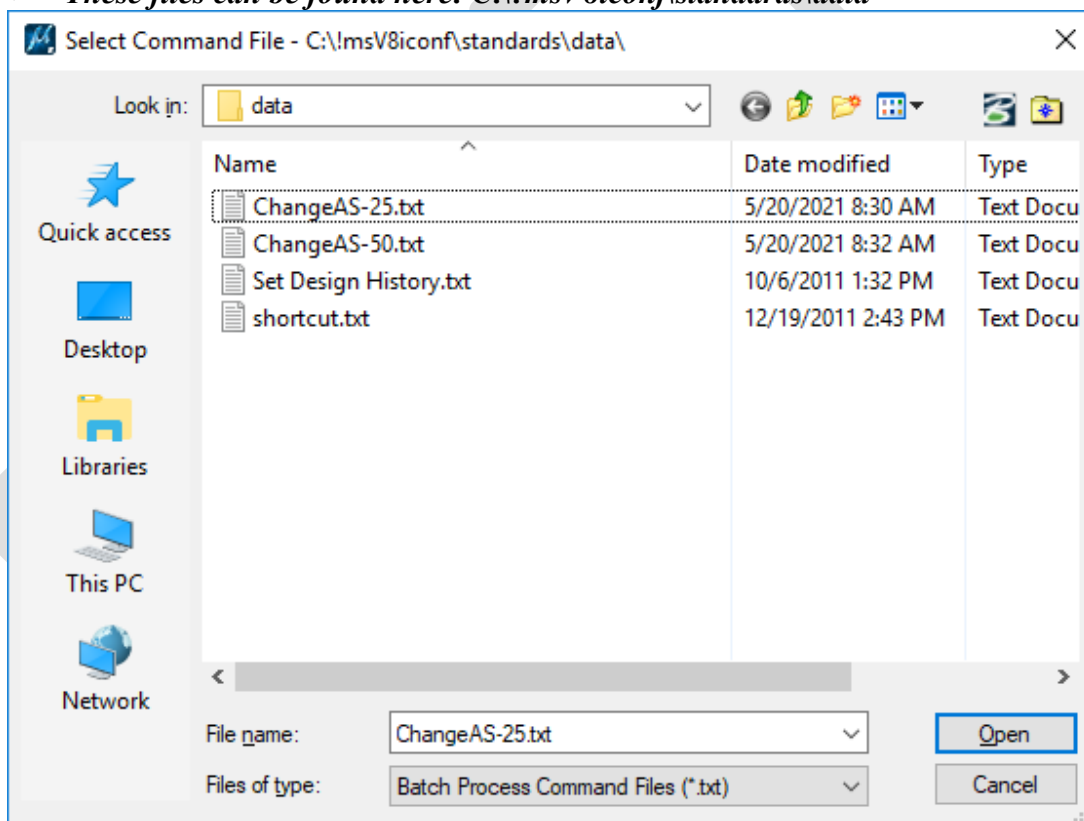
After the list of dgs to be edited are listed the **Batch Process** command now needs the **txt** file loaded. The **txt** file contains the Key-In commands that will be applied to each dgn in the list.



Click on the “magnifying glass” icon and browse to the Command File needed.

- For Profile sheet's at the scale of 1" = 25' use the txt file **ChangeAS-25.txt**
- For Profile sheet's at the scale of 1" = 50' use the txt file **ChangeAS-50.txt**

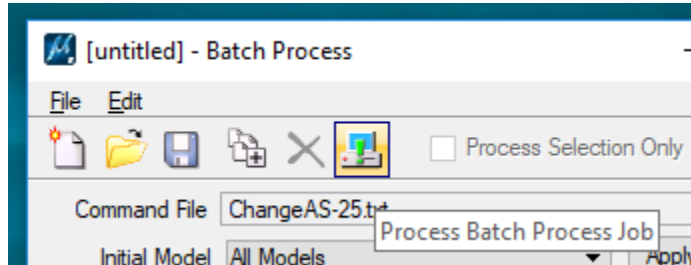
✓ *These files can be found here: C:\msV8iconf\standards\data*



## Part Four: Run the Batch Process Job

With the dgns identified and the batch process selected, run the batch process against the selected files.

Click on the **Process Batch Process Job** icon to start the processing.



After the process completes all the dgn files processed will have the Annotation Scale Active and Set.

**ADDENDUM (2021-05-20) ends-----**

## Step Four: View the Results

Select **File > Open** from MicroStation's main menu and view the sheets (i.e., ??plan1.dgn).

**If you are satisfied with the sheet layout**, then consider running the *Sheet Renumbering Utility* to place the 3 digit prefixed in front of the file names. Without the 3 digit prefix, the *Border Information* macro can't be run to fill in the border information on each sheet.

- ✓ *For detailed instructions on using the Sheet Renumbering Utility, please refer to Error! Bookmark not defined..*
- ✓ *For detailed instructions on using the Border Information macro, please refer to Error! Bookmark not defined..*

**If you are not satisfied with the sheet layout**, re-open the *Plan and Profile Generator*, select the *Sheet Index* tab and open the saved VDF file. Adjust the *Plan View* and *Profile View* stations or overlaps on the *Main* tab.

- ✓ *If you need to adjust any of the plan pages for layout you will need to reopen the Plan and Profile Generator dialog and adjust per Bentley InRoads help.*

## CREATING PROFILE PAGES ONLY

### Step One: Open MicroStation

To begin, double click your **MicroStation V8i** icon and select your project from the project pull down. Open your **Profile.dgn** file.

- ♪ If you do not have a **Profile.dgn** file then open another file and use the **Make Sheetz** program from the *Main Menu* to create the drawing file.

### Step Two: Create Profiles Only

- ♪ Before you begin deactivate your **Station Lock** button on the **Locks** toolbar.

From the *InRoads Main Menu* select **Drafting > Plan and Profile Generator....** Select the **Preferences...** button at the bottom of the dialog and load **Profile Only 25 scale**. This will setup some of the settings automatically.

- ♪ If you decide to use the **50 scale** option you will need to adjust your **Global Scale Factor** before you create your drawings and then select **Profile Only 50 scale**.

### Part One: Main

In the **Main** tab select your alignment in the **Horizontal Alignment:** area and manage the start and stop limits of your project in the **Station Limits** area of the dialog box (Figure 18-11).

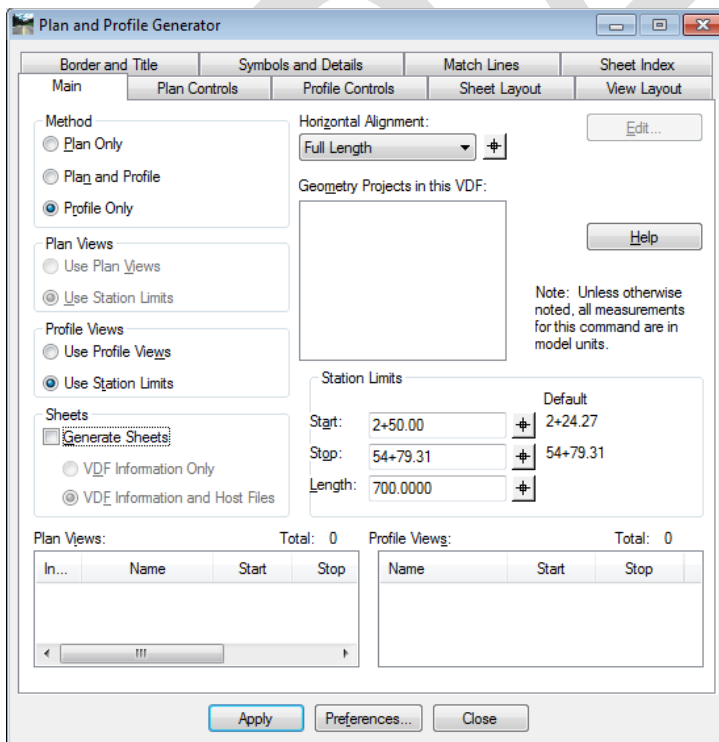


Figure 18-11: Main tab

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## Part Two: Profile Controls

Place focus on the **Profile Controls** tab (Figure 18-12). Select your **Vertical Alignment**: from the pull down and pick the existing and proposed surfaces for display.

❶ *Remember to also highlight the Surface names (using the Ctrl key) along with placing the X next to the surface names (i.e. Ground and Design). If this isn't done you will get undesirable results in the way your grid will display with your profiles.*

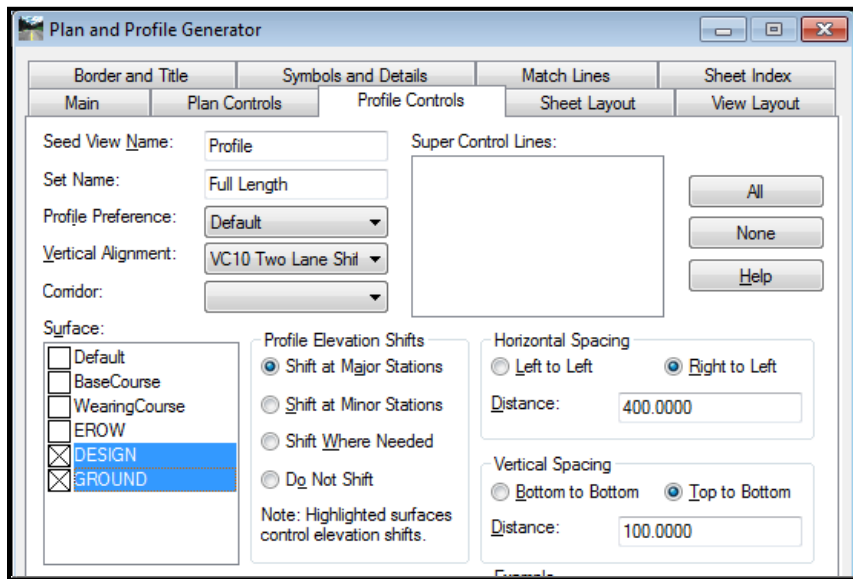


Figure 18-12: Plan and Profile Generator-Profile Controls

Click **Apply** and identify a location within your MicroStation **Profile.dgn** file. Fit the view to see the profile graphics. Next do an undo from either the **Standard** Toolbar or select **Edit > Undo** from the *MicroStation Main Menu*.

🎵 The undo is necessary to control the even 100 foot stationing when the project starts with an odd stationing.

## Part Three: Main

🎵 Before you begin **activate** your **Station Lock** button on the **Locks** toolbar.

Reselect the **Main** tab within the **Plan and Profile Generator** dialog (Figure 18-13). Set the **Profile Views** to **Use Profile Views** and turn on the **Generate Sheets** in the **Sheets** option.

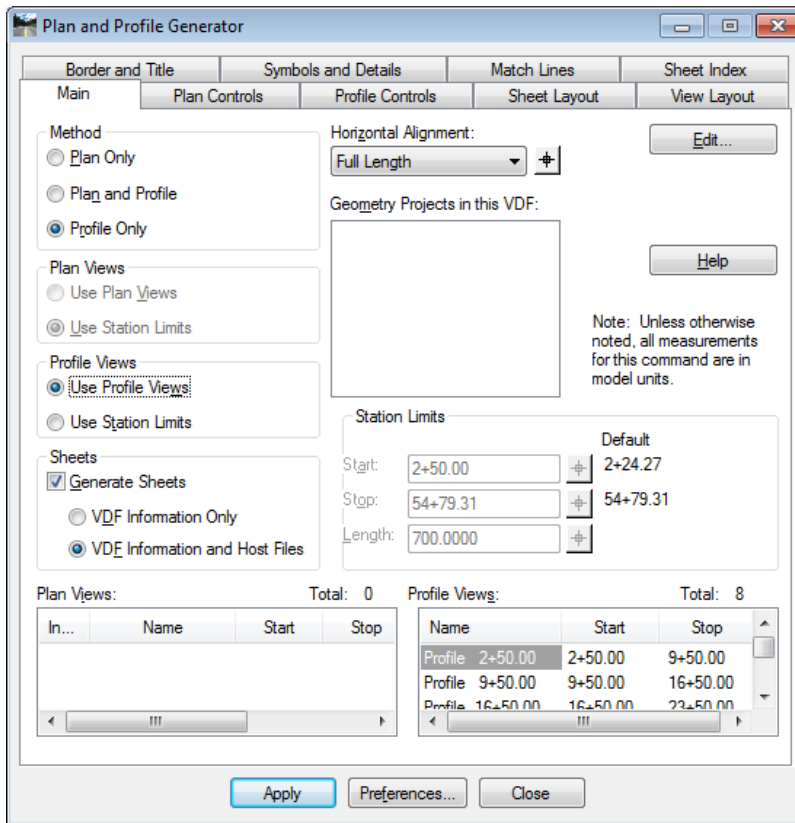


Figure 18-13: Main tab Profile Controls

## Part Four: Sheet Layout

Place focus on the **Sheet Layout** tab (Figure 18-14). Press the ... button right of the **Host File:** location and select **Profile.dgn** from the active directory.

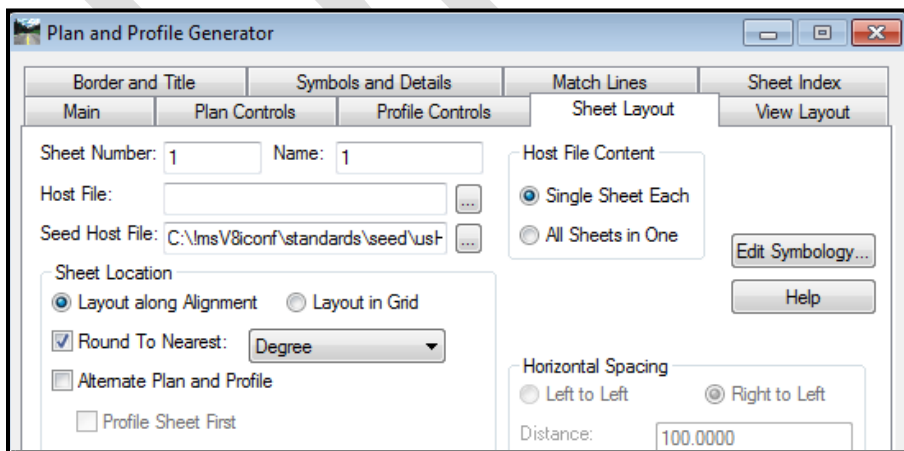


Figure 18-14: Plan and Profile Generator-Sheet Layout



Click **Apply** at the bottom of the **Plan and Profile Generator** dialog. Click **Close** and save your **VDF** file for future use.

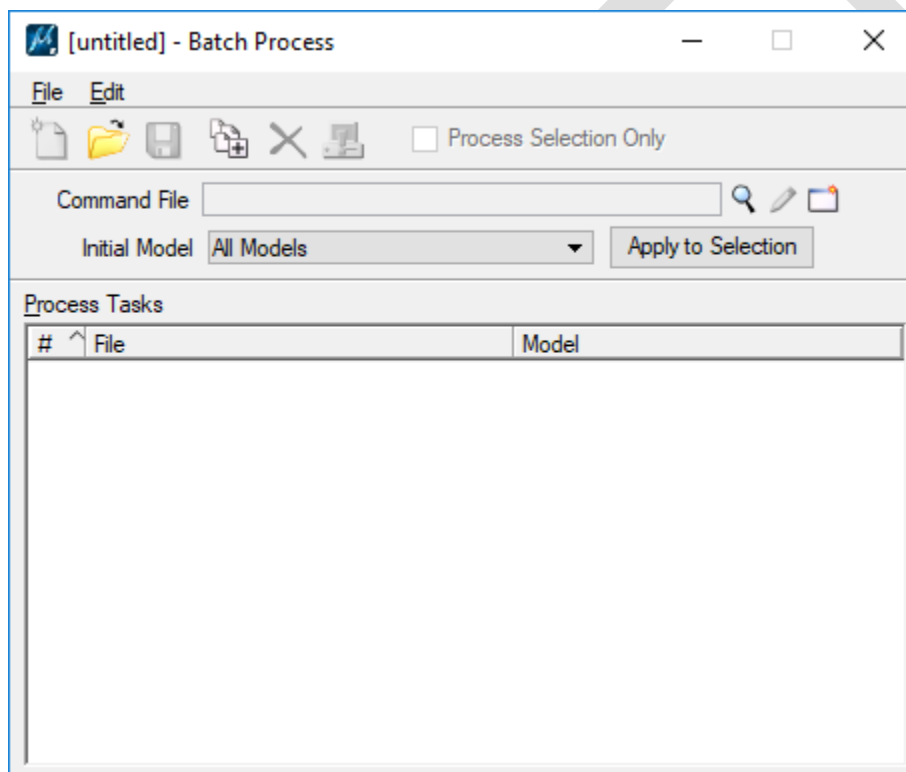
**ADDENDUM (2021-05-20) begins-----**

## Step Three: Set Annotation Scale

With the individual sheet dgn's created now the "Annotation Scale" needs to be set to the correct scale.

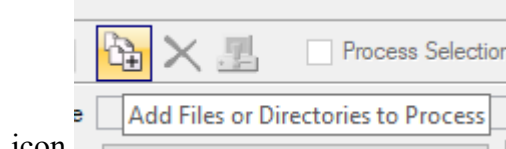
### Part One: open Batch Process

Remain in the Profile.dgn and open the Batch Process command by going to the top menubar **Utilities > Batch Process...** the following dialog box is then displayed.



### Part Two: Add Files

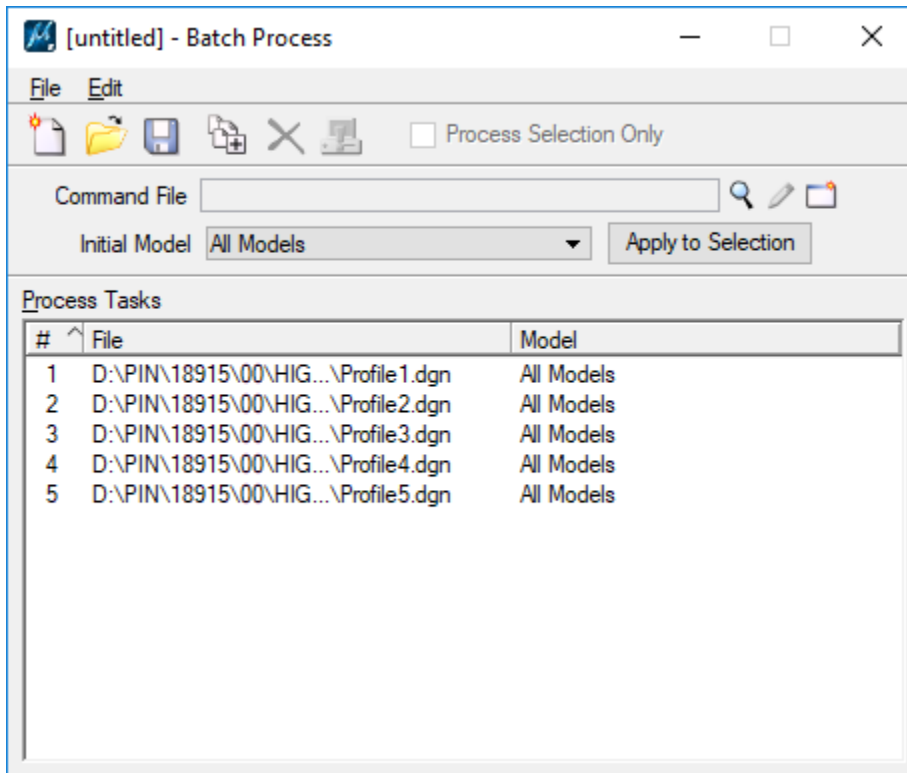
This is similar to the Print Organizer dialog box where you Click on the "**Add Files or...**"



icon add the Profile sheet dngs that you just created.

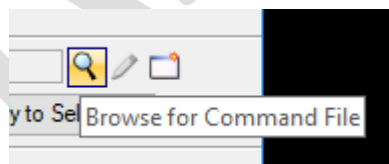
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### Part Three: Load the Command File

After the list of dgs to be edited are listed the **Batch Process** command now needs the **txt** file loaded. The **txt** file contains the Key-In commands that will be applied to each dgn in the list.

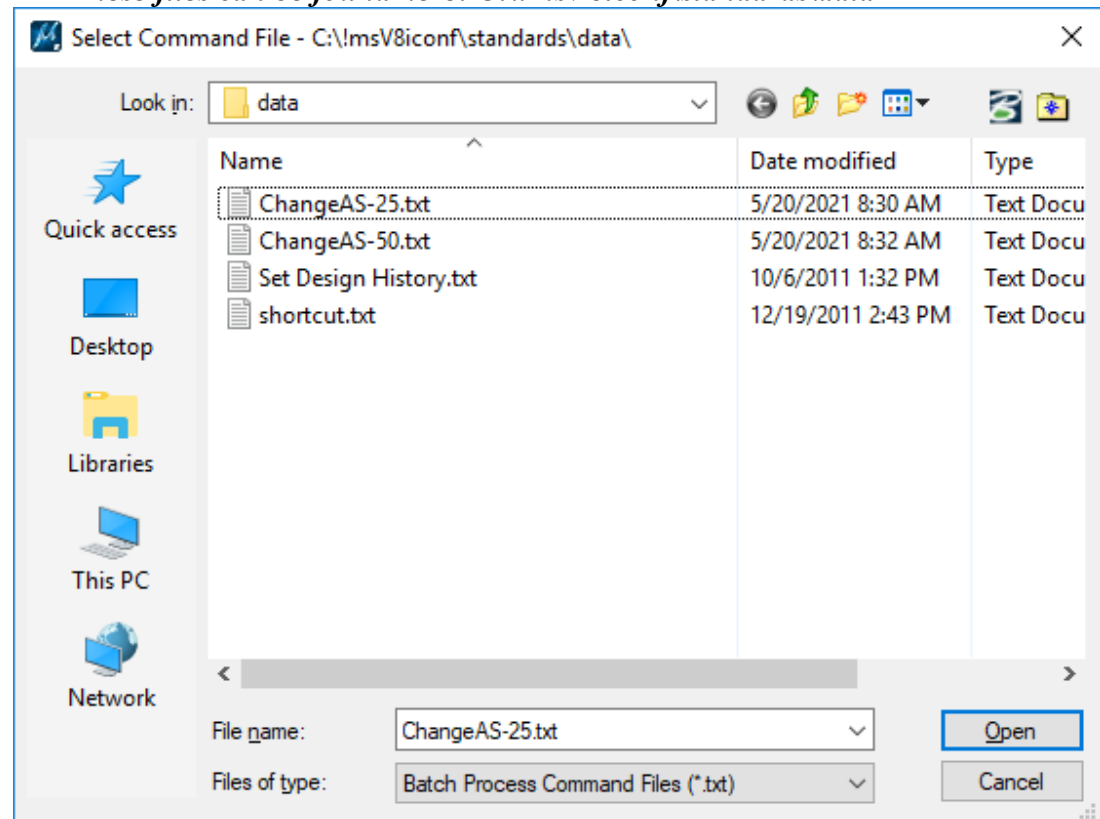


Click on the “magnifying glass” icon and browse to the Command File needed.

- For Profile sheet's at the scale of 1" = 25' use the txt file **ChangeAS-25.txt**
- For Profile sheet's at the scale of 1" = 50' use the txt file **ChangeAS-50.txt**

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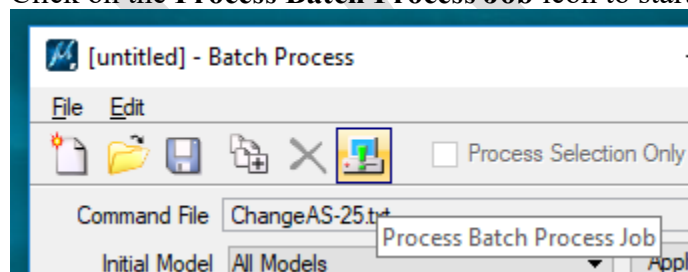
✓ *These files can be found here: C:\!msV8iconf\standards\data*



## Part Four: Run the Batch Process Job

With the dgns identified and the batch process selected, run the batch process against the selected files.

Click on the **Process Batch Process Job** icon to start the processing.



After the process completes all the dgn files processed will have the Annotation Scale Active and Set.

**ADDENDUM (2021-05-20) ends-----**

## Step Four: View the Results

Select **File > Open** from MicroStation's main menu and view the sheets (i.e. Profile1.dgn).

If you are satisfied with the sheet layout, then consider running the *Sheet Renumbering Utility* to place the 3 digit prefixed in front of the file names. Without the 3 digit prefix, the *Border Information* macro can't be run to fill in the border information on each sheet.

- ✓ *For detailed instructions on using the Sheet Renumbering Utility, please refer to Error! Bookmark not defined..*
- ✓ *For detailed instructions on using the Border Information macro, please refer to Error! Bookmark not defined..*

If you are not satisfied with the sheet layout, re-open the *Plan and Profile Generator*, select the *Sheet Index* tab and open the saved VDF file. Adjust the *Profile View* stations or overlaps on the *Main* tab.

- ✓ *If you need to adjust any of the profile pages for layout refer to Bentley InRoads help for sheet adjustments.*

## Step Five: Annotating Profiles

Reopen the **Profile.dgn** file that was created earlier. Fit view.

### Part One: Label Proposed Elevations

From the *InRoads Main Menu* select **Evaluation > Profile > Annotate Profile...** (Figure 18-15). By default we are preset to label the elevations of the proposed vertical design. If you want to label the existing ground elevations also then select the **Preferences...** button and activate the **Proposed and Existing Elevation** option and close the dialog.

Verify your vertical **Profile Set** if you have multiples in the **Profile.dgn** file, set your **Vertical Alignment:** to the vertical design, **Surface:** to the existing ground surface and select **All** under the station ranges listed in the **Profiles:** area.

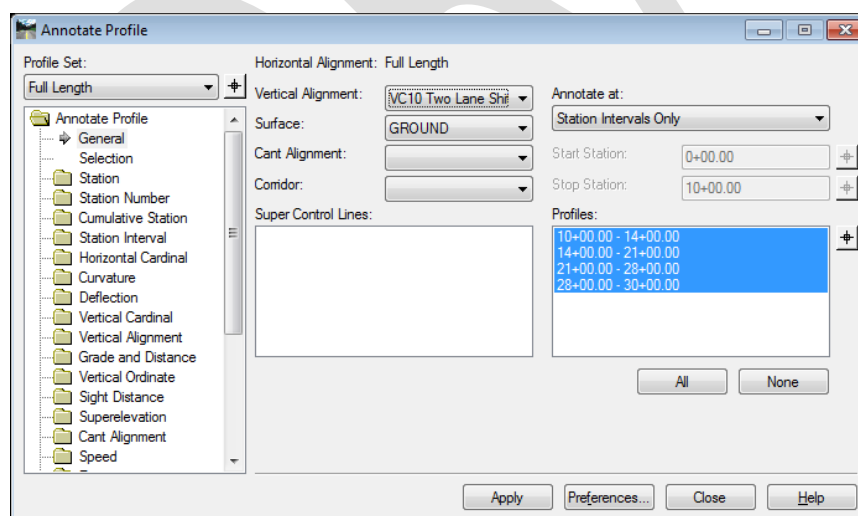


Figure 18-15: Annotate Profile

Click **Apply** and **Close** to exit this dialog.

## Part Two: Label Vertical Annotation

Normally, the Vertical alignment will already be automatically annotated based on the **Geometry > View Geometry > Options** command. If it is not annotated, select **Geometry > View Geometry > Vertical Annotation**. (Figure 18-16). Verify your vertical **Profile Set** if you have multiples in the **Profile.dgn** file. You will see a rectangular outline around the profile set to be annotated.

Verify your vertical **Profile Set** if you have multiples in the **Profile.dgn** file. You will see a rectangular outline around the profile set to be annotated.

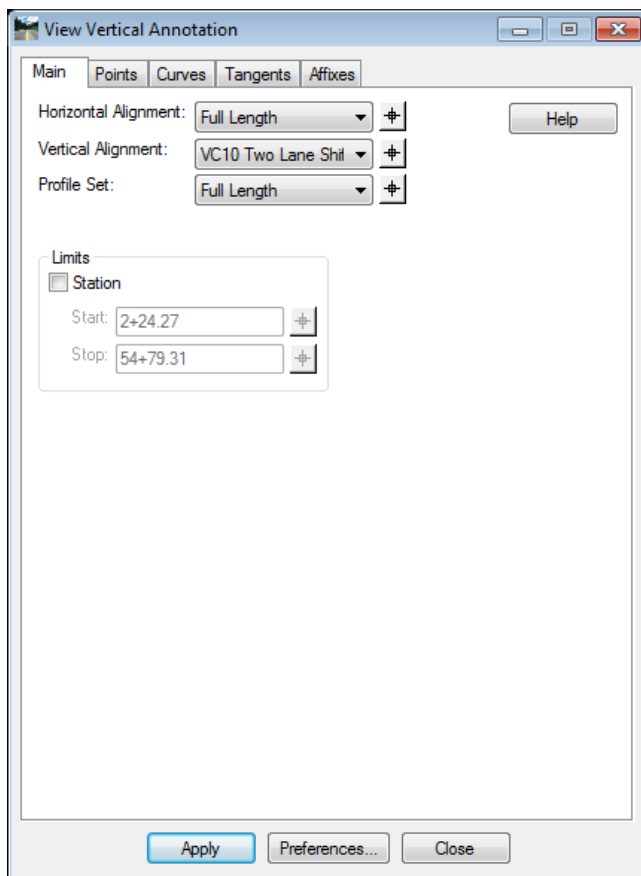


Figure 18-16: View Vertical Annotation

Click **Apply** and **Close** to exit this dialog. There will still be a need to do some clean up through MicroStation tools to fit some of the data into the sheet drawings display area.