
Chapter 2

Utilizing Web Map Server Imagery

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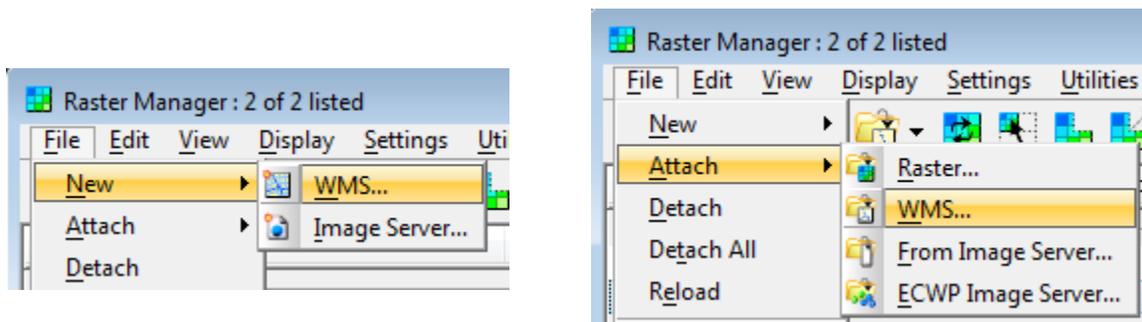
2.1 Objectives

Understand how to use available Web Map Server (WMS) imagery in a MicroStation file and utilizing that imagery to create project images for the project.

2.2 What is WMS Imagery?

In the Raster Manager, you have the option to attach a WMS. WMS stands for Web Map Service Interface Standard. It provides a simple HTTP interface for requesting geo-registered map images from one or more distributed geospatial databases. A WMS request defines the geographic layer(s) and area of interest to be processed. The response to the request is one or more geo-registered map images (returned as JPEG, PNG, etc.) that can be displayed in a browser application. The interface also supports the ability to specify whether the returned images should be transparent so that layers from multiple servers can be combined or not.

In Raster Manager, you can create new or attach existing Web Map Service files using *New >WMS* or *Attach >WMS* in the File menu. You can also manage WMS Servers using the Servers Manager dialog accessible through the WMS Map Editor dialog.

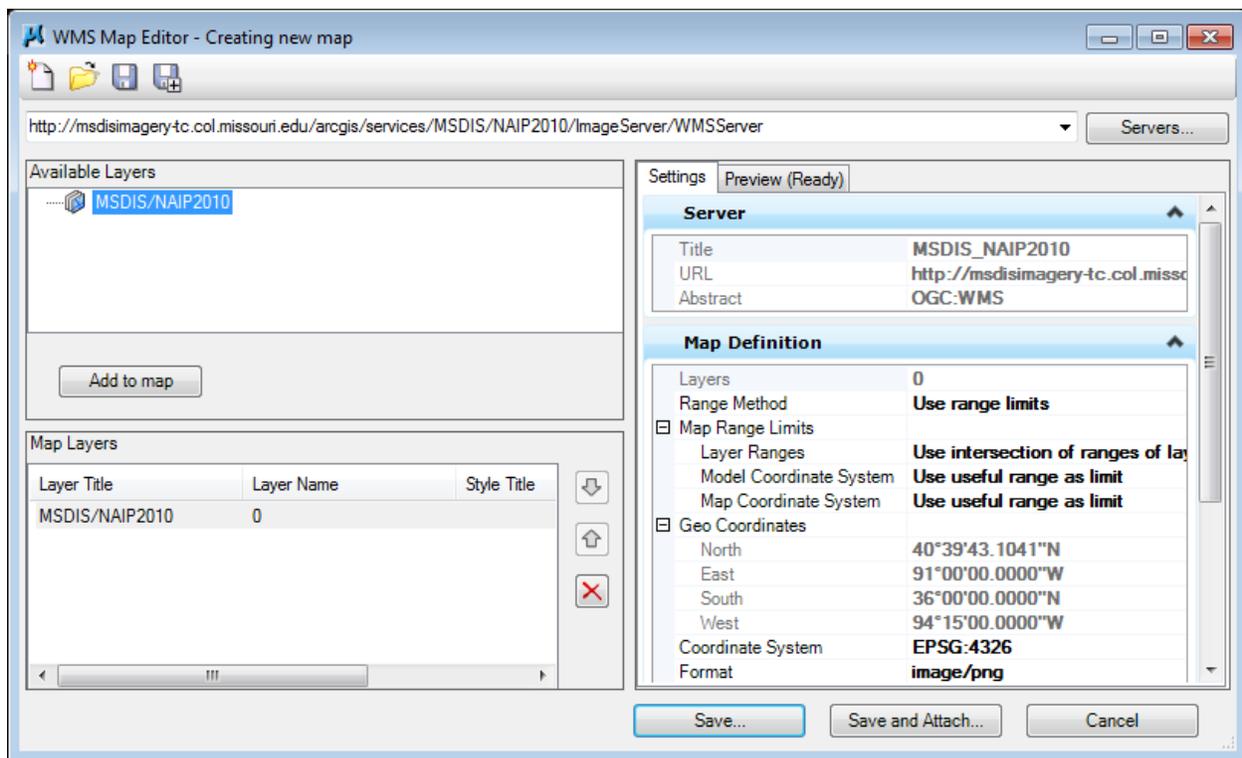


2.3 WMS Map Editor

When you select the *New > WMS* in the Raster Manager dialog, you will get the option to create new WMS map definition. This allows you to create a link to a certain web map server. The available layers with the web map server lets you define what layers you want added to the map.

CADD Support has created some web map server links for MoDOT to use. These web map server links are the latest imagery from the MSDIS (Missouri Spatial Data Information Service) internet site. We have broken the web map server links by the Missouri State Plane Zones (West, Central, East) and by the year the imagery was flown. CADD Support will periodically check for newer imagery from MSDIS and add new links as needed.

For more information about creating a new web map link and available web map server links already provided, please refer to the MicroStation help on this topic.



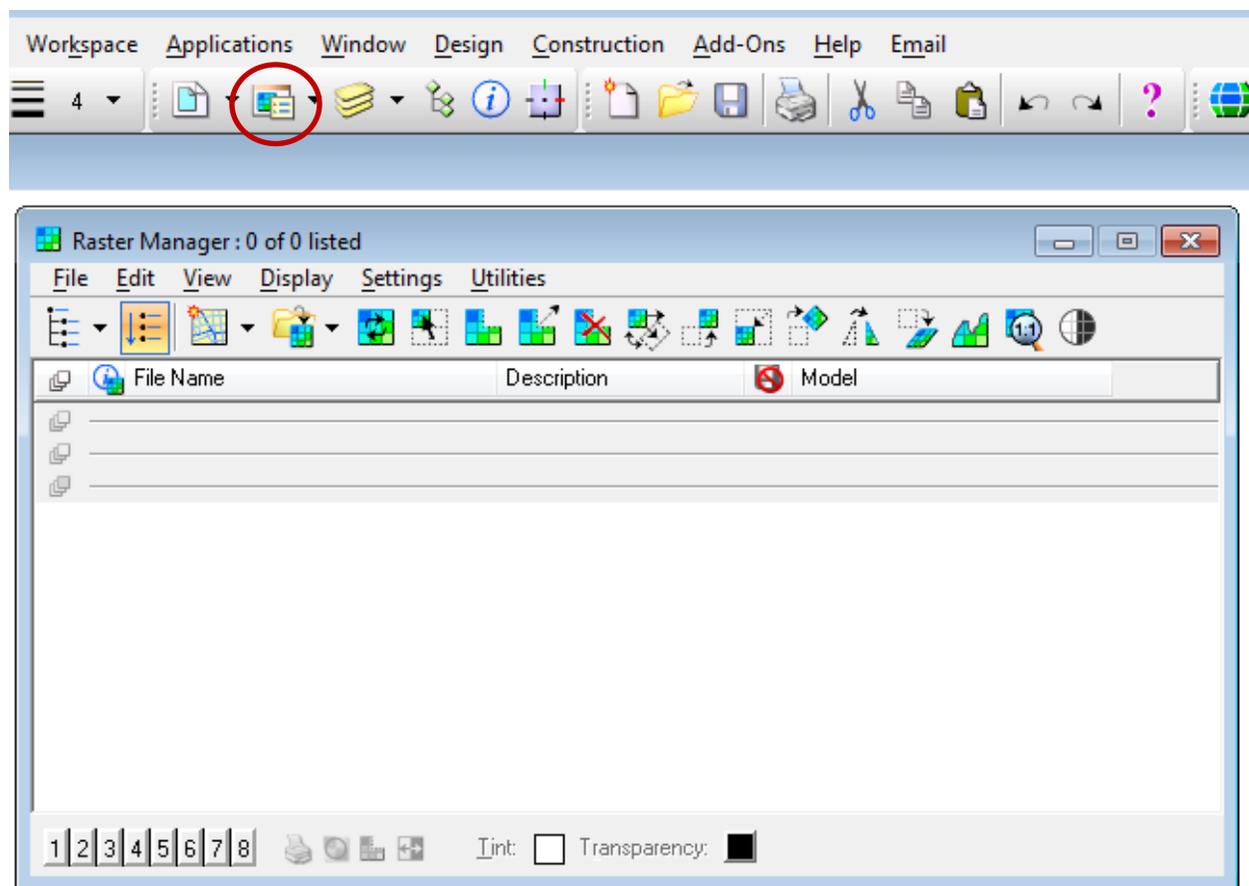
2.4 Example 2-1

This example will show the process of attaching imagery through a web map server. We will then create an image from the web map server imagery of the limits of the project.

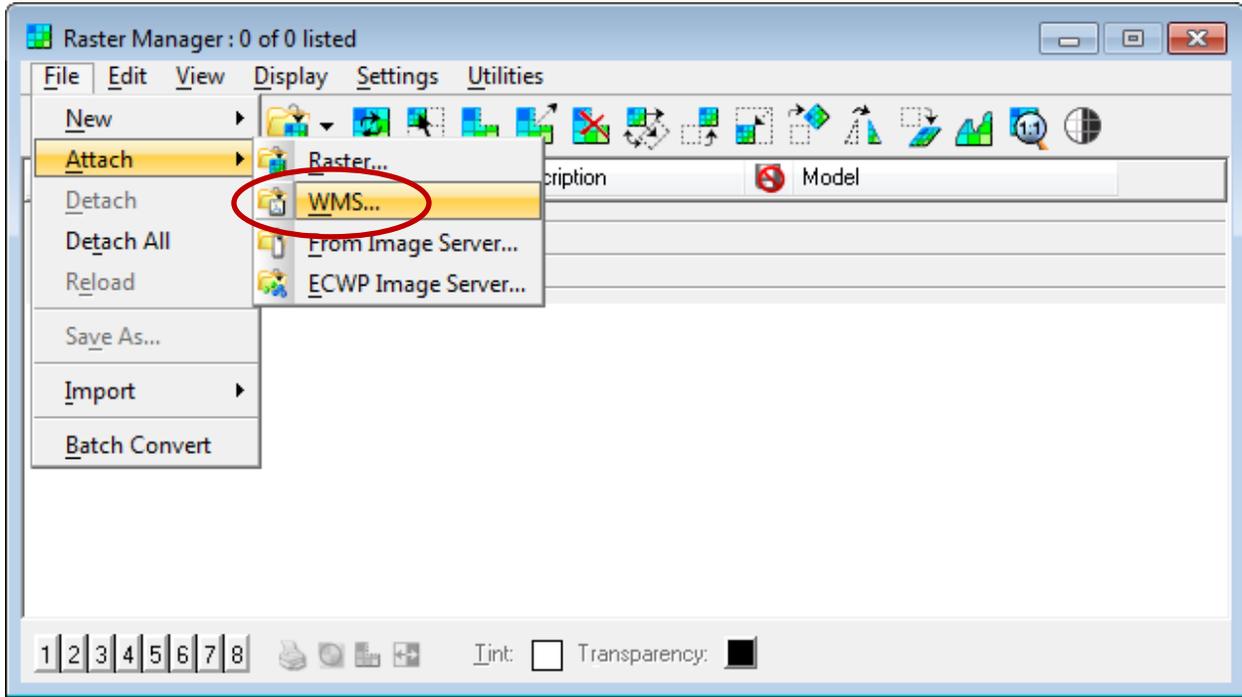
1. In ProjectWise, open the following MicroStation file:

`pwname: \\MoDOT\Documents\District CADD\Design\cadduser##\J5P0887\Plan_J5P0887.dgn`

2. Activate the **Raster Manager**. This can be loaded by the *Raster Manager* icon or under the *File* menu.



3. In the *Raster Manager* dialog, go to the **File** menu and select **Attach - WMS**.

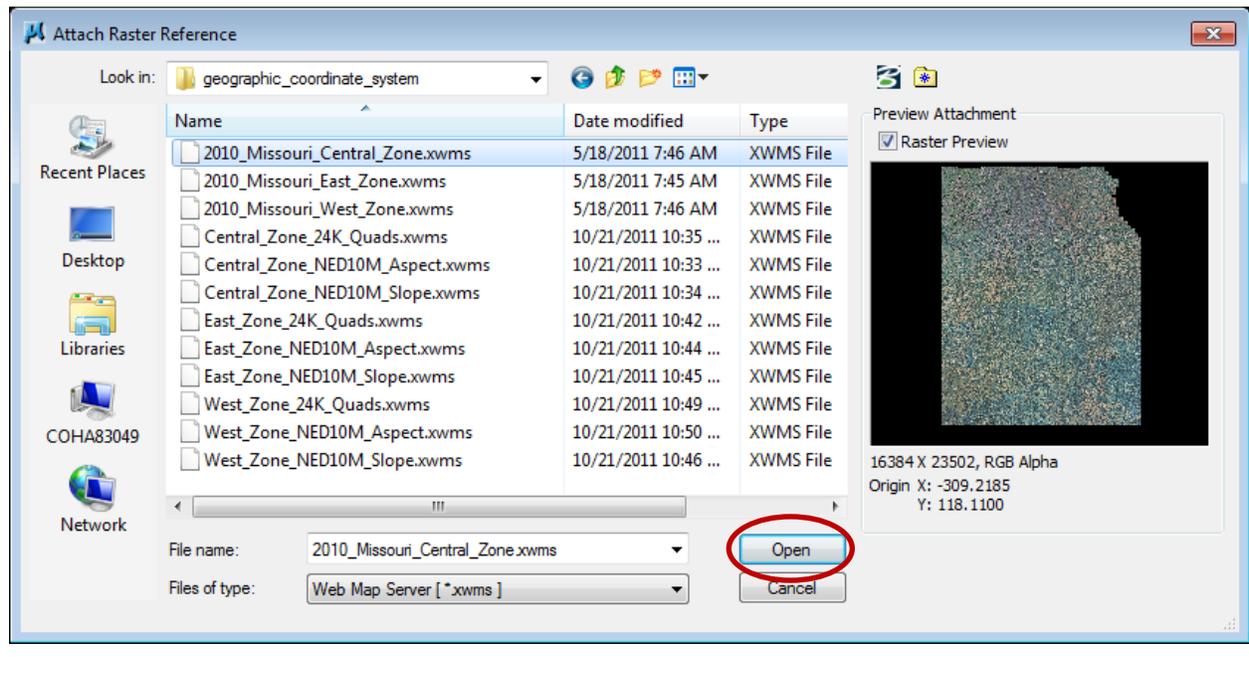


4. The links to the web map server imagery are located outside of ProjectWise.

Cancel out of the first dialog. Navigate to **T:\standard\geographic_coordinate_system** folder and attach the appropriate web map server (.xwms) that corresponds to the zone in which the project is located in.

Use the **2010_Missouri_Central_Zone.xwms** for the example.

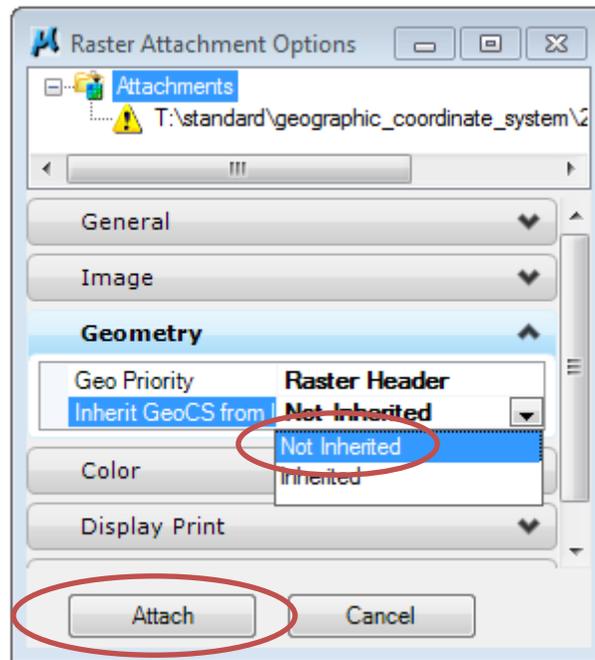
Click **Open** to attach it.



5. Before you can attach the imagery, the **Raster Attachment Options** dialog will appear. This gives you the capability of modifying how you want the imagery to be attached.

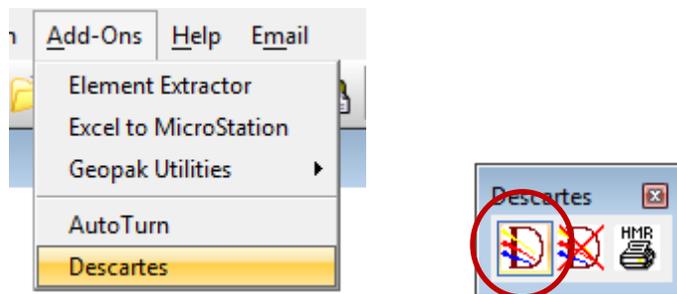
Since the web map server imagery has geographic intelligence to it, it is important that we change the “Geometry – Inherit GeoCS from Model” to **Not Inherited**. This allows the imagery to inherit the geographic coordinate system applied to the dgn file and should fall into place correctly with the MicroStation geometry.

Finally select **Attach** to see the web map server imagery.



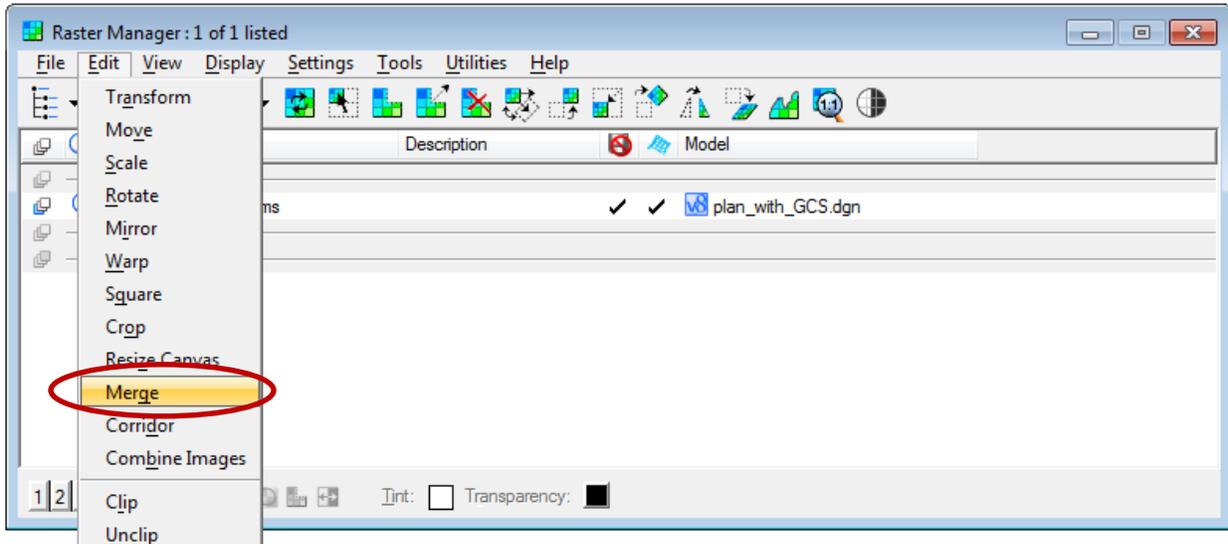
6. Once the web map server imagery has been loaded, you can create an image of the area for the project. In order to do this, you will need to open Descartes.

Go to the **Add-Ons** menu and select **Descartes** to load the toolbar. Then click on the **Descartes** icon to load the application.



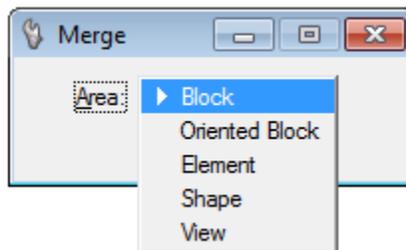
7. The *Raster Manager* dialog will open when you load the Descartes application.

Under the **Edit** menu, select **Merge**.

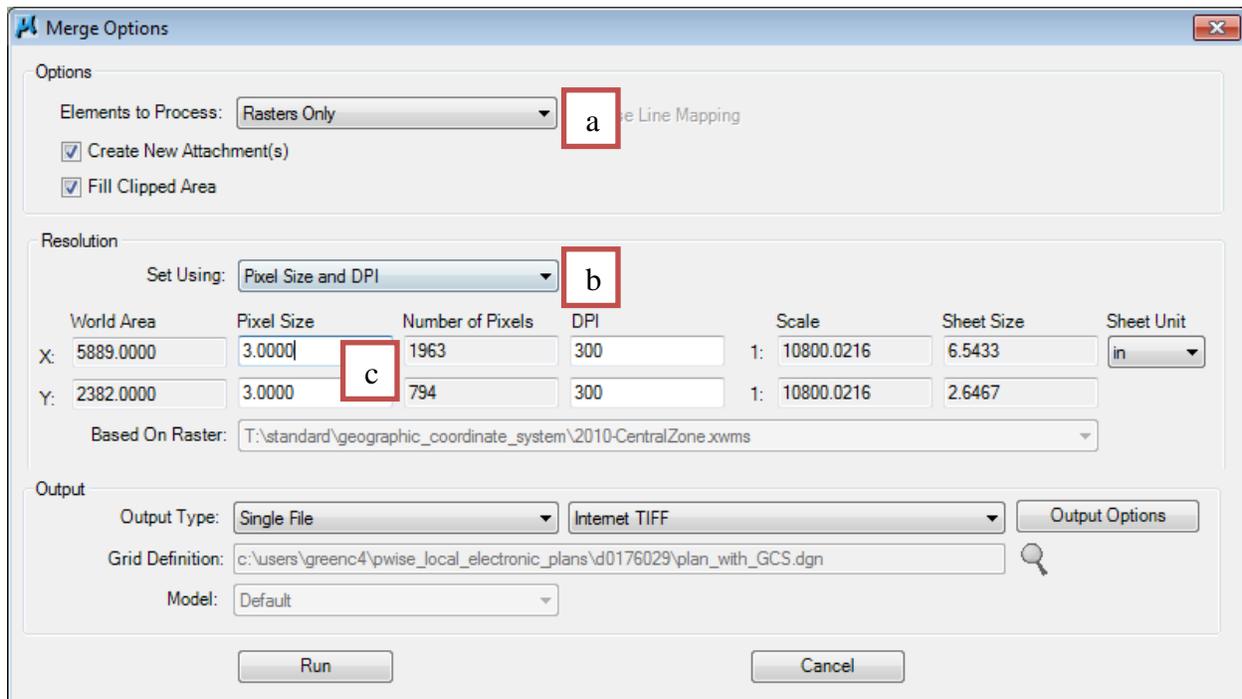


8. Now use the options in the *Merge* tool to define the area for the image you want to create from the web map server imagery.

For this example, we will use the **Block** option.



9. Once you have defined the parameters for the image being created, you will need to review the options in the Merge Options dialog. There are a few options that you will need to change.
 - a. Element to Process: **Rasters Only**
 - b. Set Using: **Pixel Size and DPI**
 - c. Set the Pixel Size to **3**. This will approximately match the pixel size of the web map server imagery. Leave the DPI set to 300.



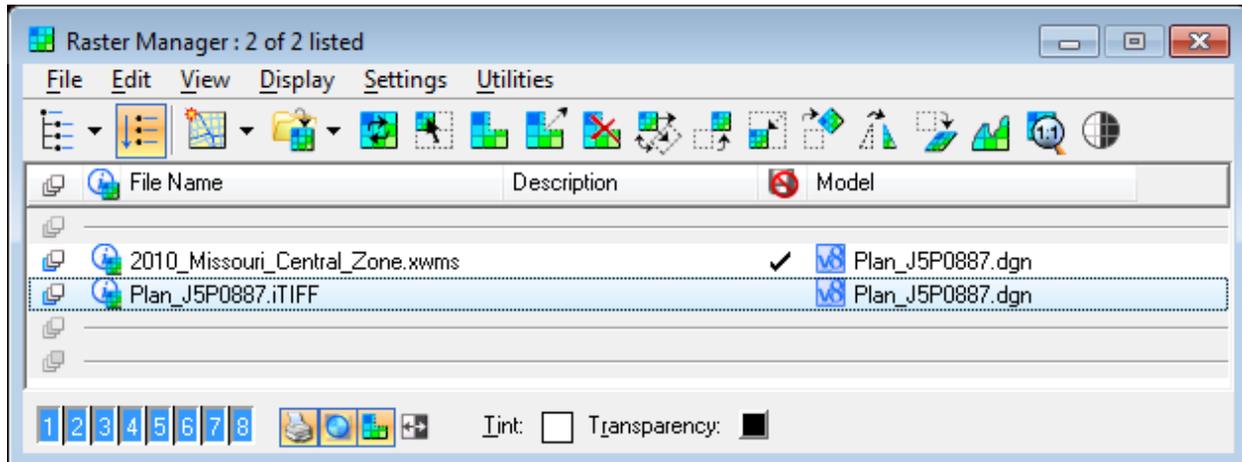
Click **Run** when all the options are set the way you want it. Store the image to the desired location inside or outside of ProjectWise.

For this example, store the image outside of ProjectWise in the following location:

T:\de-proj\ArcGIS-CADD\cadduser##

NOTE: The actual creation of the image may take a few minutes, depending on the size of the image being created. **SO BE PATIENT** and leave MicroStation alone while the image is being processed!!!!

10. You will now see the new image created from the web map server in the *Raster Manager* dialog. The web map server that is still attached to the dgn file can be detached or turned off in the view you have opened.



Save the changes to the DGN file.

2.5 Exercise 2-1

1. In ProjectWise, open the following MicroStation file:

pwname: \\MoDOT\Documents\District CADD\Design\cadduser##\J5P0649\Plan_J5P0649.dgn

2. Activate the **Raster Manager**.

3. In the *Raster Manager* dialog, go to the **File** menu and select **Attach – WMS**.

4. Attach the appropriate web map server (*.xwms). Remember the links to the web map server are located at **T:\standard\geographic_coordinate_system**.

Also make sure to change the “Geometry – Inherit GeoCS from Model” to **Not Inherited** before you attach the web map server imagery.

5. Load **Descartes** in order to create the project image from the web map server imagery.

6. In the *Raster Manager* dialog, select **Merge** under the **Edit** menu.

Select the method you desire to use to create the image.

7. In the *Merge Options* dialog, change the options as needed to create the image.

For this exercise, store the image outside of ProjectWise in the following location:

T:\de-proj\ArcGIS-CADD\cadduser##

8. After the image has been created, detach or turn off the display of the web map server imagery so just the newly created image shows in the dgn file.

Save the changes to the DGN file.