



# PDF Generation Process for Final Contract Plans, Preliminary Plans and R/W Plans

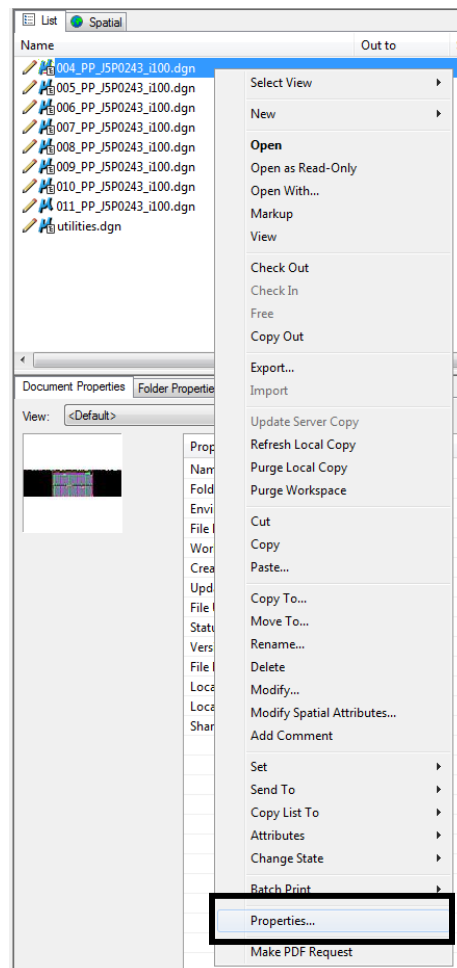
MoDOT uses a process through ProjectWise to generate the contract plan PDF files from the MicroStation files for the Project Manager, Structural Project Manager, District Land Surveyor, etc. to sign and seal. These electronically signed PDF files will be reviewed and then posted to a web site called Indox. Once the signed PDF files are on the INDOX site, contractors can download the PDF files to estimate and bid on the projects.

In order for the PDF files to generate properly, proper steps need to be done to the MicroStation files. The instructions below will demonstrate what needs to be done for the PDF files to generate properly and to the correct location.

## Step 1 – Assigning Attributes for the MicroStation Contract Plans Files

The Attributes will need to be assigned to the MicroStation contract plan files so the PDF creation of the contract plan will work properly. The PDF documents will not be created if the attributes are not filled out properly for the contract plan drawings.

- **Right click** over one of the MicroStation contract plan files and select the **Properties** option.



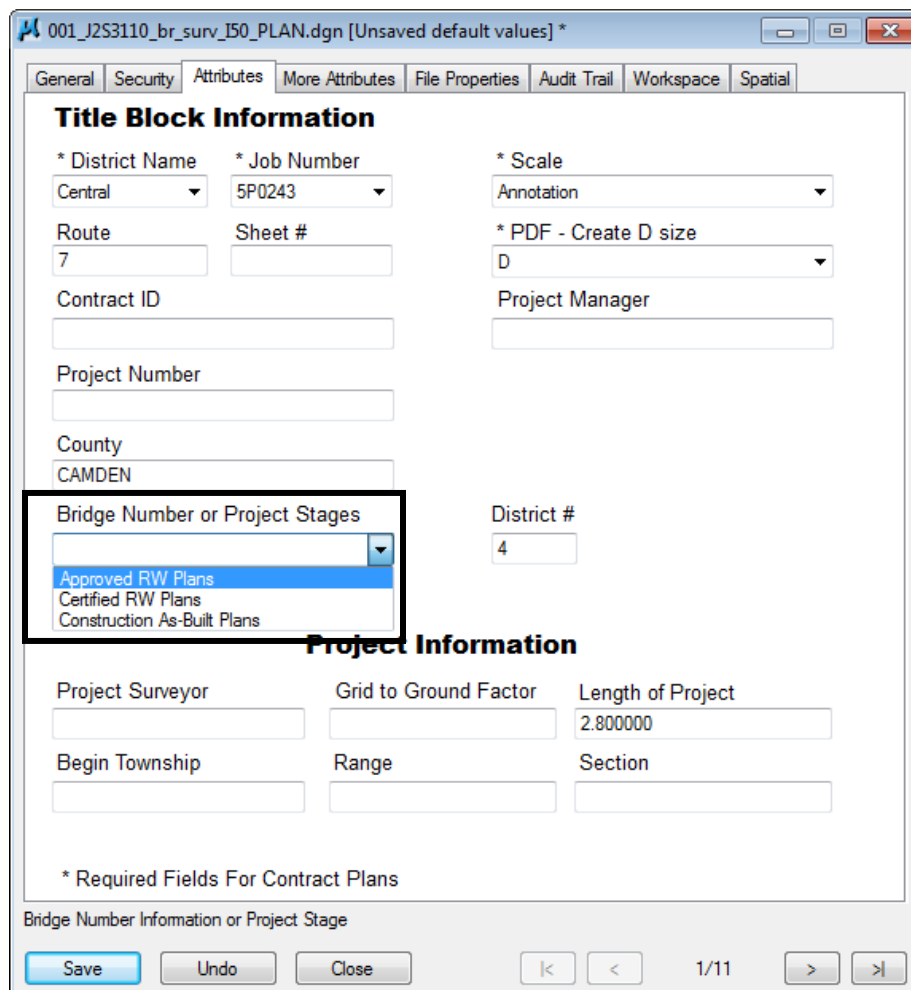
- Select the **Attributes** tab. In here, you will need to fill out the **District**, **Job Number**, **Scale**, **PDF Size (D)** and **Sheet #** for ProjectWise to create the PDF file properly.

The *Project Manager*, *County*, *Length of Project* and *Route* will automatically fill out once the *Job Number* has been filled out. That information is pulled from the TMS Database from the job number that is selected.

It is very important to have the **Scale** set correctly so the linestyles in the PDF document are created correctly. The **Scale** should be set to **Annotation** so it uses the annotation scale that is applied to the MicroStation file.

**For Approved RW or Certified RW Plans**

- For design plan sheets that need to be processed at the Approved R/W or Certified R/W stage, select the **Approved RW Plans** or **Certified RW Plans** option under the **Bridge Number or Project Stages** pull-down option.

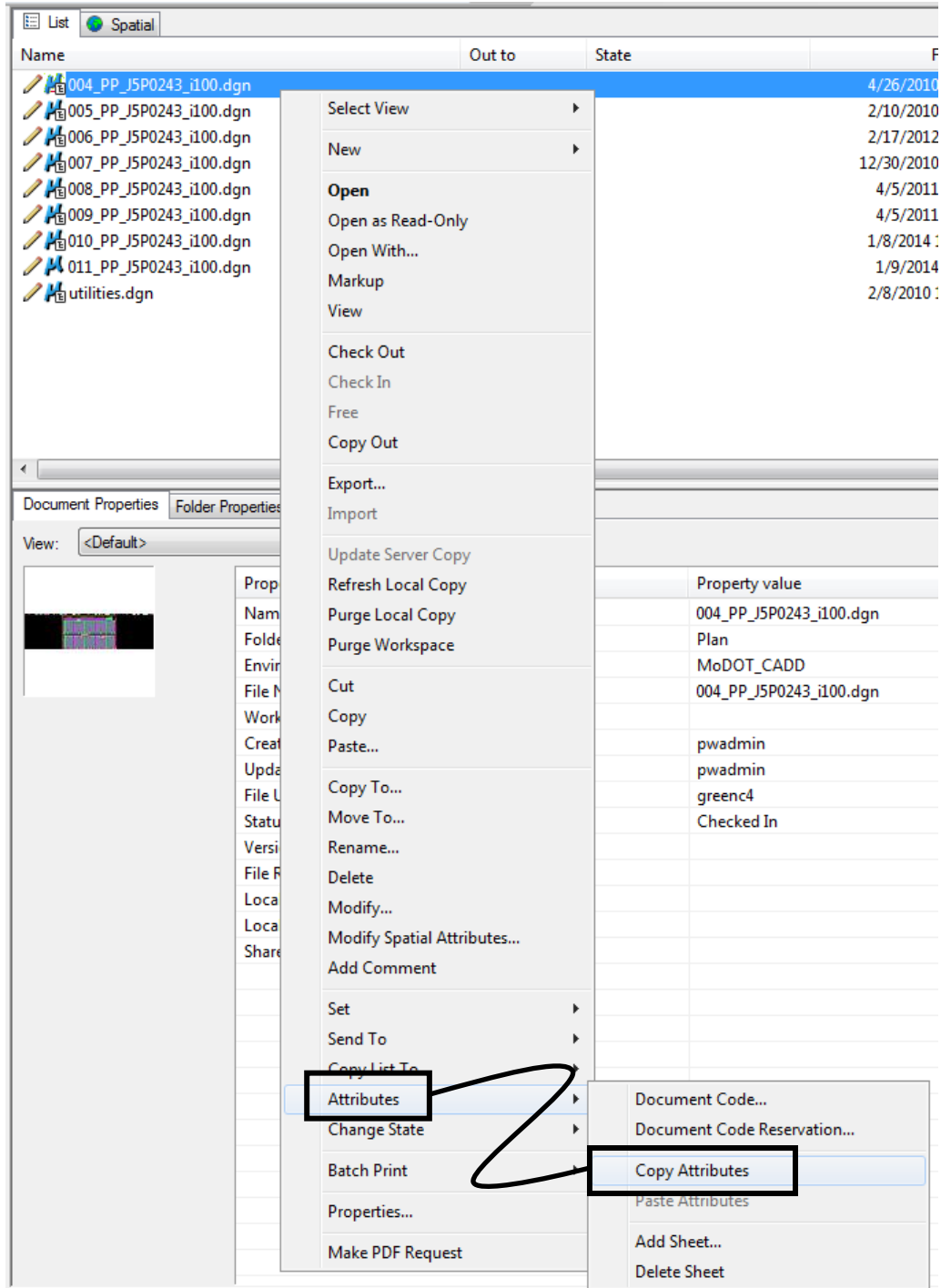


- Finally click the **Save** button at the bottom of the dialog box to save the attributes to the document.

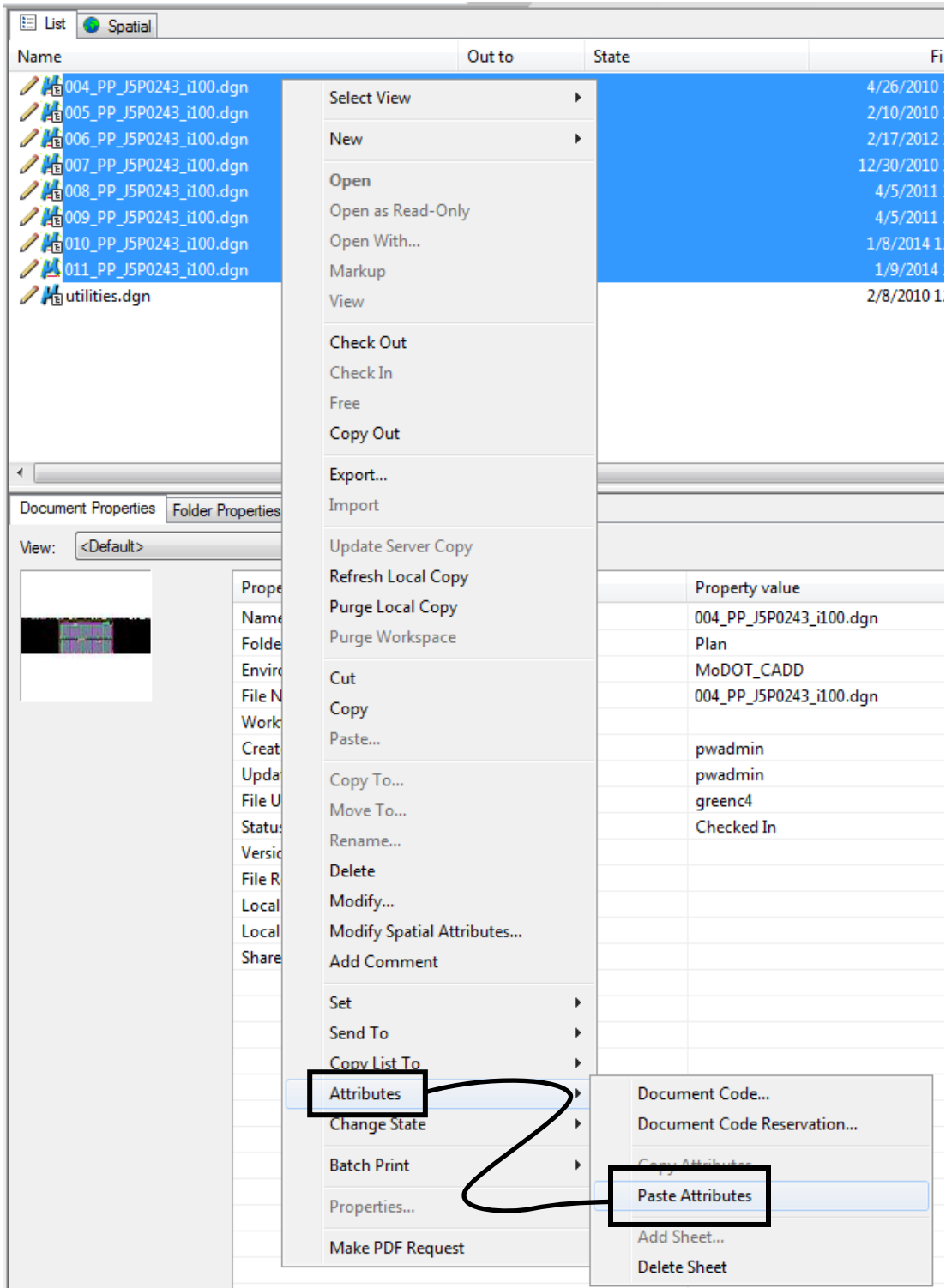
## Step 2 – Coping the Attributes to Multiple MicroStation Drawings

Once you have applied attributes to one of the MicroStation files, you can copy those attributes to multiple MicroStation files for that project.

- **Right click** over the document that has attributes assigned to it and select **Attributes - Copy Attributes** option.



- Next select the files that need to have attributes assigned to them.
- Finally, **right click** over the selected documents and select **Attributes - Paste Attributes** option. You will be prompted asking "Do you want to override existing attributes?". That is when you will want to select **Yes to All** to paste the attributes to all the MicroStation contract plan files you had selected.



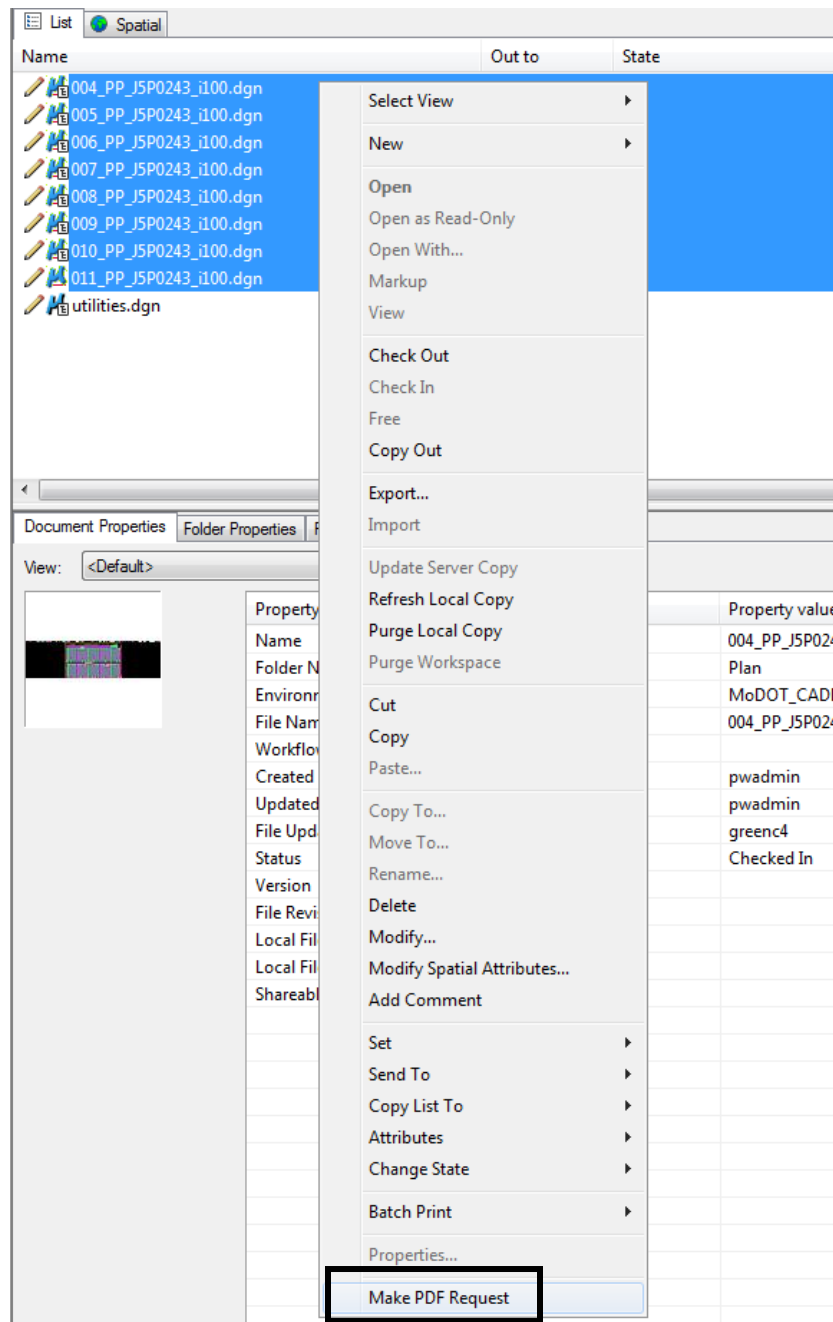
**NOTE:** You will need to go back and change the sheet number for every file.

### Step 3 – Making the PDF Request

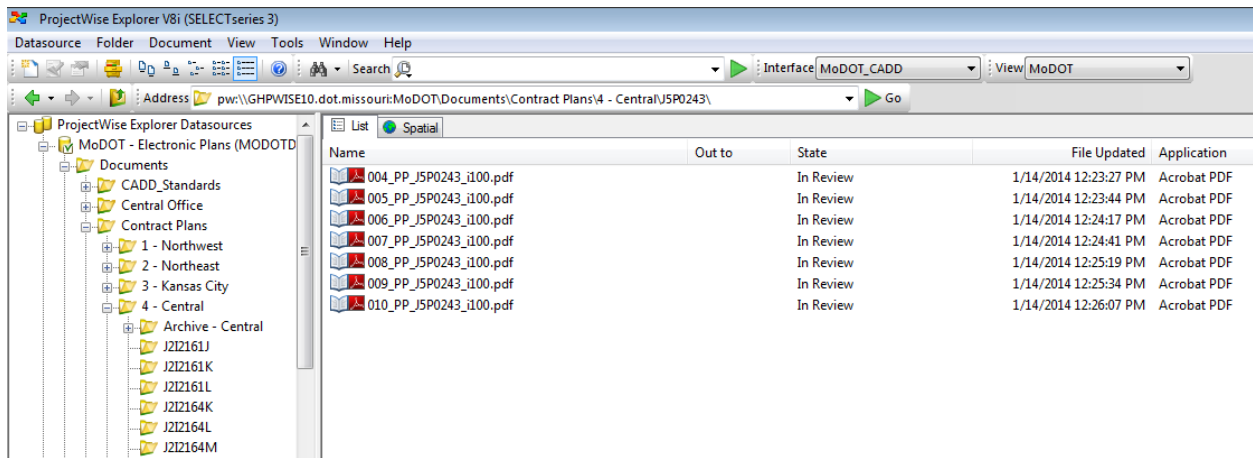
Once the MicroStation files for the job are completed and the attributes for the files are filled out in ProjectWise, you will need to make the PDF request to create the PDF documents for the Project Manager to seal. The PDF documents for the job will be created under the **Contract Plans - District XX** and then the **job number** for the project. The Project Manager will then seal the PDF documents electronically, which then the Reviewer for the job will review the sealed PDF documents.

Remember that the **Attributes** will need to be assigned to the MicroStation contract plan files for the PDF creation to work.

- Select the MicroStation files that need to be processed into PDF files, **right click** over the selected files and select the option named **Make PDF Request**.



- It may take a few minutes for your PDF files to generate, depending on how many requests are in the queue. Go to the **Contract Plans - District XX - Job Number** folder and you will eventually see the generated PDF files from the MicroStation files. The Project Manager can now review and seal those PDF files.



#### Step 4 – Making a Revised PDF File

Once the Project Manager reviews the generated PDF files to seal, there may need to be revisions done to the plans before he seals the PDF files. This is when you will make the revisions to the MicroStation files that the Project Manager is requesting and then generate new PDF files for the Project Manager.

- The Project Manager will need to delete the PDF files in ProjectWise that need to be edited.
- Once this has been done and the MicroStation files have been edited accordingly, you will do the instructions exactly like in **Step 3** to process the new PDF files.
- When the PDF files get generated, you will see the new PDF files under the **Contract Plans - District XX - Job Number** folder.

## Making a Revised PDF File after the Project has been posted to INDOX

Once the Project Manager reviews the Contract Plan PDF files and seals them, they are placed on the INDOX web site for contractors to bid and estimate off the plans for constructing the project. But you may run into a situation where you need to make addendums or revisions to sheets if they find an error in the project plans. This will show you what needs to be done for those addendum or revision sheets for those sheets that needed to be corrected.

- The Designer or Technician will make the corrections in the MicroStation files or make additional sheets as need for the project revisions.
- Once this has been done and the MicroStation files have been corrected or added accordingly, you will do the instructions exactly like in **Step 3** to process the new PDF files.
- Once the PDF files are generated, you will see the new PDF files under the **Contract Plans - District XX - Job Number** folder. But now instead of overwriting the original created PDF files, it will generate one with the extension of **\_R001** for the new PDF files.

**NOTE:** Use the link below to see more information on what needs to be added or done to the MicroStation files when you are making an addendum or revisions sheets.

[http://caddnet/index.php?title=Guidelines\\_for\\_Addendum\\_or\\_Revision\\_Sheets](http://caddnet/index.php?title=Guidelines_for_Addendum_or_Revision_Sheets)

The screenshot shows a web browser window displaying the CADD Support ProjectWise Support Material page. The browser's address bar shows the URL: [http://caddnet/index.php?title=Guidelines\\_for\\_Addendum\\_or\\_Revision\\_Sheets](http://caddnet/index.php?title=Guidelines_for_Addendum_or_Revision_Sheets). The page has a blue header with the text "CADD Support ProjectWise Support Material". Below the header, there is a "Support Documentation" section with a "Contents" list. The "Contents" list includes several items, with "Guidelines for Addendum or Revision Sheets" highlighted by a black box. The left sidebar contains a "navigation" menu with "Project Wise" highlighted by a black box. The "links" section at the bottom left contains a link to "CADD Staff".

## Proper preparation of MicroStation files prior to making PDF files for signing

There are a few items that need to be reviewed on the MicroStation files prior to going through with the “Make PDF Request” process. This will insure that the PDF files are created properly, created in the correct location, and help avoid possible delays that may cause your files not to process or even lock the system down to where no one can process files.

- Make sure **Attributes** are filled out properly in Projectwise for the MicroStation files being processed into PDF files (as stated in the beginning of the section).
- When working with Cross Section sheets, there is a **maximum** 50 border sheets for the “Make PDF Request” routine. Anything that exceeds 50 border sheets shall be split onto another cross section sheet file.
- Any blank border files (whether they are displayed or not) will be created into a PDF files when using the “Make PDF Request” routine in ProjectWise. Please **delete** any border sheets **not used** (like in cross section sheets) in the project.

This will allow the PDF generation process to just process the sheets that are needed for the project and also eliminates the Project Manager to manually delete all unused border sheets.

- Detach all unused reference files and unused raster images attached to the MicroStation files prior to running the “Make PDF Request” routine.

The performance of the “Make PDF Request” process drastically slows down and takes longer to process the PDF files when there are unused reference files or raster images attached to the files. This is because the “Make PDF Request” routine downloads all the files attached to the file that is being processed.

- When attaching a border to the MicroStation file, do not have the symbols of ‘ and “ (feet and inches) in the **Logical Name** field. This will cause the PDF file not to generate from the MicroStation file.

### INCORRECT

The screenshot shows the 'Attachment Settings' dialog box for the file 'modot\_de\_2008.dgn'. The 'Logical Name' field is highlighted with a black box and contains the text 'Border 1"=5''. This is incorrect because it contains symbols for feet and inches. Other fields include 'File Name', 'Full Path', 'Model', 'Description', 'Detail Scale', 'Scale (Master:Ref)', 'Named Group', 'Revision', 'Level', 'Nested Attachments', 'Depth', 'Display Overrides', 'New Level Display', and 'Global LineStyle Scale'. There are 'OK' and 'Cancel' buttons at the bottom.

### CORRECT

The screenshot shows the 'Attachment Settings' dialog box for the file 'modot\_de\_2008.dgn'. The 'Logical Name' field is highlighted with a black box and contains the text 'Border 5 Scale'. This is correct because it does not contain symbols for feet and inches. Other fields are identical to the 'INCORRECT' screenshot. There are 'OK' and 'Cancel' buttons at the bottom.