

Guidance for Revisions using the FDOT2004 CADD Software

When processing Plan Sheet revisions in the context of Electronic Delivery (ED), it is important to recognize how MicroStation works, particularly with reference files, and considering the need to protect legacy data previously delivered. The methods described here are the recommendation for revising plan sheets in MicroStation files using current software in the Electronic Delivery suite of tools.

The processes described include operations to do revisions as part of the overall contemporary version of the project. The project is brought up-to-date; a Revised Project CD delivery is created. Also a data subset is created that represents the changed data only (Plans and Specs Revision CD) as identified on the FDOT Roadway Design Office website. Note: The version of the flowchart at the time of this writing is dated 10/25/04.

http://www.dot.state.fl.us/rddesign/electronic_letting/default.htm

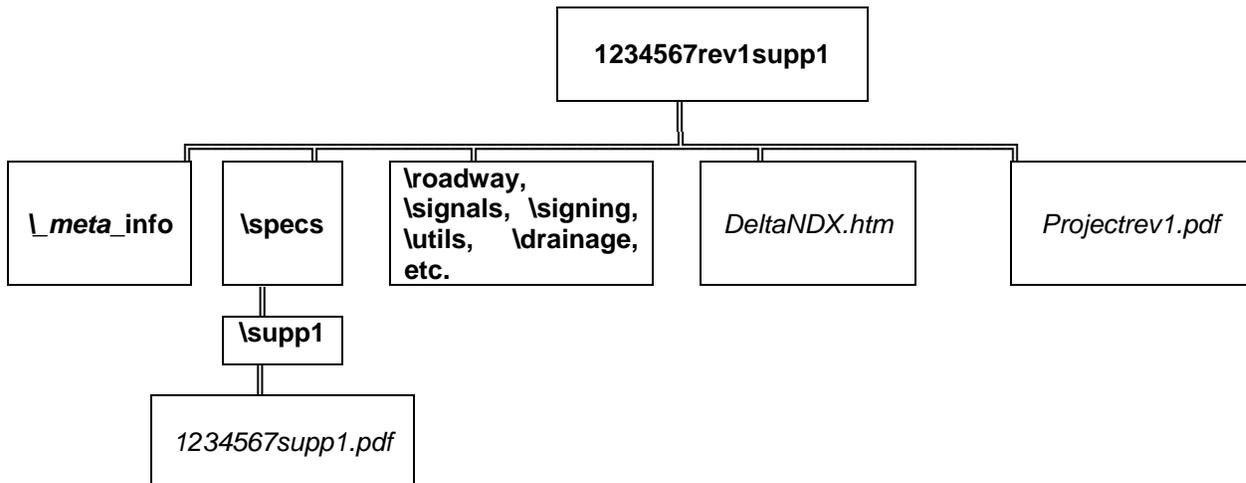
1. Back up your original delivery (make assurances you have a secured version of your earlier delivery). Make all edits on a “copy” of the original.

Note: Make certain that you have removed any “read-only” attributes to the projects files on the copy you will be revising, including the Index file (ProjectIndex.XML), SheetNDX.HTM, Project.PDF, the _meta_info\ folder, etc.

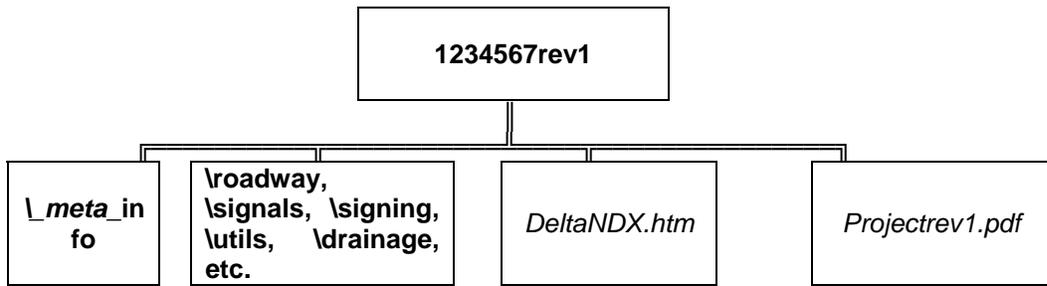
Directory Structure of Revisions / Supplements submissions (revised “Plans and Specs CD” only):

Central Office or District plans processing units working outside of a managed environment (such as TIMS or PEDDS-DB) require the revised “Plans and Specs” data submittal (contrasted with the “Project CD” submittal) on their servers to use the following directory naming conventions for revisions and/or supplements. **This does not apply for the “Project CD” submissions; only for revisions and/or supplements and their sub-sets (“Plans and Specs CD”) created from them. (bolding for emphasis).**

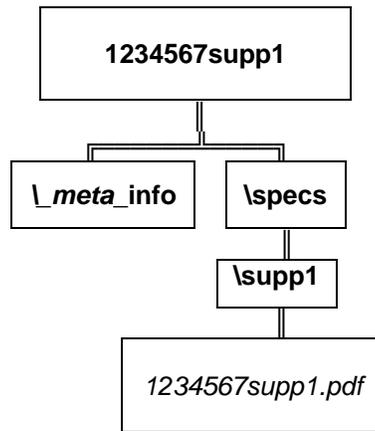
When both a plans revision and specifications changes (called a supplement) are needed, the directory structure (and content) for the revision and supplement is shown below:



If there are plans revisions only, the following directory structure would be used:



If there are specifications supplements only, the following directory structure would be used:



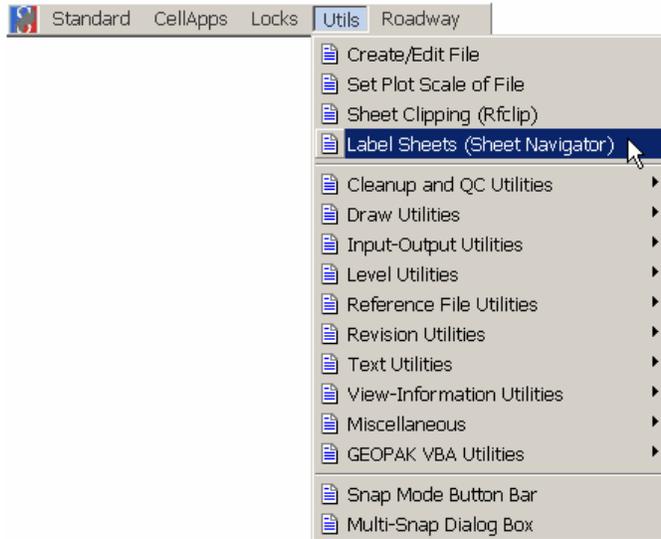
The *root directory name* for “Plans and Specs CD” data sets created for a revision and/or supplement are then:

	<u>Project CD</u>	<u>Plans and Specs (Revision) CD</u>
Original Delivery	1234567	1234567
After Revision 1	1234567	1234567rev1
After Supplement 1	1234567	1234567supp1
After Supplement 2	1234567	1234567supp2
After Revision 2	1234567	1234567rev2
After Revision 2, Supplement 2	1234567	1234567rev2supp2

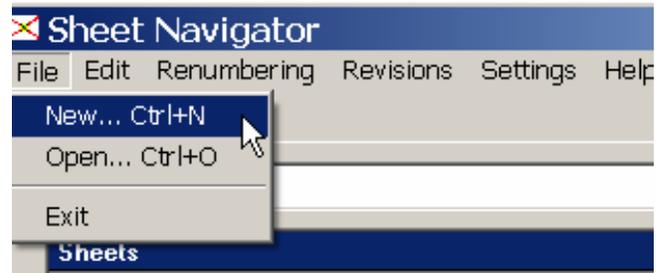
Now that this concept has been introduced, let’s discuss the remaining steps necessary to create a revision.

Important - When preparing the revision, the user should preserve data in the original delivery’s DGNs, and any plots made from them, because these may be signed & sealed by a signatory in the earlier delivery. **Do not overplot any signed and sealed file from a earlier delivery – doing so will make the Signatory of these files not authenticate in PEDDS.**

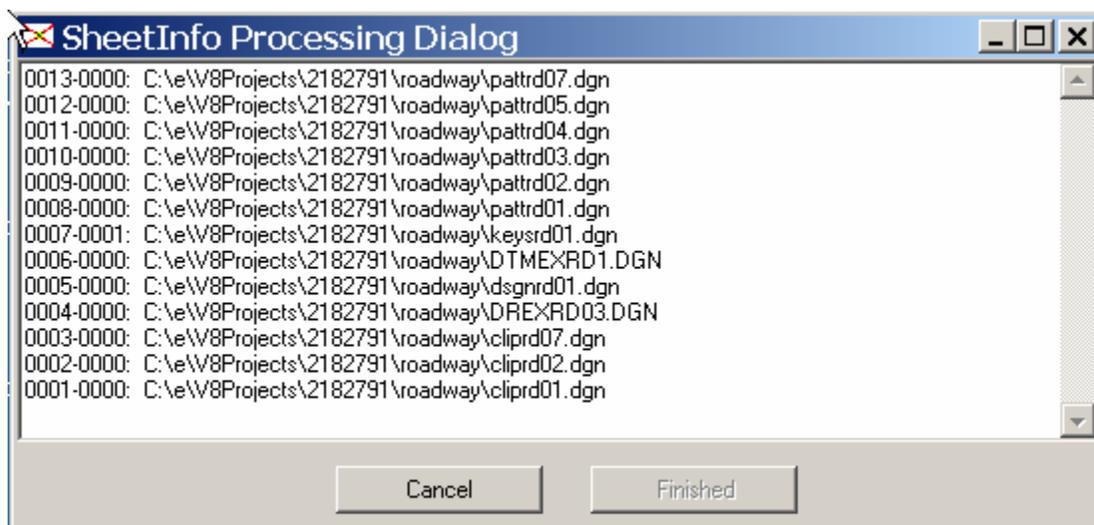
2. In Microstation, from the SiteMenu interface, select Utils -> Label Sheets to select the Sheet Navigator application. Sheet Navigator can now help you manage revisions to sheets.



3. First, go into Navigator mode (making certain the Navigator tab has focus) and from the File pull down, select the “New” option to create a new *SheetInfo.xml* file, unless you have one already and it is completely up to date.

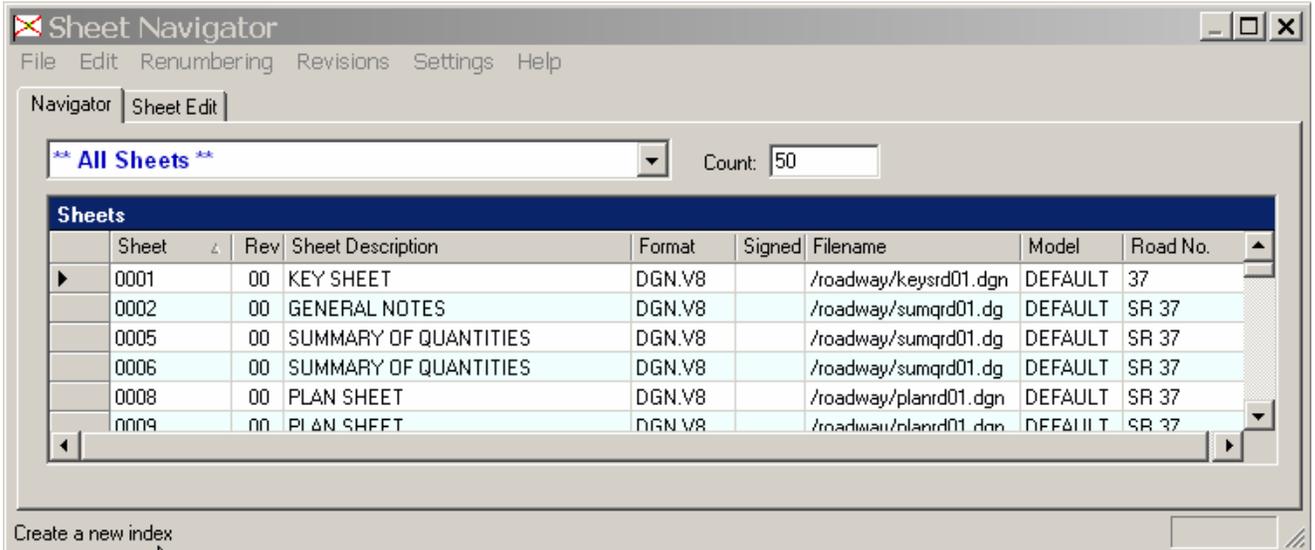


SheetNavigator will process each design file in the project directory structure looking for design

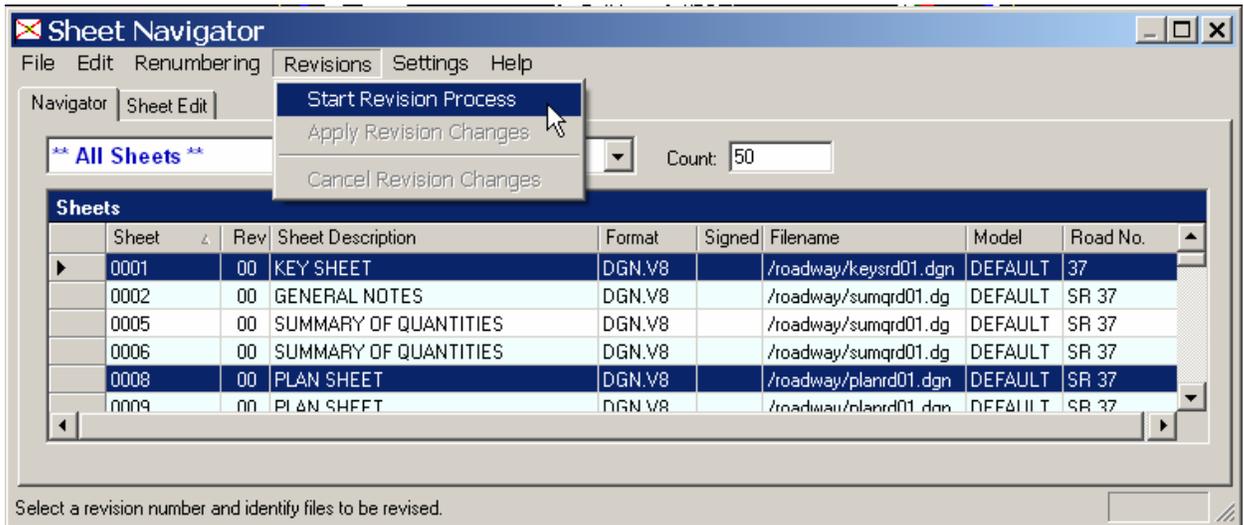


file that have properly formatted sheet border cells.

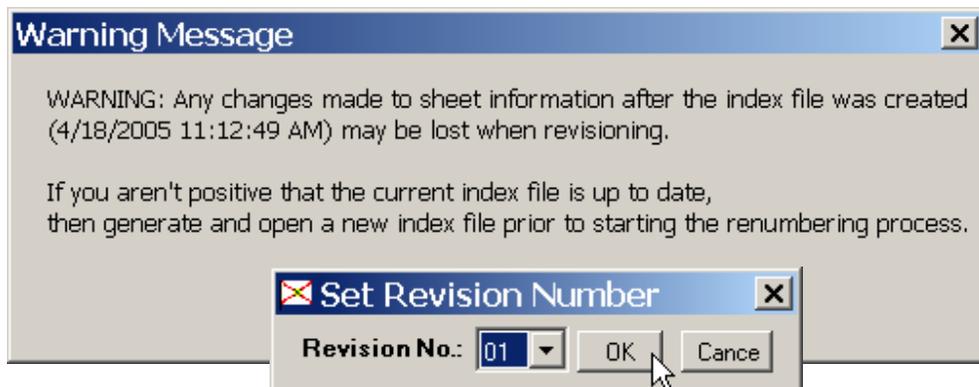
When SheetNavigator has finished, the Navigator dialog is displayed showing the current active sheets in the project:



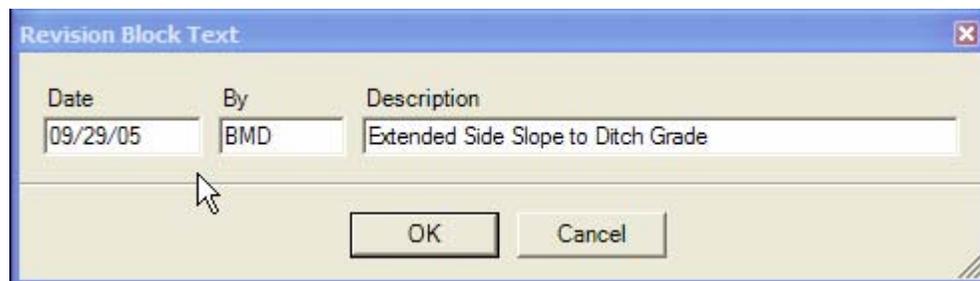
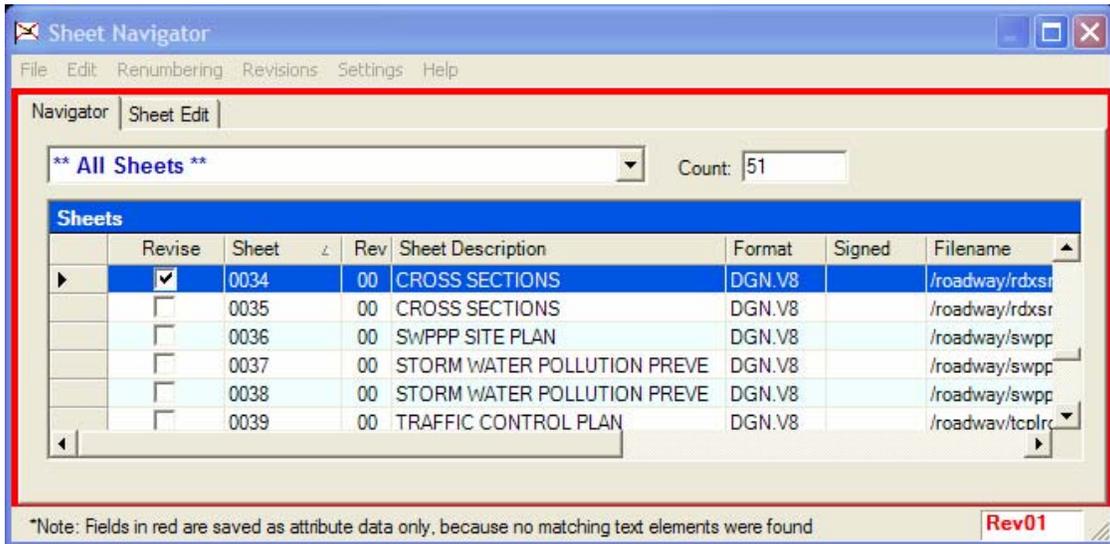
- To begin the revision process, choose Revisions -> Start Revision Process option from the pull-down menu.

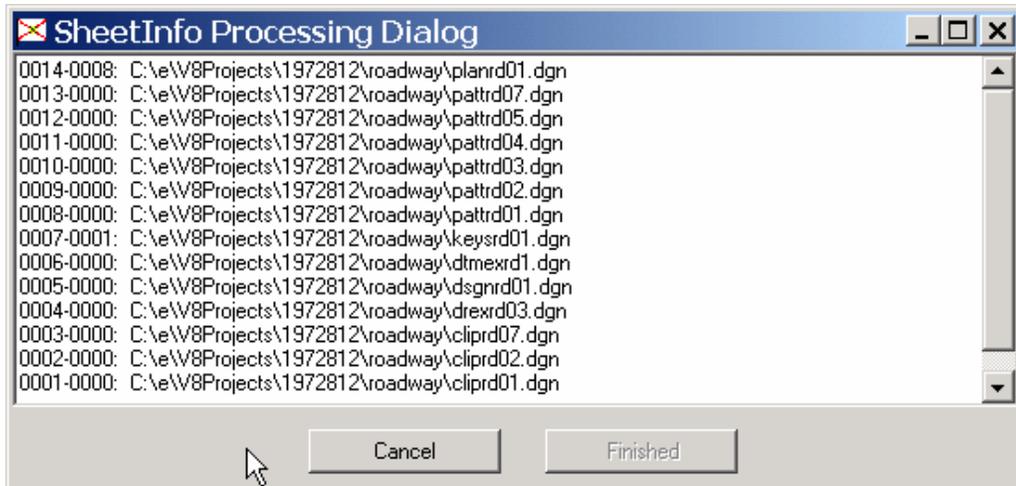


Note the warning shown below. Select the revision number and continue with the [OK] button.



- Select the revision number for the revision. Note you should choose the “official” revision number that will appear in the revision blocks and Key sheet. You must also choose which sheets to revise with the check boxes below. Enter the information to appear in the Revision Block on the Sheet, and Press the [OK] button and SheetNavigator will process the highlighted sheets.

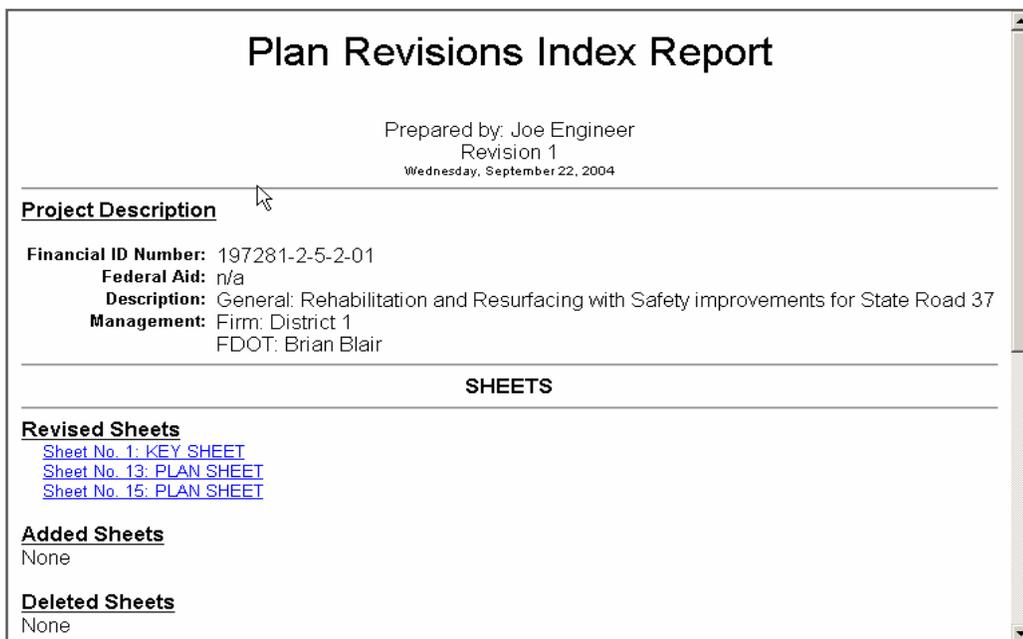
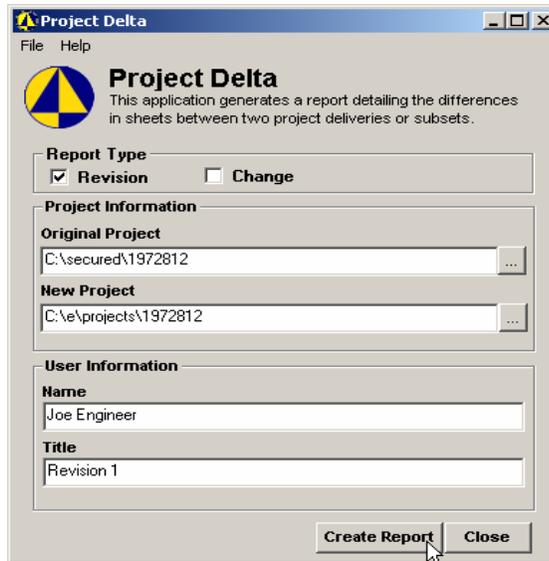




6. The SheetNavigator dialog will return in appearance to what it looked like prior to step 4), showing the the Revision Number in the column for those sheets to be revised. When SheetNavigator was processing the revision, it was making changes to the revised sheets and doing other file manipulation behind the scenes:
 - a. The design file being revised is copied so it may be preserved. In this case, **PLANRD01.DGN** is copied to **PLANRD01_2005-09-29.OLD** (notice the date in the name of the backup file, with the .DGN extension changed to .OLD)
 - b. In **PLANRD01.DGN**, the sheets that are not revised will have the “allow plot” attribute unchecked. This way, only sheets that are to be plotted later with the revision will be allowed to do so from the batch plotting process in the Electronic Delivery Indexer.
7. In **PLANRD01.DGN** (or the design files containing the sheets needed to be revised) complete the necessary revisions and complete appropriate tagging and notations with Sheet Navigator.
8. Plot the revised sheets by plotting the effected design files in their own plotting session in EDI. **DO NOT re-plot any design files containing existing unchanged sheets, otherwise you risk overwrite existing signed and sealed files, and invalidate existing PEDDS signature files – Be very careful here!** Note: EDI will warn if you are about to over plot a signed and sealed plot file – **Don’t Do it!**
9. Update the Project Index (Project.XML), and edit and save a sheet index (ProjectIndex.XML) with **Electronic Delivery Indexer (EDI)** to reflect the newly revised sheets in the plans.
10. Create NEW Signatory(s) in **PEDDS** to sign / seal the newly revised sheet image files you plotted. **DO NOT use the old Signatory files - leave the files signed with old Signatories intact.** Also create a new (different) Signatory to sign any specifications supplements. **PEDDS** allows for multiple signatory files for any given professional of record. **Sign and Seal the revised sheet Postscript files with the NEW Signatories. This is a very important step!**

Note: Up to this point, all steps have been defined in terms of producing the Revised Project CD deliverable to reflect the updated state of the project with the revisions. In the remaining steps, certain actions are needed to also produce the Plans and Specs Revision CD used in the letting process.

11. Create the Plan Revisions Index Report using the **Project Delta** application, comparing the original project delivery to the newly revised project. The report (**DeltaNDX.htm**) is placed in the root directory of the revised project and only displays information about indexed sheets and their impacted files that have been added, removed, or revised. **Note that other non-indexed files that may have changed are not reported, including supplements. This action is needed for producing the Plans and Specs Revision CD deliverable required for the letting process.**

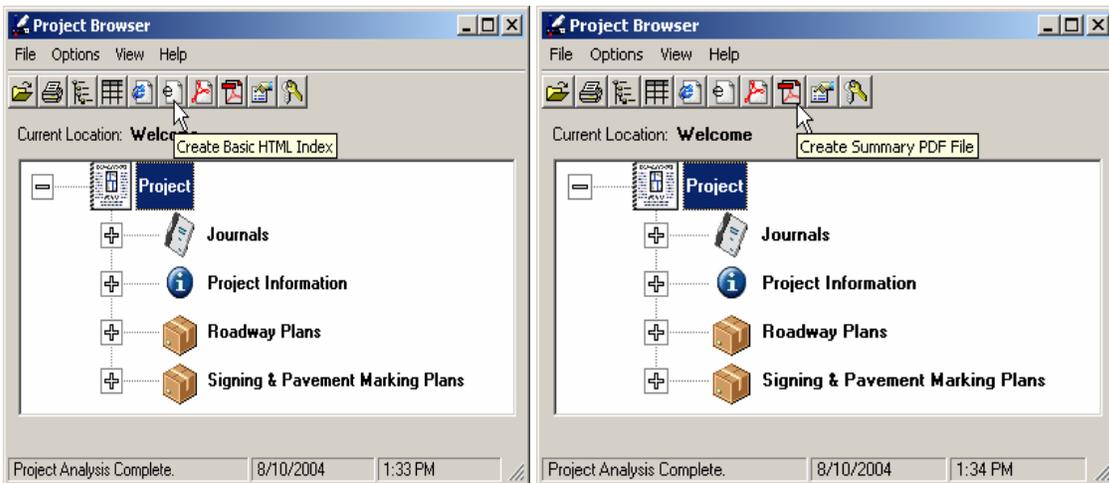


Note: Both the Revision and Change options produce the changes between two sets of project data, however, the Change option produces only a report of the differences. It does not produce any intelligent hyperlinked reports. It is merely a tool to assist when one desires to compare two

sets of data to know what has changed between them. The Revision option must be used in producing the Plans and Specs Revision CD deliverable, **DeltaNDX.htm**.

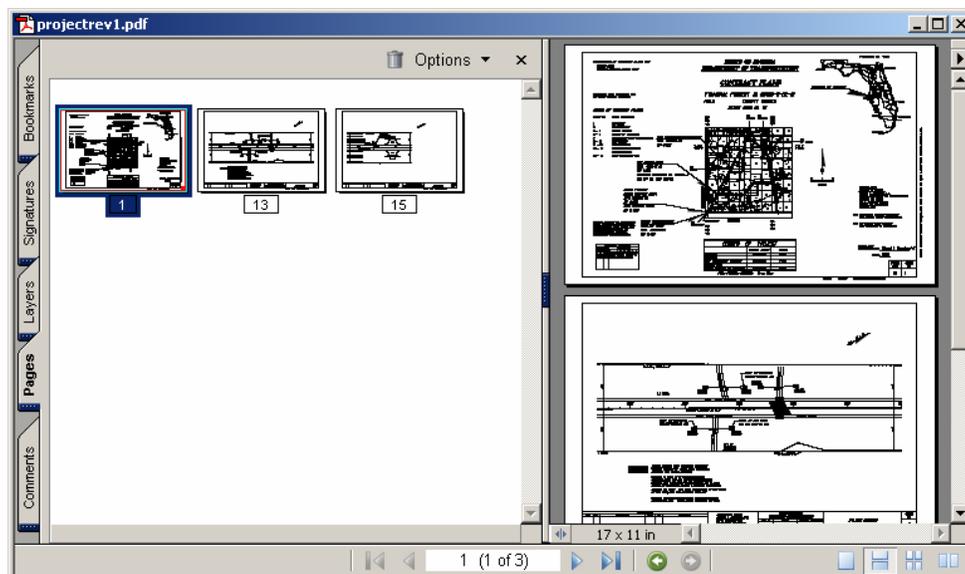
12. Update the Sheet Index Report (**SheetNDX.htm**) and project composite PDF (**Project.PDF**) using **Project Browser**.

Note: These actions in Step 12 are necessary for defining the state of the project as will be reflected in the Revised Project CD deliverable. The new **SheetNDX.HTM** file and **Project.PDF** file will only make reference to sheets that are currently active in the project following the revision. However, as required in Step 12, the updated **Project.PDF** file is copied and modified to produce a .PDF of the revised sheets (**ProjectRev1.PDF**) needed for the Plans and Specs Revision CD deliverable used in the letting process.



13. Copy the Summary PDF file (**Project.pdf**) to **Projectrev1.pdf** in the root directory of the project. Edit **Projectrev1.pdf** leaving revised sheets only, and remove all other non-revised sheets. Adobe Acrobat or other PDF editors may be used for editing.

Note: This action is necessary to produce a .PDF file of just the revised sheets to be included in the Plans and Specs Revision CD deliverable. The **ProjectBrowser** application is being updated to automate this. An example of a **ProjectRev1.PDF** is shown below:



- Secure the new project delivery with **PEDDS**. The “Revised Project CD” (now containing revisions) can be prepared and burned for delivery.

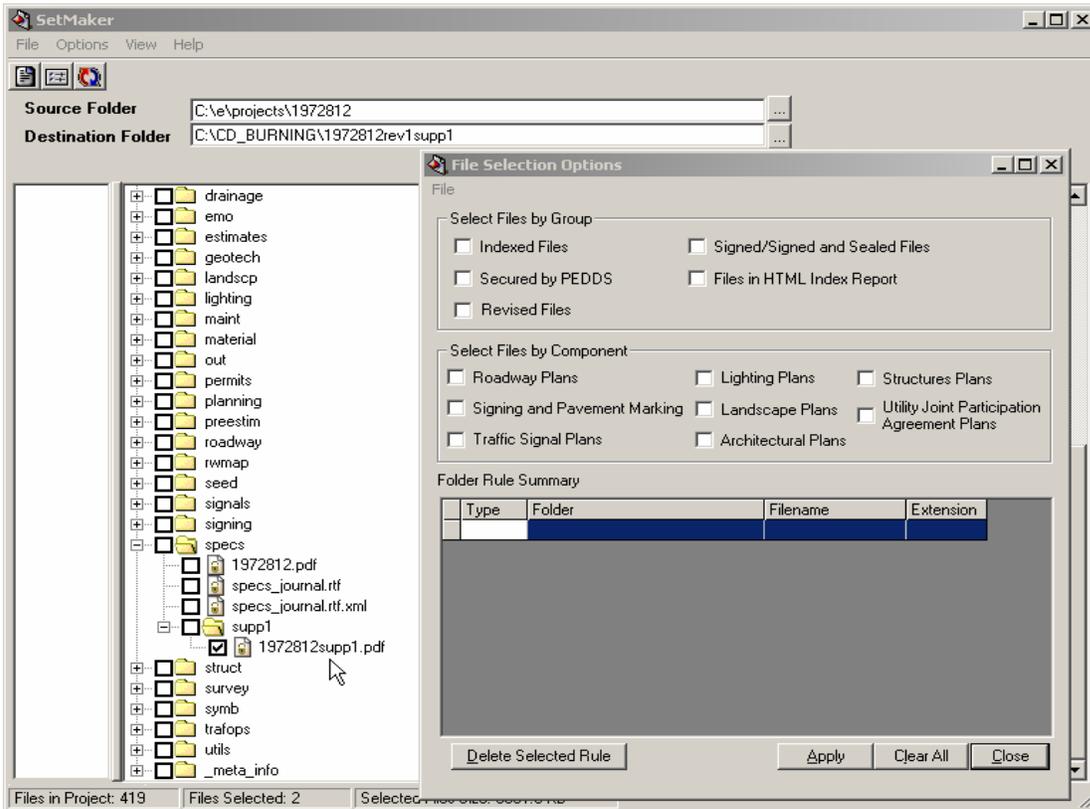
Note: Remember the revision is developed within the complete contemporary project that is brought up-to-date, making a “Revised Project CD” delivery.

Label the Revised Project CD carefully, distinguishing the label with the Revision or Supplement number, as well as the other required text on the CD label. After the CD had been burned, always authenticate the CD (the physical media) using **PEDDS**, to make sure the CD burning process went smoothly.

- Create a sub-set using **SetMaker** for the “Plans and Specs Revision CD” for the revised project. The *Destination Folder* field should contain the directory name using the Naming Structure discussed in Step 1 earlier.

Special Note: As shown below, some files must be manually selected to be included for the revision. Note that Specifications revisions involved the earlier creation of sub-directories under the **\Specs** folder to organize the revised specs files. If you want to include files in the revision set that are not included the Plan Revisions Index Report, they must be either selected manually first, or selected with the File Selection Options dialog also shown below.

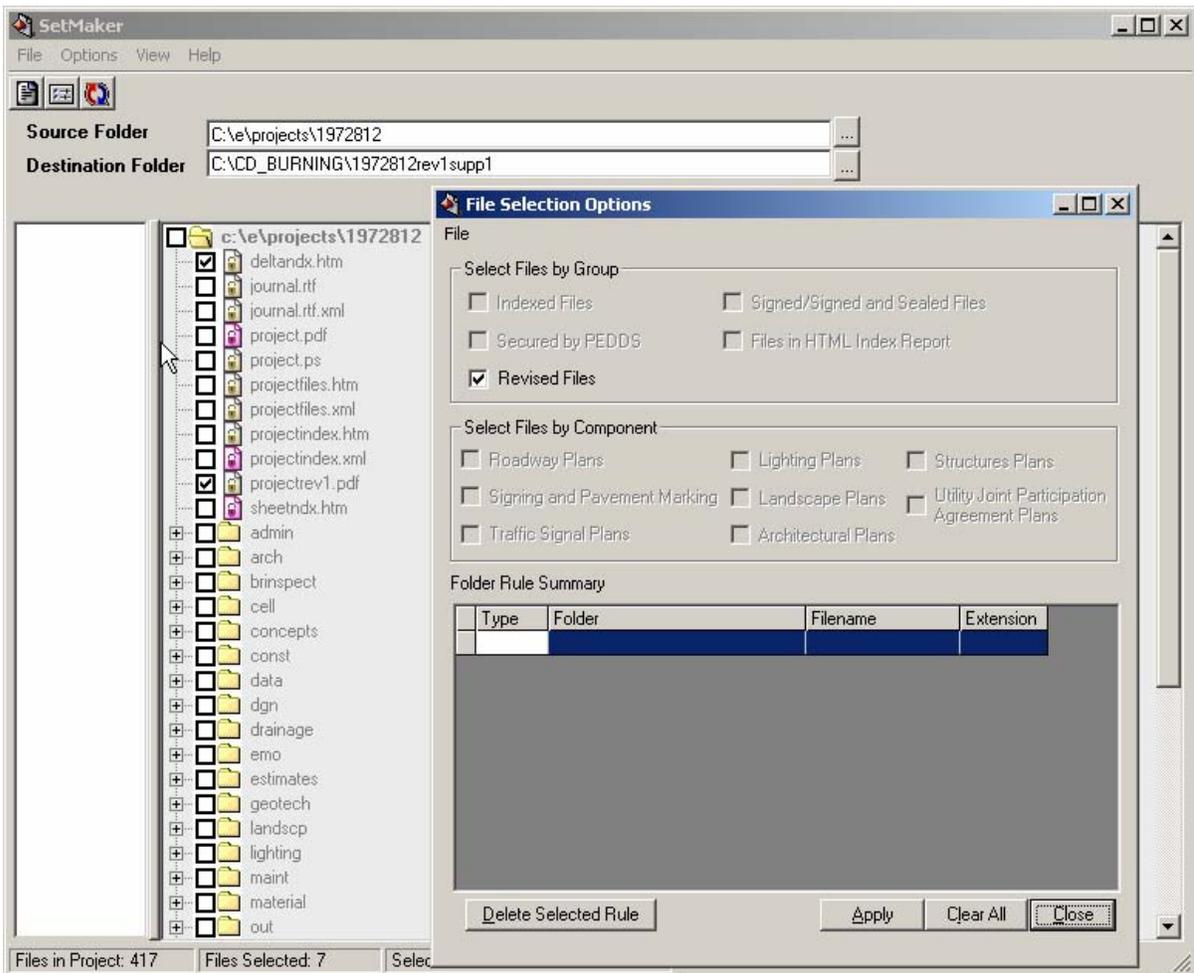
File selection settings in SetMaker are shown to create the updated project subset representing the “Plans and Specs Revision” CD. Note that the specifications supplement has been selected manually as shown:



** Seek guidance from the State Specifications Office for the required sub-directory structures and file naming conventions for specifications supplements.

Revision Set selection can be completed utilizing the Plan Revisions Index Report as a selection rule in **SetMaker**, (shown below). Note that only indexed files identified in the report will be selected by choosing the “Revised Files” rule, as well as the Plan Revisions Index Report itself. This is why it is important to manually select any files not identified in the **DeltaNDX.HTM** Report first, and then select the “*Revised Files*” rule. **SetMaker** will not allow any additional selection of files once the Revised Files Selection rule has been checked (all additional selection options grayed-out in the dialog and on the interface).

As shown below, file selection settings to create the updated subset representing the Revisions Only dataset. Note the behavior of the application once the “Revised Files” option is selected, the selection check boxes may no longer be used to select additional files. The other files shown selected were previously done manually, as documented earlier.



SetMaker copies the selected files, their Signatory files, and the minimum necessary directory structure to the *Destination Folder* and automatically Secures the Subset of the project it creates.

16. Make sure to print the *Manifest Report* generated by **SetMaker**, and burn your “Plans and Specs Revision CD.”

Note: Always Authenticate the physical CD-ROM after burning your CDs to ensure a secure delivery set for submission to FDOT.