

LAB 23 - Batch Printing to PDF

In this lab, you'll use **Batch Printing** to print multiple files at one time. Instead of printing to a printer, you'll print to PDF for the reproduction department (i.e. a plot set for a milestone submittals).

Note: To batch print to a printer, see the workflow CDOT Batch Printing.

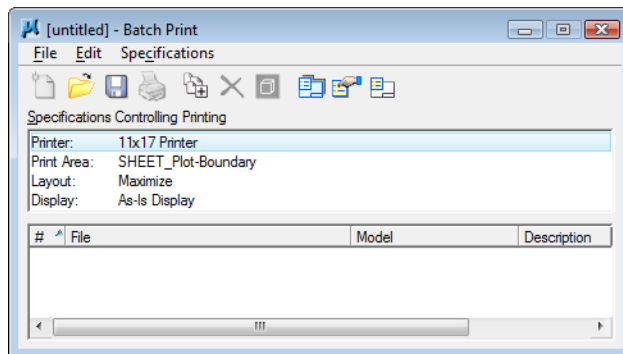
Chapter Objectives:

After completing this exercise you will know how to:

- Select files to batch print.
- Set and change batch process specifications.
- Create a batch process job file (*.job).
- Batch print to PDF files.

Lab 23.1 - Select Files to Batch Print

1. Select **Batch Print** in MicroStation from the file pull down menu.



Note: You can be in any MicroStation file when you run the **Batch Print** process.

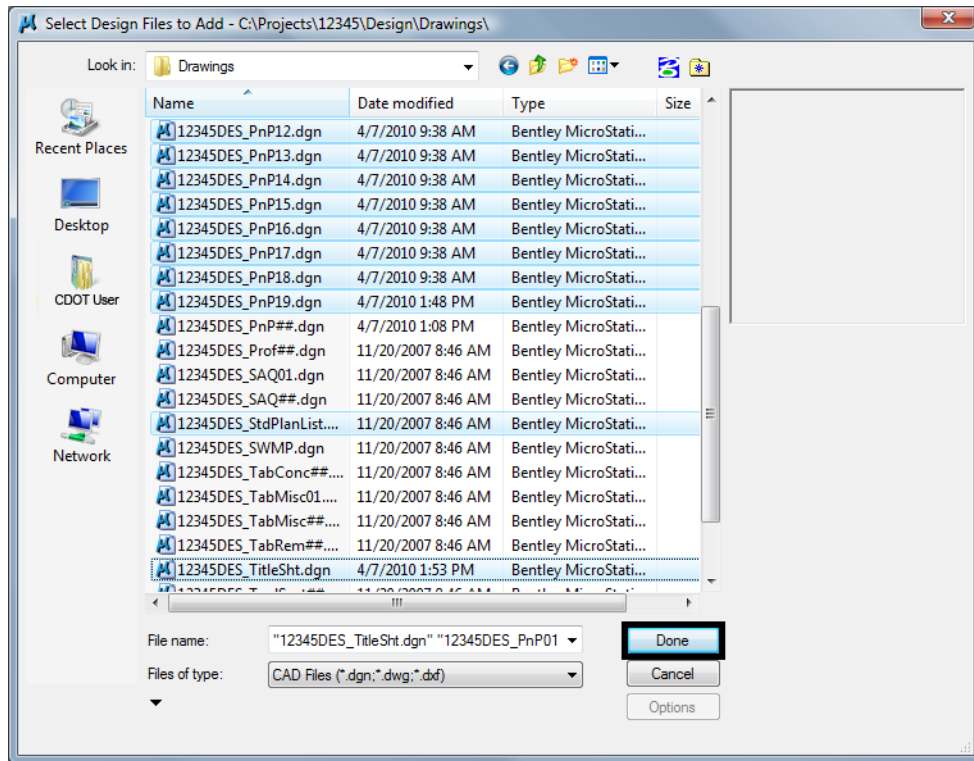
2. In the **Batch Print** dialog box, select **Edit > Add Files**.

Note: **Add Active File** adds the design file that is open in MicroStation.

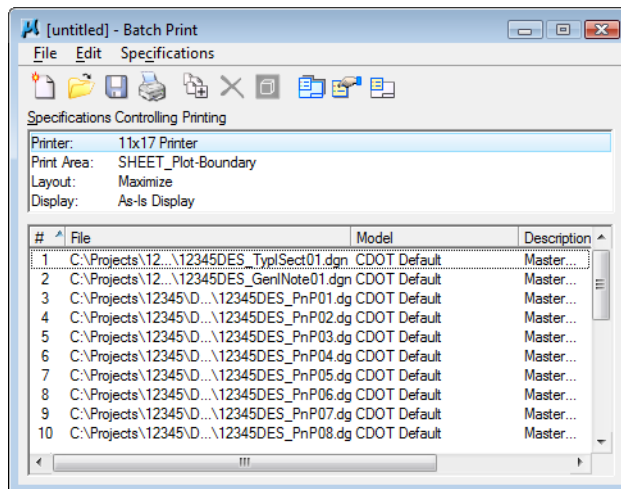
3. Navigate to the C:\Projects\12345\Design\Drawings folder. Select the following files to add to the batch process (you can hold down the **Ctrl** or **Shift** key to select multiple files):

- ◆ 12345DES_GenNote.dgn
- ◆ 12345DES_PnP01.dgn – 12345DES_PnP19.dgn
- ◆ 12345DES_StdPlanList.dgn
- ◆ 12345DES_TitleSheet.dgn
- ◆ 12345DES_TypISect01.dgn

4. Select **Done**.

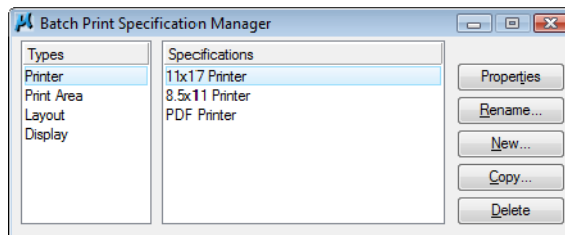


5. When finished adding files, select **Done**.

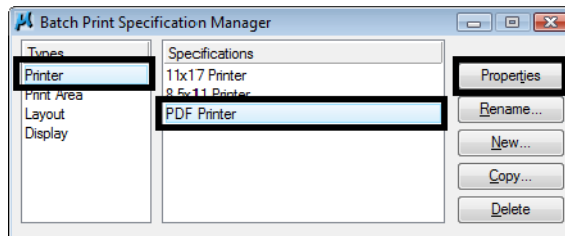


Lab 23.2 - Set Batch Process Specifications

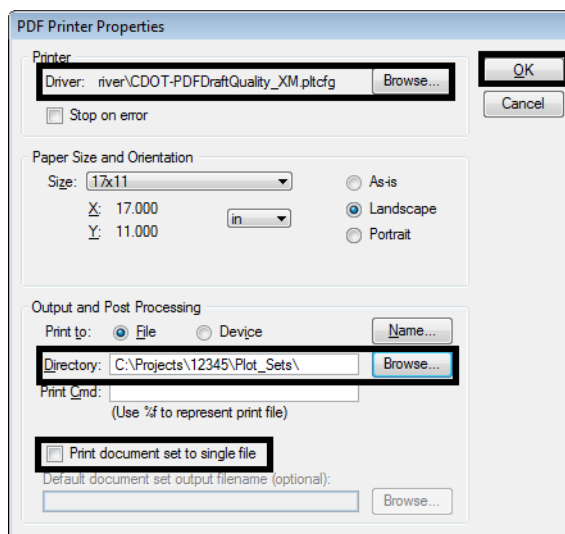
- The batch process default specifications are:
 - ◆ **Printer: 11x17 Printer**
 - ◆ **Print Area: SHEET_Plot-Boundary**
 - ◆ **Layout: Maximize**
 - ◆ **Display: As-Is Display**
- Select **Specifications > Manage** to change the default specifications.



- Under **Types**, select **Printer** and **PDF Printer**
 - ◆ Select Properties

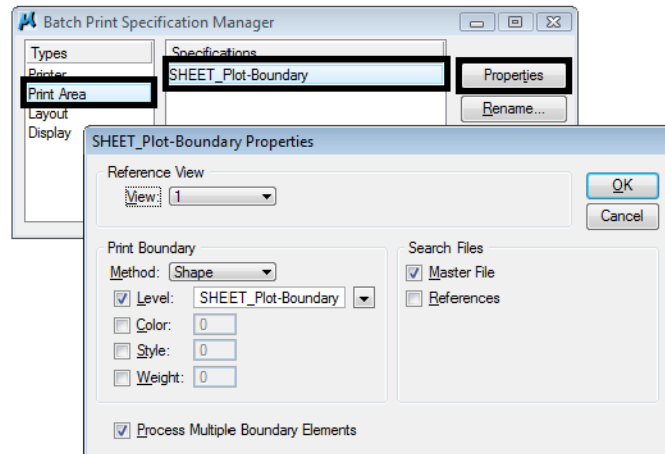


- ◆ Select **Driver** and select **CDOT-PDFDraftQuality_XM.pltcf** and select **OK**
- ◆ Toggle off **Print document set to single file**
- ◆ Set the **Directory** to **c:\projects\12345\Plot_Sets**



Note: To print all these sheets to a single PDF, the toggle for **Print document set to single file** must be **ON**

- ◆ Select **OK**
- ◆ Under **Types**, select **Print Area** and then select **Properties**.

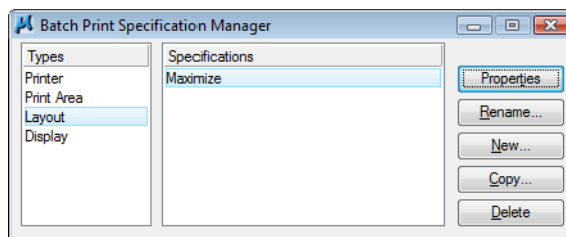


Note: The printable area defaults to the outer boundary of the standard CDOT sheet border (the yellow shape on level **SHEET_Plot-Boundary**).

Just **Master File** is checked **ON** under **Search Files**.

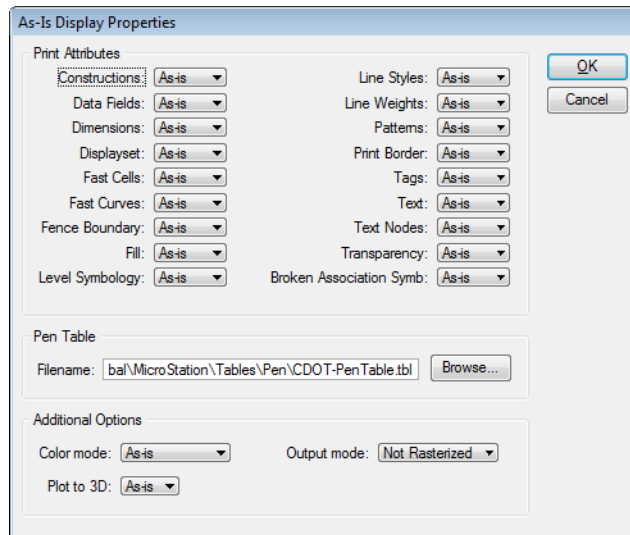
If **References** is toggles **ON** and the level **SHEET_Plot-Boundary** is not found in the **Master File** as a cell, it will search for the level in the Reference files associated with the sheet file. This might cause blank sheets to be generated.

4. Cancel the **Properties** box.
5. Under **Types**, select **Layout** and then select **Maximize**.



6. Under **Types**, select **Display**
 - ◆ Select **As-Is Display**

◆ Select Properties

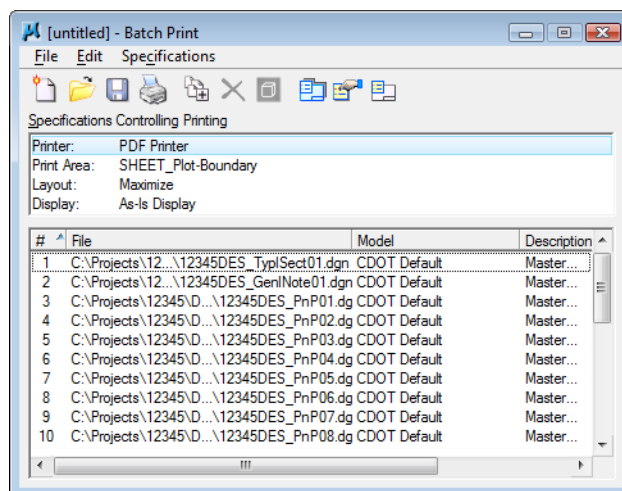


Note: The **As-Is Display Specification** sets up the print properties for various elements. The **As-Is** setting reads MicroStation's View Attributes setting for each design file.

The Pen Table defaults to **CDOT-PenTable.tbl**, which is the table used for black-and-white printing.

7. **Cancel** out of the **Properties** box.
8. **Close** the **Batch Print Specification Manager** box by selecting the **X** in the upper-right corner.

Your changes are shown in the main **Batch Print** dialog box.



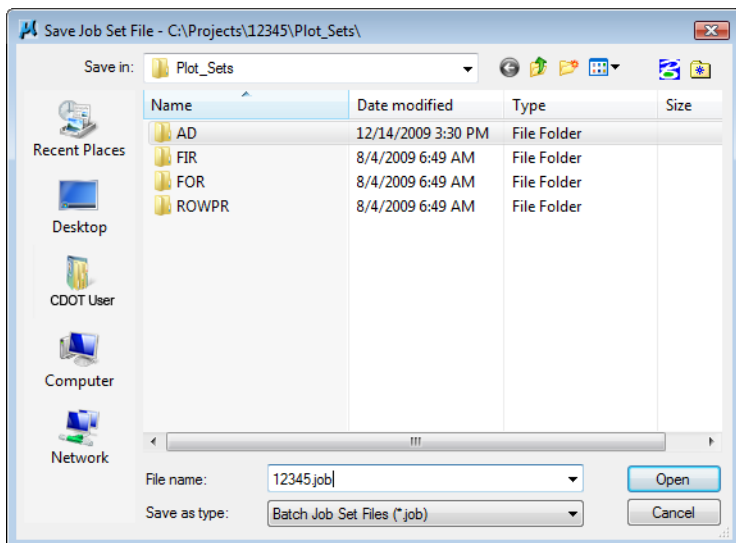
Lab 23.3 - Save the Specifications to a Job file (*.job)

1. From the Batch Print dialog box, select **File>Save As...**

2. Navigate to the project's **...Plot_Sets** folder.

Note: You should select one of the subfolders (FIR, FOR, etc.) for the appropriate plot set. For training purposes, you'll plot to the upper level Plot Sets folder.

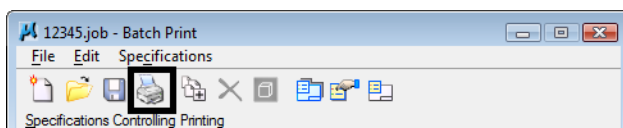
3. In the **Files** field, key in **12345** and select **OK**.



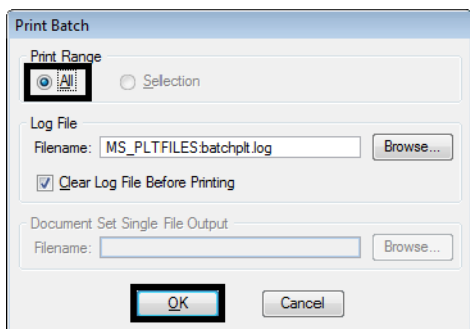
The job file should be saved to the project in the appropriate folder under the **Plot_Sets**. The file is automatically assigned a .job extension. If you want to process this job again, select **File > Open** from the **Batch Print** dialog box and choose the **12345.job** file.

Lab 23.4 - Create the Batch Prints

1. Select the **Print** icon to open the **Print Batch** dialog box.



2. In the **Print Batch** dialog box, set **Print Range** to **All** to print all the files selected



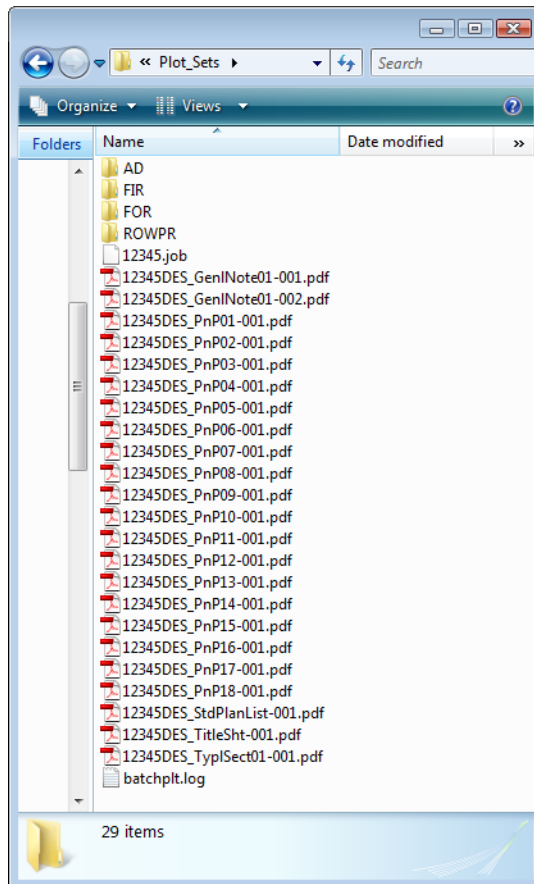
Note: The option **Selection** would print only the files that you highlight in the list.

3. Select OK to start the batch process.

The process will take a few minutes to complete. If errors are encountered, open the error log **batchplt.log** in the **C:\Projects\12345\Plot_Sets** folder for more information.

Lab 23.5 - Review the PDF files

1. In Windows, open **My Computer**.
2. Navigate to the **C:\Projects\12345\Plot_Sets** folder.



Note: The folder contains the all the individual pdf file sheets plus the **12345.job** file and batch log file.

- Double-click on one of the pdf files to open.

GENERAL NOTES

[Notes within] are designer directions - delete all directions prior to final plan. Submittals: All RFI shall be filled in by the designer during design phase. If the notes does not specify include RFI.

For preliminary plan quantities of pavement materials, the following rates of application were used:

Prime Coat (MC-70) [XXXX].....	0.100 Gal./Sq. Yd.
Seal Coat (MC-70) Diluted Emulsified Asphalt [XXXX].....	0.100 Gal./Sq. Yd.
Seal Coat Material [XXXX].....	0.100 Lbs./Sq. Yd.
Seal Coat Diluted Emulsified Asphalt.....	0.100 Gal./Sq. Yd. (Diluted)
Seal Coat [XXXX].....	0.100 Lbs./Sq. Yd.
Bituminous Pavement [XXXX].....	1.50 Lbs./Sq. Yd./Inch
Aggregate Base Course Class [XX].....	0.100 Lbs./Sq. Yd.
Asphalt Rejuvenating Agent [XXXX].....	0.100 Gal./Sq. Yd.

Diluted emulsified asphalt for seal coat shall consist of 1 part emulsified asphalt and 1 part water.

Asphalt rejuvenating agent shall be selected an accordance with manufacturer's recommendations. For estimating purposes, [XXX] gallons of asphalt rejuvenating agent to one gallon of water was used.

It should be noted that the use of asphalt rejuvenating agent is dependent as results of tests performed after completion of surfacing and may not be required by the Engineer.

Rejuvenating agent, if required, will be applied as seal coat at the time of construction. Rate of application shall be as determined by the Engineer at the time of application.

Diluted [XXX] shall be used as a short palliative where required and shall consist of a dilution of [XXX] and water, the portions of which shall be [XXX] parts water and [XXX] part [XXX], based on volume measurement. Location shall be as directed by the Engineer.

Rater shall be used as a short palliative where required. Locations shall be as directed by the Engineer.

Regeneration Chloride shall be used as a short palliative where required. Locations shall be as directed. It is estimated that [XXX] gallons will be required at this project.

The following shall be furnished with each bituminous pour:

1. All over course of least 20 Feet in length.
2. Short skid or skid.
3. [XXX] Feet of Control Line and stakes.

Any layer of bituminous pavement that is to have a succeeding layer placed thereon shall be completed full width before succeeding layer is placed.

Asphalt joints shall fall on lines, shoulders lines or median lines, except where stated on the plans.

All travel lanes are subject to construction incentive/disincentive payments.

Pavement sections incentive/disincentive shall be based on inches/mils.

Final addresses which require bituminous pavement shall be placed and an [XXX] inches thickness of pavement (and [XX] inches thickness of AC) placed as follows:

Public approaches and entrances to building or residence shall be paved 50 Feet out from the edge of shoulder or to the right-of-way line, whichever is less. Paved entrances shall be paved 4 Feet out from the edge of shoulder.

The Contractor shall not park any vehicles or equipment in, or obstruct any areas not approved by the Engineer.

Millings shall become the property of the State. The Contractor shall supply all necessary equipment to haul this material to a site within the limits of the project as directed by the Engineer.

Prior to placing bituminous pavement, the paved surface shall be swept and dressed. This will not be paid for separately, but shall be included in the cost of the Hot Mix Asphalt Pavement Item.

The Contractor shall coordinate the shouldering operation such that full compliance to the existing grade is obtained as a daily basis following the paving operation for the affected area unless otherwise approved by the Engineer.

Overlay of paved areas shall commence within 5 working days following the planning unless otherwise approved by the Engineer.

The pavement shall be out to a neat line [XXX] as directed by the Engineer. This will not be paid for separately, but shall be included in the cost of the Hot Mix Asphalt Pavement Item.

It is estimated that the old road is to be obliterated at the following locations: [XX + XX]

Moisture-density control will be required for the full depth of those embankments on this project.

Depth of moisture-density control for this project shall be as follows:

- Full depth of embankments within 100 Feet of bridge abutments.
- Top 100 Feet of these embankments when 100 Feet or more in height.
- Full depth of embankments which are less than 100 Feet in height.
- Full depth of all embankments.
- Base of cuts and fills [XX] Feet.
- Base of fills [XX] Feet or 1/2 mile in height, [XX] Feet.
- Full depth of near dikes (widths with bridge abutments).
- Full depth of embankment sections used for ditches and channel changes.

Consolidation required for compaction of bases of cuts and fills will be considered as necessary to that operation and will not be paid for separately.

The maximum thickness of topsoil shall be 100 inches. It is estimated that [XX] Cu. Yds. will be required based on the average thickness of [XX] inches.

Type of compaction for this project will be ASPH/D T-[XXX].

Concrete curb and gutters as shown on drawings are required on:

- All concrete abutment installations including side drains.
- All concrete culvert installations located on station [XXXXXX].

Guard posts, delineators and [XXX] will be removed by State forces at no cost to the project. Mile posts will be adjusted or reset by State forces at no cost to the project.

It is estimated that [XX] gallons of pavement marking paint will be required at this project as follows:

White.....	[XX] gallons
Yellow.....	[XX] gallons

Final signing and striping will be done by state forces at no cost to the project.

It is estimated that [XX] hours of blasting with a motor grader in the [XX] to [XX] (typical) maximum range will be required as directed by the Engineer.

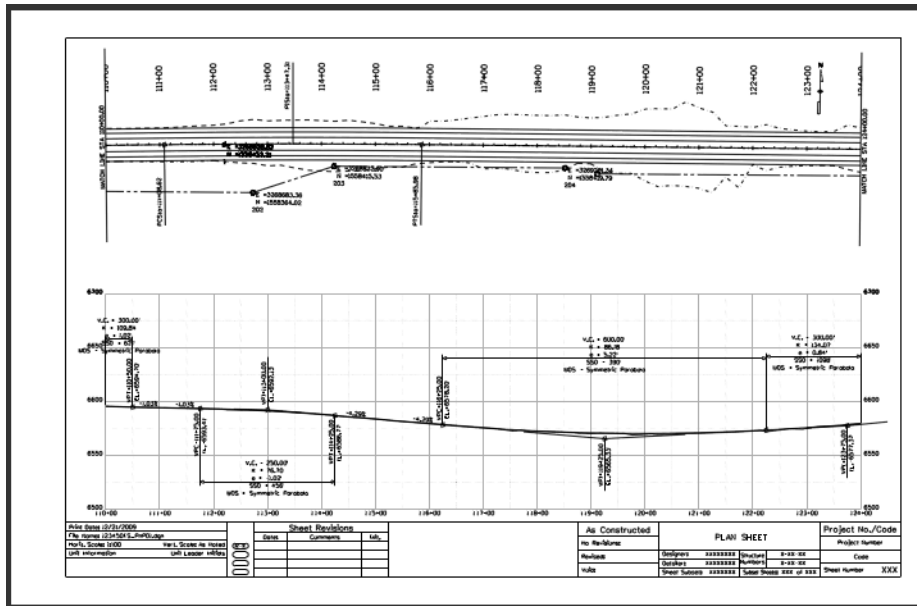
It is estimated that [XX] hours of mowing with a power crawler type tractor in the [XX] to [XX] maximum range will be required as directed by the Engineer.

Plan Date 12/21/2009

Project No./Code

As Constructed	GENERAL NOTES	Project No./Code
No Revisions		Project Number
Revised	Design: XXXXXXX	Structure: S-03-02
Checked	Checked: XXXXXXX	Permit: P-02-02
Issue	Sheet Number: XXXXXXX	Sheet Number: XXX

- Continue opening sheets as desired.



- Close My Computer.
- Return to MicroStation and Exit.