

## Electronic Plans

### This documentation assumes:

- Adobe Acrobat 10 (not just Adobe Reader)

- **Format:** PDF (Compatible with “Acrobat 5.0 and later”)
- **Naming Convention:**

		<b>Addendum</b>	<b>CCO</b>
<b>Section Method</b>	PCN#_Section?.pdf	PCN#_Section?Add#.pdf	PCN#_Section?CCO#.pdf
<b>Non-Section Method</b>	PCN#_Nonsection.pdf	PCN#_NonsectionAdd#.pdf	PCN#_NonsectionCCO#.pdf

**Note:** Each Addendum or CCO includes only the revised sheet(s) for that Section.

- **Original File Location:** Office’s prj folder (Ex. U:\rd\prj\CNTYPCN#\ for Road Design)
- **Page Size:** Match Paper Size (8.5 in. x 11 in. or 11 in. x 17 in)
- **Rotation:** Match Paper (Landscape or Portrait)
- **Color:** Match Paper (One set matching Bid Letting Submittal)
- **Resolution:** 600dpi
- **Number pages** to match Section in PDF (Ex. B for Section B)
- **Embed Thumbnails**
- **PDF Information**  
Fast Web View – Yes  
Tagged PDF – No

Note: To check **File > Document Properties >> Description...**

- **Initial View**

Document Properties

Navigation tab: Pages Panels and Page

Page Layout: Default

Magnification: Fit Page

Note: To check **File > Document Properties >> Initial View...**

File size of PDFs usually is between 100 KB to 300 KB per page. Rarely should it exceed 500 KB per page. Large files can cause performance issues viewing and printing.

## **PDF from Word or Excel with Adobe PDF**

Open file

**File>Print**

**Select Adobe PDF**

Confirm print options Properties > Adobe PDF Setting

Default Setting: Standard

Note: If the file is Color but Black and White is desired:

Print Properties > Paper/Quality

Color: Select Black & White

**OK**

Select folder to save PDF

**Save**

## **Adding “Not For Construction” as a Background**

Choose Tools > Pages > Background > **Add Background...**

Select Type > **Add a Background**

Select Source > **From file** – Browse... select file

(U:\rd\Doc\PDF\Background\_NotForConstruction.pdf)

Click **OK** to close the Add Background dialog box.

**Save As**

Note: The Background also at <http://www.sddot.com/business/design/files/Default.aspx>

## **Removing “Not For Construction” as a Background**

Choose Tools > Pages > Background > **Remove Background...**

Answer **YES**

Optional -**Update Thumbnails** (see Above)

**Save As**

## **Adding “Preliminary” as a Watermark (ROW Plans – Only)**

Choose Tools > Pages > Background > **Add Watermark...**

Select Type > **Add a Watermark**

Select Source > **From file** – Browse... select file

(U:\rd\Doc\PDF\Watermark\_Preliminary.pdf)

Click **OK** to close the Add Watermark dialog box.

**Save As**

## **Removing “Preliminary” as a Watermark (ROW Plans – Only)**

Choose Tools > Pages > Watermark > **Remove Watermark...**

Answer **YES**

Optional -**Update Thumbnails** (see Above)

**Save As**

## **To Number Pages**

Click the Page Thumbnails button to open the Page Thumbnails panel.

Select **Options > Number Pages...**

Pages: All

Style: 1,2,3

Prefix: Type in Letter for Section

## **To Rotate Pages**

Click the Page Thumbnails button to open the Page Thumbnails panel.

Select **Options > Rotate Pages...**

For Page Range, specify whether all pages corresponding to page thumbnails selected in the Pages tab, or a range of pages are to be rotated.

Select page selection from the Rotate menu, and the orientation of pages to be rotated.

Click **OK**

## **To Replace Pages**

Click the Page Thumbnails button to open the Page Thumbnails panel.

Select **Options > Replace Pages...**

Select File containing the replacement pages

Original: enter pages to be replaced in the original document

Replacement: enter first page of the replacement range.

Click **OK**

## **To Insert Pages**

Click the Page Thumbnails button to open the Page Thumbnails panel.

Select **Options > Insert Pages...**

Select File containing the insertion pages

Location: After or Before

Page: Select desired location

Click **OK**

## **To Embed Thumbnails**

Note: To update embedded thumbnails you will need to remove embedded thumbnails first.

Click the Page Thumbnails button to open the Page Thumbnails panel.

Select **Options > Embed All Page Thumbnails**

## **Standard Plates in Adobe 11x17 sheets**

If you have MicroStation V8i it is recommend you use the method on the next page.

1. Download Standard Plates needed from the Office of Road Design's WEB page (<http://www.sddot.com/business/design/plates/Default.aspx> ).
  - Right Click on Standard Plate Number > Save Target As...

**Note:** Standard Plates are also stored at <U:\pd\Standards\StandardPlatesPDF>
2. Print an empty border sheet to PDF, with or without project numbers & page numbers. Or get a copy from <U:\rd\Doc\PDF> or the Office of Road Design's WEB page. (<http://www.sddot.com/business/design/docs/downloads/emptyborder.pdf>)
3. Open a PDF with an empty border sheet.
  - If not landscape rotate page.
  - If multiple pages Specify Page Range in Page Range.
4. Tools > Pages > Watermark > **Add a Watermark...**
5. Select Source > **From file** – Browse... select standard plate PDF downloaded.
  - Select Page Number desired if multiple page standard plate.
  - Confirm Appearance > Scale relative to target page is unchecked.
6. Select Position > **Horizontal Alignment** from **Left**.
7. Select OK.
8. Repeat Steps 4 thru 7 except **Add a Watermark** on **Right**. (Add New)

**Note:** You can add project numbers & page numbers using "Add Header & Footers" in Adobe. I would not use any commenting Tools to fill in project numbers & page numbers as it will look like a review comment and won't print when "Document Only" is printed which maybe the default.

## **Standard Plates in MicroStation 11x 17 sheets**

### **This documentation assumes:**

- MicroStation V8i.
  - Bentley Configuration Utility has been run.
  - Plan.bdr resides in the active folder.
  - Connection to the U: drive.
1. Create New MicroStation File(DGN) using StdPlatePageSeed.dgn as the seed file.
    - Location of Seed file U:\rd\Bentley\V8i\MicroStation\Seed\English\
    - You will need one for each page of Standard Plates.
    - Name: s12001\_1s12001\_2.dgn, s63576s63580.dgn ....
  2. Open appropriate MicroStation file created in step 1.
  3. File > Raster Manager.
  4. Right Click on Left Side Plate and select **File Name...**
  5. Select appropriate standard plate PDF. And select OK.
    - If appropriate plate is NOT sheet one (i.e. Sheet 1 of 1 or Sheet 1 of 2 ...), you will need to detach and reattach –see below.
  6. Right Click on Right Side Plate and select **File Name...**
  7. Select appropriate standard plate PDF. And select OK.
    - If appropriate plate is NOT sheet one (i.e. Sheet 1 of 1 or Sheet 1 of 2 ...), you will need to detach and reattach –see below.
  8. Repeat step 2 thru 7 as needed.

**Note:** These MicroStation Files can be added to your Print Organizer Set(.pset). Since the files are referenced from <U:\pd\Standards\StandardPlatesPDF> you will always get the latest Standard Plate every time you plot.

Detach and Reattach standard plates.

1. Open appropriate MicroStation.
2. File > Raster Manager.
3. Right Click on appropriate file and select **Detach**.
4. **File > Attach > Raster.** (From Raster Manager)
5. Select appropriate standard plate and select Open.
6. In Raster Attachment Options
  - a. Right Click on the File name and select **Page Selection...**
  - b. Select the appropriate page and Select OK.
  - c. Under Actions Change “Place Interactively” to **YES**.
  - d. Select Attach.
  - e. Follow Prompts – using the yellow points for the Left Side Plate and the red points for the Right Side Plate.

## **MicroStation Print Organizer**

### **This documentation assumes:**

- MicroStation V8i.
- Bentley Configuration Utility has been run.
- MicroStation is open.

### **File > Print Organizer**

#### **File > Add Files to Set...**

Select **Add**

Add desired files.

(Alternatively, you can drag and drop design files into the Print Set hierarchical view from Windows Explorer.)

From Print definition creation options

**Browse** (Magnify Glass)

Select desired Print Style

**OK**

#### **File > Print**

Select the desired **Print Range**.

Select the desired **Destination**. (Following documented naming convention)

**OK**

**Note:** An error message in the Message Center may indicate the PDF is read-only, or another user may have it open.

## **MicroStation Print – Roll Plotting**

**This documentation assumes:**

- MicroStation V8i.
- Bentley Configuration Utility has been run.
- MicroStation is open.

**Place a Fence** around the desired plot area.

**File > Print**

**File > Select Bentley Driver**

Select SDDOTpdf\_Roll.pltcfg

**Open**

Select the desired **Scale**

**File > Print**

Select the desired **Destination**. (Following documented naming convention)

**OK**

**Note:** An error message in the Message Center may indicate the PDF is read-only, or another user may have it open.

**This creates a large format PDF. To produce a large format paper you will print this PDF to a Windows Printer capable of printing rolls.**

## **Numbering PDF Pages using Header and Footers**

### **This documentation assumes:**

- Adobe Acrobat 10
- The majority of your pages were created using MicroStation and/or Microsoft Word using SDDOT standard settings.
- All pages are 11 in. x 17 in.
- The PDF is open.
- File contains no Header and Footer information.
- The Header and Footer saved settings, as described below, are on your C: drive.

### **For Plan Sheets:**

1. Choose Tools > Pages > Header & Footer > Add Header & Footer.
2. From the "Saved Settings:" drop down box select "Title Block (Plans 11x17)"
3. Under "Right Header Text"  
Change the first "B" to the appropriate section. (DO NOT change <<1>>)  
Change the second "B" and "99" to the appropriate section and the total number of pages.
4. Optional - Project Number.  
Under "Left Header Text" fill in Project Number.
5. Confirm setting utilizing the "Preview".
6. Select OK.

This applies page numbers and total pages to all the pages in the PDF. If all the pages don't have the title block in exactly the same location those pages will need to be adjusted. One solution is to fill in the page numbers in the source software, i.e. Microsoft Excel. Or you can update the Header & Footer and apply it only to the pages selected in "Page Range Options...", you will also want to adjust the "Start Page Number" under "Page Number and Date Format..."



### **For Cross Section Sheets:**

After completing the above steps some page information will not be in the proper location.

### **For Cross Section Landscape sheets:**

1. Choose Tools > Pages > Header & Footer > Update...
2. From the "Saved Settings:" drop down box select "Title Block (Cross Sections 11x17 Landscape)"
3. Under "Right Header Text"  
Change the first "X" to the appropriate section. (DO NOT change <<1>>)  
Change the second "X" and "99" to the appropriate section and the total number of pages.
4. Optional - Project Number.  
Under "Left Header Text" fill in Project Number.
5. Select "Page Range Options..." and set the range of pages to modify.
6. Select "Page Number and Date Format..." and modify "Start Page Number" to define the starting page number.
7. Confirm setting utilizing the "Preview".
8. Select OK.

### **For Cross Section Portrait sheets:**

9. All pages will need to be rotated so the title block is right side up.
10. Choose Tools > Pages > Header & Footer > Update...
11. From the "Saved Settings:" drop down box select "Title Block (Cross Sections 11x17 Portrait)"
12. Under "Right FooterText"  
Change the first "X" to the appropriate section. (DO NOT change <<1>>)  
Change the second "X" and "99" to the appropriate section and the total number of pages.
13. Optional - Project Number  
Under "Left Footer Text" fill in Project Number.
14. Select "Page Range Options..." and set the range of pages to modify.
15. Adjust "Start Page Number" under "Page Number and Date Format..." for the pages to update.
16. Confirm setting utilizing the "Preview".
17. Select OK.

## **Add Header and Footer – Saved Settings**

These saved setting can be copied from U:\rd\Adobe\Acrobat\10.0\Preferences\HeaderFooter to C:\Users\trpr1xxx\AppData\Roaming\Adobe\Acrobat\10.0\Preferences\HeaderFooter\

Or run this batch file <U:\rd\Adobe\Acrobat.bat>

### **Title Block (Plans 11x17)**

Font – Arial 8  
Top Margin – 0.68  
Left Margin – 14.2  
Right Margin – 0.65  
Right Header Text - B<<1>>    B99

### **Title Block (Cross Sections 11x17 Portrait)**

Font – Arial 8  
Bottom Margin – 0.42  
Left Margin – 8.7  
Right Margin – 0.40  
Right Footer Text - X<<1>>    X99

### **Title Block (Cross Sections 11x17 Landscape)**

Font – Arial 8  
Top Margin – 0.6  
Left Margin – 14.2  
Right Margin – 0.40  
Right Header Text - X<<1>>    X99

- The “Right Header Text” is right justified text and controlled by the “Right Margin” setting .
- The “Left Header Text” is left justified text and is controlled by the “Left Margin” setting.
- To move the Project Number left or right adjust the Left Margin.
- To move Total Page Number left or right adjust the Right Margin.
- To move Page Number left or right adjust the number of spaces after <<1>> .

## **Searchable Text and WEB Links**

**This documentation assumes:**

- Adobe Acrobat Pro 10

Searchable text searchable and WEB links in the PDF of the plan sets will make the files more robust. Some pages are only images and need Optical Character Recognition (OCR) to allow this capability.

**Note: DO NOT** run OCR on all plan sheets. Run only on pages with images. Some pages that may need OCR are Note Sheets, Quantity Sheets and Data Sheets.

**Note:** Run OCR before adding a background i.e. "Not for Construction". Or you may get a message "This page contains renderable text."

- **Optical Character Recognition (OCR)**

1. Open PDF with Adobe Acrobat.
2. Determine which pages need OCR. (See Note above)
3. Select the Recognize Text command. **Tools > Recognize Text > In This File**
  - Select **From page: and input page range**.
  - Confirm Settings: Primary OCR Language: English (US)  
**PDF Output Style: Searchable Image (Exact)**
    - If not set **Edit >** and select to match
  - Select **OK**
4. Run appropriate Wizard to save the file.

**Note:** If a page with OCR is replotted/replaced , OCR will need to be rerun on that page.

## **Reducing Adobe PDF file size and Enabling Fast Web View**

After you've made any final changes to the Adobe PDF document reduce the size and enable Fast Web View.

### Reduce File Size

Select **File > Save As > Reduce Size PDF...**

Select the version compatibility you need, and click **OK**.

(Recommended "Acrobat 5.0 and later")

Click **Save**

When you choose Save As with the same file name, Acrobat rewrites the entire PDF document as efficiently as possible. When you choose Save, changes are appended to the file, which may increase the file size. By default, Acrobat also optimizes a PDF document for Fast Web View when you save it using the Save As command. Documents optimized in this way can be downloaded one page at a time from a Web server or network, reducing the time it takes to access and view them.

## **Printing a PDF**

PDF's can be printed on different sizes of paper and different scaling. If possible it is best to print to a paper size that matches the PDF page size with no scaling. Most plan sheets will be on 11x17 PDF page size, so if your printer is capable of printing 11x17 you can print a scalable print. A simple way to do this is the check "Choose Paper Source by PDF Page Size" and set "Page Scaling: None" when printing.

If your printer can only print 8 ½" x 11" you can still print but it may not be to scale. You want to uncheck "Choose Paper Source by PDF Page Size" and set "Page Scaling: Fit Page".

**Note:** the preview will show the size and zoom.

## **Viewing a PDF**

Adobe allow for many options and tools to make viewing easier. Some of these you can set with the Preference dialog box. Preferences affect your view of all PDF documents, but they do not affect printing or what other users see when they view the same documents on another computer.