# LAB 17 - Creating Plan Sheets

Creating Plan and Profile sheets is a repetitive and time consuming process. InRoads has automated this process. This lab demonstrates P and P sheet creation and editing with the InRoads Plan and Profile Generator command.

### **Chapter Objectives:**

- Input data for the initial P and P sheet creation
- Prepare the seed files for the Plan and Profile Generator command
- Edit sheet extents and recreate sheets
- Move reference files within the sheet border
- Add a model file to a single sheet

Before beginning this lab, verify that the following files are loaded:

- C:\Projects\12345\Design\InRoads\12345DES\_Geometry.alg
- C:\Projects\12345\Design\InRoads\12345 existing ground.dtm
- C:\Projects\12345\Design\InRoads\12345DES.dtm
- C:\Projects\12345\Design\Drawings\Reference Files\12345DES\_Prof.dgn
- C:\Projects\12345\Design\Drawings\Reference Files\12345DES\_Model.dgn
  - **Note:** The 12345DES\_Model.dgn file should have feature data displayed from previous labs. If this file is empty or if data not appropriate for plan sheets is near the SH 86 alignment, then all data in the the file should be deleted and surface features from the 12345DES.dtm and the SH 86 alignment should be displayed prior to working the lab.

## Lab 17.1 - Creating 100 Scale P and P Sheets

This lab illustrates the user input required to produce an initial set of P and P sheets.

1. Open the *C:\Projects\12345\Design\Drawings\Reference Files\12345DES\_Prof.dgn* file in MicroStation.

The step below sets the scale factor so that text displayed by InRoads will be the proper size for a 100 scale plan set.

 Select Tools > Options and <D> the Factors tab and set the scale factors to 100 for the Text Scale Factor and the Cell Scale Factor. Set the Linestyle Scale Factor to 1. This can also be done from the Global Scale Factors dialog box.

Precision	Genera	al	Units an	d Format	Geom	etry
Tolerances Factors		Abbreviations Rail		Rai	al Sight Distar	
Text Scale F	actor:	10	0.0000	_	Help	
Cell Scale Fa	actor:	10	0.0000.0			
Line Style So	ale Factor:	1.0	0000			
		1	Scale F	actors	5	
			Text:	100.0000		Apply
			Cell:	100.0000	r	Close
			Line Shie	1 0000		

#### 3. **<D> Apply** then **Close**.

Preferences are predefined menu settings that are used to set up the dialog box for a particular style of plan sheet. In this case, a 100 scale plan and profile sheet with a 2 times vertical exaggeration is desired. The steps below select the desired preference.

- 4. From the InRoads menu bar, select **Drafting > Plan and Profile Generator**. The **Plan** *and Profile Generator* dialog box is displayed.
- 5. On the Plan and Profile Generator *Main* tab, <D> the **Preferences** button. This displays the *Preferences* dialog box.
- 6. From the *Preferences* dialog box, highlight 100 Scale P&P (2x Vert).
- 7. <D> Load.

Border an	d Title	Symbo	ls and Details		Match Lin	es	Sheet	Index	
Main	Plan C	ontrols	Profile Cont	trols	Sheet I	ayout	View	Layout	
Method			Horizontal	Alignment	:			4.24	
Plan Only	у		SH 86	-	-	-		<i>m</i>	
Plan and Profile O	l Profile		Geometry I	Projects in	this VDF:	-			
Plan Views	14							ciþ	
Use Flar	views					Net	. I lalaaa att		
Ose Stat	ion Limits					not	ed, all measu	rements	
Profile View	s					fort	this command del units	are in	
Use Prof	ile Views						aci anito.		
Use Stat	ion Limits		-Station L	imits			Default		
Sheets			Start:	203+80.3	28	<b>+</b>	203+80.28		
Generate	e Sheets		Stop:	260+43	16	ا ا	260+43.16		
VDF	Information C	nly	Length:	200+43.	+3.10 +				
VDF	Information a	nd Host Files	Lengur.	1400.00		<del>-</del>			
lan Views:			Total: 0	Profile Vie	🐂 Prefe	rences			
ln	Name	Start	Stop	Name	Name:				Clos
•	III		4		100 Sca 100 Sca 100 Sca 100 Sca 100 Sca 100 Sca	ile Full P ile Full P ile Full P ile Full P ile P&P	Profile 10x Profile 1x Profile 2x Profile 5x (1x Vert) (2x Vert)		Loa Sav
		Apply	Prefere	nces	100 Sca 100 Sca 20 Scale	ile P&P ile ROW e Full Pla	(5x Vert) / Plan Sheet an Sheet	- <u> </u>	)ele
					•		•		Hel

8. **<D> Close**. This dismisses the Preferences dialog box.

Preferences do not make all of the desired changes to menu settings, in particular those that are project specific. The steps below make the project specific changes to the menu settings.

- 9. Back on the *Main* tab, in the Station Limits area, key in *204+00.00* for the *Start* station.
- 10. key in *260+00.00* for the *Stop* station.

Sheets -	station Limits rate Sheets DF Information On DF Information an	ly d Host Files T	Station Start: Stop: Length:	204+00.00 260+00.00 1400.00	Default 203+80 (+) 260+41 (+) 260+41	0.28 3.16
In	s: Name	Start	Stop	Name	Start	Stop
•	m	Apply	► Prefere	ences) Clos	;e	

Reference files that make up the plan portion of the sheets are selected from the Plan Controls tab. The following steps are used to select the desired files.

- 11. **<D>** the **Plan Controls** tab.
- 12. **<D>** the **Model Files** button. This displays the **Open Model File** dialog box.

📲 Plan and Profile	Generator				- 0 론
Border and Titl	Border and Title Syn		d Details	Match Lines	Sheet Index
Main	Plan Contro	ols Pr	ofile Controls	Sheet Layout	View Layout
Seed View Name:	STA				Model Files
Width Left:	-200.00		<del>+</del>		
Width Right:	200.00		+		
Overlap:	0.00		+		Uala
Boundary Chords:	6				нер
Force Rectang	ular Bounda	ny			
Model Files:					

- 13. Highlight the C:\Projects\12345\Design\Drawings\Reference Files\12345DES\_Model.dgn file.
- 14. **<D> Open**. The file is added to the *Model Files* list and the *Open Model File* dialog box is dismissed.
- 15. **<D>** the **Model Files** button. This displays the **Open Model File** dialog box.
- 16. Highlight the C:\Projects\12345\ROW\_Survey\Drawings\Reference Files\12345SURV\_Topo.dgn file.
- 17. **<D> Open**. The illustration below shows the Plan Controls tab with the two files added.

Border and Title Main F Seed View Name: 9 Width Left: - Width Right: 2 Overlap: ( Boundary Chords: ( Force Rectangula Model Files:	Plan Controls STA -200.00 200.00 0.00 6 lar Boundary	Dymbols and Pr	Details       ofile Controls       +       +       +       +	Match Lines Sheet Layout	Sheet In View Li Model F	ndex ayout iiles p
Main F Seed View Name: Width Left: Width Right: Overlap: Boundary Chords: Force Rectangula Model Files:	Plan Controls STA -200.00 200.00 0.00 6 lar Boundary		+       +       +       +       +	Sheet Layout	: View Li Model F	ayout iiles p
Seed View Name: S Width Left: Width Right: Overlap: Boundary Chords: Force Rectanguar Model Files:	STA -200.00 200.00 0.00 6 lar Boundary		<del>+</del> +		Model F	p
Width Left: Width Right: Overlap: Boundary Chords: Force Rectangula Model Files:	-200.00 200.00 0.00 6 lar Boundary		+ + +		Help	p
Width Right: 2 Overlap: 0 Boundary Chords: 0 Force Rectangula Model Files:	200.00 0.00 6 Iar Boundary		+ +		Hel	P
Overlap: ( Boundary Chords: ( Force Rectangula Model Files:	0.00 6 Iar Boundary		<del>+</del>		Hel	p
Boundary Chords:	6 lar Boundary		_		Heij	P
Force Rectangula	lar Boundary					
Design\Drawings\R ROW_Survey\Draw	ererence_Hie rings\Referen	is\12345DE ce_Files\12	S_Model.dgn 345SURV_To	ign ▶		

The Profile controls tab determines how the profiles will be displayed. Most of the settings are by the selected preference, however, it is a good idea to check the Surface area and make sure it is set up as desired. In this exercise, only the existing ground is to be displayed in the profile so it is the only one toggled on. The highlighted surface is used to determine where elevation shifts occur. Because the existing ground is the only surface displayed, it is also used to determine elevation shifts.

18. **<D>** the **Profile Controls** tab.

- 19. In the *Surface* area, toggle off all surfaces except *12345 existing ground*.
- 20. Verify that the surface **12345** existing ground is toggled on and highlighted. The illustration below shows the tab as completed.

Bord	er and Title		Symbo	ls and Details	_	Match Lines		Sheet Index
Main	Pla	an Cor	trols	Profile Controls		Sheet Layo	ut	View Layout
Seed Vie Set Nam Profile Pr Vertical / Surface:	ew Name: e: reference: Nignment:	STA SH 8 2x Ve None	6 ertical	V V				Help
Defa	ult 45 existing gri 45DES	bund	Shift a     Shift a     Shift a     Shift a     Do Na     Note: Hig     control el	at Major Stations at Minor Stations Where Needed ob Shift shighted surfaces evation shifts.		Vertical Spacing Bottom to Bot	( 500.00 tom ( 500.00	<ul> <li>Right to Left</li> <li>Top to Bottom</li> </ul>
Profile H Profiles p Margin Top: Left:	eight: per Column: s 125.00	200.0	00 Bottom: Right:	25.00	Ē			$\langle \rangle$
Lott.	75.00		rugitt.	/5.00		<u>Luininin</u>	••••••••••••••••••••••••••••••••••••••	

With the exception of the Host File, the Sheet Layout tab is set by the prererence selected. The Host File is the base name that the finished sheets will be called. The host file name is incremented for each sheet created so that they will all have a unique name. In the steps below, the host file name is entered.

21. **<D>** the **Sheet Layout** tab.

- 22. **<D>** in the *Host File* field, then **<D>** the button. This displays the *Save As* dialog box.
- 23. In the *Save As* dialog box, navigate to the *C:\Projects\12345\Design\Drawings\* folder.
- 24. In the File Name field, key in 12345DES\_PnP.dgn.

- 🐂 Plan and Profile Generator T Border and Title Symbols and Details Match Lines Sheet Index Sheet Layout Main Profile Controls Plan Controls View Layout Sheet Number: 1 Host File Content Name: 1 Host File: Single Sheet Each C:\Projects\12345\Design\Drawing Seed Host File: C:\Workspace\Workspace-CDOT\_ All Sheets in One Edit Symbology... Sheet Location L Kave As × 🗸 R Save in 📗 Drawings 🕝 🤌 📂 🛄 <del>-</del> E A Name Date modified Туре Size 2 Cross\_Sections 11/21/2007 3:38 PM File Folder First **Recent Places** Reference\_Files 4/14/2009 8:39 AM File Folder 퉬 Tabs 1/26/2009 1:10 PM File Folder 🛃 12345DES\_EarthworkQ... 11/20/2007 9:46 AM Bentley MicroStati... Desktop 🔏 12345DES\_GenlNote##... 11/20/2007 9:46 AM Bentley MicroStati... She 🕺 12345DES\_Plan##.dgn 11/20/2007 9:46 AM Bentley MicroStati... 84 Clipp 🛃 12345DES\_PnP##.dgn 👘 11/20/2007 9:46 AM Bentley MicroStati... Leve Chris Ferree 🕺 12345DES\_Prof##.dgn 11/20/2007 9:46 AM Bentley MicroStati... Symb 🔏 12345DES\_SAQ01.dgn 11/20/2007 9:46 AM Bentley MicroStati... 🔏 12345DES\_SAQ##.dgn 11/20/2007 9:46 AM Bentley MicroStati... 🔳 U 🕺 12345DES\_StdPlanList.... 11/20/2007 9:46 AM Bentley MicroStati... Computer File name 12345DES PnP.dan Save Network Save as type: MicroStation Design Files (\*.dgn) Ŧ Cancel Help
- 25. <D> the Save button. This dismisses the *Save As* dialog box adds the file name to the *Host file* field.

The Border and Title tab identifies the cell used for the sheet border. This tab should be checked to ensure that the proper border cell is being used. Also check to make sure that all of the toggles in the symbology area are turned off. If left on, erroneous data could be displayed on the sheets.

- 26. **<D>** the **Border and Title** tab.
- 27. Verify that the Sheet\_Design-Sheet cell is selected for the cell Name.

Main	Plan Control	s Pr	ofile Controls	Sheet Layout	View Layout
Border and T	Title	Symbols and	Details	Match Lines	Sheet Index
Border					Browse
Cell		C	Reference File	e Name:	
Name:	SHEET Des	ian-{ 👻	C:\Program Fi	iles\Workspace-CDOT\	
Retain C	ell Levels for E	ach Sheet	Sheet Size:	B (11 x 17) 🔹	
Come Le	welfer Each S	haat	Custom Width	16.00	Help
			Custom Heigh	t 10.50	
Onique l	Level for Each	Sheet	Title Block Da	ta File Name:	
Sheet Level:	1				
Level Step:	1				
Scale:	100.00			Ealt	
ymbology:				Location in Paper III	oito:
Object		Name		X: 13.42	Tits.
Rotation			Ц	X: 0.02	
Uate			H	U.92	
User Text 2			H	User Lext:	
User Text 3				-	
User Text 4				Station Format:	
User Text 5				s+sss.ss	-
•				Use Sheet Level	

28. Verify that all of the check boxes in the *Symbology* area are toggled off.

- 29. **<D>** the **Apply** button.
- 30. **<D>** in the MicroStation view window.

The command creates a profile for each sheet (there are 5 sheets in this project) and then creates the sheets, each as a separate dgn file. The last sheet is shown below.



The plan and Profile generator offers an easy to move between generated sheets. Using the Sheet Index tab, sheets can be opened in without having to navigate through the MicroStation menus. Use the steps below to review the other sheets.

- 31. **<D>** the **Sheet Index** tab.
- 32. Highlight sheet **1** in the *Sheet Index* list.
- 33. **<D>** the **Show Sheet** button.

Plan an	d Profile Genera	ator						
Main	Plan Co	ontrols	Profile Controls	M	Sheet Layout	View Layout		
VDF File Name: Open Open Show Sheet Clipping Boundary Mode:  Calculate  Use Existing								
Sheet Ind	lex:					Save As		
Sheet	Sheet Name		Host File	She	et Rotation			
1	1	C:\Projects	\12345\Design\Drav	vings 105	5 <sup>^</sup> 00'00''	Create Plot Set		
4 5 Sheet Vie	3 C:\Projects\12345\Design\Drawings 100^0000" 4 C:\Projects\12345\Design\Drawings 91^00'00" 5 C:\Projects\12345\Design\Drawings 101^00'00" None Delete Sheet Regenerate Sheet Show Sheet ieet Views:							
Sheet	View Typ	e	View Name		Anchor X	Anchor Y		
1	Plan	S	TA 204+00.00		1.75	8.50		
1	Profile	S	TA 204+00.00		1.75	1.75		
						Edit		
		Apply	Preferences.		Close			

34. Repeat steps 31 and 32 for the remaining sheets.

### Lab 17.2 - Creating 50 Scale P and P Sheets

To switch from 100 scale sheets to 50 scale requires some additional setting changes. Most of these are handled through the preferences, however the Annotation Scale for the profile and seed host file and the InRoads Scale Factors must be set before executing the command. This insures that the correct annotation scale is applied to each sheet.

The (MicroStation) annotation scale does not affect graphic elements displayed by InRoads but it will affect elements added with MicroStation commands.

This lab uses the same data as above to create a set of 50 scale P&P sheets.

In the steps below, the model properties are changed in the 3D-Seed\_CDOT.dgn (seed host file). This will ensure that each P and P sheet created will have the proper annotation scale for the project.

1. Using the MicroStation menu bar, open the:

 $\label{eq:c:workspace-CDOT_XM} C: Workspace-CDOT_XM \ Standards-Global \ MicroStation \ Seed \ Seed \ CDOT. \ dgn$ 

- 2. **<D>** The **Models** button on the MicroStation *Primary* toolbar. This displays the Models dialog box.
- 3. On the **Models** dialog box, **<D>** the **Edit Model Properties** button. This displays the *Model Properties* dialog box.
- 4. Set the *Annotation Scale* to 1'' = 50' using the drop down menu.
- 5. **<D> OK**. This dismisses the *Model Properties* dialog box.

)T.dan (3D - V8 DGN) - MicroStation V8 XM Edition	
T Help	
• [□ • ⊡ •  • ∰ • ∰	े • 🞠 • 🛈 🕂 🕁 • 阕
Models	
Type 2D/3D Name	Description
Model Properties	Master Model
Iype:         Design         3D            Name:         CDOT Default	
Description: Master Model	
I"=50"         50.0000( : 1.00000           Line Style Scale:         Annotation Scale	
Update Fields Automatically Cell Properties Cell Properties Cell Type: Graphic  Cell Type: Graphic Cell Type: Graphic	
QK Cancel	

- 6. **<D> Yes** on the message window that is displayed. This has no effect because the drawing is empty.
- 7. Close the *Models* dialog box.
- 8. From the MicroStation menu bar, select File > Save Settings.

1	¢ C	Worksp	pace\Work	space-CDO	T_XM\S	tandards-0	Global\MicroSt	tation\Seed	\3D-See	d_CDOT.dgn (3D -	V8
:	<u>F</u> ile	<u>E</u> dit	E <u>l</u> ement	<u>S</u> ettings	<u>T</u> ools	<u>U</u> tilities	Wor <u>k</u> space	Window	<u>H</u> elp	CDOT Help	
	1	New								Ctrl+N	
2	6	Open								Ctrl+O	
Ţ		<u>Close</u>								Ctrl+W	
1		<u>S</u> ave								Ctrl+S	
		Save <u>A</u> s									
		Compre	ess								F
	I	Sa <u>v</u> e Se	ttings							Ctrl+F	
-	Q	Project	Explorer								
E		<u>R</u> eferen	ce								

**Note:** The changes to the seed file only last until the computer is logged off. At the next log in, the settings revert back their original state. The sheets created from the seed file maintain the changes.

The same setting made above must also be made in the dgn file that will contain the profile information. The following steps remove the data from the previous lab and update the model properties and InRoads scale factors for 50 scale sheets.

- 9. Open the C:\Projects\12345\Design\Drawings\Reference Files\12345DES\_Prof.dgn file.
- 10. Select File > Save As from the MicroStation menu bar. Navigate to: C:\Projects\12345\Design\Drawings\Reference Files\
- 11. Key in *12345DES\_Prof\_50Scale.dgn* for the file name.
- 12. <D> Save.
- 13. Delete all of the data in the dgn file.
- 14. Repeat steps 2 through 8 above.

The dgn files are ready for the new scale. Next the InRoads settings are changed for 50 scale..

- 15. From the InRoads menu bar, select **Tools > Options** and **<D>** the **Factors** tab and set the scale factors to **50**. This can also be done from the **Global Scale Factors** dialog box.
- 16. **<D> Apply** and then **<D> Close** to dismiss the dialog box used.
- 17. Display the Plan and Profile Generator dialog box.
- 18. **<D>** the **Main** tab.
- 19. **<D>** the **Preferences** button. This displays the **Preferences** dialog box.
- 20. From the *Preferences* dialog box, highlight 50 Scale P&P (1x Vert).
- 21. <D> Load.
- 22. **<D> Close**. This dismisses the Preferences dialog box.

Freferences		×
Name:		Close
50 Scale Double Plan 50 Scale Double Profile 10x 50 Scale Double Profile 1x	*	Load
50 Scale Double Profile 1x 50 Scale Double Profile 2x 50 Scale Double Profile 5x		Save
50 Scale Full Plan Sheet 50 Scale Full Profile 1x		Save As
50 Scale P&P (1x Vert)	Ţ.	Delete
		Help
Active Preference: 50 Scale PF	9 (1x	Vert)

Except for the Host File name, the user defined settings are still active and are used for this lab. To set the Host File name:

- 23. **<D>** the **Sheet Layout** tab.
- 24. **<D>** in the *Host File* field, then **<D>** the button. This displays the *Save As* dialog box.
- 25. In the Save As dialog box, navigate to the C:\Projects\12345\Design\Drawings\ folder.
- 26. In the File Name field, key in 12345DES\_PnP\_50Scale.dgn.
- 27. <D> the Save button. This dismisses the *Save As* dialog box and adds the file name to the *Host file* field.
- 28. **<D>** the **Apply** button.
- 29. In the "Do you want to regenerate Plan Views?" message box, <D> Yes.
- 30. In the "Do you want to regenerate ProfileViews?" message box, <D> Yes.
- 31. **<D>** in the MicroStation view window.

Nine 50 scale sheets are created. Follow the steps below to check that the correct annotation scale was used.

- <D> The Models button on the MicroStation *Primary* toolbar. This displays the Models dialog box.
- On the Models dialog box, <D> the Edit Model Properties button. The Model Properties dialog looks like the illustration below.

Model Properties
Type Design
Name: CDOT Default
Description: Master Model
<u>R</u> ef Logical:
<u>▲</u> 1"=50' ▼ 50.00000(: 1.00000
Line Style Scale: Annotation Scale
Update Fields Automatically
Cell Properties
<u>C</u> an be placed as a cell     Cell Type: Graphic
<u>C</u> an be placed as an annotation cell
<u>O</u> K Cancel

- 34. **<D> Cancel** to dismiss the *Model Properties* dialog box.
- 35. Close the *Models* dialog box.

## Lab 17.3 - Edit Sheet Extents

After examining the sheets created in the last lab, the intersection on sheet 4 should be centered on the sheet. In this lab, the sheet extents are changed to center the intersection.

First, view sheet 4 to determine the amount of shift required.

- 1.  $\langle D \rangle$  the Sheet Index tab.
- 2. Highlight sheet **4** from the *Sheet Index* list.

Main	Plan C	Controls	Profile Controls	Sheet Layout	View Layout
Bord	er and Title	Symt	ools and Details	Match Lines	Sheet Index
VDF File	Name: CAProje	cts\12345\	Design \In Roads \50sca	le.vdf New	Open
- Show S Clipping	Sheet   Boundary Mode	e: 💿 Calcu	ılate 🔘 Use Existin	g	Save
Sheet Ind	dex:				Save As
Sheet	Sheet Name		Host File	Sheet Rotation	Help
1	1	C:\Projects	s\12345\Design\Drawir	ngs 105^00'00'' _	Create Plot Set
2	2	C:\Projects	s\12345\Design\Drawin	ngs 105^00'00''	
3	3	C:\Projects	s\12345\Design\Drawir	ngs 105^00'00''	
4	4	C:\Projects	s\12345\Design\Drawir	ngs 105^00'00''	All
5	5	C:\Projects	s\12345\Design\Drawir	ngs 95 00'00" 🔻	None
` <u> </u>				,	Hono
	Delete She	eet Re	generate Sheet	Show Sheet	
Sheet Vie	ews:				
Sheet	View Ty	ре	View Name	Anchor X	Anchor Y
4	Plan	S	TA 224+00.00	1.75	8.50
4	Profile	S	TA 224+00.00	1.75	1.75
					Edit

#### 3. **<D>** the **Show Sheet** button.



Examining sheet 4 shifting two stations (200 feet) to the left centers the intersection.

- 4. Open the C:\Projects\12345\Design\Drawing\Reference Files\12345DES\_Prof.dgn file.
- 5. Delete the previously displayed profiles.

Plan and Profile Generator can be used to specify the station extents of any sheet. Here, sheet 4 is adjusted to center the intersection and the other sheets will automatically be changed to match. The steps below update the station extents on sheet 4.

- 6.  $\langle D \rangle$  the Main tab.
- 7. Toggle on Use Plan Views.
- 8. Highlight sheet **4** in the *Plan Views* list.
- 9. **<D>** the **Edit** button. This displays the *Edit Plan View* dialog box.

Border and Title Symbols a		and Details Match Lir		Match Line	s	Sheet Index
Main Plan Control	s Pr	ofile Cont	rols	Sheet La	yout	View Layout
Method	н	orizontal /	Alignment:		ſ	Edit
Plan Only		SH 86		+		E.u
Plan and Profile	G	eometry F	<sup>o</sup> rojects in thi	is VDF:		
Profile Only	1	2345DE	5_Geometry			
Plan Views					[	Help
Use Plan Views						
Use Station Limits					Note: Ur	nless otherwise
Profile Views					for this c	ommand are in
Use Profile Views					model un	iits.
Ose Station Limits		Station Li	mits		Defer	L.
Sheets		Start:	204+00.00		-+ 203+	π 80.28
Generate Sheets		Ston	200.00.00			43 16
VDF Information Only		Longth:	200+00.00			
VDF Information and He	ost Files	Lengui.	/00.00			
Plan Views:	Total	: 9	Profile Views	s:		Total: 9
In Name	Start	Stc 🔷	Name		Start	Stop
3 STA 217+00.00 2	17+00.00 2	24+	STA 204+0	00.00	204+00.00	210+00.00
	24+00.00 2	31+	STA 210+0	00.00	210+00.00	217+00.00
4 STA 224+00.00 2			1510.717.0	N 1 1 1 1 1	ZT ZEOOLOOL	22/14/00/00

- 10. In the *Edit Plan View* dialog box, key in *222+00.00* for the *Start* station.
- 11. Key in *229+00.00* for the *Stop* station.

🚔 Edit Plar	n View	1	122	X
View Name:	STA 224+00.00			Apply
Start:	222+00.00	Stop:	229+00.00	Close
Rotation:	105^00'00''	Overlap:	0.00	Model Files
Width Left	-100.00	Width Right:	100.00	
Force Re	ectangular Boundary Bou	undary Chords:	6	
Model Files:				Next >
C:\Projects	s\12345\Design\Drawing: s\12345\ROW_Survey\D	s\Reference_F rawings\Refer	iles\12345DES_Model.dg/ ence_Files\12345SUBV_1	Help
•			4	
Nested A	Attachments			

12. **<D> Apply**. This displays the *Adjust Plan Views* dialog box.

The next steps update the remaining sheets to match the changes made to sheet 4.

- 13. In the *Adjust Plan Views* dialog box, toggle on *Adjust all views to maintain view* lengths.
- 14.  $\langle D \rangle$  the OK button.

Adjust Plan Views	L X
View Adjustment	ОК
$\bigcirc$ Do not adjust any other views	Help
Adjust only the neighboring view	
Adjust all views to maintain view lengths	

15. **<D> Yes** on the *"Update view names in corresponding sheets?"* Message box.

Bentley InRoads XM Edition	
Update view name in correspond	ling sheets?
Yes	No

16. In the *Edit Plan View* dialog box, *<D>* Close.

Edit Plan	View	1	1	Ex.
View Name:	STA 222+00.00			Apply
Start:	222+00.00	Stop:	229+00.00	Close
Rotation:	105^00'00''	Overlap:	0.00	Model Files
Width Left	-100.00	Width Right:	100.00	- Provious
Force Re	ctangular Boundary Bou	undary Chords:	6	< Frevious
Model Files:				Next >
C:\Projects C:\Projects	s\12345\Design\Drawing: s\12345\ROW_Survey\D	s\Reference_Fi rawings\Refere	les\12345DES_Model.dgi ence_Files\12345SURV_1	Help
<	III		•	
Nested A	ttachments			

Reducing the start station by 2, shifts the intersection to the middle of the sheet. Toggling on *Adjust all views to maintain view lengths,* resets the stations on the remaining sheets.

Finally, the steps below regenerate the sheets.

- 17. On the *Plan and Profile Generator* dialog box, **<D> Apply**.
- 18. **<D> Yes** in the, *"Do you want to regenerate Profile Views?"* message.
- 19. **<D>** in the MicroStation view window.
- 20. After processing is complete, examine sheet 4 as described at the first of the lab. The illustration below shows how the sheet looks.



### Lab 17.4 - Moving Reference Files Within the Sheet Border

After adjusting the sheets in the last lab, the first sheet has only 400 feet of data. The data is aligned with the left margin of the sheet border, but should be aligned with the right margin.

This lab demonstrates how to shift the data within the sheet border.

1. Examine sheet 1, as described at the first of the lab. The illustration below shows sheet 1. The reference files for the plan and profile need to be shifted 300 feet or 6" (paper scale) to the right.



- 2. On the Plan and Profile Generator's *Sheet Index* tab, highlight sheet **1** in the *Sheet Index* list.
- 3. In the *Sheet Views* list, highlight sheet 1 Plan.

- 🐂 Plan and Profile Generator - • 💌 Main Plan Controls Profile Controls Sheet Layout View Layout Symbols and Details Sheet Index Match Lines Border and Title VDF File Name: :\Projects\12345\Design\InRoads\50scale.vdf New. Open. Show Sheet Save Clipping Boundary Mode: 

  Calculate
  Use Existing Save As. Sheet Index: Help Sheet Sheet Name Host File Sheet Rotation Create Plot Set. 01 C:\Projects\12345\Design\Drawings 105^00'00' C:\Projects\12345\Design\Drawings 105^00'00 02 3 03 C:\Projects\12345\Design\Drawings 105^00'00'' 04 C:\Projects\12345\Design\Drawings 105^00'00" 4 All 05 C:\Projects\12345\Design\Drawings 99^00'00'' 5 ٠ None Ш Delete Sheet Regenerate Sheet Show Sheet Sheet Views: Sheet View Type View Name Anchor X Anchor Y 8.50 1 Plan STA 204+00.00 1.75 Profile STA 204+00.00 1.75 1.75Edit.. Apply Preferences... Close
- 4. **<D> Edit**. This displays the *Edit Sheet View* dialog box.

- 5. In the Anchor X field, key in 7.75.
- 6. **<D> OK**. This dismisses the *Edit Sheet View* dialog box.

🚔 Edit Shee	t View	<u> </u>
Sheet:	1	ОК
View Type:	Plan	Cancel
View Name:	STA 204+00.00	Help
Anchor X:	7.75	Tiop
Anchor Y:	8.50	

- 7. In the *Sheet Views* list, highlight sheet **1 Profile**.
- 8. **<D> Edit**. This displays the *Edit Sheet View* dialog box.
- 9. In the Anchor X field, key in 7.75.

#### 10. **<D> OK**.

🚔 Edit Shee	t View	
Sheet:	1	ОК
View Type:	Profile	Cancel
View Name:	STA 204+00.00	Help
Anchor X:	7.75	
Anchor Y:	1.75	

- 11. **<D>** the **Regenerate Sheet** button.
- 12. **<D> Yes** on the message box that is displayed.

Main	Plan (	Controls	Profile Controls	Shee	t Layout	View Layout	
Borde	er and Title	Symi	ools and Details	Match I	ines	Sheet Index	
VDF File	Name: :\Proje	ects\12345\	Design\InRoads\50sc	ale.vdf	New	Open	
Clipping	) Boundary Mod	e: 💿 Calcu	late 🔘 Use Existi	ng		Save	
Sheet Inc	dex:			-		Save As	
Sheet	Sheet Name		Host File	Sheet Ro	tation 🔺	Help	
1	01	C:\Projects	\12345\Design\Draw	ings 105^00'(	0" =	Create Plot Set	
2	02	C:\Projects	\12345\Design\Draw	ings 105^00'0	0"		
3	03	C:\Projects	\12345\Design\Draw	ings 105^00'0	0"		
4	04	C:\Projects	\12345\Design\Draw	ings 105^00'0	0"	All	
5	05	C:\Projects	\12345\Design\Draw	ings 99^00'0	D" -		
•				-	•	None	
Sheet Vie Sheet	Delete Sh ews: View Ty	eet Re Bentley In	generate Sheet	Show Sheet			
1 1	Plan Profile	<u>^</u>	This sheet border wish to continue?	and its data	will be del	eted and re-created. D	o you
					1	Yes	No



The sheet now looks like the illustration below.

## Lab 17.5 - Adding a Model File to a Single Sheet

Many of the specialty groups create data that is included on the plan sheets. However, much of this information applies to a localized area and is contained on one or two sheets in the set ( a bridge or intersection, for example).

This lab demonstrates how to attach a Model File to a single P&P Sheet. A traffic signal plan is added to Sheet 4.



1. Examine sheet 4, as described at the first of the lab. The illustration below shows sheet 4.

Additional models are added from the Edit options on the Main tab of the Plan and Profile Generator dialog box. The steps below illustrate this process.

- 2.  $\langle D \rangle$  the Main tab.
- 3. Highlight sheet **4** in the *Plan Views* list.

Border and Title	Sumboli	and Details		Match Lines	Sheet Index
Main Plan	Controls	Profile Co	ntrols	Sheet Lavout	View Lavout
Tidi	Controla	Tonic Col	1010	oneer Layout	view Layour
Method		Horizonta	I Alignment:		Edit
Plan Only		SH 86		▼ +	
Plan and Profile		Geometry	Proiects in t	his VDF:	
Profile Only		12345DE	ES Geometr	v	
Diana Manura		, i	_	, I	Help
Use Plan Views					
				Note	Unless otherwise
Use Station Limits		J		noted	, all measurements
Profile Views		n l		for thi	s command are in Lunits
Use Profile Views				mode	i unito.
Ose Station Limits		Station	Limits		с. н.
Sheets		Start	204-00-0	⊥_20	1auit 13+80.28
Generate Sheets		ordin.	204+00.0	J 20	0.00.20
OVDF Information	Only	Stop:	260+00.0	0 <u>+</u> 26	0+43.16
VDF Information	and Host Files	Length:	700.00	-#-	
lan Views:	1	Fotal: 9	Profile View	NS:	Total: 9
In Name	Start	Stc 🔦	Name	Start	Stop
3 STA 215+00.00	215+00.0	222+	STA 204+	00.00 204+00.0	0 208+00.00
4 STA 222+00.00	222+00.0	0 229+	STA 208+	+00.00 208+00.0	0 215+00.00
	220±00 U	1 236-	STA 215	00 00 215±00 0	<u>nn 222∓UU UU</u>

4. **<D>** the **Edit** button. This displays the *Edit Plan View* dialog box.

5. In the *Edit Plan Views* dialog box, *<D>* the **Model Files** button.

🕌 Edit Plan	View			×
View Name:	STA 222+00.00			Apply
Start:	222+00.00	Stop:	229+00.00	Close
Rotation:	105^00'00''	Overlap:	0.00	Model Files
Width Left	-100.00	Width Right:	100.00	< Previous
Force Re	ctangular Boundary Bou	undary Chords:	6	
Model Files:				Next >
C:\Projects	12345\Design\Drawings	Neference_Fi	es\12345DES_Model.dg	Help
C:\Projects	12345\ROW_Survey\D	rawings\Refere	nce_Files\12345SURV_1	
•	III		۴.	
Nested A	ttachments			

- In the Open Model File dialog box, navigate to C:\Projects\12345\Traffic\_ITS\Drawings\Reference\_Files.
- 7. Highlight the **12345Signal01.dgn** file.
- 8. **<D> Open**.
- 9. Back in the *Edit Plan Views* dialog box, *<D> Apply*.

This change only occurs on sheet 4. Therefore. there is no need to update the other sheets.

- 10. **<D> No** in the message box that is displayed.
- 11. **<D> Close** to dismiss the *Edit Plan View* dialog box.

Edit Pla	n View			23
View Name	STA 222+00.00			Apply
Start:	222+00.00	Stop:	229+00.00	Close
Rotation:	105~00'00''	Overlap:	0.00	Model Fles
Width Left	-100.00	Width Right:	100.00	C Preuteur
Force R	ectangular Boundary B	oundary Chords:	6	Crievious
Model Files				Next >
C:\Project	s\12345\Design\Drawin s\12345\ROW_Survey\	gs\Reference_Fi Drawings\Refere	iles\12345DES_Model.dg ince_Files\12345SURV_1	Help
C:\Project	s\12345\Traffic_ITS\Dra	swings Bentley	/ InRoads XM Edition	Σ
Rested #	in Attachments	Upda	te view name in corresp	onding sheets?
		_	Yes	No

Since the added model file only affects on sheet (sheet 4), there is no need to generate a new complete set. Instead, only sheet 4 is updated. The steps below are used to update the sheet.

- 12. In the *Plan and Profile Generator* dialog box, *<D>* the **Sheet Index** tab.
- 13. In the *Sheet Views* list, highlight sheet **4**.
- 14. **<D>** the **Regenerate Sheet** button.

15. **<D> Yes** on the message box that is displayed.



The sheet now looks like the illustration below.



16. Close the **Plan and Profile Generator** dialog box.

17. <D> Yes on the message box that is displayed. Navigate to C:\Projects\12345\Design\ InRoads\ and name it 12345DES\_50Scale.vdf.

Bentley InRoads XM Edition	
Save Current VDF File?	
Yes No Cancel	

- 18. Save all of the data files and Close InRoads.
- 19. Close MicroStation.

#### Chapter Summary:

- In *Lab 17.1 Creating 100 Scale P and P Sheets* the input data for the initial 100 scale Plan and Profile Generator run was described
- In *Lab 17.2 Creating 50 Scale P and P Sheets* the annotation scale in the seed files was changed for 50 scale sheets along with the InRoads scale factors and the Plan and Profile Generator settings. Then a new set of sheets was generated
- In *Lab 17.3 -Edit Sheet Extents* the sheet extents for the 50 scale plans were modified to center the intersection and the sheets were regenerated
- In *Lab 17.4 -Moving Reference Files Within the Sheet Border* the reference files (plan and profile) were moved within the sheet border to the right margin
- In *Lab 17.5 Adding a Model File to a Single Sheet* a traffic signal plan model file was added to sheet 4 only