



Correspondent Sample Lines

Tutorial





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INTRODUCTION

We use corresponding sample lines when we have multiple alignments in a drawing and we would like to obtain information about their relationship. For example, this means that we want to display two or more alignments in the same cross-sections, as shown in the image below. In doing so, we need to be careful that the main alignment is always active when determining the corresponding sample lines. This means that we will define the corresponding sample lines for the main alignment and insert the roadway of the other alignment into the cross-sections of this main alignment.



PREPARATION

We start with the drawing in which we have two alignments with profiles and calculated superelevations.



In the next step, we will create corresponding axes on the main axis, AXIS_1, and then insert the secondary roadway, AXIS_2, into the cross-sections for the main axis.

1. Sample Lines

In the first step, we draw sample lines on the main axis, AXIS_1.

1.1 Active alignment

Be careful to have the active axis set to AXIS_1.

1. Run the <u>Alignment Manager (21C)</u> command.

2. Double-click on AXIS_1.



1.2 Sample Lines

1. Click on the Draw Sample lines (21H1) icon.

2. The Draw cross-axes dialogue box will appear. Sample lines will be created equidistantly along the entire alignment (check the "Over the whole interval" option).

3. Specify whether a sample line is created at the start/end station and at the start/end points of horizontal elements.

4. Define the distance between sample lines and the width on the left/right.

The cross-sections should be wide enough to be drawn across the second axis as well.

5. Define the prefix of the sample line name and the starting counter.

6. Confirm by clicking OK.

In the drawing, cross-sections are drawn on the AXIS_1 alignment:



Cant

Draw cross-axes

Sample

lines Cant design Sample Lines and Tools 👻

🞼 👻 🌈 👻 Draw Turnouts

🌾 🔹 🗾 Z Draw rail connections 🔛 Delete Turnouts

🔷 👻 🗡 📲 Turnouts Catalogue 🛛 📲 Turnouts report table

AXIS 2

Turnouts

💒 Edit Turnouts

×

2. Convert Sample Lines to Correspondent



Layout		
 O? Edit Floating Elements ¬[*] Move Pl → ✓ Alignment Data → 	Sample lines	5
Editing	Draw Sample Lines	Undo
	Sample Lines Through Points	
	E Convert Sample Lines to Correspondent	

2. Select the sample lines of the main alignment you want to change to correspondent section lines. In our case, we will select all sample lines in the drawing.

3. Refresh profile

Refresh the longitudinal profile on the main axis, AXIS_1.

1. Run the	Refresh Profiles (31X)
command.	

					Profile
💦 Label Slopes	00	⊾ # ¬•	<i>\</i> ₹	DP	25
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Drainage and S	Sewer	Tools	Mass Haul	Plot	Refresh and Undo

2. It opens a new dialogue box. You can leave the default settings and simply click OK.

In the longitudinal profile, sample lines are drawn:



4. Refresh second profile

In the next step, we refresh another alignment as well.

4.1 Active alignment

1.	Run the	Alignment	Manager	(21C)
сс	mmand.			

2. Double-click on AXIS_2.



4.2 Refresh profile

1. Run the <u>Refresh Profiles (31X)</u> command.

Profile					
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🕂 Label Ditch	۵	💌 🥕 🛏	Mass Haul 🚽	T	Profiles
Drainage and S	Sewer	Tools	Mass Haul	Plot	Refresh and Undo

2. It opens a new dialogue box. You can leave the default settings and simply click OK.

In the longitudinal profile, corresponding sample lines are drawn. *Corresponding sample lines are recognized by the asterisk next to the prefix of the sample line name.*



5. Cross-sections for major alignnment

4. Press OK to confirm parameters.

1. Click on the Layout tab, select Ø I. Alignment Manager (41C) and double click Project Alignment Scale Label Input Points Points on the AXIS_1 to set it as an active Manager from File report alignment. Initial Setup 🔻 Points and Connections 💌 2. Click on the Cross-sections tab and run Copy Macro D 🗖 the Draw CS View command. Save Macro **D** nt Macro Project Alignment Draw Manager CS View Copy Element Initial Setup 👻 TCS Definition 3. In Read terrain dialog box specify: [Read terrain Table type: Plateia Tables Scale Plot scale: 200 Table type Plot scale PLATEIA X-scale factor: 1 X-scale factor: Y-scale factor: 1 Y-scale factor: Input data Input file - Layout: *current drawing* Input file - Layout Input file - Profile: *current drawing* C * CURRENT DRAWING * Input file - Profile Select the first and the last ~ ӣ CURRENT DRAWING * cross-section from the drop-down Section AXIS 1.0 menu. Include correspondent sample lines (marked with *) First cross-section Last cross section Maximum section width left [m]: 60 0.000 <P1> 1366.717 <P70> Maximum section width right [m]: 30 Elevation [m]: 50 Maximum section width left [m] No. of columns 60 Humus thickness [m]: 0.2 Maximum section width right [m] 30 No. of rows 50 No. of all sections: Elevation [m] Humus thickness [m] 0.2 Check: Insert roadway. 🖂 Insert roadway

5. Select insertion point for upper-left corner and cross-sections will be inserted in the drawing.



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1

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e -

Cancel

OK

If we zoom in on one cross-section, we can see that we have inserted the roadway axis AXIS_1.



6. Draw additional alignment

In the final step, we insert the roadway of the second alignment (AXIS_2) into these cross-sections of the AXIS_1.

1. Run the	Draw	additio	onal	(41F2)
command.				

2. Define layout and longitudinal profile data. Both layout and profile are in the same current drawing, that's why we select *currect drawing*.

3. Click tick button so select all cross-sections.

4. Define additional settings in the bottom part of the dialogue box and press OK.

Cross Sections							
Project Alignment D Manager CS	raw View \cong (mac) (mac) Macro Macro (mac) Macro Macro (mac) Macro (mac) Macro (mac) Macro (mac) Mac	Copy Macro Save Macro Copy Element TCS Definition	t Current				
-ju	Initial Setup	. ip as init					
Insert additional alig	inment		×				
Layout data Image: Current Drawing * Image: Current Drawing * Image: Longitudinal profile data Image: Current Drawing * Image: Current Drawing * Image: Current Drawing * Axes list Image: Current Drawing *							
Select method							
Between CS			<u> </u>				
First cross-section:	P10+000.00						
Last cross-section:	P70 1+366.72		<u> </u>				
Settings							
Height		1 ROADWAY	~				
Distance 2 FROM.AXIS							
Draw track labels in	n rubric	1 ROADWAY	~				
🔽 Draw track labels o	n elements						
🗹 Label axis name							
Label station	Label station						
		ОК	Cancel				

The final result are cross-sections on the AXIS_1, where in addition to the roadway of AXIS_1, we also show the roadway of AXIS_2:

