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Create Sample Lines Tutorial

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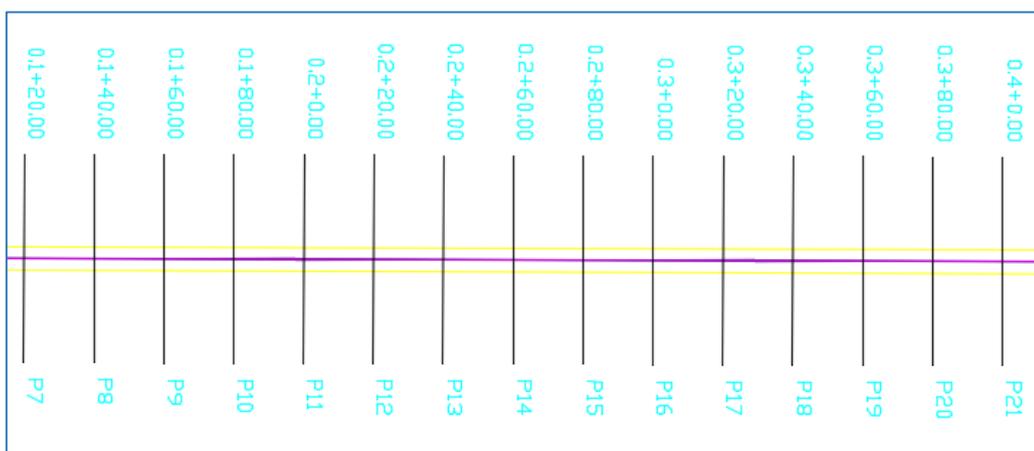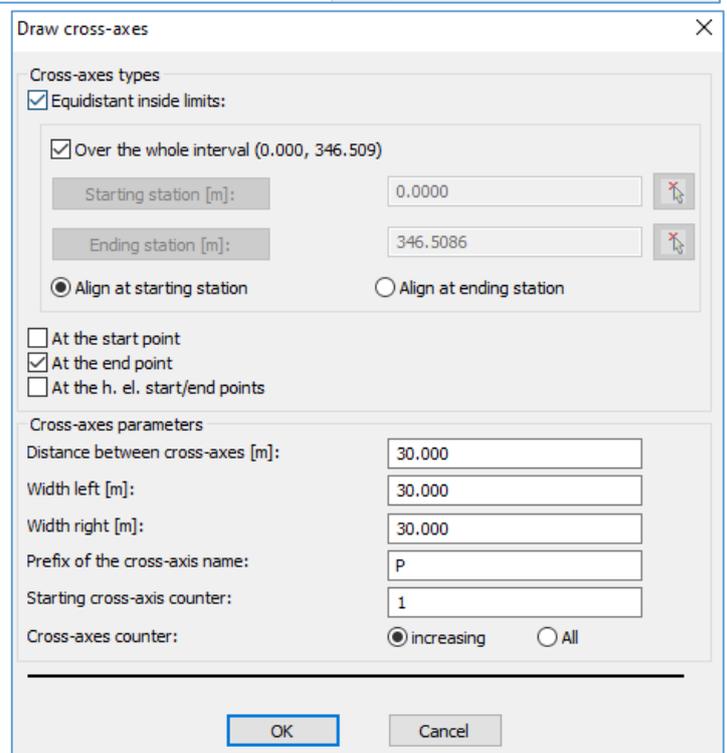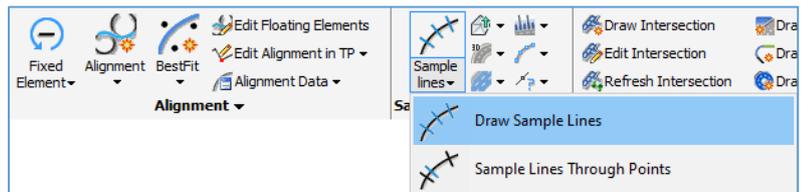Internet: www.cgs-labs.com

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INTRODUCTION

After the longitudinal alignment has been created, you can construct sample lines. Sample lines that are draped on the surface of the digital terrain model are cross sections. Using commands from the *Sample Lines* command group, you can create sample lines on arbitrary stations as follows: equidistant (at regular intervals), through selected points on the longitudinal alignment or in the main points of the alignment.

1. Draw Sample Lines

1. Start with Layout Ribbon Panel.

2. Click on Draw Sample Lines icon.

3. In *Draw cross-axes* dialog box define the area where sample lines will be created.
   - Over the whole interval
   - Define starting and ending station

4. Sample lines can be created at the start point, end point and at the horizontal elements start/end points.

4. Define the distance between sample lines [m], width left and right, prefix and the starting counter of sample lines.

2. Sample Lines Through Points

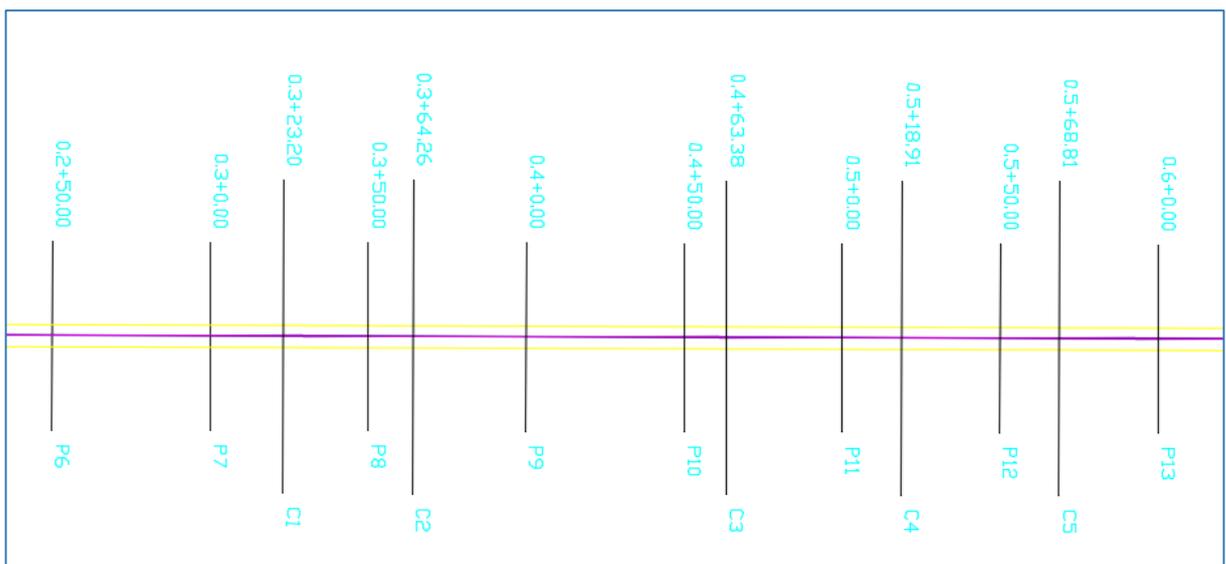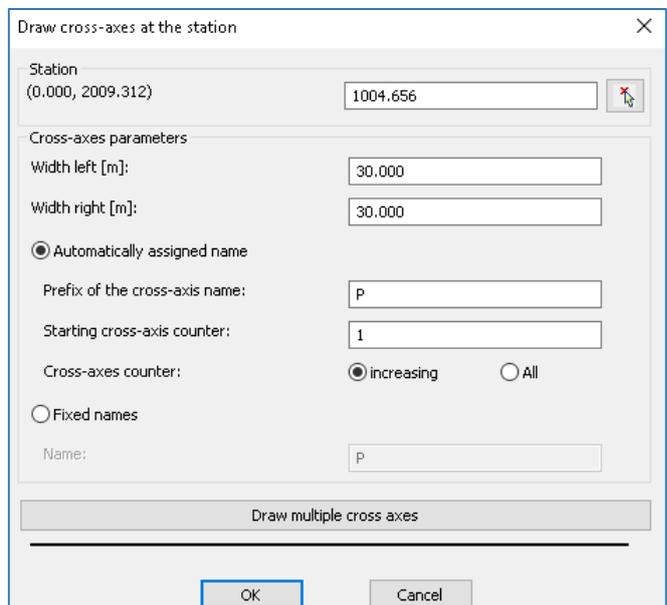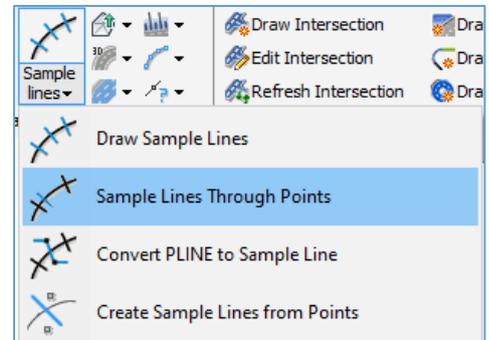The Sample Lines Through Points command enables sample lines interactive drawing at user defined alignment positions.

1. Click on Sample Lines Through Points icon.

2. In *Draw cross-axes at the station* dialog box define a station where you want to draw a sample line.

- Type in a station
- With the button

3. Define sample line width left and right, prefix and sample line counter.
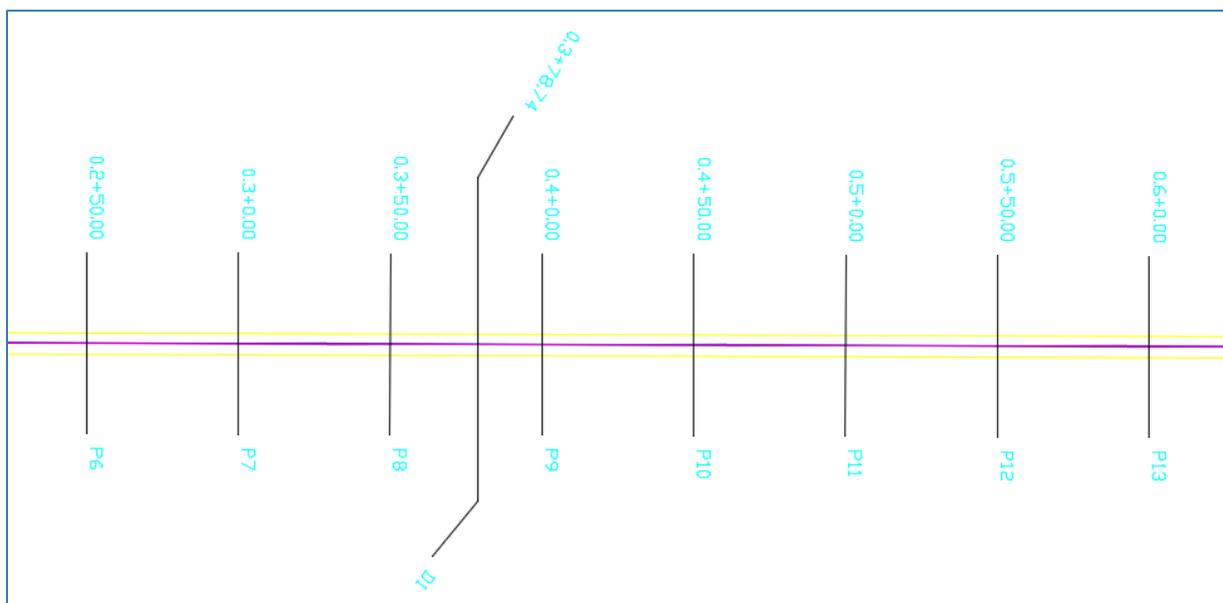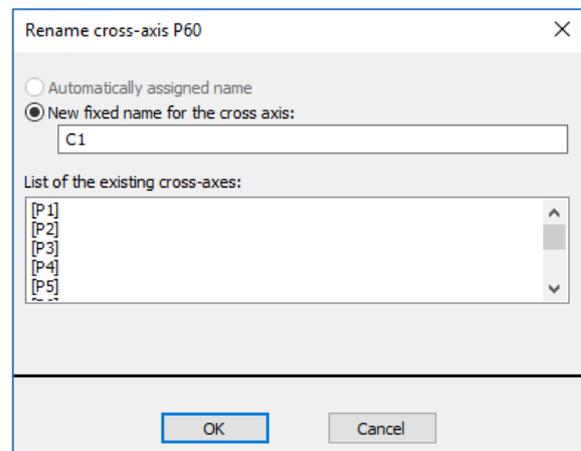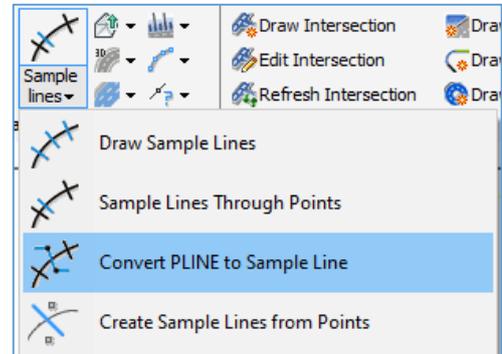
4. Click the button *Draw multiple cross-axes* to draw multiple sample lines. The dialog box closes. Define locations for the sample lines in the drawing.

3. Convert Pline to Sample Lines

This command converts an arbitrary two-dimensional PLINE entity into a sample line, allowing you to create sample lines that are not perpendicular to the longitudinal alignment. The sample line can also be a broken line.

1. Click on Convert PLINE to Sample Line icon.

2. Select a polyline in the drawing you want to convert into a sample line. Press *Enter*.

3. In *Rename cross-axis* dialog box define new fixed name for the sample line and press *OK*.

4. Create Sample Lines from Points

The command Create Sample Lines from Points draws sample lines on the basis of points in individual profiles along the alignment. Besides the classic method and the zigzag method, the function enables to draw sample lines on the basis of a regression method. We have two options: perpendicular regression and ordinary regression.

1. Click on Create Sample lines from Points icon.

2. In *Draw cross axes from points* dialog box select the data source (CGS points or Civil3D points) and the layer, where the points of the cross sections are.

3. Define the method on which basis sample lines will be drawn and enter the left and right width of the generated sample lines.

4. Press *OK*.