

Point Placement on Profiles and Cross Sections

The following instructions will guide you through the process of creating points at user defined stations/offsets and elevations. These instructions assume that the profiles and cross sections have been drawn. Carlson modules are displayed as **{Civil - Design}**, main menus are displayed as **[Profiles]**, and submenus and menu commands are displayed as **<Point Placement on Profile>**.

Point Placement on Profiles

- 1) To begin placing points on the drawn profile: **{Civil - Design} → [Profiles] → <Profile Utilities> → <Point Placement on Profile>**.
- 2) In the command line, it prompts the user to select points from the **(.crd)** file or **points**.
 - a. File – This option will draw a profile based on points that are in a coordinate file. The elevations of the profile come from the elevation of the points and the stations come from the station value in the description field of the point. Points that do not contain the station value in the description will be ignored. When this profile is drawn it will plot the points on the profile along with description, point number and elevation.
 - b. Points – Point symbols are placed on the profile at picked points or at entered stations and elevations. The station and elevation of the current position of the cross hairs is displayed in the upper left of the screen. The symbols can be any of the point symbols or a special pipe crossing that will become an ellipse to represent any vertical exaggeration. **(Use the point method as the default)**
- 3) Type **“P”** to select the point method then hit **“Enter”**
- 4) The **Profile Settings** dialog box appears on the screen.
 - a. Select Symbol: Choose the Carlson point symbol to be placed on the profile
 - b. Direction – **Choose the direction** of the profile
 - c. Prompt for Snap – **Checked**. Gives the user more control of selecting the point after one is picked on the screen. An option window will appear to let you fine tune the picked point or to round to an even offset and/or elevation.
 - d. Draw Pipe Crossing – Check this option to draw a pipe. If this option is selected, the select point symbol is grayed out and can not be chosen.

- e. Label Station and Elevation – Labels the station and elevation of the placed point
 - f. Grid Starting Station – Enter the starting grid station for the profile that is going to contain the placed point
 - g. Grid Bottom Elevation - Enter the bottom grid elevation for the profile that is going to contain the placed point
 - h. Horizontal Scale: Enter the horizontal scale of the profile
 - i. Vertical Scale: Enter the vertical scale of the profile
 - j. Point Symbol Layer: Specifies layer for the point that is being placed (Click the Select button to select a layer from the list of existing layers)
 - k. Text Size Scaler: Scaler used to calculate the text size by multiplying it by the horizontal scale.
 - l. Symbol Size Scaler: Scaler used to calculate the symbol size by multiplying it by the horizontal scale.
 - m. Station Label Prefix: adds a user specified string of text before the station label
 - n. Station Label Suffix: adds a user specified string of text after the station label
 - o. Elevation Label Prefix: adds a user specified string of text before the elevation label
 - p. Elevation Label Suffix: adds a user specified string of text after the elevation label
- 5) Once all options have been chosen click “**OK**”.
 - 6) In the command line, it prompts the user to Pick Lower Left Grid Corner of the profile.
 - 7) Once this is done the Carlson window appears on the screen and identifies the station and elevation of the location of the cross-hair is on the profile.
 - 8) In the command line, it is prompting the user to enter a station or to pick a location on the profile to locate for the point placement. Enter a station or pick a point on the profile to draw the point.
 - 9) Once finished entering the stations and elevation hit “**Enter**” to end the command.

Placing Points on Cross – Sections

- 1) To begin placing points on the drawn profile: **{Civil - Design} → [Sections] → <Points on Sections> → <Point Placement on Sections>**.
- 2) In the command line, it prompts the user to select points from the **(.crd)** file or **points**.
 - a. File – This option will draw a profile based on points that are in a coordinate file. The elevations of the profile come from the elevation of

the points and the stations come from the station value in the description field of the point. Points that do not contain the station value in the description will be ignored. When this profile is drawn it will plot the points on the profile along with description, point number and elevation.

- b. Points – Point symbols are placed on the profile at picked points or at entered stations and elevations. The station and elevation of the current position of the cross hairs is displayed in the upper left of the screen. The symbols can be any of the point symbols or a special pipe crossing that will become an ellipse to represent any vertical exaggeration. **(Use the point method as the default)**
- 3) The **Section Settings** dialog box appears on the screen.
- a. Select Symbol: Choose the Carlson point symbol to be placed on the profile
 - b. Direction – **Choose the direction** of the profile
 - c. Prompt for Snap – **Checked**. Gives the user more control of selecting the point after one is picked on the screen. An option window will appear to let you fine tune the picked point or to round to an even station and/or elevation.
 - d. Draw Pipe Crossing – Check this option to draw a pipe. If this option is selected, the select point symbol is grayed out and can not be chosen.
 - e. Draw Retaining Wall – Draws retaining wall at specified location.
 - f. Label Station and Elevation – Labels the station and elevation of the placed point
 - g. Grid Starting Station – Enter the starting grid station for the profile that is going to contain the placed point
 - h. Grid Bottom Elevation - Enter the bottom grid elevation for the profile that is going to contain the placed point
 - i. Horizontal Scale: Enter the horizontal scale of the profile
 - j. Vertical Scale: Enter the vertical scale of the profile
 - k. Point Symbol Layer: Specifies layer for the point that is being placed
 - l. Text Size Scaler: Scaler used to calculate the text size by multiplying it by the horizontal scale.
 - m. Symbol Size Scaler: Scaler used to calculate the symbol size by multiplying it by the horizontal scale.
 - n. Offset Label Prefix: adds a user specified string of text before the offset label
 - o. Offset Label Suffix: adds a user specified string of text after the offset label
 - p. Elevation Label Prefix: adds a user specified string of text before the elevation label

- q. Elevation Label Suffix: adds a user specified string of text after the elevation label
- 4) Once all options have been chosen click "**OK**".
- 5) In the command line, it prompts the user to Pick Grid Center point of the cross section.
- 6) Once this is done the SurvCadd window appears on the screen and identifies the station and elevation of the location of the cross-hair is on the profile.
- 7) In the command line, it is prompting the user to enter a station or to pick a location on the profile to locate for the point placement. Enter a station or pick a point on the profile to draw the point.
- 8) Once finished entering the stations and elevation hit "**Enter**" to end the command.