

# CDOT Placing Steel Shapes



This document is designed to serve as a guide for placing steel structure components in MicroStation with the use of the CDOT Steel Program.

## Placing steel sections

1. From the *CDOT Menu*, select **Add On's > CDOT Steel**.

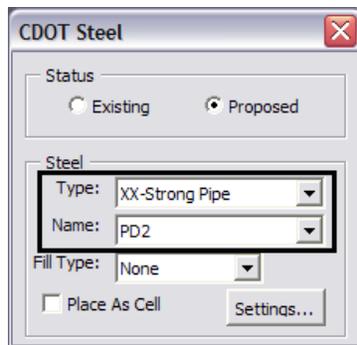
**Note:** When the *CDOT Steel* dialog displays you will notice that the currently defined structure is attached to your cursor. As you make changes in the dialog the changes will be immediately reflected in the structure. To place the structure in the design file, <D> at the desired location.

2. In the *CDOT Steel* dialog select the *Status* of the steel structure you are placing, *Existing* or *Proposed*.



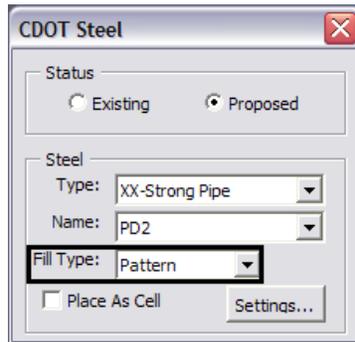
Changing the *Status* setting automatically changes the MicroStation settings to the correct level and bylevel symbology.

3. Select the *Type* of structure element and *Name* to place from the respective drop-down lists. Changing the *Type* automatically updates the list in the *Name* drop-down list.

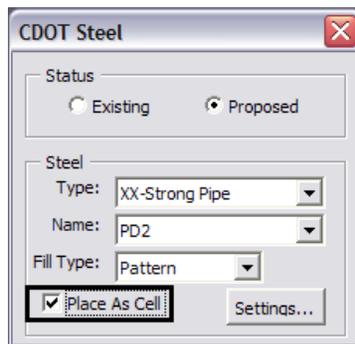


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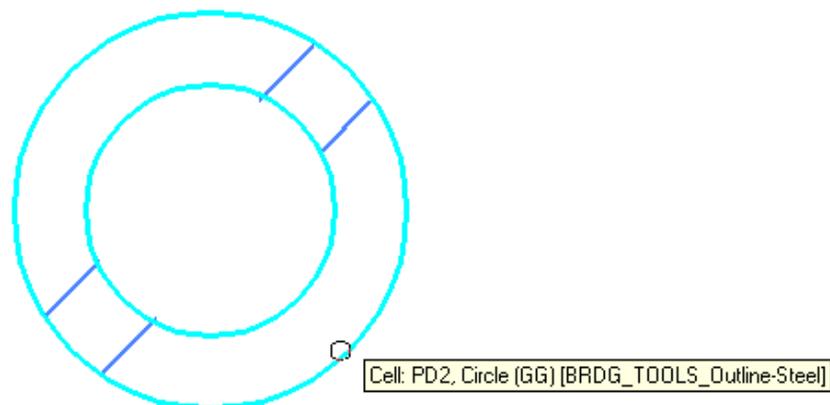
4. Select the **Fill Type** for the element from the drop-down list. The **Pattern** fill type will use the CDOT standard steel pattern cell.



5. The steel components can be placed as cell elements by selecting the **Place As Cell** checkbox. When placed as a cell the cell name is set to the value in the **Name** drop-down.

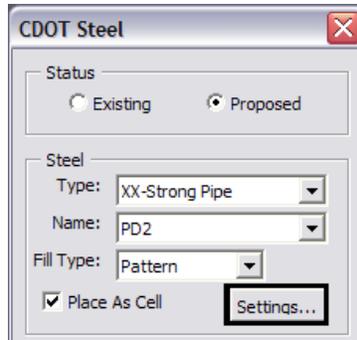


6. To place the structure with the selected settings, <D> the mouse at the desired location and finish the placement. Notice that the patterning takes place outside of the hole (inside) area.

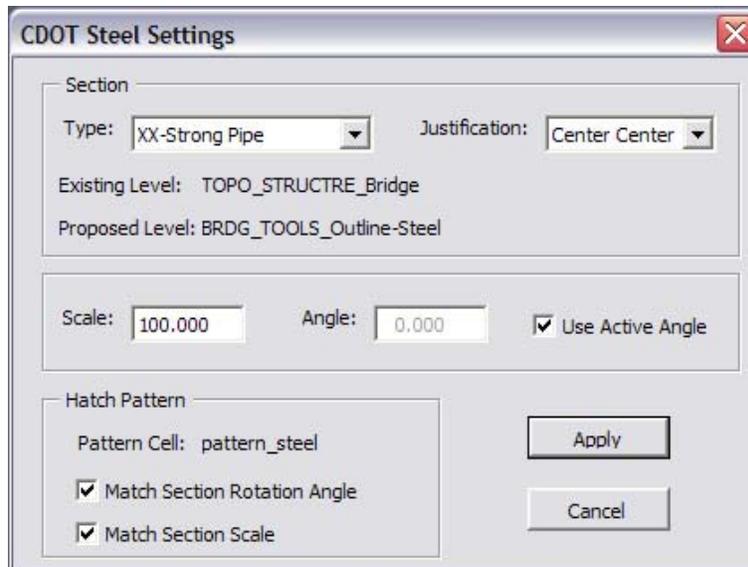


## Changing settings

1. To change the placement settings <D> the **Settings** button on the *CDOT Steel* dialog.



2. The *CDOT Steel Settings* dialog allows for adjusting placement scale and rotation values as well as the placement justification for each section type. Unlike the main *CDOT Steel* dialog you must <D> **Apply** in the settings dialog for the changes to take affect.



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3. To change the placement justification for a type of section select the *Type* from the drop-down list, then select the desired *Justification*.

CDOT Steel Settings

Section

Type: XX-Strong Pipe Justification: Center Center

Existing Level: TOPO\_STRUCTURE\_Bridge

Proposed Level: BRDG\_TOOLS\_Outline-Steel

Scale: 100.000 Angle: 0.000  Use Active Angle

Hatch Pattern

Pattern Cell: pattern\_steel

Match Section Rotation Angle

Match Section Scale

Apply

Cancel

4. To change the size of the section, modify the *Scale* value.

CDOT Steel Settings

Section

Type: XX-Strong Pipe Justification: Center Center

Existing Level: TOPO\_STRUCTURE\_Bridge

Proposed Level: BRDG\_TOOLS\_Outline-Steel

Scale: 100.000 Angle: 0.000  Use Active Angle

Hatch Pattern

Pattern Cell: pattern\_steel

Match Section Rotation Angle

Match Section Scale

Apply

Cancel

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- To change the placement angle to something other than the active angle setting uncheck the *Use Active Angle* checkbox and enter a new rotation angle.

CDOT Steel Settings

Section

Type: XX-Strong Pipe Justification: Center Center

Existing Level: TOPO\_STRUCTURE\_Bridge

Proposed Level: BRDG\_TOOLS\_Outline-Steel

Scale: 100.000 Angle: 45  Use Active Angle

Hatch Pattern

Pattern Cell: pattern\_steel

Match Section Rotation Angle

Match Section Scale

Apply

Cancel

- To vary the hatch pattern angle and/or scale independently of the section values, uncheck the appropriate *Match Section* checkboxes. With these boxes unchecked, patterning will use the active design file settings.

CDOT Steel Settings

Section

Type: XX-Strong Pipe Justification: Center Center

Existing Level: TOPO\_STRUCTURE\_Bridge

Proposed Level: BRDG\_TOOLS\_Outline-Steel

Scale: 100.000 Angle: 45  Use Active Angle

Hatch Pattern

Pattern Cell: pattern\_steel

Match Section Rotation Angle

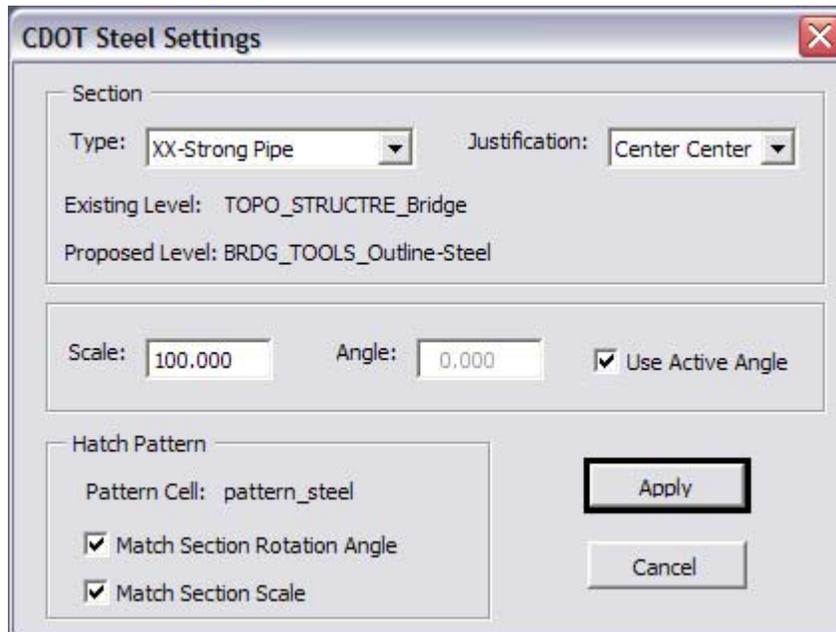
Match Section Scale

Apply

Cancel

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7. After the settings have been changed <D> **Apply** to save the settings.



The image shows a software dialog box titled "CDOT Steel Settings". It contains several sections for configuring steel shapes:

- Section:** Includes a "Type" dropdown menu set to "XX-Strong Pipe" and a "Justification" dropdown menu set to "Center Center". Below these are labels for "Existing Level: TOPO\_STRUCTURE\_Bridge" and "Proposed Level: BRDG\_TOOLS\_Outline-Steel".
- Scale and Angle:** Features input fields for "Scale" (100.000) and "Angle" (0.000), along with a checked checkbox for "Use Active Angle".
- Hatch Pattern:** Shows "Pattern Cell: pattern\_steel" and two checked checkboxes: "Match Section Rotation Angle" and "Match Section Scale".
- Buttons:** "Apply" and "Cancel" buttons are located at the bottom right of the dialog.

8. Continue by placing the Steel Shapes as desired.