Drawing Creation Tutorial

Editing Drawings

Version 2014

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PART OF HEXAGON

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SESSION 1

Editing Drawings

Objective

By the end of this session, you will be able to:

- Edit within the view
- Create and place symbols within the view
- Change layers and layer symbology
- Place revision clouds
- Place text boxes with manual leaders
- Move view with all associated annotations
- Hide and copy objects using the **Hide** and **Show** commands
- Update the drawing and observe the changes

Overview

Smart 3D automates the drawing creation process by using view styles that contain graphic, label and dimension rules. However, there are times when the graphical representation obtained from the 3D model needs to be changed. At other times, you need to add additional graphics or annotations to the view. The SmartSketch Drawing Editor allows users to open the view and add new graphics, add new layers, modify layers of intelligent graphics, and use the display manager to change symbology (such as line style, weight and color) based on the layer. These edits inside the view are preserved through drawing updates. The Hide/Show command lets you hide the graphics produced from the 3D model, and lets you create a copy of the graphics for further editing inside the view.

Scaled sketching allows users to draw graphics and place annotations so that they are associated to the view and can be moved with the view within the drawing sheet. Scaled sketching should be used only if you need to draw graphics, such as revision clouds, outside the view boundaries or to place annotations such as text, leaders and dimensions that need to move with the view.

In this session, we will learn how to:

- Add dimensions and symbols to a drawing
- Place a revision cloud
- Place text boxes and manual leaders
- Move a view with associated graphics
- Use the hide/show command
- Edit within a drawing view

Edit Within the View

1. Select **Tasks > Space Management** to enter a 3D task.
2. Select **File > Define Workspace**.

   *The **Define Workspace** dialog box displays.*
3. Under **Filter**, select **More…**, then select **Drawings Creation Filters > 08 > U01 & U02 Workspace**.
4. Right-click on the drawing **Drawings Creation Lab > 08 > Equipment > Equipment Plan01** and select **Edit**.
5. The SmartSketch Drawing Editor displays.
6. Maximize the drawing window.
7. Click **Fit View** .
8. Double-click the view boundary to edit the objects inside the view.

   TIP Notice that a new window opens with the contents of the view fit within it. The solid black rectangle around the edge represents the view boundary; any graphic placed outside that rectangle will not display when the embedded document is exited. The supported modifications are:

   Layer changes:

   - Creating new layers
   - Changing the layer of an 'intelligent' or manually-placed graphic
   - Changing how layers are displayed with the **Display Manager**

   Graphic changes:

   - Add graphics or text
   - Copy intelligent objects
   - Add text boxes
   - Place fills or symbols

   Label and dimension placement should still be performed 'outside' the view.
9. Click **Zoom Area** .
10. Drag a rectangle around the two pumps to get a closer look.
11. Right-click to exit **Zoom Area**.
12. Click **Tools > Layers**.

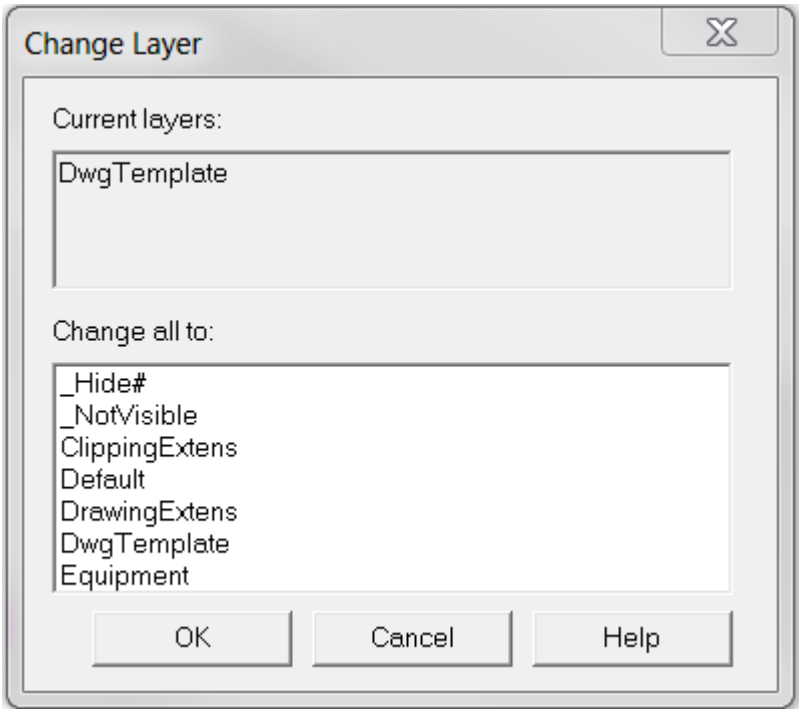
    *The **Layers** ribbon displays.*

13. Type **Equipment** In the **Layer** field.

    The software creates a new layer with that name.

14. Click **Top Down** on the horizontal toolbar.
15. Select one of the pumps to add the group to a select set.
16. Press CTRL, and select the other pump to add the group to the select set.
17. Click **Change Layer** on the **Layers** ribbon.

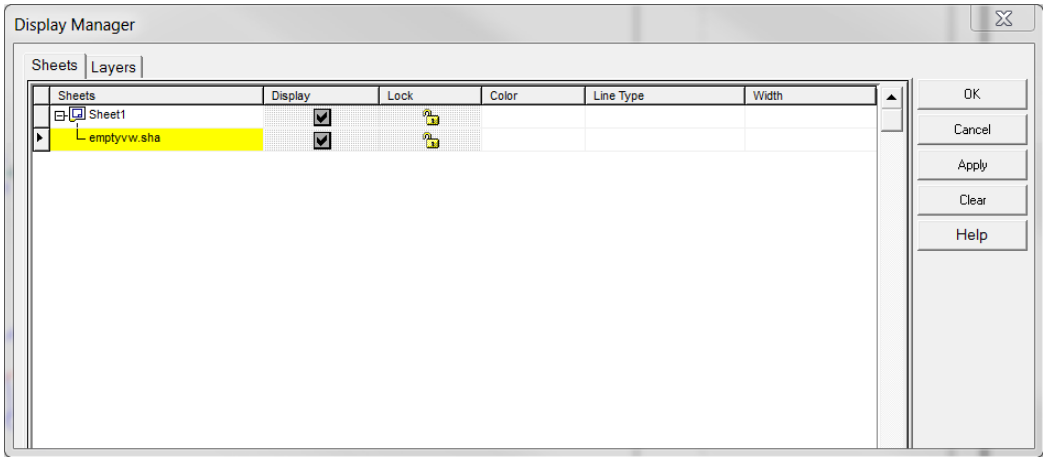
    *The **Change Layer** dialog box displays.*



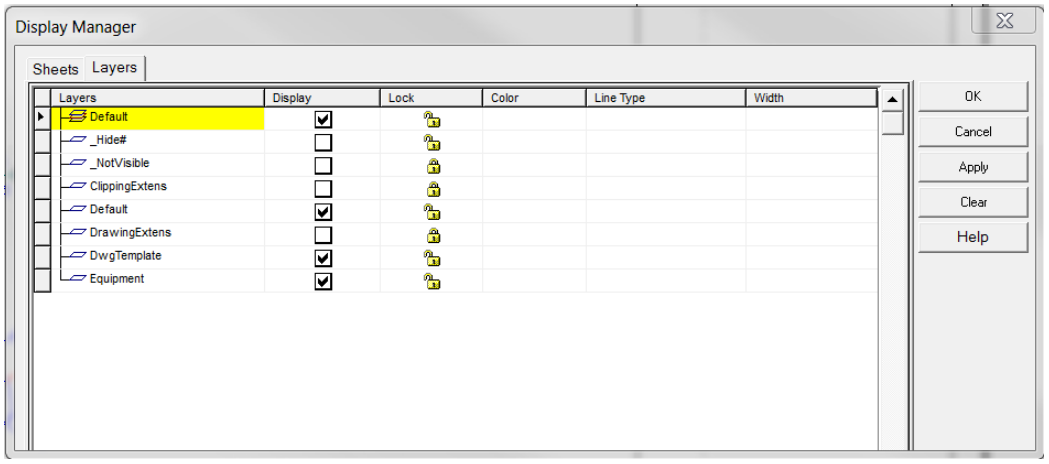
TIP Using the **Change Layer** command is the only way to change the layer of a group object. The ability to change the layer of a group is not available on the group property dialog box.

18. Select **Equipment** from the **Change all to** section on the **Change Layer** dialog box.
19. Click **OK** on the **Change Layer** dialog box.
20. Press ESC to clear the selection from the objects.
21. Right click on the view, and select **Display Manager**.

*The **Display Manager** dialog box displays.*

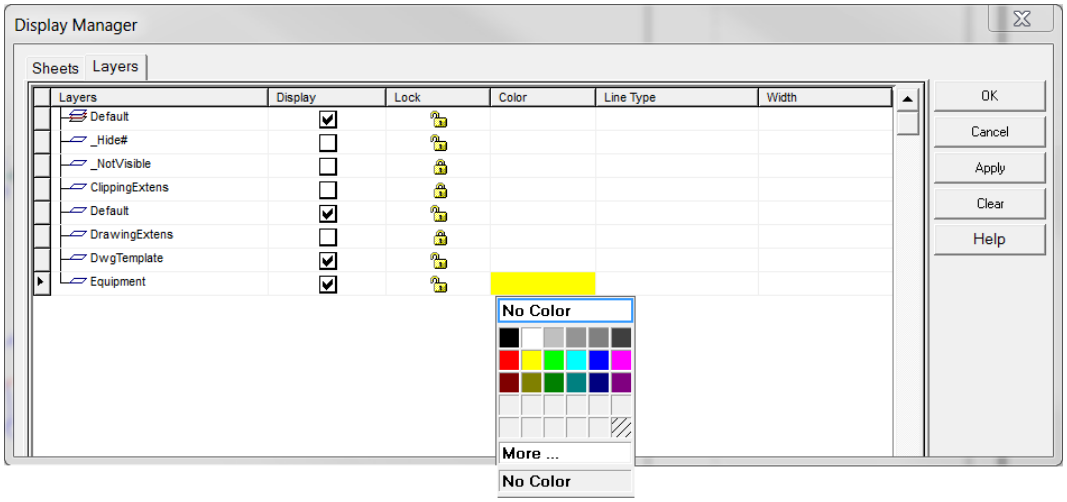


22. Click the **Layers** tab on the **Display Manager** dialog box to display every layer name.

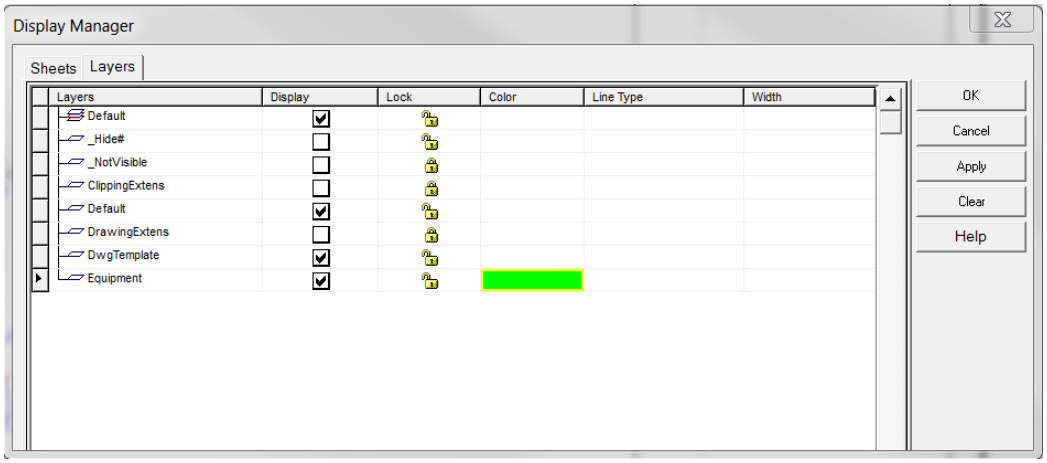


23. Click the **Color** cell In the row for layer **Equipment**.

A color palette displays.

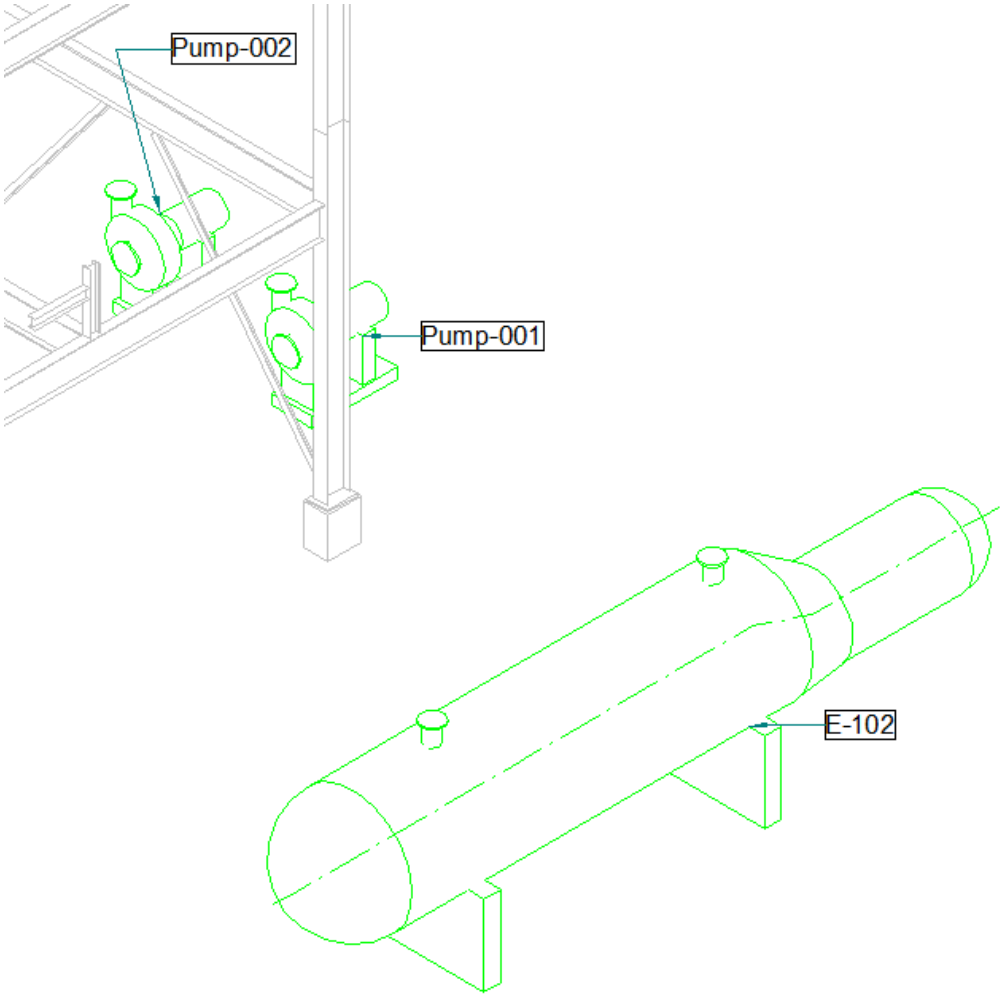


24. Click green on the color palette.



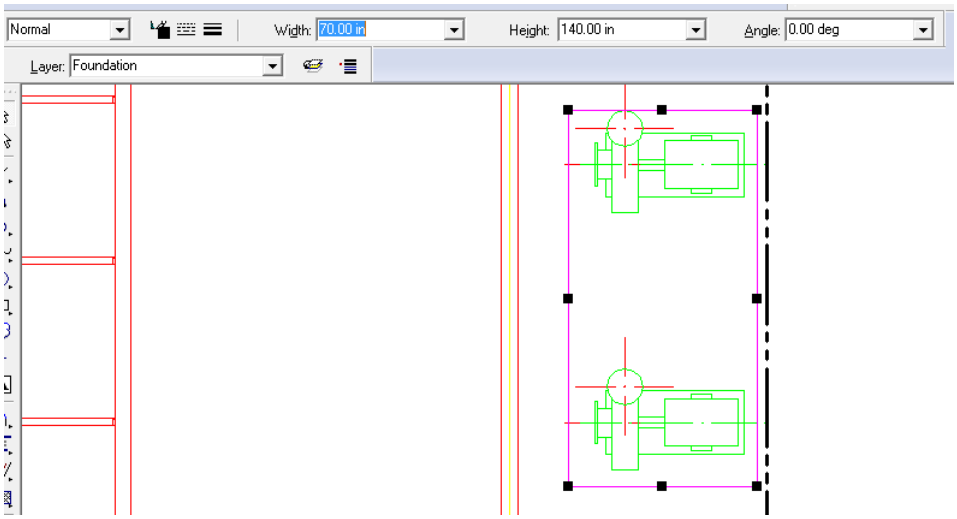
25. Click **OK** on the **Display Manager** dialog box to exit the dialog box.

The equipment objects display with a green color.



*The equipment objects display as green in the drawing window. They use the **Display Manager** settings inside of the view.*

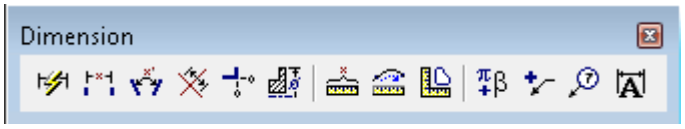
26. Type **Foundation** in the **Layer** field.
27. On the **Draw** toolbar, select **Rectangle** ☐.
28. Set the **Width** to 70 in, **Height** to 140 in, and **Angle** to 0. Position the rectangle around the base of the two pumps.



29. Select **File > Update** to modify the view contents.
30. Select **File > Close** to close the view window and return control to the drawing window.

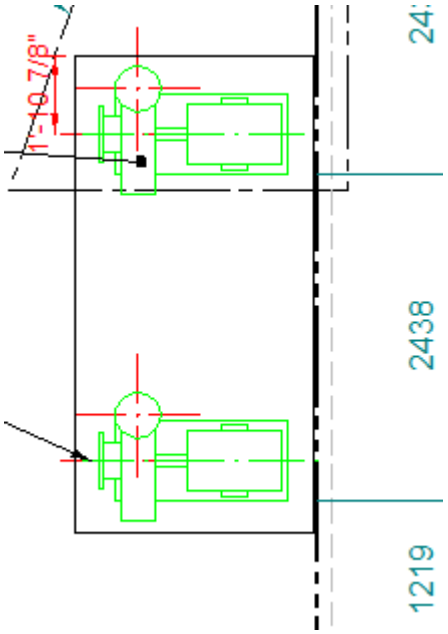
Add Dimensions

1. Zoom in closer to the two pumps and the foundation.
2. Click **Dimension**.
3. The **Dimension** toolbar displays.



4. Drag the **Dimension** toolbar to the toolbar area to dock it.
5. Click **Distance Between**.
6. Select the top edge of the rectangle you drew to define the start point of the dimension.

7. Select the centerline of Pump-002 as shown below to display the dimension attached to the cursor.



8. Click to place the dimension to left of the rectangle.
9. Select the centerline of Pump-001 to display the dimension attached to the cursor.
10. Click to place the dimension to left of the rectangle.
11. Select the bottom edge of the rectangle you drew to define the start point of the dimension.
12. Click to place the dimension to left of the rectangle. Notice that all of these dimensions are model scale dimensions.
13. Select **File > Exit** to exit this drawing. Save when prompted.

Add Symbols Inside View

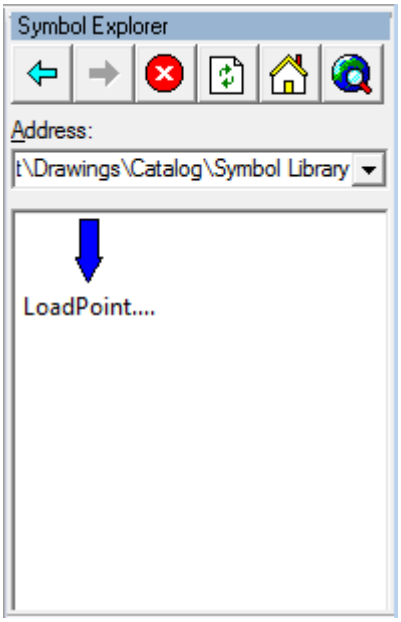
1. Right-click **Drawings Creation Labs > 08 > Piping > Piping Plan02** and select **Edit**.

   The SmartSketch Drawing Editor displays.
2. Maximize the drawing window.
3. Click **Fit** .
4. Click **Symbol Explorer** .

   *The **Symbol Explorer** dialog box displays.*
5. Click **Explore Elsewhere** .

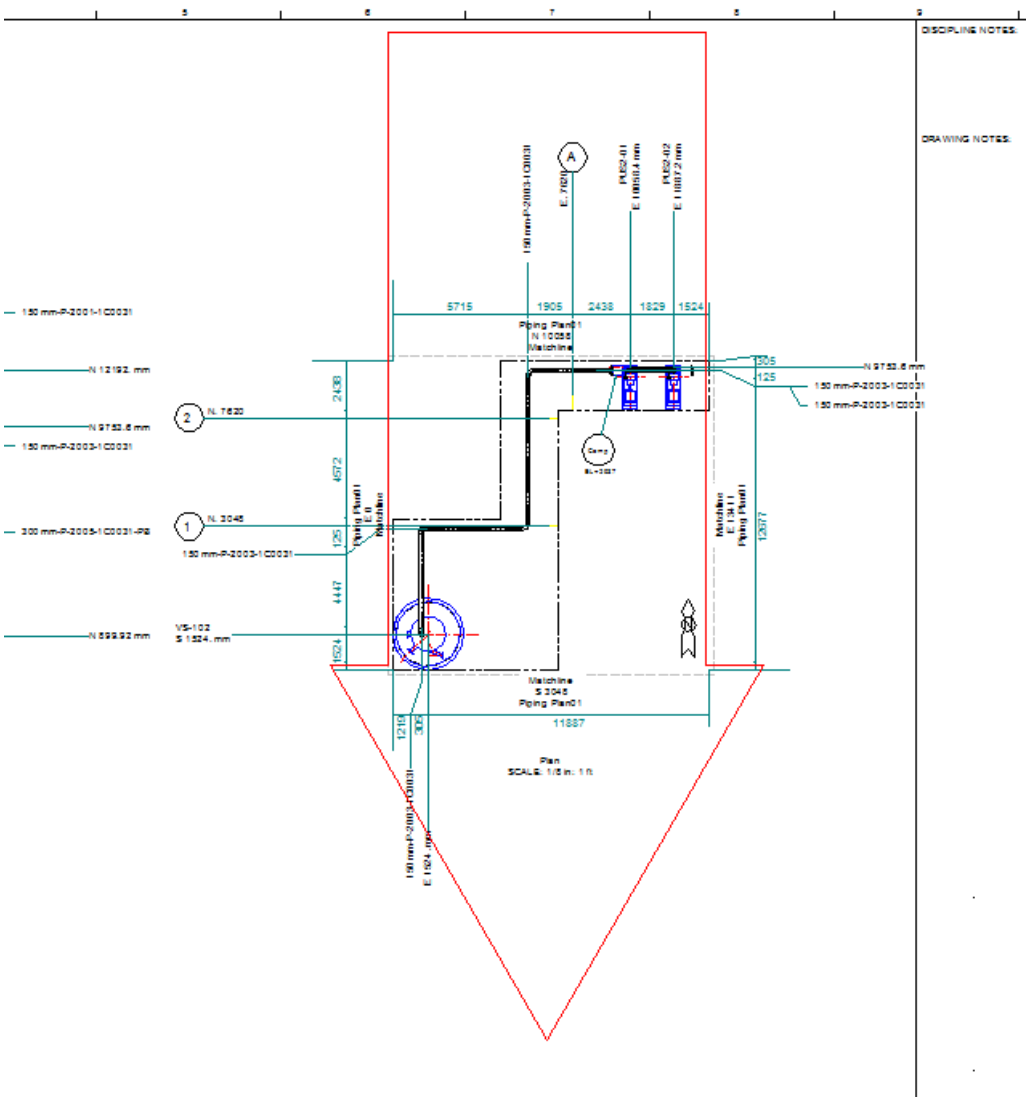
   *The **Browse for Folder** dialog box displays.*
6. Select **Shared Content > Drawings > Catalog > Symbol Library**, and click **OK**.

*The **LoadPoint** symbol displays in the **Symbol Explorer**.*



7. Select the symbol.
8. Move the cursor into the graphics window to display the graphics of the symbol at the end of the cursor.

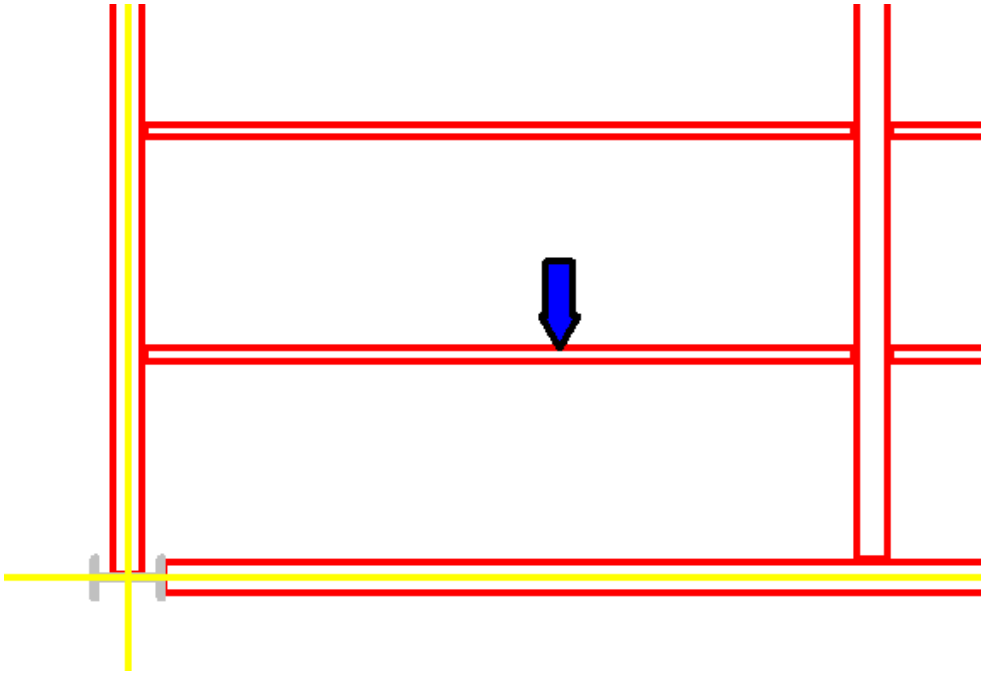
Notice that the symbol is coming in at 1:1 scale.



9. Right-click to exit symbol placement without placing the symbol.
10. Double click the left view to enter it for editing.
11. Click **Explore Elsewhere**, and select **SharedContent > Drawings > Catalog > Symbol Library**.
12. In the **Symbol Explorer**, select the symbol.
13. Move the cursor into the graphics window to display the graphics of the symbol at the end of the cursor.

    Notice that the symbol is coming in at view scale.
14. Click on one of the horizontal beams in the view to place the symbol.
15. Click **Zoom Area**.

16. Drag a rectangle around the symbol to get a closer look.



17. Select **File > Update** to modify the view contents.
18. Select **File > Close** to close the view window and return control to the drawing window.
19. Save the session.

Place a Revision Cloud

1. Click **Scaled Sketching** .

   *The **Scaled Sketch** ribbon displays.*

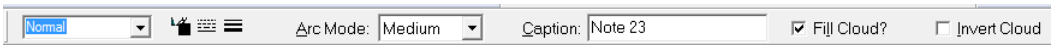
2. Click **Select color for reference data**
3. Select **Green** from the palette.

4. Click the right view to populate the view's scale in the field on the Scaled Sketching ribbon.

5. Click **Enter Scaled Sketch Mode** on the ribbon bar.
6. Click **Revision Cloud** on the vertical toolbar.

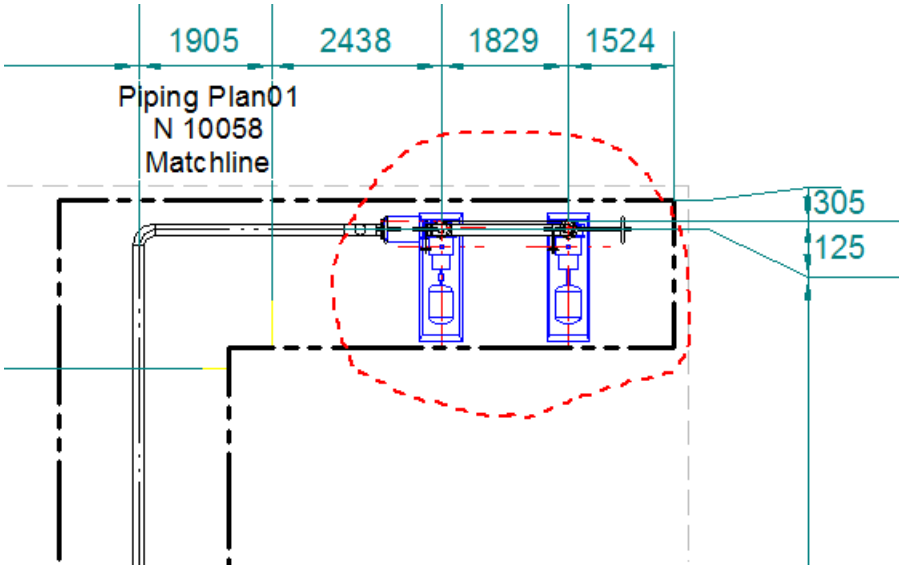
   *The **Revision Cloud** ribbon displays.*

7. Set the **Arc Mode** to **Medium**, type **Note 23** in the **Caption** field, and click **Fill Cloud?**.



   The status bar displays.

8. Left-click to start placing the revision cloud.
9. Click below the two pumps in the right view to place the start point of the revision cloud.
10. Drag the cursor in an approximate circle around the two pumps.



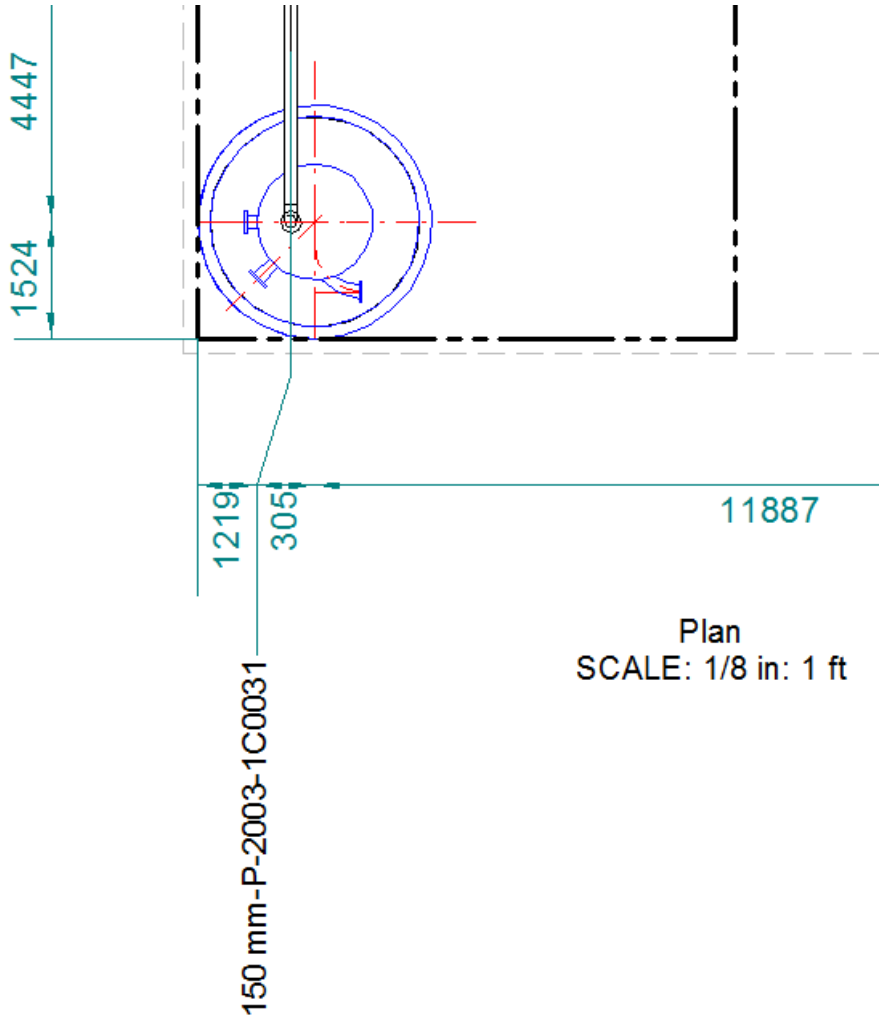
11. Click near the start point to close the shape and finish the cloud.

    *A text box displays attached to the cursor. This is the text box that contains the **Caption** value.*

12. Click somewhere inside of the cloud to place the text box.
13. Click **Select** to exit **Revision Cloud**.

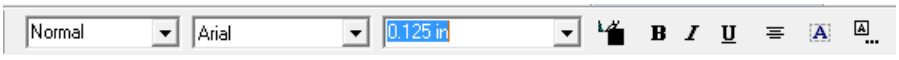
Place Text Boxes and Manual Leaders

1. Click **Zoom Area** .
2. Drag a rectangle around the lower left quadrant of the right view to get a closer look.



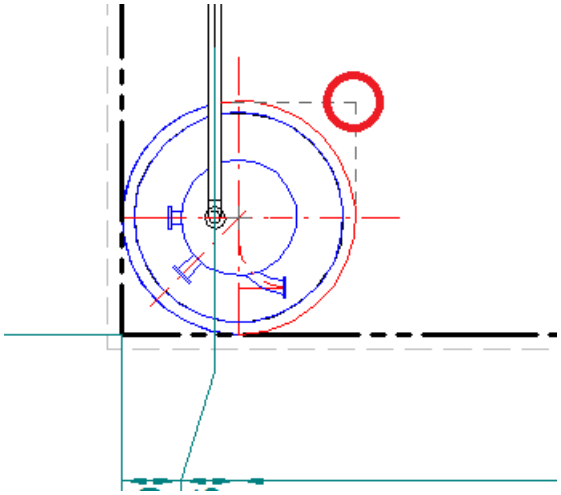
3. Right-click to exit **Zoom Area**.
4. Click **Text Box** on the vertical toolbar.

   *The **Text Box** ribbon displays.*



   The status bar displaysEnter Text Position.

5. Click near the equipment **VS-102** to place the text box.



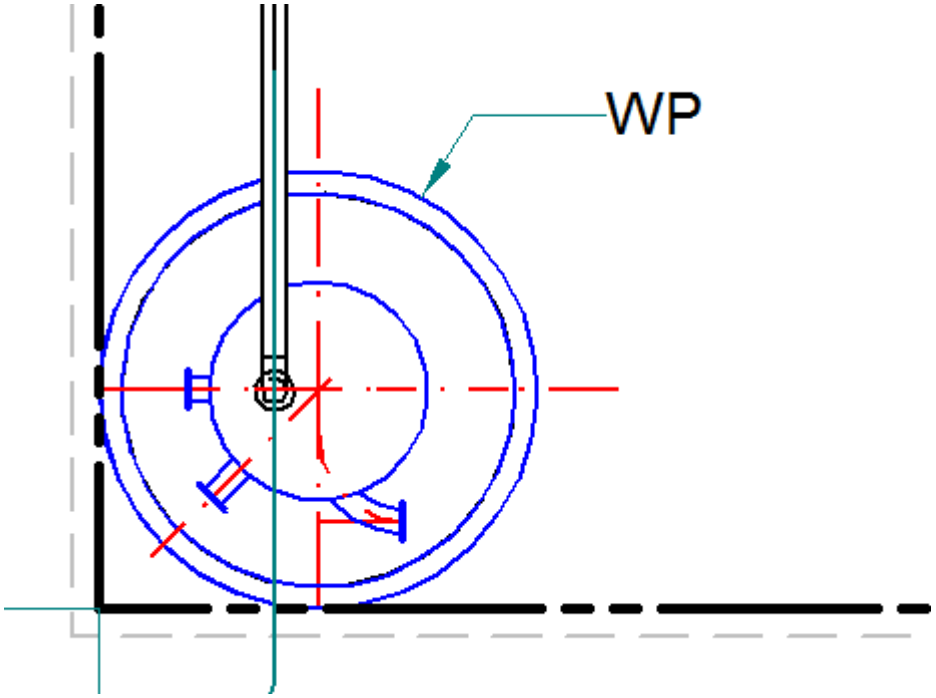
6. Type **WP** to enter text into the text box.
7. Click **Select** to exit **Text Box**.
8. Click **Leader** on the **Dimension** toolbar.

   *The **Leader** ribbon displays.*

9. Click **Break Line** on the **Leader** ribbon to enable a break line on the leader.
10. Select the text box.

    A leader displays with one end attached to the text box and one end attached to the cursor.

11. Select the equipment with the label **VS-102** to complete the placement of the leader.



12. Click **Select** to exit **Leader**.
13. Click **Finish** on the **Scaled Sketching** ribbon.
14. Click **Scaled Sketching** to exit the Scaled Sketching mode.

Move a View with Associated Graphics

1. Click **Fit** .
2. Select the left view boundary and try to drag the view.

   The view does not move. This is to prevent unintentional movement of the drawing view.
3. Press ESC to deselect the view.
4. Press ALT and click the left view. Continue pressing ALT until a message displays, telling you that the ALT + Select action is complete.

   You can now move the select set.

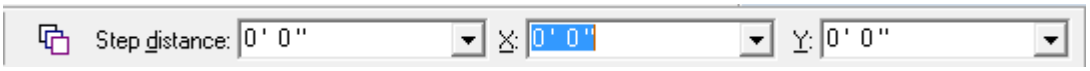
   NOTE Holding the ALT key down when selecting a graphic view will add the view and all of the views associated annotations and graphics to a select set. For views with a lot of annotations, it may take several seconds for the message to appear.
5. Release the ALT key.
6. Click the selected view and drag it to a new position within the border.

   Notice the objects placed while in Scaled Sketching mode move with the view.
7. With the objects still selected, click **Change** .

*The **Change** toolbar displays.*

8. Drag the **Change** toolbar to the toolbar area to dock it.
9. Click **Move/Copy** .

   The Move/Copy ribbon displays.



10. Ensure that **Copy**

is not selected, so that the **Move** command is operational.

    The status bar message tells you to select from point.
11. In the **X** field, type "0 1" and press TAB, so that the field displays 0 ‘ 1 " and is "locked".
12. In the **Y** field, type "0" and press TAB, so that the field displays 0 ‘ 0 " and is "locked".
13. Click in an open space in the drawing to define the ‘from’ point of the command.

    The status bar message tells you to select to point.
14. Move the cursor to the left of the click point and notice that the select set move 1" to the left from its original point.
15. Move the cursor to the right of the ‘from’ point and notice that the select set move 1" to the right from its original point.
16. Click to the left of the ‘from’ point to move the view 1" to the left.
17. Press ESC to deselect the objects.
18. Save your change, and select **File > Exit** to exit SmartSketch Drawing Editor. Click **Yes** when asked to save the drawing.
19.

Use the Hide/Show Command

1. Click **File > Define Workspace.**

   *The **Define Workspace** dialog box displays.*
2. Select **More** from the **Filter** list, and then select **Drawings Creation Filters\09\U01& U02 Workspace**.
3. Open the **Drawing Console,** and expand the **Creation Labs\09\Equipment** folders.
4. Right click **Equipment Drawing01,** and select **Edit**.
5. Maximize the drawing window in **SmartSketch Drawing Editor**.
6. Click **Fit** .

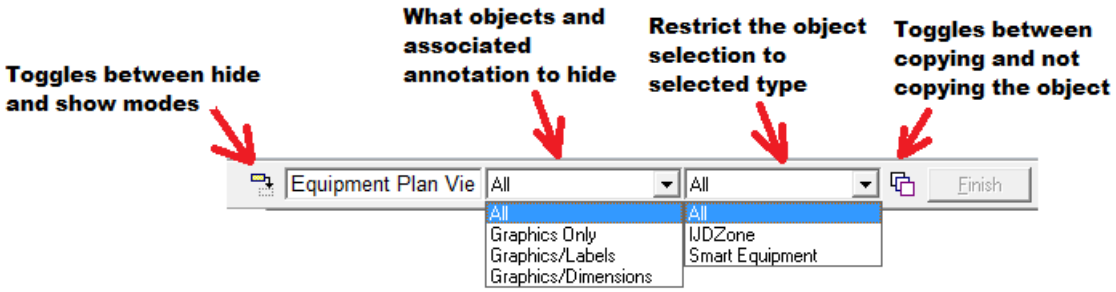
7. Click **Hide/Show** on the horizontal toolbar.

   *The status bar displays **Select View**.*

   TIP The purpose of **Hide/Show** is to hide or alter objects within the view.

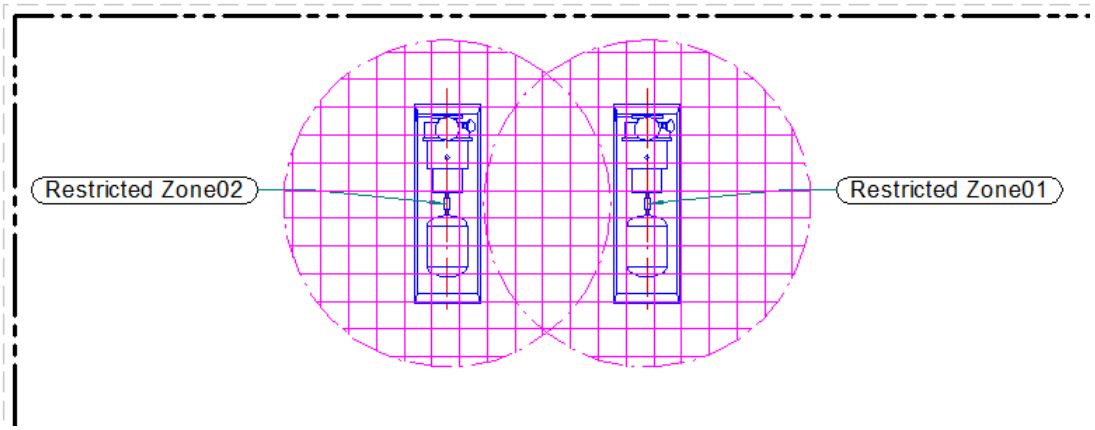
8. Click on the view.

   *The **Hide/Show** ribbon displays.*



9. Select **Graphics Only** from the leftmost list on the **Hide/Show** ribbon so that no associated annotation is hidden.
10. Select **IJDZone** to restrict the objects selected to just space objects.
11. Click **Copy Graphics** to copy the selected objects.

12. In the drawing, select the edges of the two hazardous areas to hide the original objects and make *non-intelligent* copies of them.



13. Click **Finish** on the **Hide/Show** ribbon.
14. Press ESC to exit **Hide/Show**.

Edit Within the Drawing View

1. Double-click the view to edit the objects inside the view.

   A new window opens with the contents of the view fit within it.

   TIP The solid black rectangle around the edge represents the view boundary; any graphic placed outside that rectangle does not show when the embedded document is exited.

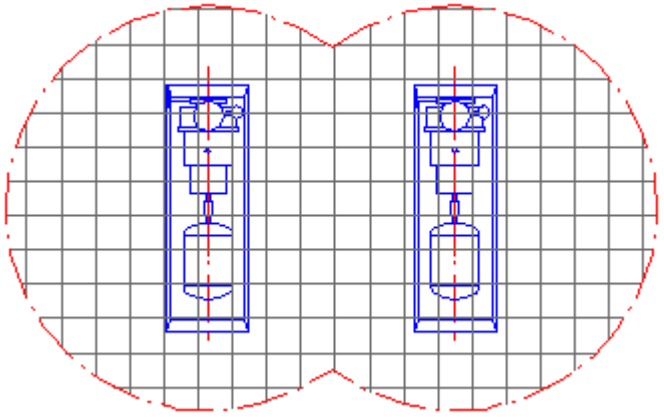
2. Click **Bottom Up** on one of the horizontal toolbars.

   TIP Because the copied graphics are in a group, using **Bottom Up** selects the child elements of the group without having to use **QuickPick**.

3. Click **Trim** from the vertical toolbar.

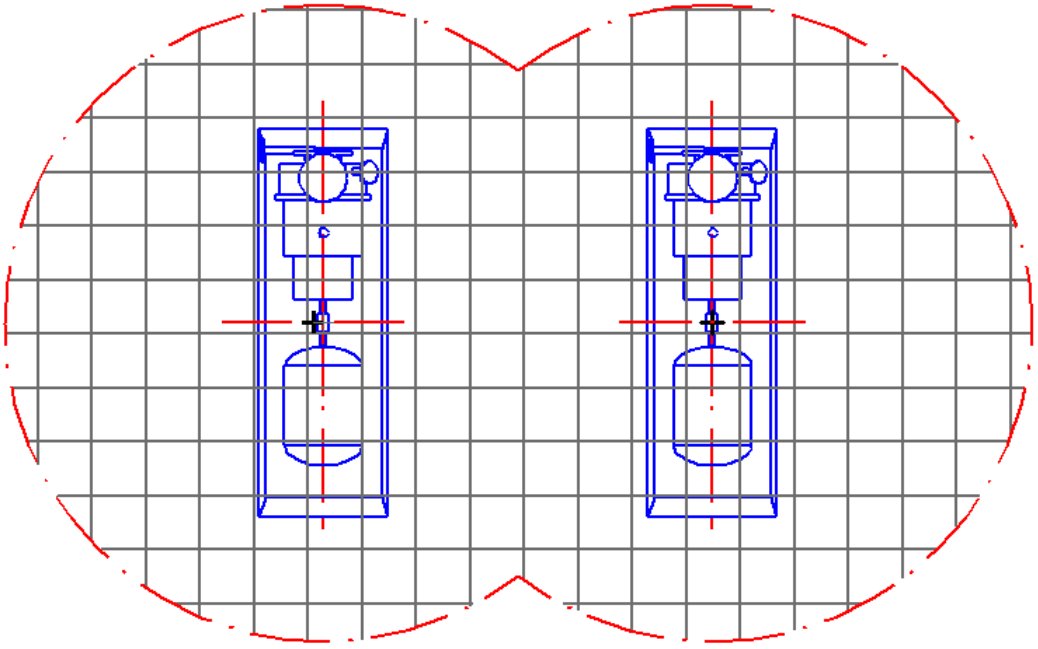
   TIP **Trim** trims open and closed elements to the closest intersection in both directions. When in the command, simply drag the cursor across the segments that you want to remove.

4. Drag the cursor over the interior edges of the space volumes; it may be necessary to drag the cursor more than once because there are multiple edges on top of one another.



5. Click **Line** on the vertical toolbar to draw a centerline transversally across the equipment.
6. Select **Dash Dot Red** from the **Line Style** list.

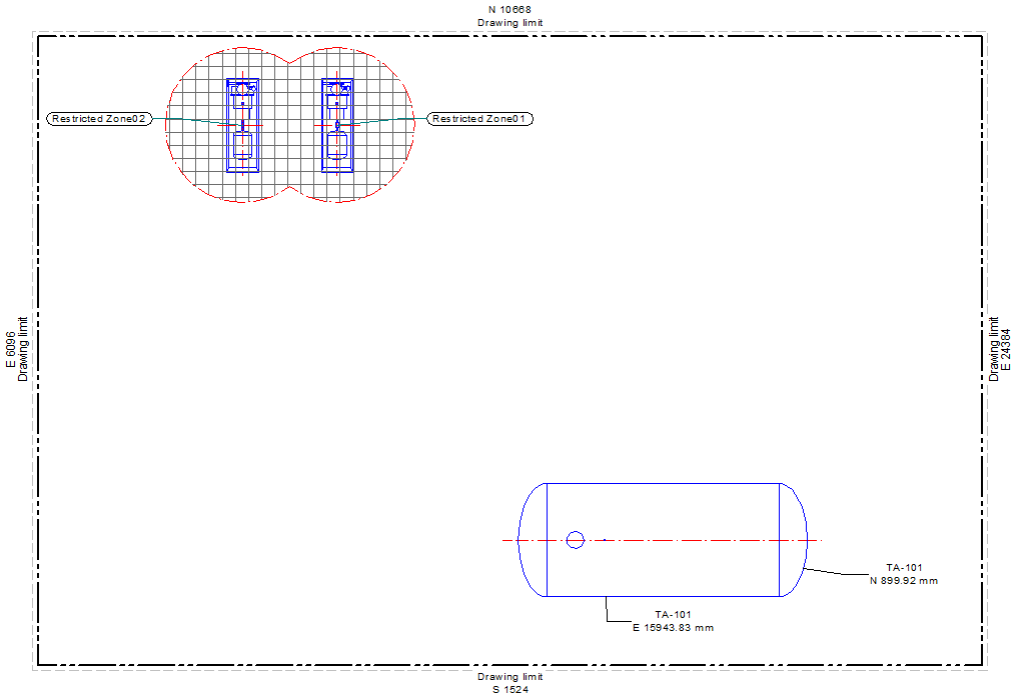
7. Draw a horizontal line through the approximate center of each equipment.



8. Click **File > Update** to save the contents of the embedded document.
9. Click **File > Close** to exit the embedded document and return to the drawing document.
10. Click **File > Save** in the drawing document.
11. Click **File > Exit** to exit **SmartSketch Drawing Editor**.
12. Right-click **Equipment Drawing01** in the **Drawing Console**, and select **Update Now**.
13. When the update completes, right-click again on the drawing **Equipment Drawing01** and select **Edit**.

    *The software opens the drawing in **SmartSketch Drawing Editor**.*
14. Maximize the drawing window in **SmartSketch Drawing Editor**.
15. Click **Fit** .

The software retains the view edits.



16. Click **File > Exit** to exit **SmartSketch Drawing Editor**. You do not need to save the drawing because you did not change it.