


Process Plant Facilities Template

 [In this topic](#)

The Process Plant Facilities Template includes stencils to assist the industrial process plant facilities manager in laying out a shop floor.

This template opens with the Wall Utility toolbar in place. You can use the Wall Utility buttons with the Double Line Wall and other shapes to form a T-joint or corner joint between walls, extend a wall to meet another, match doors and windows to wall thickness and angle, and move and size the building shapes precisely on the page.

For information about how a particular shape behaves, right-click the shape, then choose Shape Help.

Before you draw your process plant plan:

- Determine the plan dimensions for the warehouse/factory structure and external loading area, and existing or proposed equipment (such as machines, cranes, racks, shelving, and other objects you want to include in the plan).
- Determine the size of the loading bays and doors, and note the directions for door swings.

Laying the foundation

By default, the Process Plant Facilities Template opens with a scaled drawing page in landscape (wide) orientation.

To change the page settings and drawing scale:

1. Choose File > Page Setup.
2. On the Page Size tab and Drawing Scale tab, choose the settings you want for the drawing page size, the printed page size, and the drawing scale, then click OK.

To change the measurement units, click the Page Properties tab and choose the unit you want to use from the Measurement Units list, then click OK.

See also:

[Rotating and resizing pages](#)

[Setting page orientation and scale](#)

Drawing to scale

When you're choosing a drawing scale for a process plant plan, keep the following things in mind:

- In Visio Technical, drawing units are sizes in the real world. Page units are sizes on the printed page. The ratio of page units to drawing units is the drawing scale.
- The smaller the drawing scale, the larger the area you can represent. A scale such as 1/8 inch = 1 foot allows you to draw an entire shop floor on one page. A scale such as 1 inch = 1 foot allows you to focus on one machine.
- When you drop shapes on a scaled drawing page, they adjust automatically to the scale you've set.

See also:

[Setting page orientation and scale](#)

Creating a process plant plan

The first step in creating a process plant plan is to use guides and wall, windows, doors and loading bay shapes to build the facility plan.

To assemble the framework and position walls, doors, and windows:

1. Drag guides from the horizontal and vertical rulers and position them on the page so that they indicate

the perimeter, the number and location of rooms in the drawing, and correct dimensions.

TIP After you set up the guides that make up the framework, you may want to turn off the drawing page grid and use only the rulers and guides to position and glue shapes. To turn off the drawing page grid, choose View > Grid.

2. For each wall, drop a Double Line Wall shape so that the shape's endpoints glue to the intersection of the horizontal and vertical guides. The selection handles turn red, indicating that the shapes are glued.
3. To join the wall shapes at the corners, use the Join Walls button on the Wall Utility toolbar.
4. Glue Horizontal and Vertical dimension line shapes from the General - Dimensioning, Architectural stencil to the endpoints of the walls, or to the guides, to indicate the length of walls.
5. Position window and door shapes on the walls, gluing the endpoints to the guide. If necessary, use the Align To/Match Walls button on the Wall Utility toolbar to rotate the window and door shapes to the angle of the wall on which you drop them. To flip or rotate door shapes so the doors open in the appropriate direction, right-click the shape, then choose the appropriate command from the shortcut menu.
6. To reposition walls, drag the guide to which they're glued. Window and door shapes move with the walls.

After you assemble the framework and wall structure, add shapes for shop floor machines and equipment; hoists, loading and unloading equipment, lifters or lifts, and shelving for storing and distributing manufactured goods; and equipment for hauling, transporting, and distributing manufactured goods.

See also:

[About positioning shapes precisely](#)

Using layers with process plant plans

A layer is a named category of shapes. When you create a process plant plan, Visio Technical places the shapes on layers. For example, the wall, door, and window shapes are placed on the Building Envelope layer; shop floor machine shapes are placed on a Machines layer; cranes are placed on a Warehouse Equipment layer; and so on.

When shapes are assigned to separate layers, you can treat the layers of shapes separately. For example, you can hide or lock all layers except the one you want to work on or you can print shapes based on their layer assignments. To modify layer settings in a drawing, you use the View > Layer Properties command.

To view only one layer in a drawing:

1. Choose View > Layer Properties.
2. In the Layer Properties dialog box, under Visible, uncheck all the layers except the one you want to view, then click OK.

See also:

[About layers](#)

Measuring area and perimeter

You can use the Measure tool to calculate the total perimeter and area of any closed shape drawn with the drawing tools, such as a shape that outlines the floor area of a floor plan. To run the Measure tool, choose Tools > Macro > Visio Extras > Measure.

TIP To measure the perimeter and area of a drawing constructed with shapes that contain height and width, first trace the boundary with the pencil tool, then run the Measure tool on the simple boundary shape.

You can use the Area Analysis tool to calculate the area of a room or space created using the Double Line

Wall shape. To run the Area Analysis tool, choose Tools > Macro > Facilities Management > Area Analysis.

See also:

[Using the Area Analysis tool](#)

[Using the Measure tool](#)

Working with shape properties

A custom property is a field in which you can store information. For example, a Drill Press shape might include fields that contain information about its Manufacturer, or Model Number. To associate additional data with your process plant planning shapes, you can run the Custom Properties Editor to add properties.

To run the Custom Properties Editor:

- Choose Tools > Macro > Custom Properties Editor.

See also:

[Adding, editing, and deleting custom-property fields](#)

Generating reports from properties

If you've associated custom-property data with your process plant planning shapes, you can run the Property Reporting Wizard to generate inventory or numerical reports based on the data. For example, you can create an inventory of milling equipment.

To run the Property Reporting Wizard:

- Choose Tools > Property Report.

See also:

[Creating reports from custom data](#)

Linking shapes to other drawing pages, other files, or World Wide Web locations

You can add navigational links to any shape in your diagram, so that users of the diagram can right-click the shape to jump to separate drawing pages, separate files, or documents on an intranet or the Web. For example, you can link a shop floor machine shape to the manufacturer's Web site for ordering and other product information.

To add links to shapes:

- Choose Insert > Hyperlink.

See also:

[About using hyperlinks](#)

Placing Visio drawings on the World Wide Web

You can easily convert a Visio drawing to a format Web browsers can read. Then you can distribute the drawing on an intranet or the Web.

See also:

[Exporting shapes and drawings in .jpg or .gif format](#)

[Saving drawings as HTML pages](#)

Creating a process plant plan

Drawing to scale

Generating reports from properties

Laying the foundation

Linking shapes to other drawing pages, other files, or World Wide Web locations

Measuring area and perimeter

Placing Visio drawings on the World Wide Web

Using layers with process plant plans

Working with shape properties

