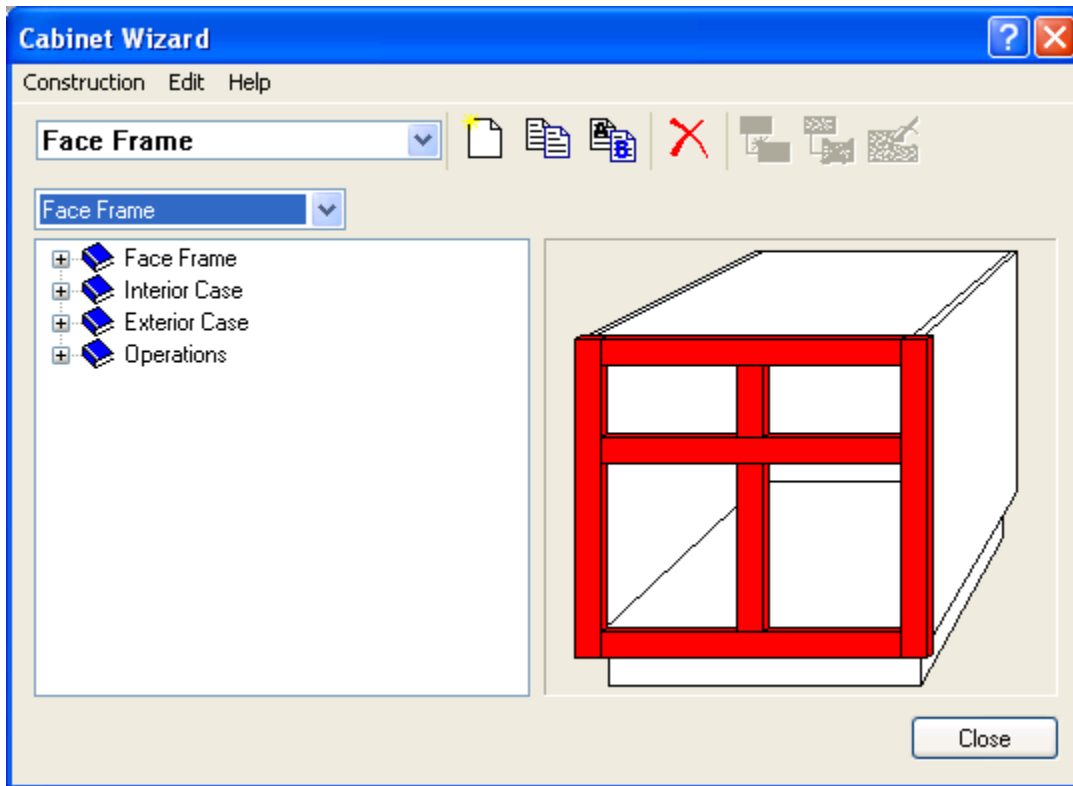


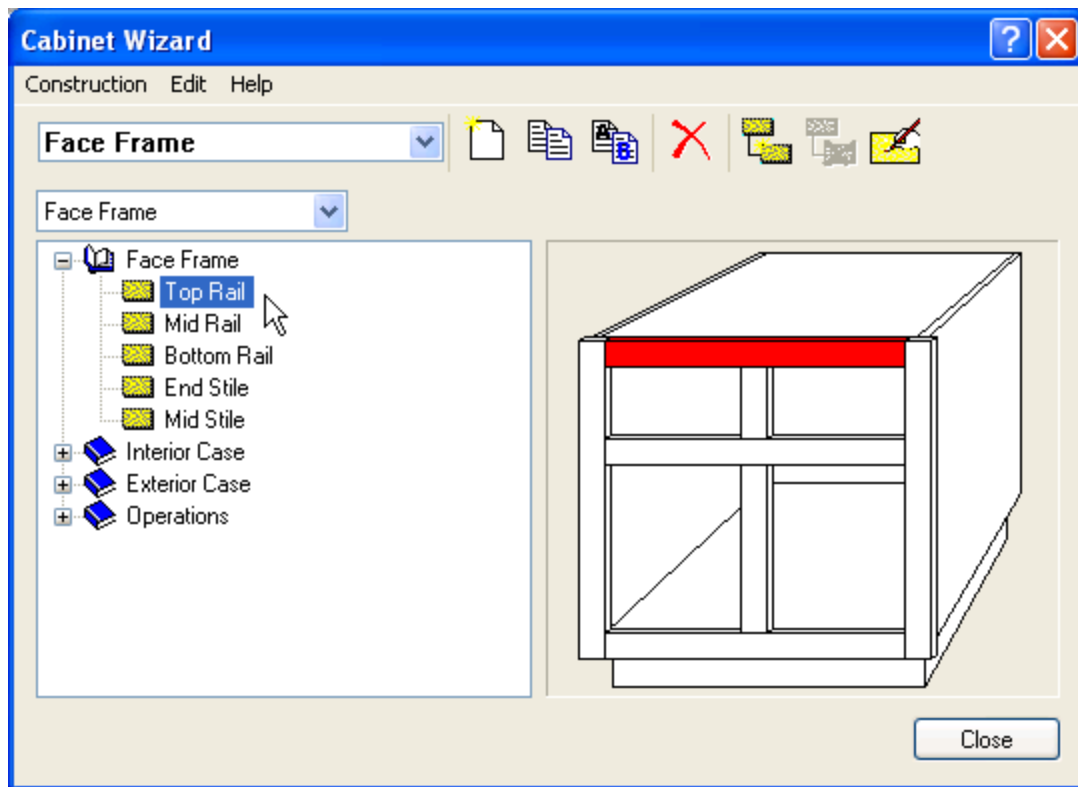
What's New in Solid Version 4.0

New Cabinet Wizard Options In Solid 4.0

The Cabinet Wizard will appear very different for users who are moving from an older version of Solid up to Version 4.0. In addition to the new look, there are also several new options throughout the Wizard. This is why it is recommended that you set up your construction methods for version 4.0 from the beginning rather than by transferring standards from a previous version.



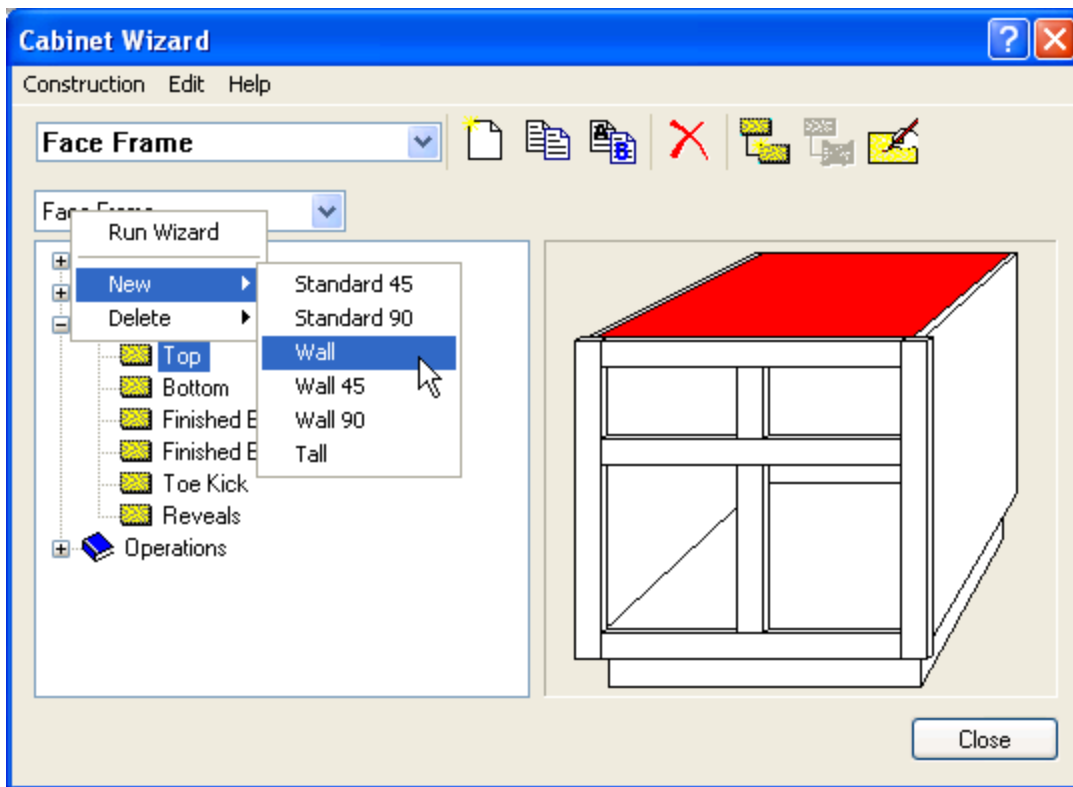
To navigate through the Cabinet Wizard, simply click the + symbol beside the branch that you want to expand. In the following example, the + symbol beside Face Frame was clicked to show the branches in the Face Frame section.



To run the Wizard for a particular branch (such as Top Rail), simply double-click on that branch or click that branch and then click the Edit Selected Part button.

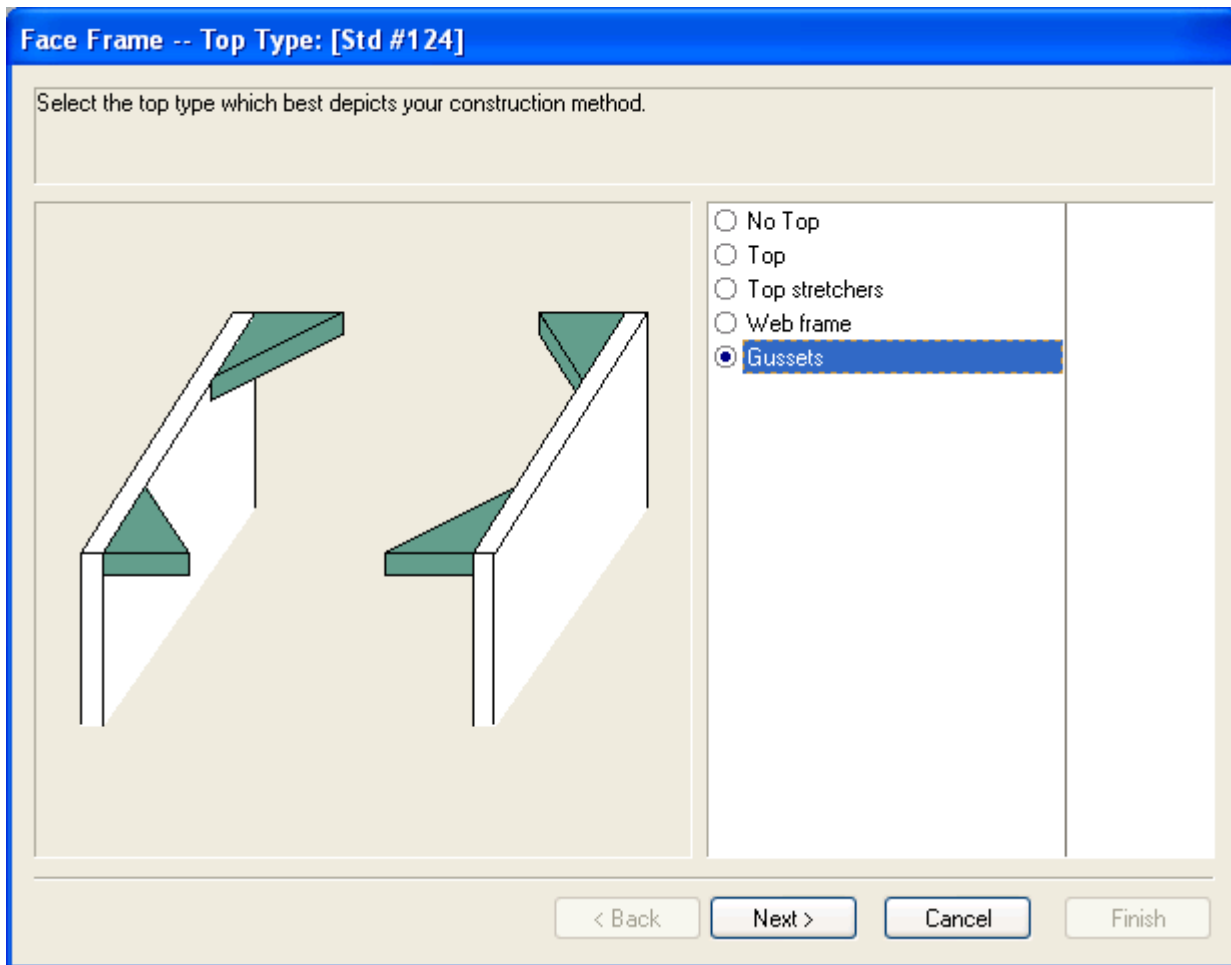
Each part may also be expanded so that different classes of cabinets may have unique settings.

Available classes are: Base 45, Base 90, Wall, Wall 45, Wall 90, and Tall. To expand a part, right-click on that part (for example, Top Rail) and then hold your mouse over New, and finally, click the desired class to add.



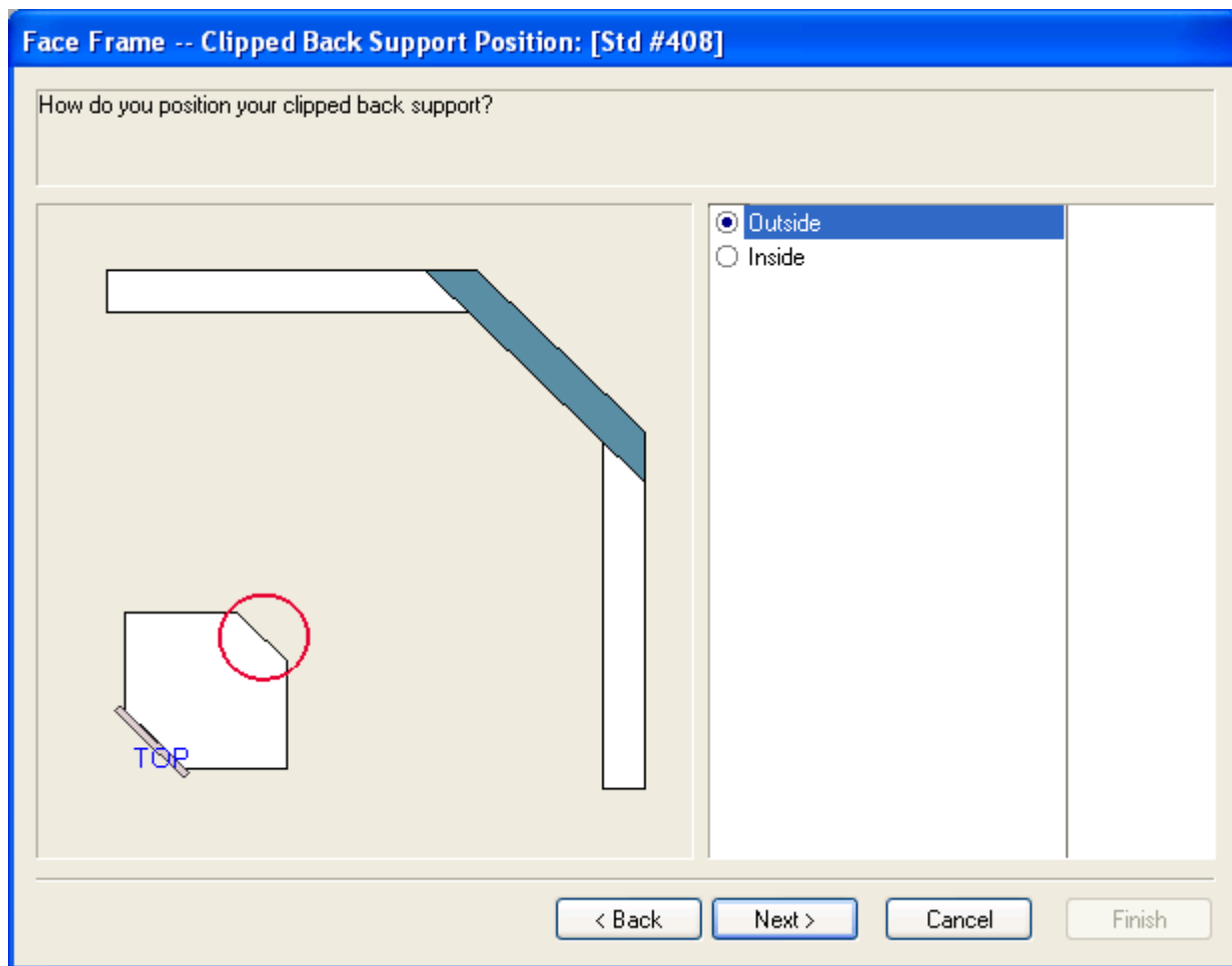
Like previous versions of Solid, if the user fails to expand a branch to include the optional cabinet classes, those classes will follow the answers for the original branch.

New Top Type: Gussets



The top type Gussets allows the construction of diagonal corner blocks as pictured above in addition to the already available types of full top, web frame and stretchers.

New Options for Corner Cabinets. The new Cabinet Wizard includes the option for a clipped back support in corner cabinets with an angled or clipped back.

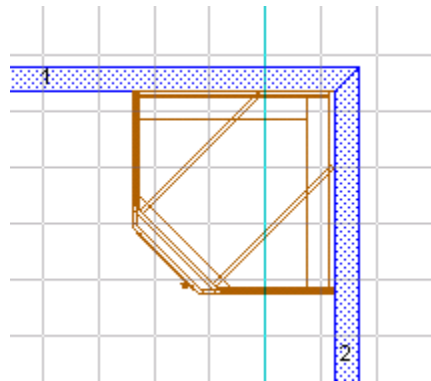


First, make sure to have a branch under the cabinet wizard for the corner cabinet (in the above example, it is a Base 45 cabinet).

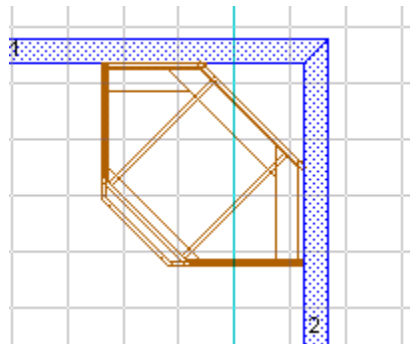
The new option will now appear in the cabinet wizard for the unfinished back under the corner cabinet branch. There will be some new questions relating to the clipped back support.

To apply the clipped back support:

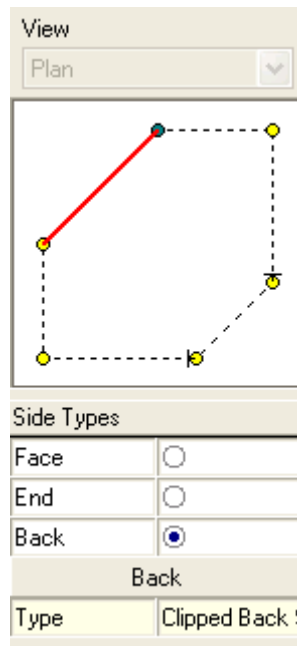
First, place a corner cabinet in a job.



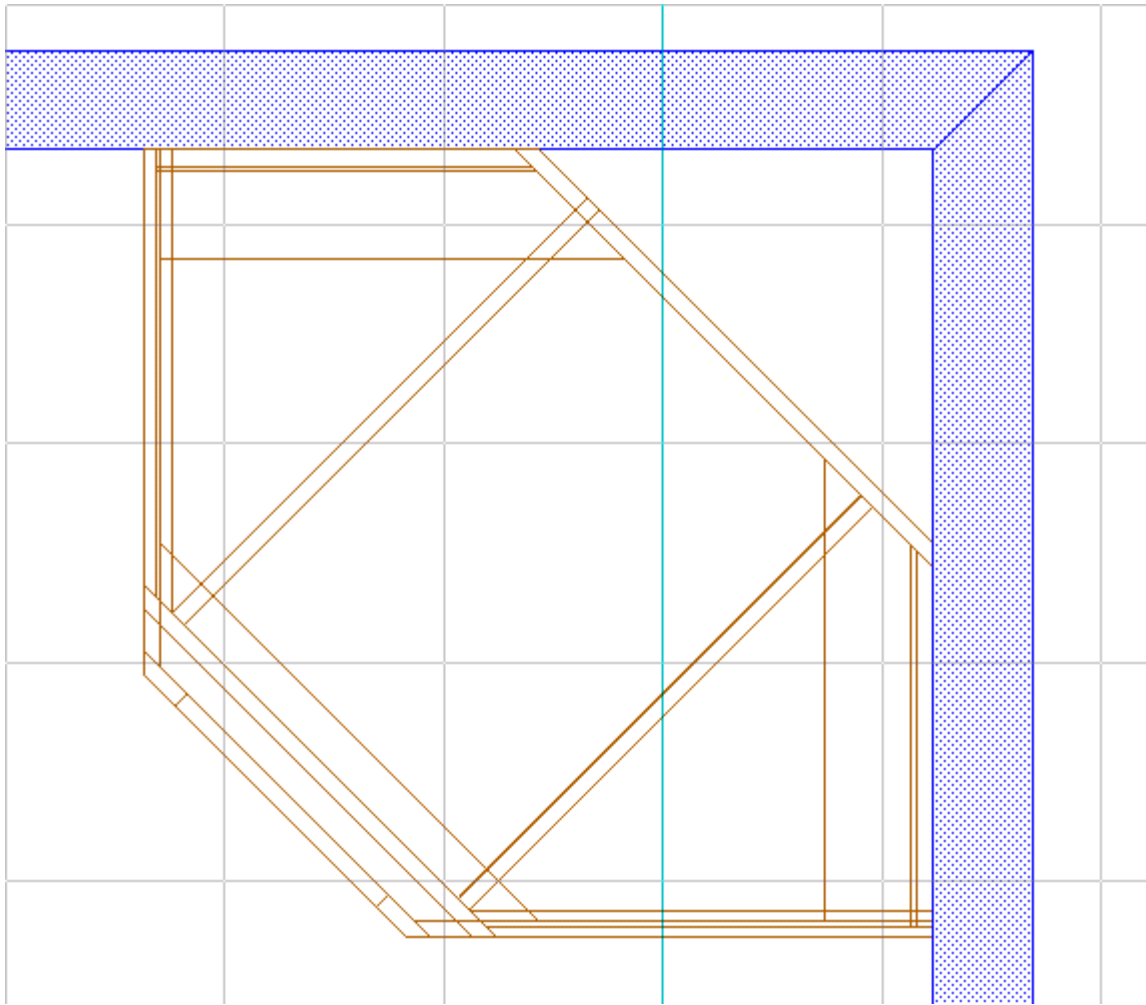
Next, shape that corner cabinet so that the back is clipped as desired.



Then, take the cabinet to the section editor and you should see the side selector on the left side of the screen as pictured below. Click on the side, in the side selector, which represents the clipped back (the red side in the picture below).



Finally, in the Back Type pull down that appears on the left, choose Clipped Back Support from the options that appear.



Above is an example of a completed corner cabinet with the clipped back support. Notice the mitre joints on the corners.

More New Cabinet Wizard Questions

Partition Unfinished Back Joint. Gives the user more control over the depth of the partition and how it joins the unfinished back.

Unfinished Back Fixed Shelf Joint. Gives the user more control over the fixed shelf depth.

Adjustable Shelf Grain Alignment. On a shaped cabinet, the user may specify whether the grain direction is shifted to match the cabinet opening.

Fixed Shelf Grain Alignment. Same as on an adjustable shelf.

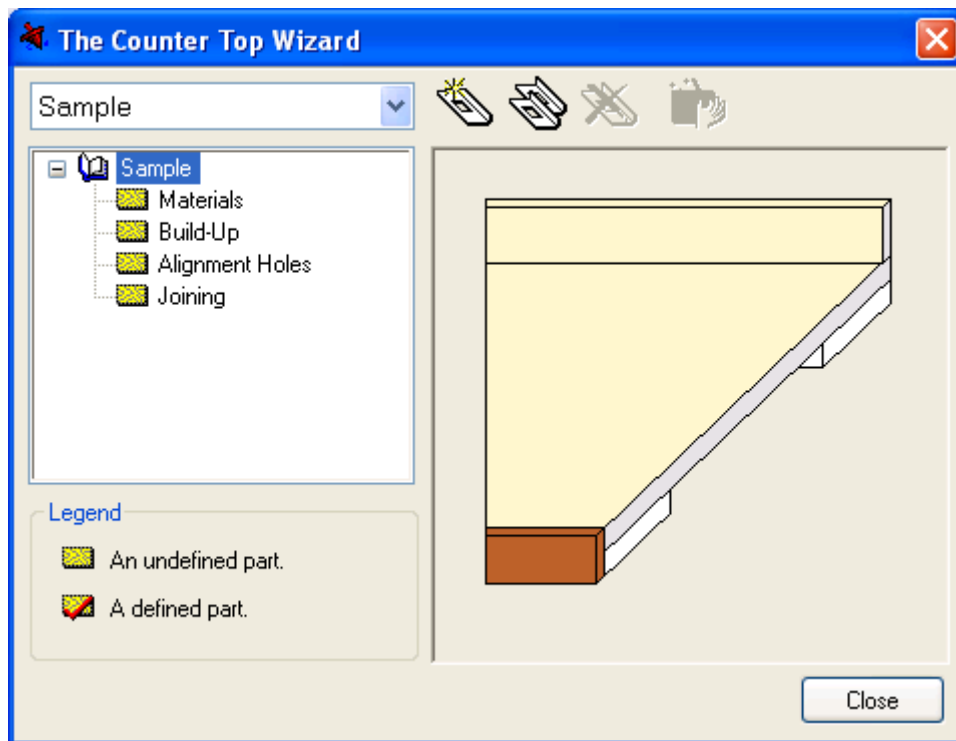
Sub Frame Notch Deck. Allows the user to specify whether the deck is notched or simply left short in a situation where a sub-frame is placed on a cabinet.

New options for Material Face orientation. The cabinet wizard now allows the user to specify which direction the good side of the material should face for tops, bottoms, and unfinished backs. If you use a 2-sided material for these parts, you can specify if the good side faces into the cabinet or out of the

cabinet. This is available for several parts in the wizard.

Counter Tops Wizard In Solid 4.0

Solid 4.0 has a new feature for shops that build countertops. The Counter Tops Wizard is available through the Utilities Menu at the Splash Screen. This Wizard is similar in function to the Cabinet Wizard. Below is the first screen that the user sees in the Counter Tops Wizard.



The Counter Top Wizard includes options for:

Materials

Surface and substrate

Build-up

Edge cap width

Splash construction

Build Up

Build Up width

Joint Edge type (mitre or overlap)

Build Up Along Joint Edges

Radius Build Up

Interior Edge Radius

Alignment Holes

Hole Placement and Spacing

Hole Diameter and Depth

Rear Holes only or Front and Rear holes

Joinery

90 Degree Corner Joints

45 Degree Corner Joints

Several Hardware Options

None

Draw Bolt

Dog Bone

Double Action

Intelli-Joints (Use I-Joints inside Solid to design your own hardware)

How to Use This New Feature

Step 1: Set up at least one countertop construction method that you will want to use.

From the Solid Splash Screen, click Utilities and then Counter Tops Wizard. Click the Create New Construction Method button. The program will prompt you to name the new method or it will name it New Countertop if you simply click OK.

Click on the Materials branch and then click the Run Part Wizard button. Answer these questions according to the method that you wish to build this type of countertop. In this section of the Wizard, you will decide if the construction uses a separate substrate material or if the substrate is included with the surface. Next, you will decide if you want to use build up with this method. Then, you will describe the splash used in this construction method. Finally, you will enter the width of any edge cap that you would use in this type of countertop.

Next, click on the Build Up branch and then click the Run Part Wizard button. First, the wizard will ask you to enter the width of your build up for this method. Next, it will ask that you enter the type of joint that you will use for build up on a countertop joint edge. You will then choose whether or not to add build up along the joint edge. Finally, you will answer questions about the build up regarding how you handle curved top situations.

Then, click on the Alignment Holes branch in the Wizard and click the Run Part Wizard button. The Wizard will ask you to enter the parameters for adding alignment holes for positioning of the build up on the top. If you choose to add alignment holes to the tops, the Wizard will ask you to define where these holes will appear and the diameter and depth of the holes.

Finally, choose the Joining branch and click the Run Part Wizard button. The wizard will then ask you to define the type and position of joinery that you use in this countertop type. The wizard will ask you how you handle 90-degree corner joints and 45-degree corner joints. Then, the wizard will give you choices of the types of hardware that you will use in the joints. The Wizard has pre-defined hardware setups for Draw Bolts, Dog Bones, and Double Action types of hardware. However, the wizard also allows you to set up an intelli-joint for any other type of hardware that you might wish to set up.

Step 2: Start a new job. In the job properties window, click on the Counter Top tab. This tab is identical to the same tab in the job properties in version 3.5 with the exception of the Construction Method selection drop down box. You should now be able to select the new construction method that you set up. Click the pull down and then select your Counter Top Construction Method.

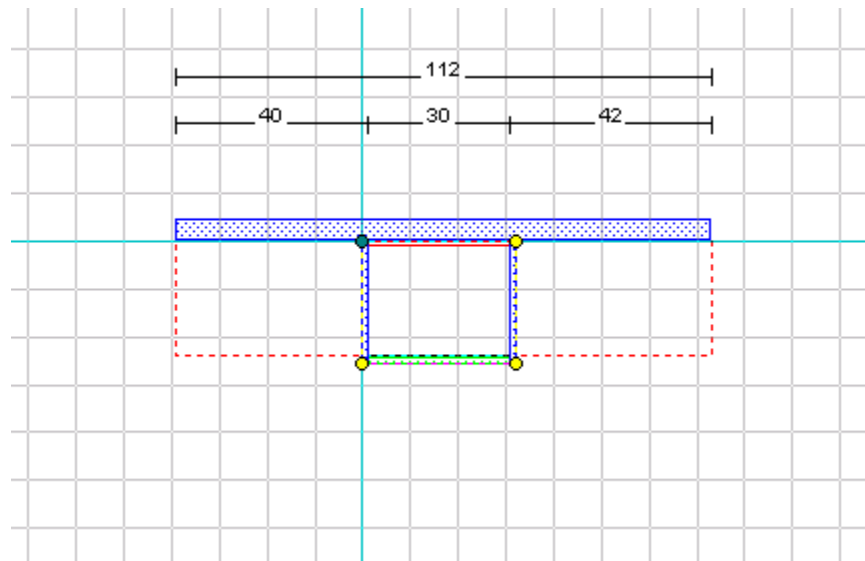
Step 3: Build the room, cabinets, and countertops in the same methods as always. However, you will now find that Counter Tops may be edited in the orthographic views in the same way that cabinets may be edited. The operations on tops will be visible and the parts may be output to CNC where they are machined per your specifications.

To edit Counter Tops:

From the Floor Plan view, click the Tops button on the left side of the screen. Right-Click on the Top that you wish to edit and click Edit Top if you want to edit the parts of the countertop or click Edit Shape if you wish to edit the outside shape of the countertop.

Using Point Position to Edit Top Shape

When you click Edit Shape the countertop will appear as in the picture below.



In the top shape edit view, the line color indicates the type of edge on that side of the countertop. A green edge means that the countertop has a finished profile on that side, a blue edge means that the countertop has a finished side there, and a red edge means that there is a splash on that side.

There are several tools that appear on the left side of the screen when editing a countertop (see picture below). These tools can be used for changing the shape of the top, changing the edge type for a certain edge of the top, and for changing the shape of the top itself.



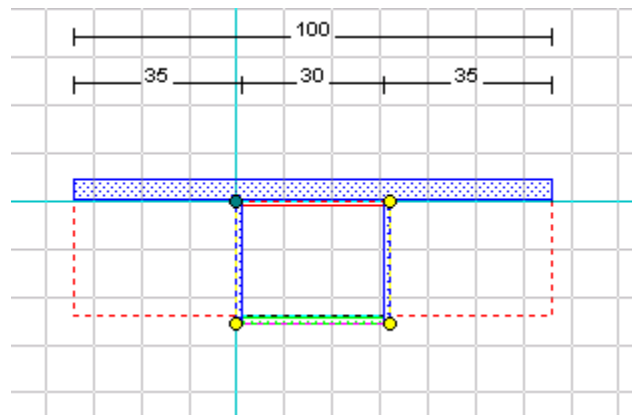
Button Functions:

Select Point	Add Point	Delete Point	Move Point
Move Line Parallel to Current Position	Arc Line	Radius Point	Change Reference Point
Select Edges for	Select Edges for	Select Edges for	Select Edges for

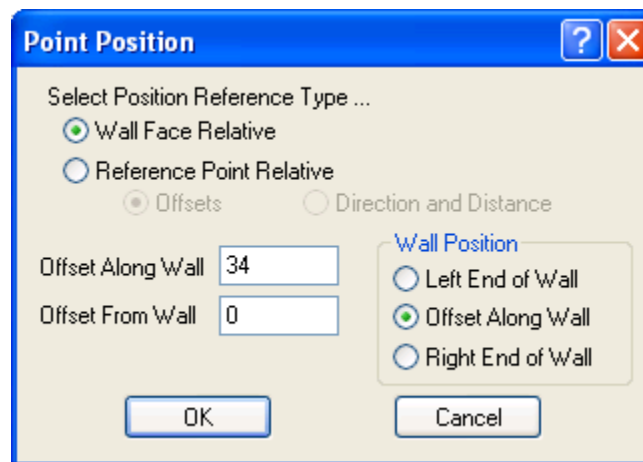
Unfinished Edge	Finished Edge	Profile	Splash
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Point Position

The best way to manually edit the shape and position of a countertop is to use relative positioning for the countertop points. Here is the countertop that we will start with in our example:



Step 1: Right-click on the first point that you wish to position. It is usually easier to set a point that touches the wall at a known location. In the example below, I right-clicked on the point on the back left corner of the countertop.



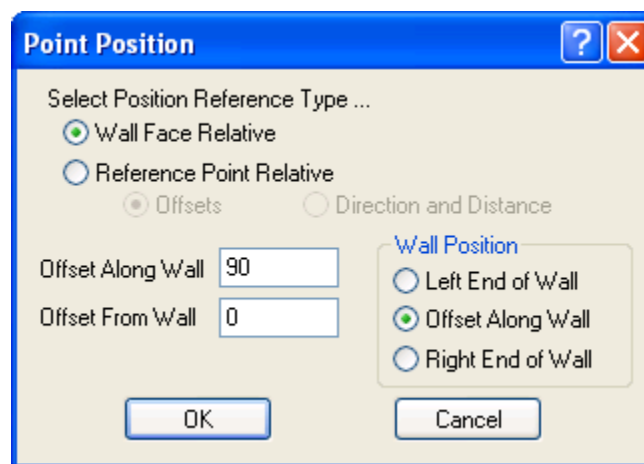
For this point, I am going to use the Reference type Wall Face Relative and Wall Position of Offset Along Wall. NOTE: If you choose a Wall Position of Left End of Wall or Right End of Wall, the point will snap to a position that is flush with the corresponding end of the wall. Offset Along Wall allows the point to be placed at exactly some distance from the left end of the wall.

Step 2: Set the Offset Along Wall number to the distance that you want the point to be from the left end

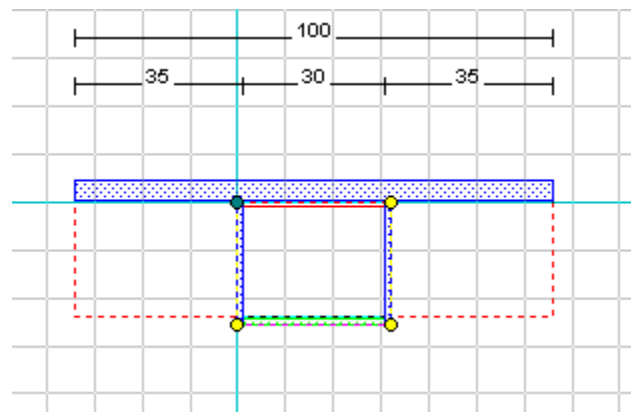
of this wall (In my sample, I am changing the distance to 10). Set the Offset From Wall to the distance that the point should be out from the wall face. In this case, that number is set to zero so that the point touches the wall.

Step 3: Now that we have placed the first point in exactly the right position, we can use it as a Reference Point to set the rest of the points in relation to its position. Click the Change Reference Point button (see previous page for a picture of that button) and then click the point that we have just set the position for (the back left point). The reference point will have a green color.

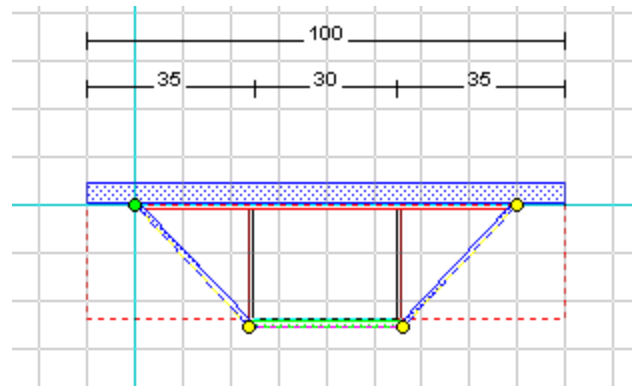
Step 4: Right-click on the next point on the countertop. In my sample, I am right-clicking on the point at the back right corner of the top. I have changed the horizontal offset to 90. This means that this point is 90 inches away from the reference point in a horizontal direction. The vertical offset of zero means that the two points are the same distance from the wall. Horizontal and vertical offsets would obviously switch meanings if the wall were running from top to bottom on the screen rather than from left to right.



Here is the countertop that we started with for this example:



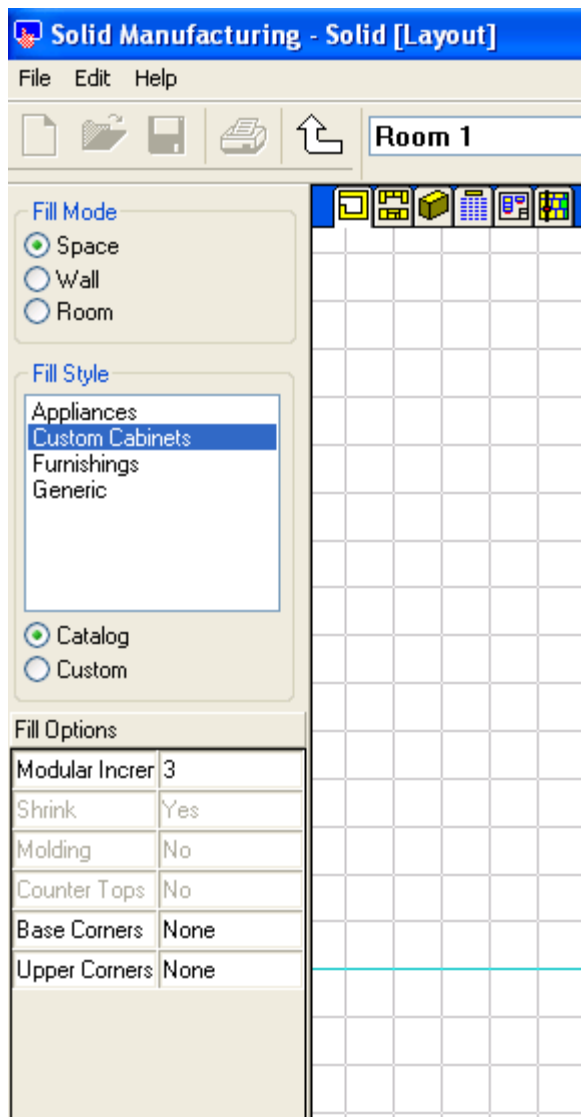
This is the result of our changes:



To really learn manual top editing: **PRACTICE, PRACTICE, And PRACTICE!!!**

New Options In a Solid 4.0 Job

Autofill



Autofill options now appear on the left side of the screen when you go into Autofill by clicking on the Autofill button.

An additional option is available for autofill with modular catalogs. There is an option called Shrink. The option is set to either yes or no. With Shrink set to yes, the modular cabinets may be resized to fit in the space allowed. With the option set to no, the cabinets must remain at the catalog size.

Wood Wizard

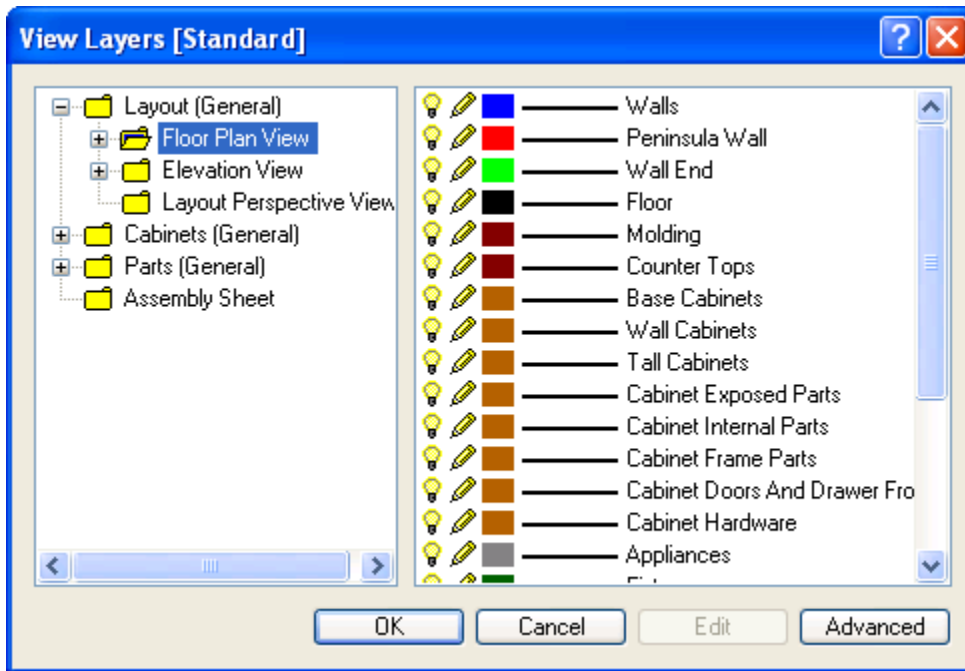
Another useful new feature in Solid 4.0 is the ability to open the Wood Wizard from the room level of a job.

From the floor plan or the elevation view, click on Utilities and then Wood Wizard. The Wood Wizard functions as usual.

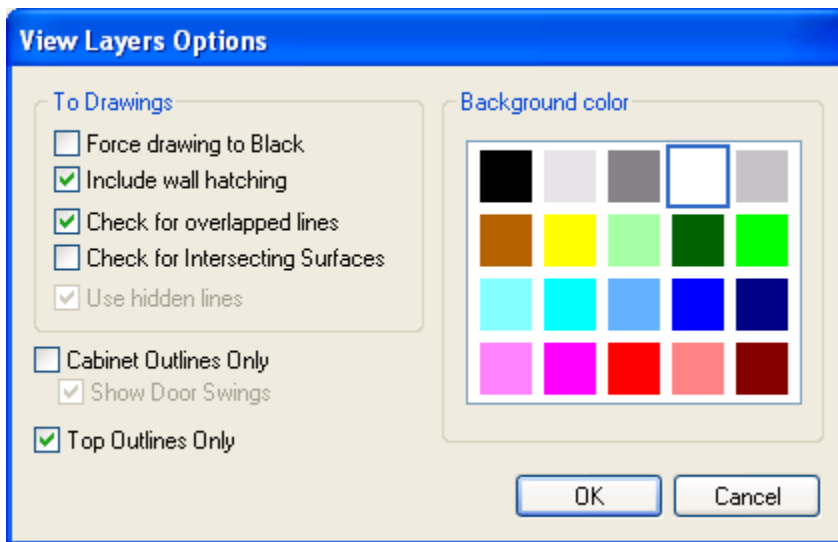
Layers Options

Layer options have slightly changed in Solid 4.0. By clicking on the System menu and then Layers,

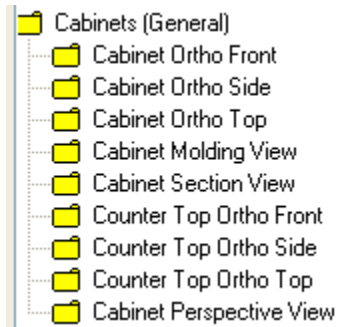
then choosing the desired layer and clicking Edit, you will see the following window. A slight departure from the previous version is that there appears a button for Advanced features.



Under Advanced, the following features will appear. Note that the options are not all new options they have simply been grouped together in one place.

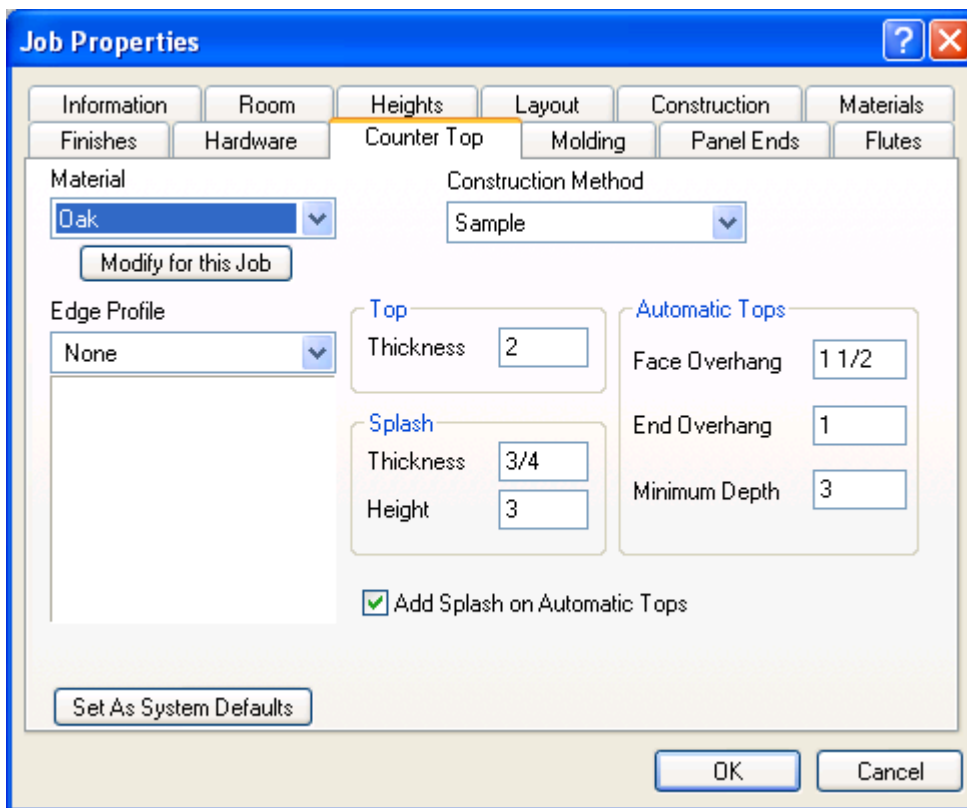


Furthermore, there are some new views that have layers options in Solid Version 4.0. Below are the new branches under the Cabinets (General) tree:



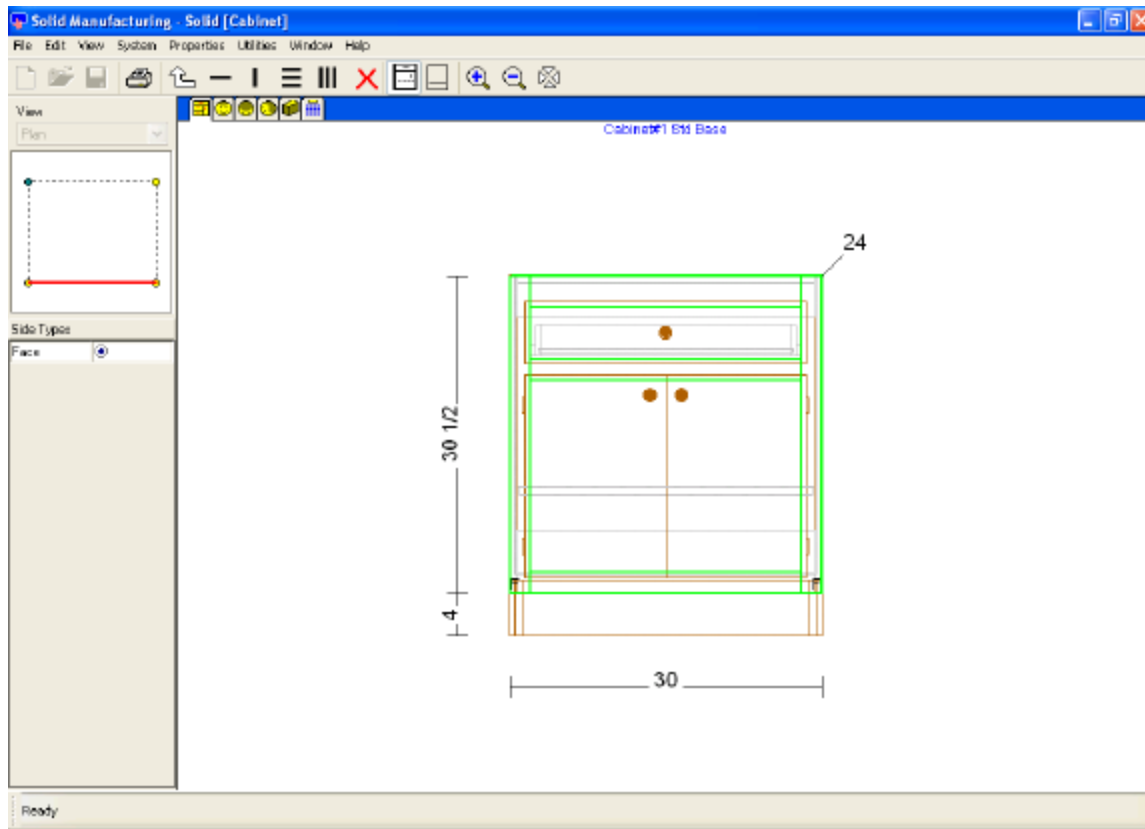
Countertop Construction

Another new selection that is available at the job level properties menu is the countertop construction method. This is where the user specifies which countertop construction method will be employed in this job. The countertop construction wizard is discussed in more detail in the Counter Top Wizard section of this documentation.



New Cabinet Section Editor In Solid 4.0

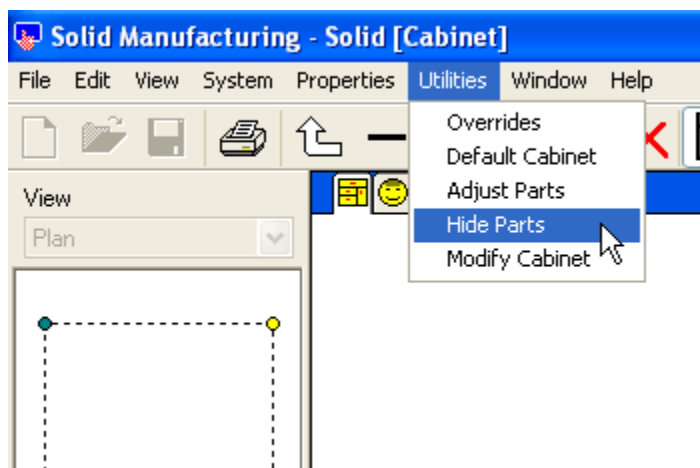
Solid 4.0 has a completely redesigned cabinet editor. The new editor offers several features which were previously either unavailable or more cumbersome to use.



The New Cabinet Section Editor

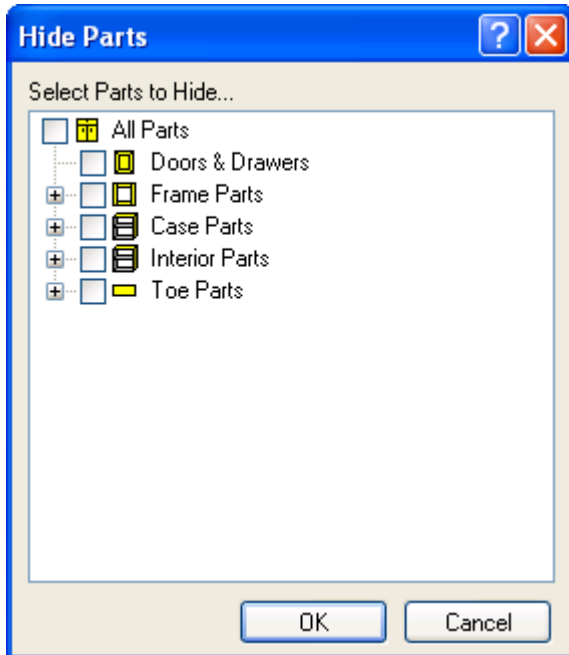
First, the new section editor looks and functions more like the orthographic views in older versions. Changes made in the orthographic views, such as moving or deleting parts, are now visible in the section view.

Secondly, the user has more control over what parts are visible in the section view. By clicking on Utilities | Hide Parts, the user can set any or all cabinet parts to be invisible. (NOTE: Parts that are hidden will not appear on the printed assembly sheets.)

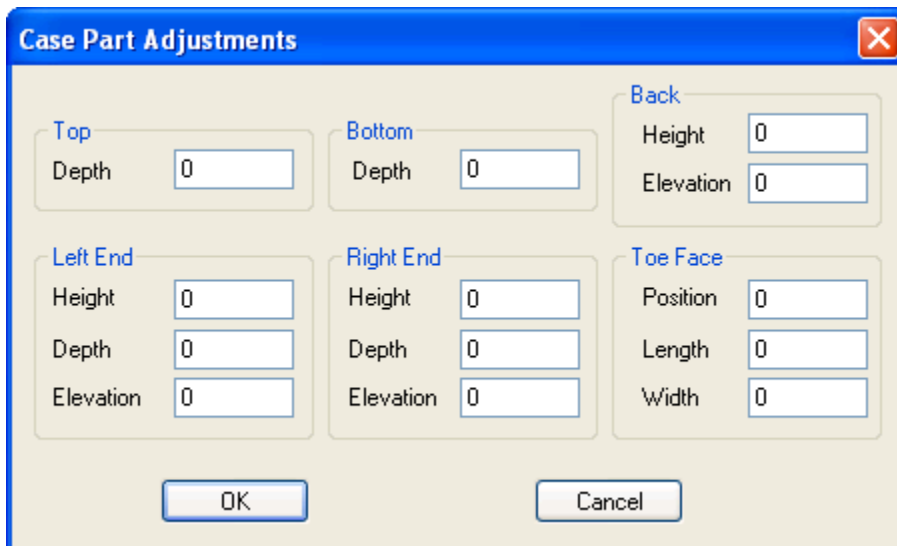


In the Hide Parts window that appears, simply check the boxes for parts that you wish to hide in the

section editor view.

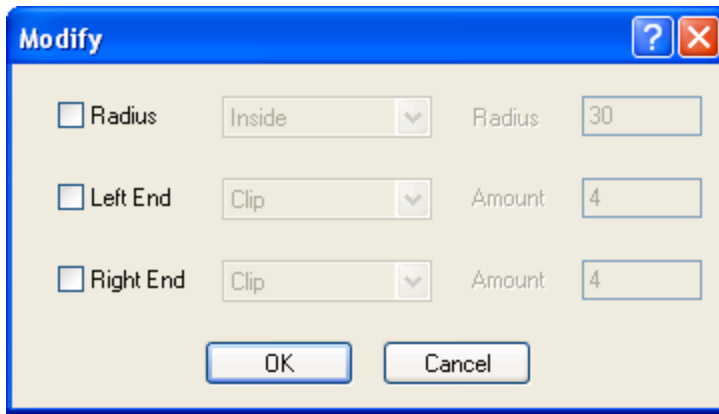


Users will notice that some options in the cabinet editor have been moved to different locations in the menus. For example, there is no longer a Parts menu with Adjust Parts and Delete Parts options. Adjust Parts is now available under the Utilities menu. Delete Parts has been replaced by the Hide Parts options which is also under the Utilities menu.

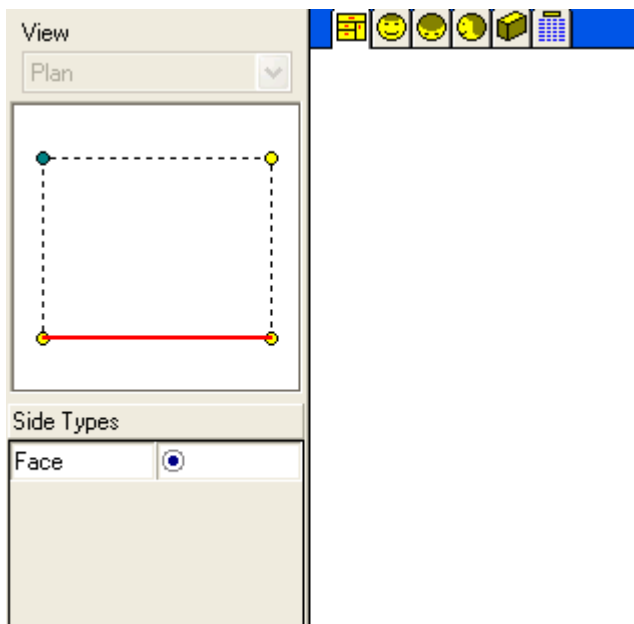


Another option under the Utilities menus is the Modify Cabinet option. This option includes the ability to radius the cabinet (inside or outside radius), or to add a clip, radius or angle to the cabinet ends.

These are not new options; they have been moved from the Properties menu from previous versions.



In the Solid 4.0 Cabinet Editor, the side selector is visible for all cabinets (Pictured below). In previous versions, the side selector was only available for cabinets whose shape had been modified.



The side selector is used to change the attributes of any side of the cabinet. A popular use is to add a second face to the cabinet either on a side or on the back. In Solid 4.0, there is an additional use for corner cabinets with a clipped back. The clipped back may be changed to a Clipped Back Support and it will then follow the Cabinet Wizard standards for a clipped back.

When you add a second face to the cabinet, the side selector allows you to give priority to either face.

The face with a priority of 1 has a higher priority than the face with a priority of 2. Therefore, sectioning of face 1 will run through the entire cabinet but sectioning of face 2 will terminate when it runs into a part from face 1.



Additionally, you will see some changes in the way that openings, doors, drawers, and internal parts are edited. Below, you will see the new side bar that appears when you click on a door or opening from the Section Face view.

Opening	
Dimensions	
Width	26
Height	18 1/2
Lock Width	No
Lock Height	No
Type	
Door	<input type="radio"/>
Pair Door	<input checked="" type="radio"/>
Drawer	<input type="radio"/>
False Front	<input type="radio"/>
Open	<input type="radio"/>
Panel	<input type="radio"/>
Blank Panel	<input type="radio"/>
Door	
Pair Gap	0
Mullions	None
Adjustments	
Inset	0
Overlays	
Left	1/2
Right	1/2
Top	1/2
Bottom	1/2

The next picture shows the options that appear when you click on a drawer or false front from the Section Face view.

Opening	
Dimensions	
Width	26
Height	5
Lock Width	No
Lock Height	No
Type	
Door	<input type="radio"/>
Pair Door	<input type="radio"/>
Drawer	<input checked="" type="radio"/>
False Front	<input type="radio"/>
Open	<input type="radio"/>
Panel	<input type="radio"/>
Blank Panel	<input type="radio"/>
Adjustments	
Inset	0
Drawer Box	
Box Depth	20
Clearances	
Top	3/4
Bottom	1/4
Side	1/2
Overlays	
Left	1/2
Right	1/2
Top	1/2
Bottom	1/2

In the picture below you will see the options that appear when you click on a shelf or rollout in the Section Case view.

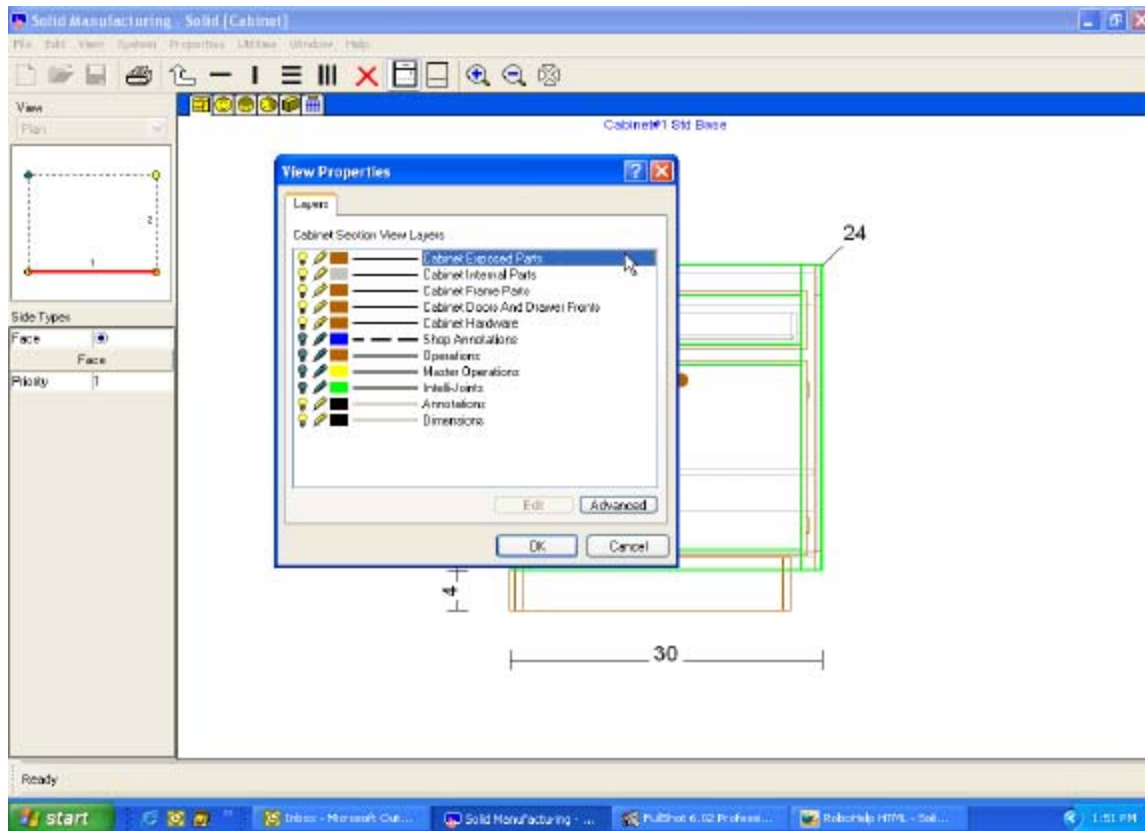
Shelf	
Dimensions	
Width	3/4
Length	28 1/2
Type	
Shelf	<input type="radio"/>
Adjustable Shelf	<input checked="" type="radio"/>
Fixed Shelf	<input type="radio"/>
Rollout Shelf	<input type="radio"/>
Rollout Tray	<input type="radio"/>
Drawer Stretch	<input type="radio"/>
Top	<input type="radio"/>
Bottom	<input type="radio"/>
Position	
Relative	Float
Adjustments	
Depth	-1/4
Left	-1/8
Right	-1/8

Finally, below is a view of the options that will appear when you click on a partition in the Section Case view.

Partition	
Dimensions	
Width	3/4
Length	7 15/32
Split Bottom	No
Type	
Partition	<input checked="" type="radio"/>
Double Partition	<input type="radio"/>
Position	
Relative	Float
Adjustments	
Depth	0
Top	0
Bottom	0

Cabinet Editor Layer Options

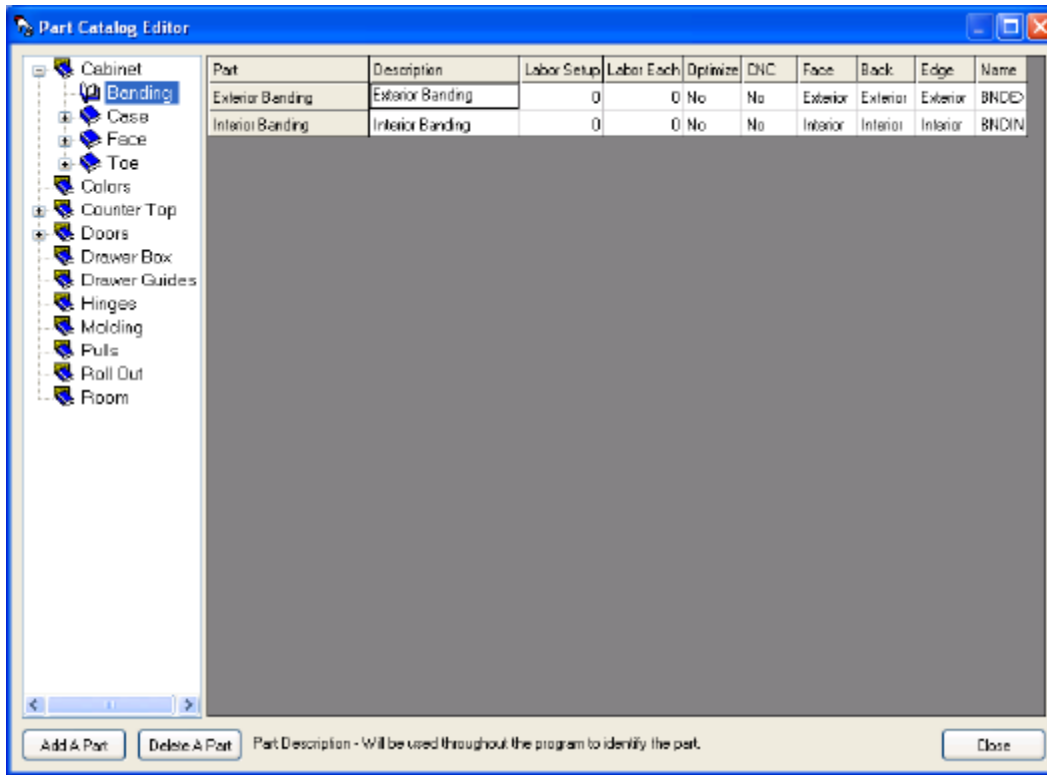
In Solid 4.0, the user has the opportunity to set layer options in the cabinet editor. A shortcut to the layers options: in the cabinet editor, Right-Click outside of the cabinet and then click Properties. Click the Layers tab and the properties for the cabinet editor layers will appear as below.



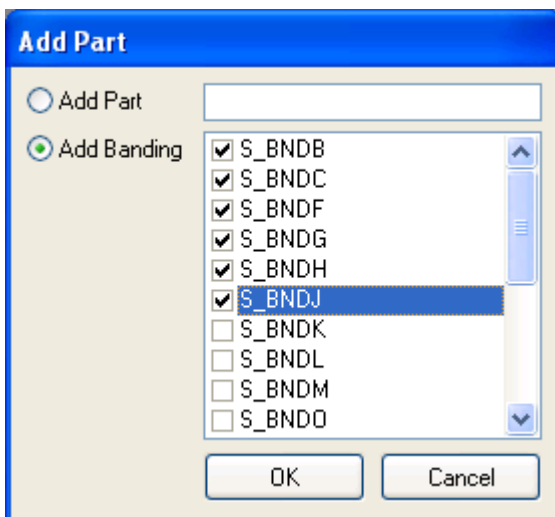
New Banding Options In Solid 4.0

In previous versions of Solid, the user was limited to the banding options of Interior, Exterior, Door, and None. In version 4.0, new options have been added for more flexibility to the user.

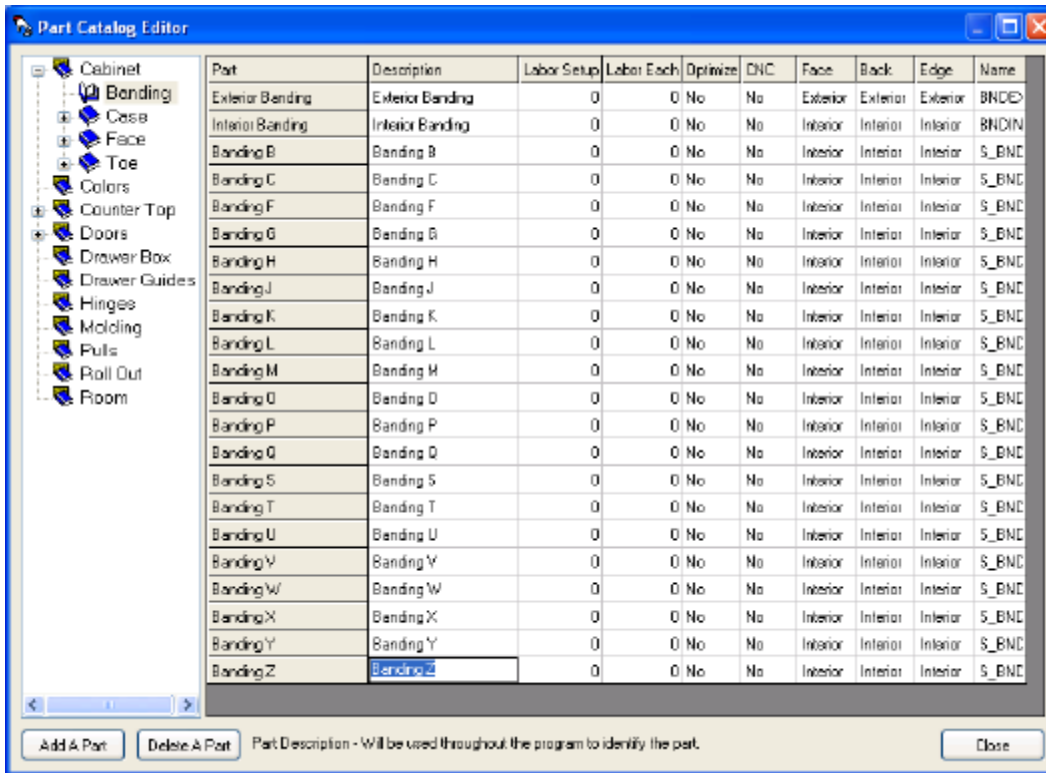
The new banding options may be accessed through the part catalog editor. From the Solid Splash Screen, click Catalogs and then click Parts. In the Part Catalog Editor, click the + symbol beside Cabinet to expand the branch and see the Banding section.



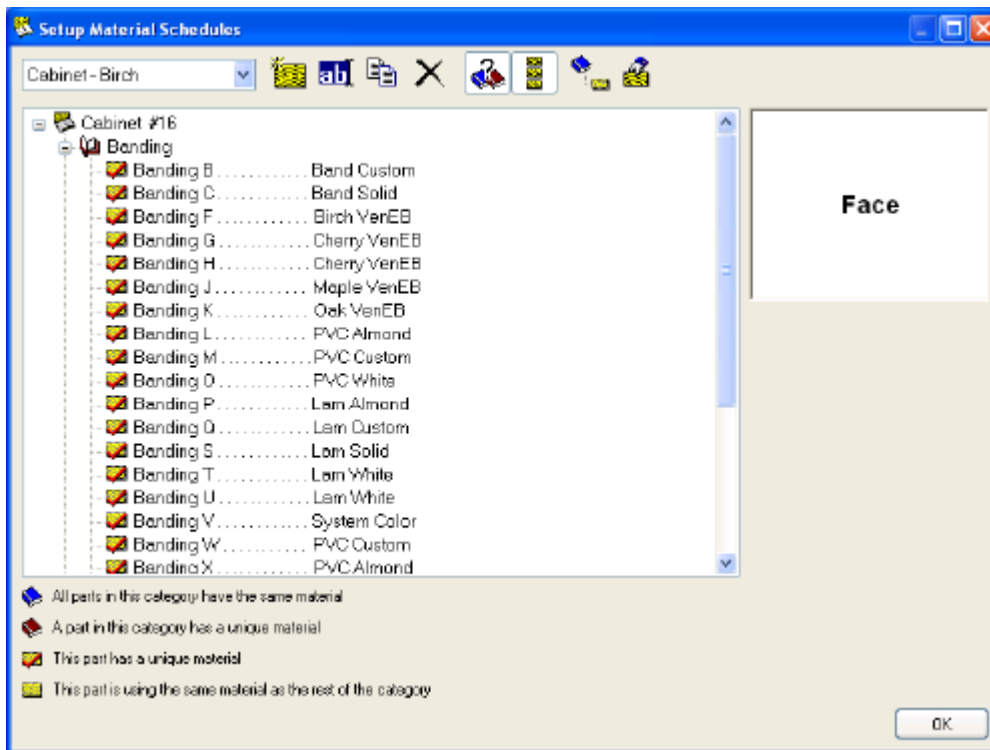
The new banding codes available in Solid 4.0 are B, C, F, G, H, J, K, L, M, O, P, Q, S, T, U, V, W, X, Y, and Z. The existing codes of A (used for angled in CNC output), D (used for Door banding), E (used for exterior banding), I (used for interior banding), and R (used for radius in CNC output) are all still available in 4.0 as well. You must click on the Add A Part button at the bottom of the Part Catalog Screen (Pictured above) and then choose to add banding. Then, check the banding codes that you wish to add.



You will then see those codes added to the banding list.



To assign materials to these banding types, go into the material schedules for cabinet parts. From the Solid Splash Screen, click Catalogs|Material Schedules|Cabinet Parts as pictured below.

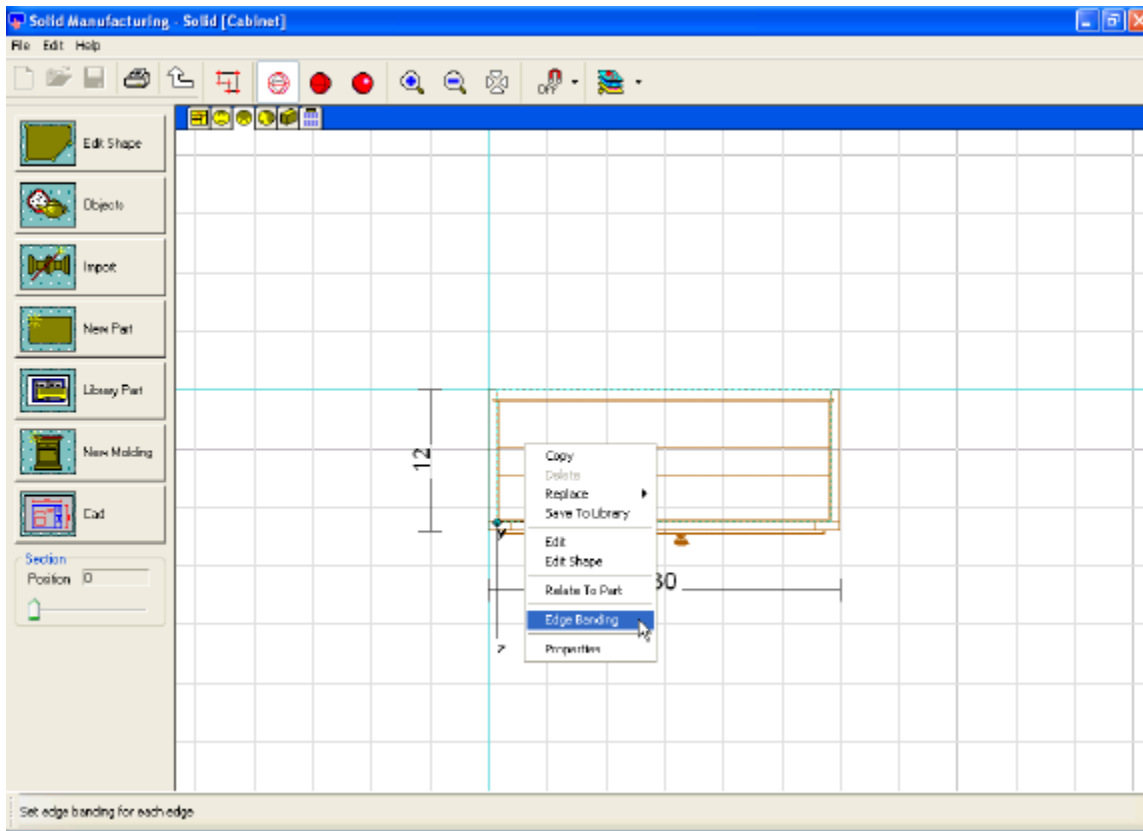


Next, simply select materials for the banding options that you will be using. Use Interior and Exterior

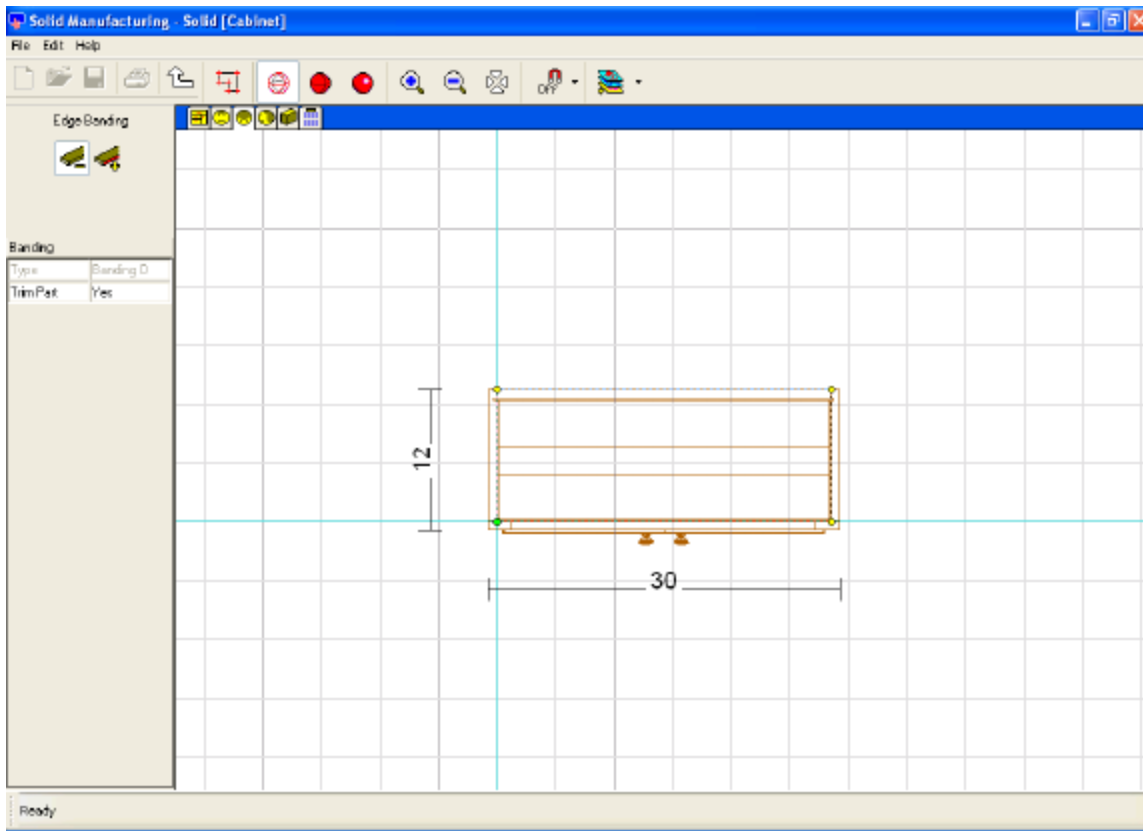
banding first, then choose materials for the new types as needed for additional types of banding.

How to Apply Banding to a Part

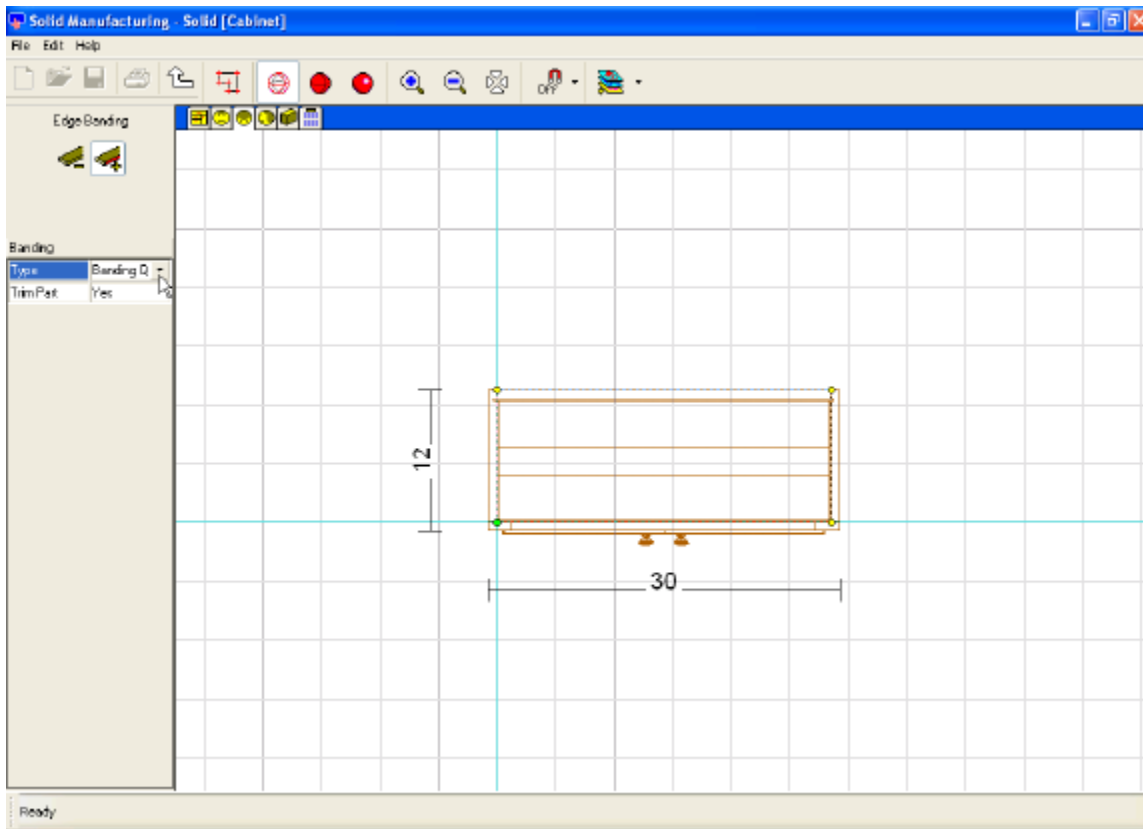
Once inside a job, you may set the banding options for a particular part by going into the orthographic view for a cabinet and then right-clicking on the part and choosing the Edge Banding option.



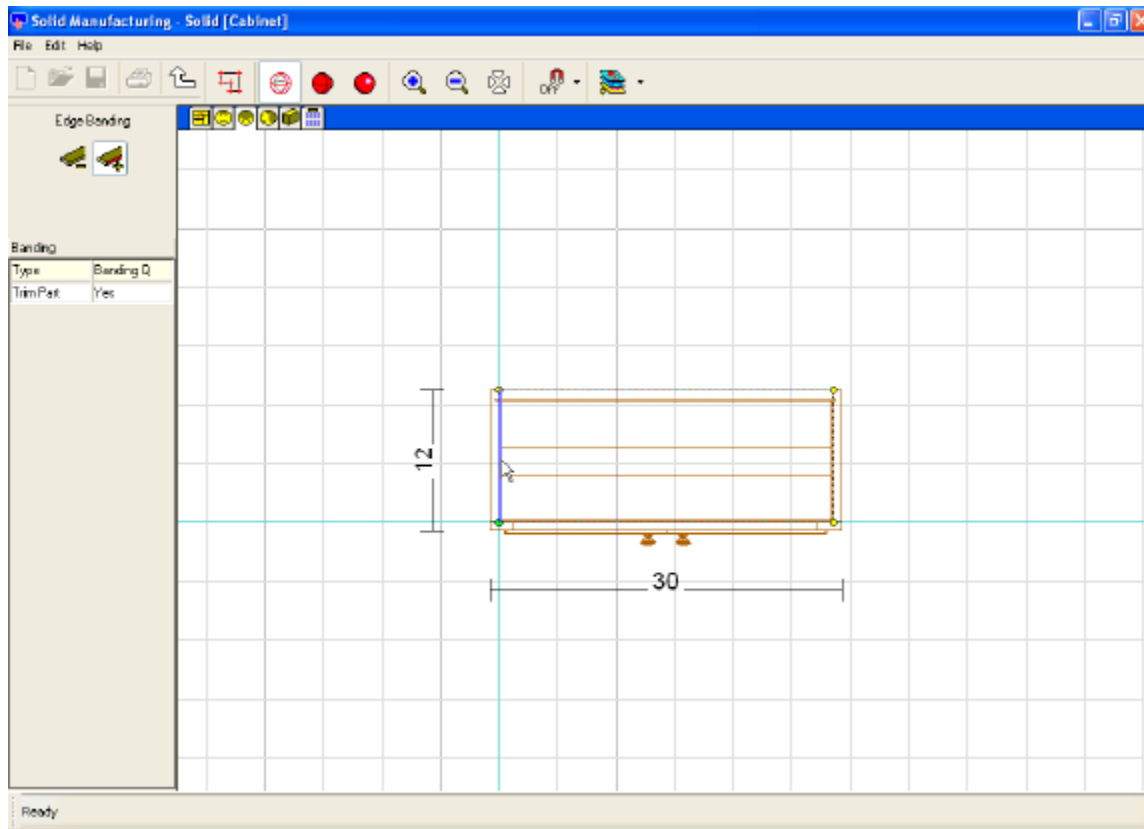
Now, you should see a tool set on the left side of the window that appears as the one below:



Click on the add banding button (The Add Banding button has a + symbol). Then choose the desired banding type from the pull down list



Finally, click on the part edge that you want to apply this type of banding to.

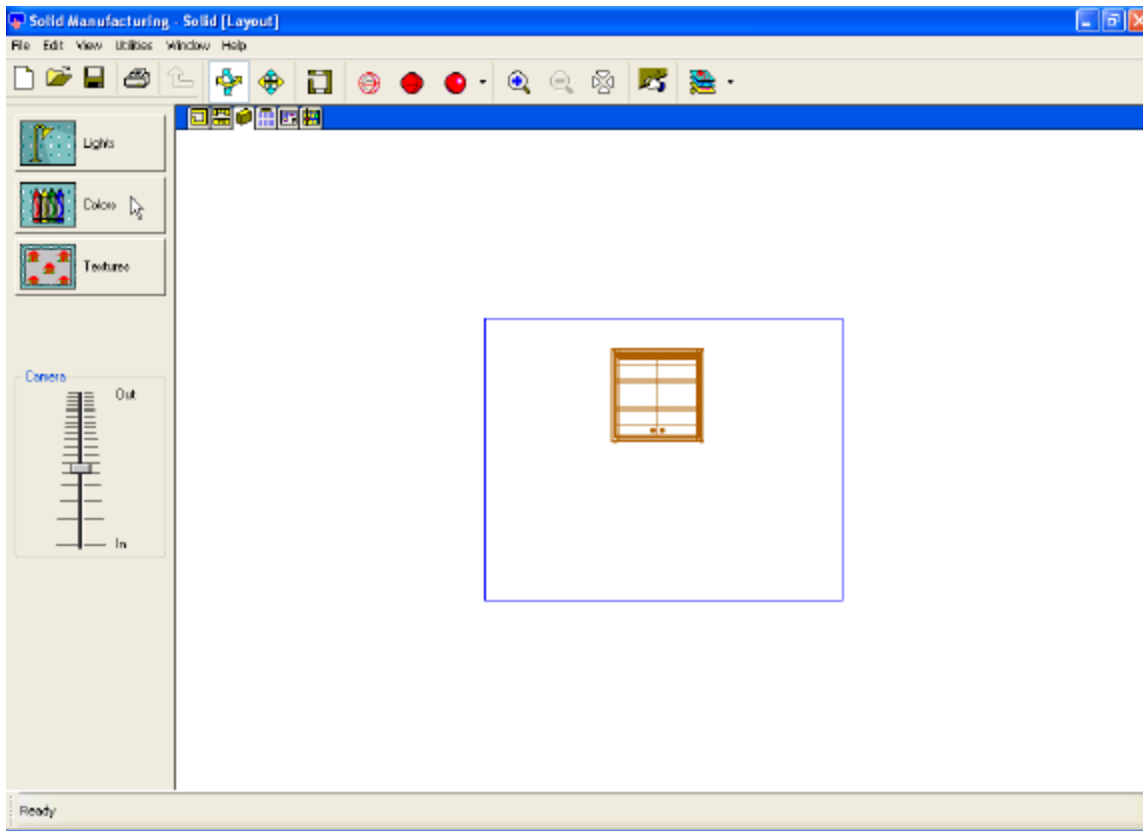


The new banding properties for this part will be exhibited in the part parameters and the cut list.

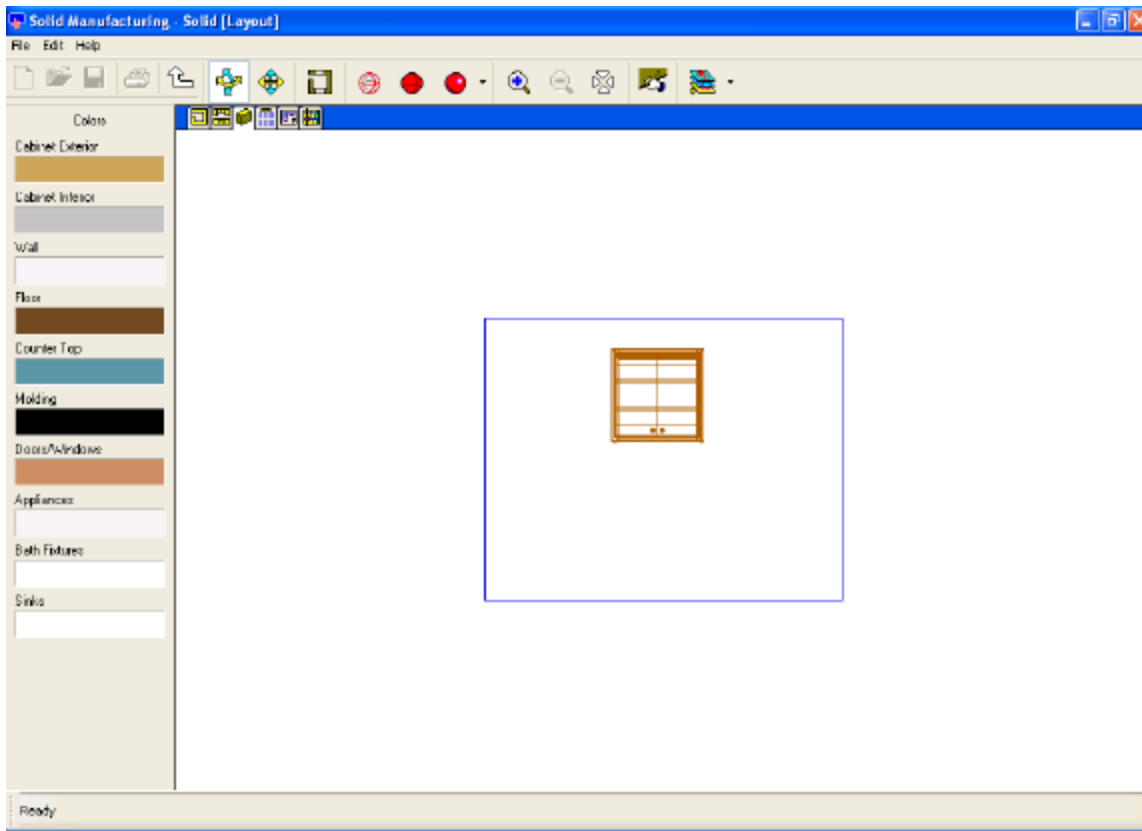
New Color And Texture Options In Solid 4.0

Color Options

In Solid Version 4.0, there is a new interface for color selection. To access the color palette, go to the perspective view of the room and click the Colors button on the left side of the screen.

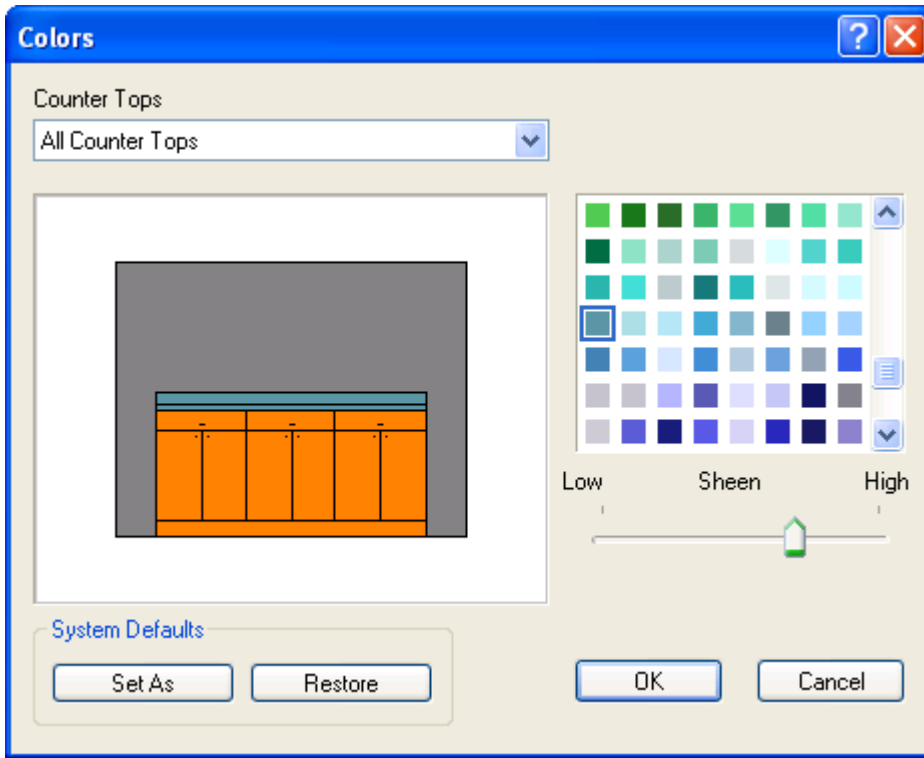


To change the color for one of the items in the list on the left, simply click on that color square and select a new color. Some of the color selections have additional options which are available after clicking on the color box.



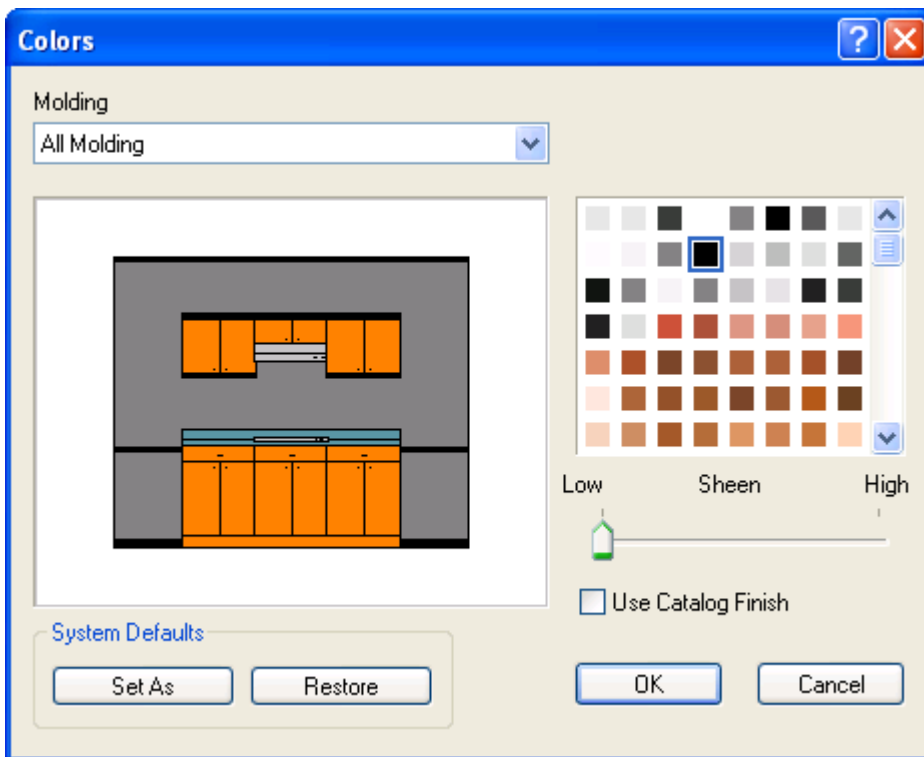
Counter Top

Additional options include the ability to change colors for splashes, tops, or all counter tops.



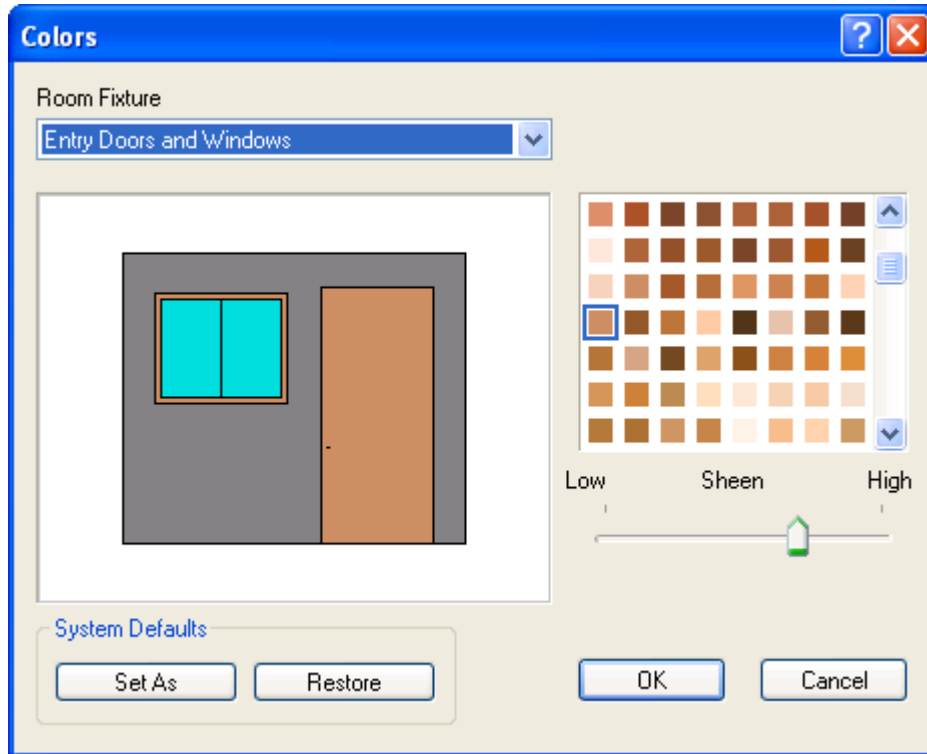
Molding

Additional options for molding include the ability to change the color for every type of molding in the room, crown, light rail, base board, chair rail, ceiling, or all molding.



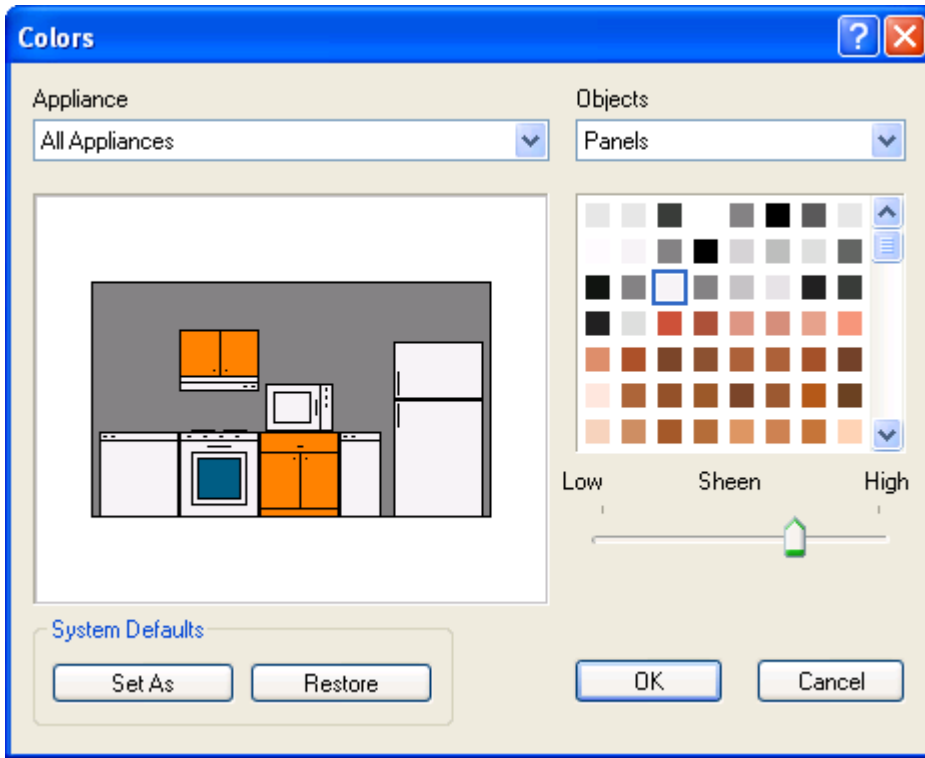
Doors/Windows

This section allows the user to select colors for entry doors, windows, or both doors and windows.



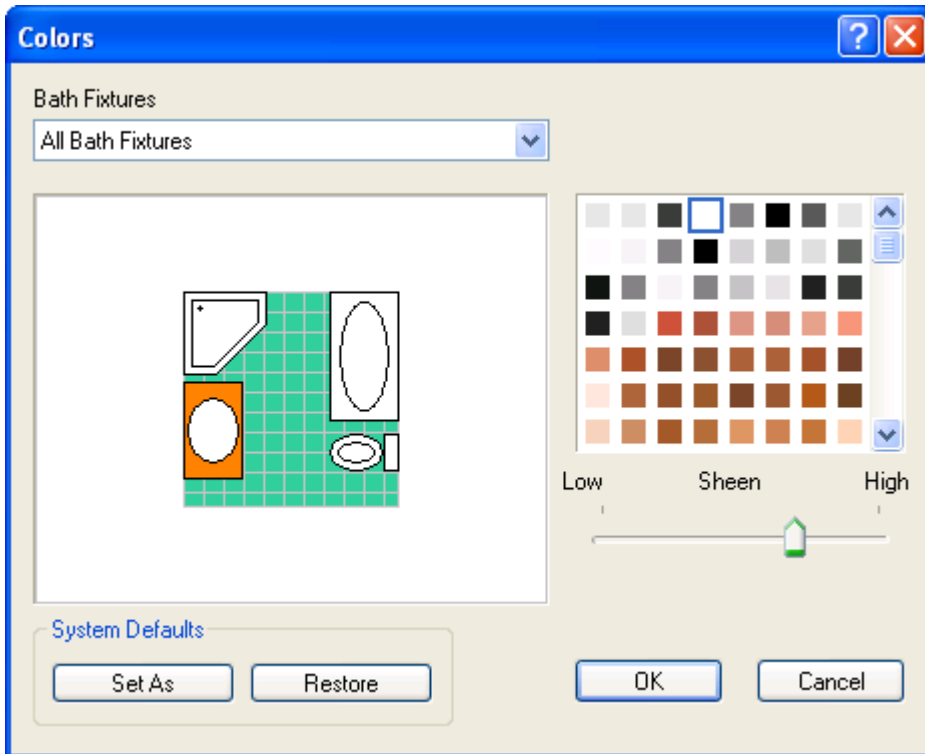
Appliances

Additional options under appliances include the ability to change the colors for selected types of appliances. In addition the user may choose the colors that will appear for the appliance pulls as well as the appliance panels.



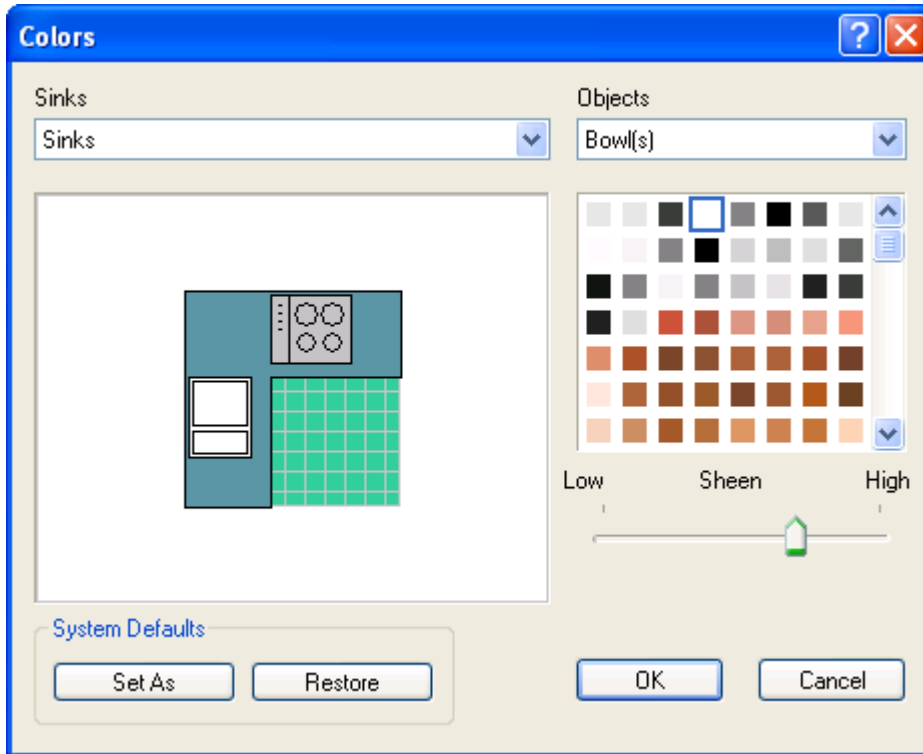
Bath Fixtures

Additional options include bath tubs, showers, toilets/bidets, sinks, or all bath fixtures.



Sinks

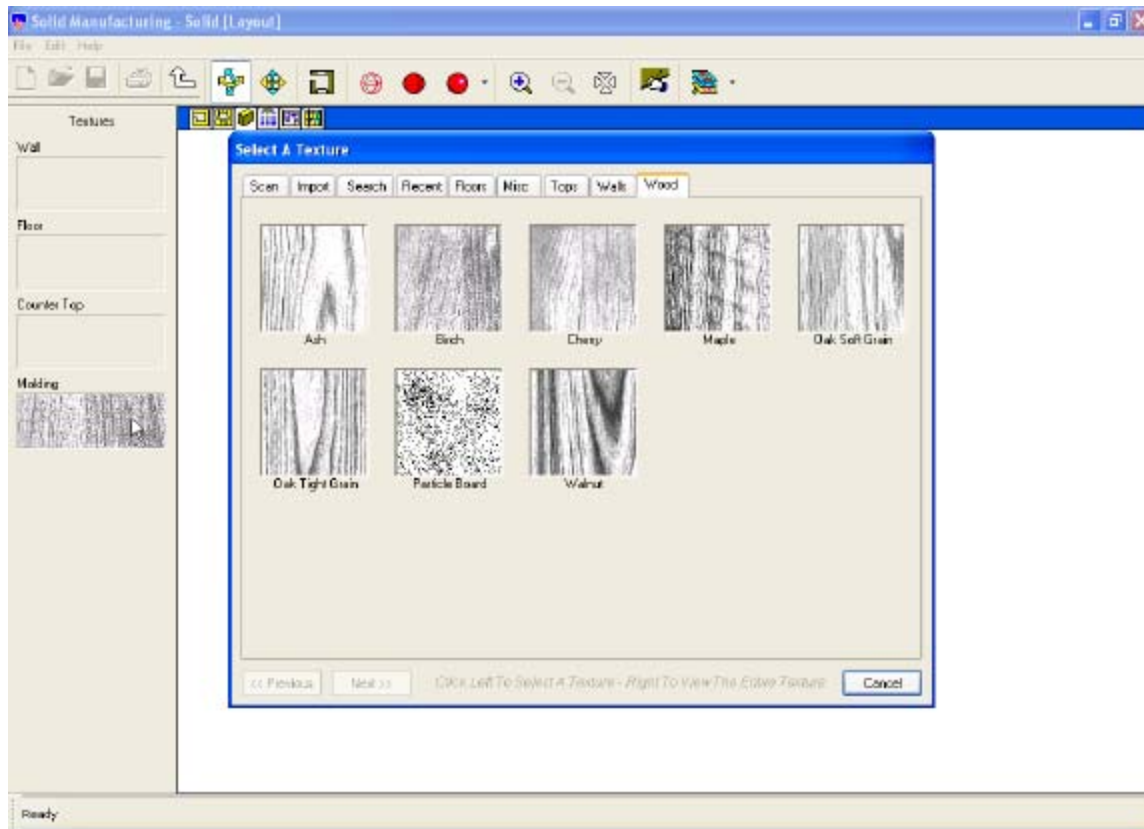
Under the sink color options, the user may select the colors for the sink bowls, faucets, and water.



Texture Options

In Solid 4.0, the user may easily select a texture for molding from the room perspective view.

In addition to the three texture categories, molding has been added to the list. The user simply clicks on the molding square and selects a texture to apply it.

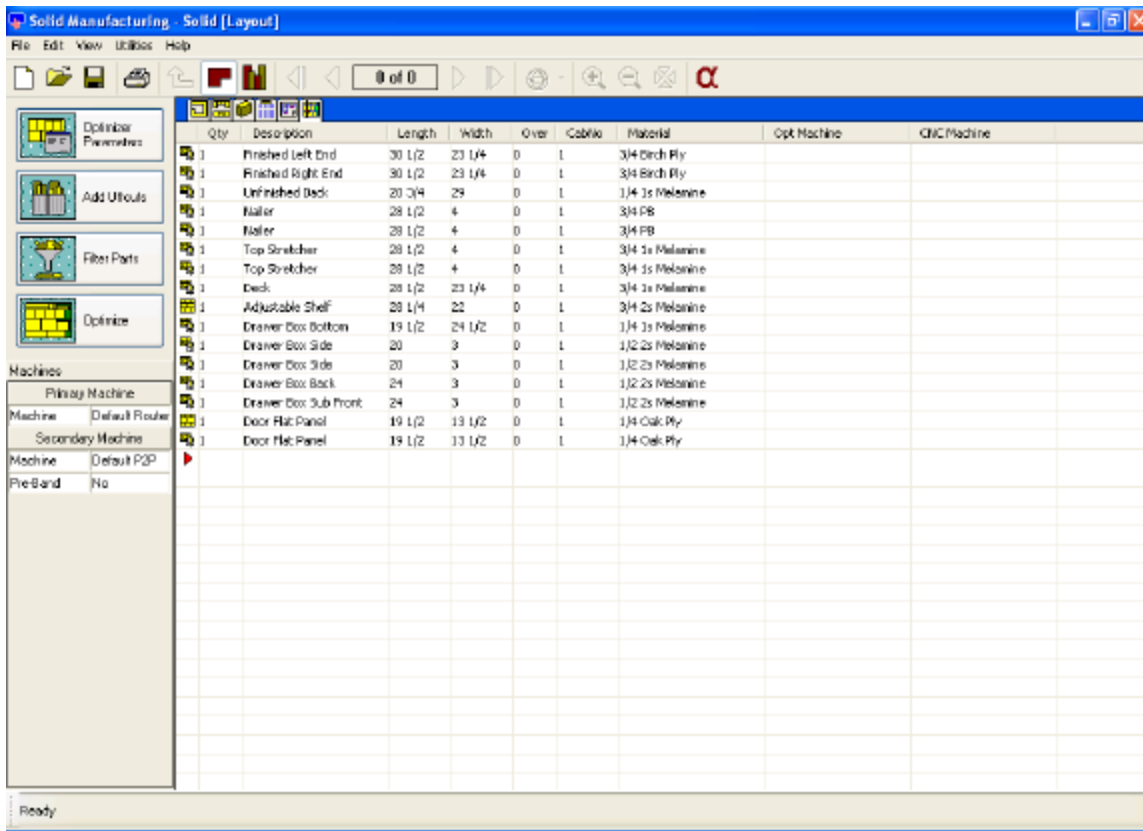


New NC Center Options In Solid 4.0

The NC Center in Solid 4.0 has several new features that users of the program should find very helpful. For the advanced users, there is an even more feature packed version of the Advanced CNC Center which is based in the AlphaCAM engine.

To get to the NC Center, the process has not changed. From the room level of a job, click on the NC Center button at the top of the drawing.

The Edit Parts View:



This is the first screen that you will see when you enter the NC Center, the edit parts view. This screen shows information about the parts that are set to be optimized. Many of the features in the NC Center are identical to previous versions, however, there are several new features as well.

Click on the Optimizer Parameters button on the tool bar to the left. You will then see the following screen:

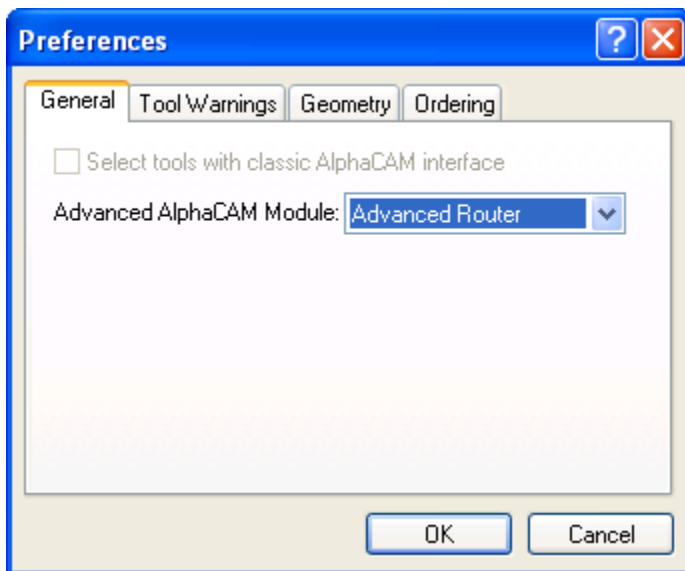


(Note that the screen pictured is what you will see if your primary machine is something other than a saw)

Most of the features here are the same as previous versions, however, under the Offcuts tab, there is an option box labeled square off nest.

Preferences

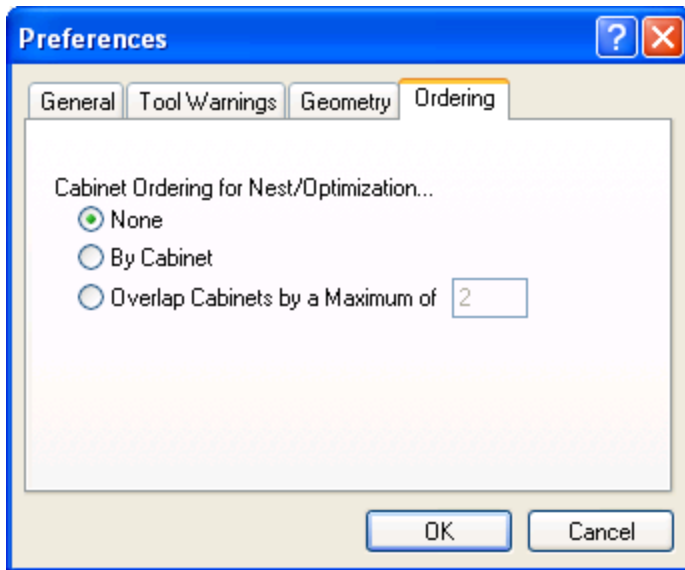
By clicking on Utilities/Preferences from the NC Center screen, the user will see the following window:



The check boxes under the Tool Warnings tab control what circumstances will produce warnings in an optimization.

Under the Geometry tab, the user controls some new options such as: extending dado lengths by the tool diameter to make parts fit together more easily, combining edge operations with the outline cut of the part, and milling operations from the unfinished face when possible.

Finally, the Ordering tab has options for the order in which parts are optimized. These options are designed to allow the user to choose between nesting parts of the same cabinet close together to save time or nesting parts in an order to minimize waste.



If you choose to order by cabinet, each sheet of material will be restricted to contain parts of only one cabinet. For example, when cabinet number 1 is completely cut out, you can begin assembly on it. If you choose to overlap cabinets, you may control how many cabinets may be on the same sheet.

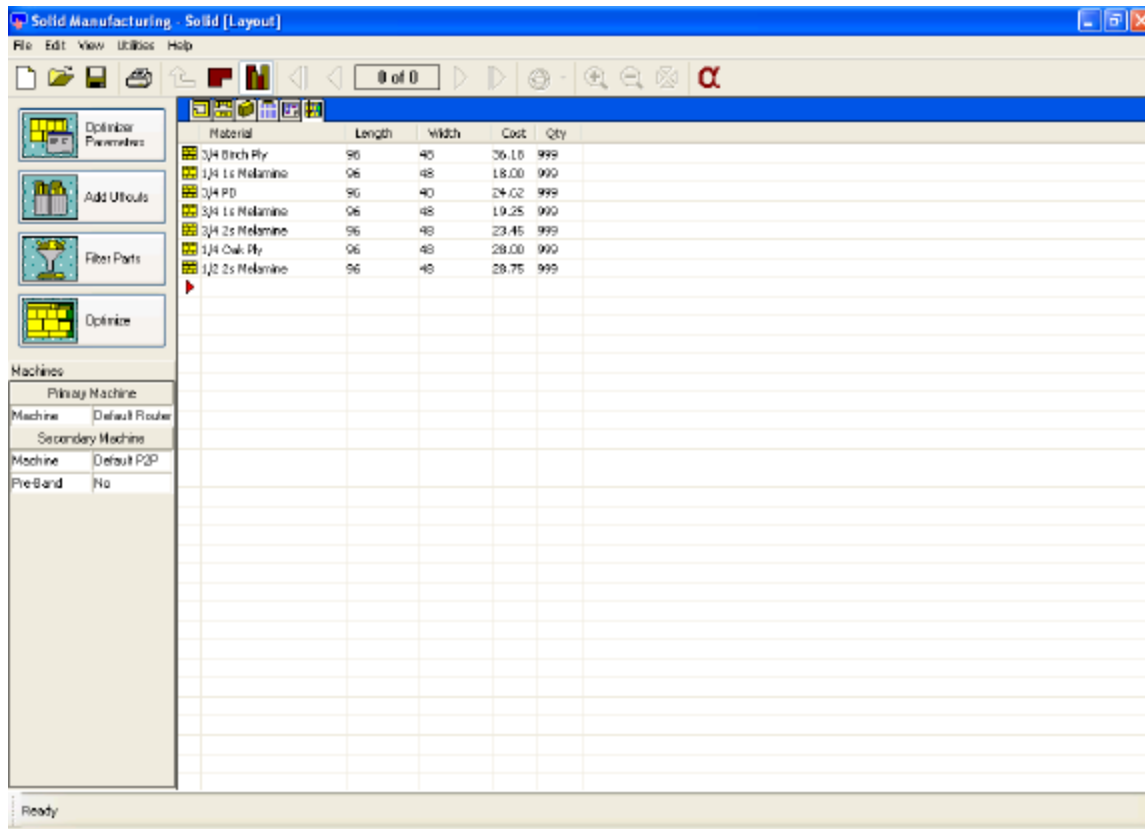
Also, under the Utilities menu, there is an option to Add Parts From Library.

Parts may be added to this library by right-clicking on a part in the Edit Parts view list and then clicking on Add to Library, or by creating a part in AlphaCam and saving it. These parts may be added to the optimization without going through that process of adding another cabinet to the job, etc. This may be useful for parts that are needed often and the shop would benefit from having an inventory of them.

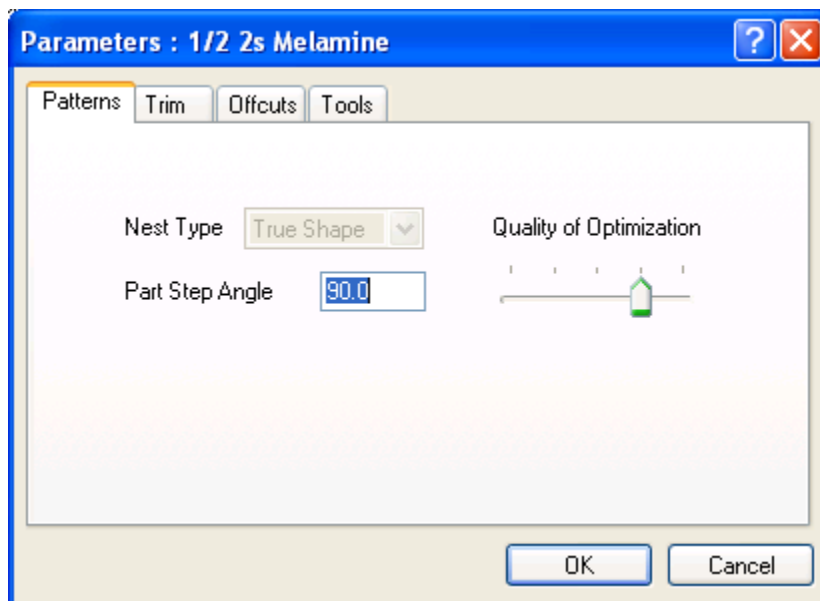
Parts may also be added to the optimization by clicking on Utilities and then Import DXF file. This process works in a similar manner as the add library parts function, but the parts may be created in the Wood Wizard or another program that allows the creation of three dimensional .dxf parts.

When importing a .dxf file, you can set up the characteristics for the layers in the output that Solid will create for that part. Click the Advanced button for the following screen:

The Edit Materials View:



A new feature in the Edit Materials area of the optimizer is the ability to select a specific tool to outline a particular material. Simply right-click on the material in this list that you wish to select a tool for and click Properties; The following window will appear.



In this window, you can select a certain tool for the outline of this material and you can also select tools that outline parts depending on which side of the material is being cut. To do so, simply click the Tools tab and select the appropriate tools from each list. Choosing an outline tool for a material will create an override for that material that will be indicated at the Edit Materials view by the red check-mark symbol

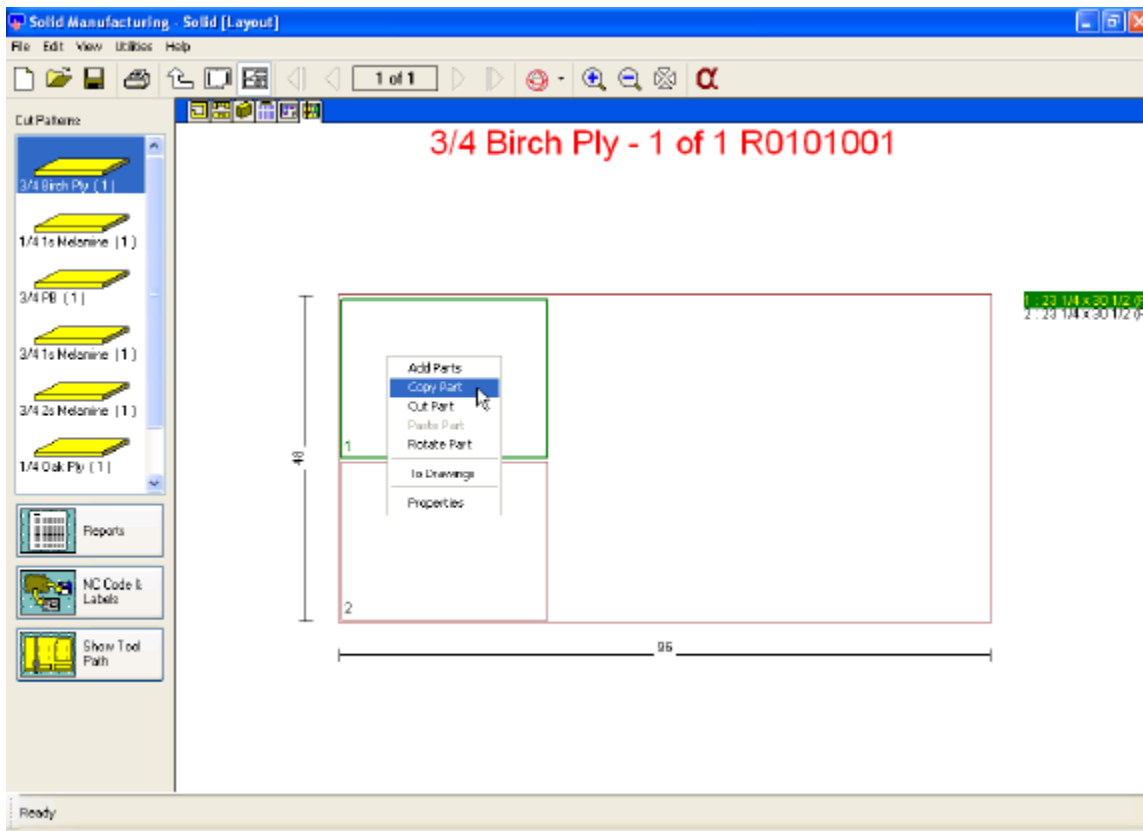
pictured below:

Material	Length	Width	Cost	Qty
3/4 Birch Ply	96	48	36.18	999
1/4 1s Melamine	96	48	18.00	999
3/4 PB	96	48	24.62	999
3/4 1s Melamine	96	48	19.25	999
3/4 2s Melamine	96	48	23.45	999
1/4 Oak Ply	96	48	28.00	999
1/2 2s Melamine	96	48	28.75	999

Material overrides may be removed by right-clicking on the material in the list and then clicking Remove Override.

New Features in the Optimization

There are some new features available to the user after optimization has been completed. Right-Clicking on a part on a nested sheet opens a list of options that are available to the user.



Add Parts This option allows the user to add parts to this particular sheet from the part library that was discussed previously.

Copy Part Allows the user to copy the current part to the clipboard.

Cut Part Copies the part to the clipboard and removes it from the current sheet.

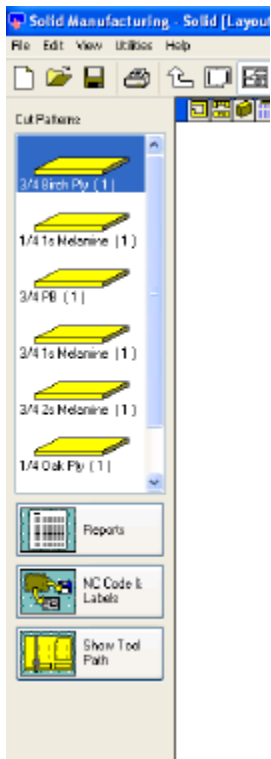
Paste Part - Allows the user to paste a part that was previously copied to the current sheet.

Rotate Part Allows the user to rotate the part on the current sheet.

To Drawings Sends the current view to the drawings page.

Properties Allows access to the optimization properties for the current material.

Additionally, there are some new options on the tool bar to the left of the screen.



The Reports button:

This option allows the user access to several part label and part program reports.

To create the output files, click on the NC Code and Labels button.

This process is similar to clicking on Links and then Output CNC in previous versions. Some new features include the ability to output both NC code and Label-it labels at the same time. To do so, simply check the boxes marked NC Machine Data and Label-IT. Furthermore, this new window allows the user to verify that the output path is correct or to change it for this particular situation by browsing to a new location. This is also true for the label-it output which may now be easily changed to a new location as well.