Landscaping Tutorial

This tutorial describes how to use Home Designer Pro's Terrain Tools. In it, you will learn how to add elevation information to your terrain, how to create terrain features, and how to add plants and other objects from the library.

It is a good idea to become familiar with the Terrain Tools before beginning your own terrain project.

In this tutorial, you will learn about:

- Creating a Terrain Perimeter
- Creating a Walkout Basement
- Creating a Retaining Wall
- Adding a Driveway
- Adding Library Objects to Your Plan

This tutorial continues from where the Materials Tutorial left off, so you may want to save this plan using a new name to archive your previous work.

Creating a Terrain Perimeter

The Terrain Perimeter is a closed polyline that defines the boundary of the terrain that generates in 3D views, and of the contour lines that generate in floor plan view. It can also be used to represent a lot boundary. See "Terrain Perimeter" on page 874 of the Reference Manual.

To create and resize a terrain perimeter

1. On Floor 1 of your plan, select **Terrain> Create Terrain Perimeter** 🏛 from the menu or click the corresponding toolbar button. See "Toolbar Arrangement" on page 105 of the Reference Manual.

   • If this menu option is not available in a given plan file, a terrain perimeter already exists.

2. Select **Window> Fill Window** ⬚ to fill the screen with the Terrain Perimeter.
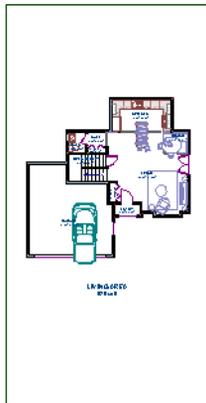
3. Select **View> Temporary Dimensions** ⬚ and make sure temporary dimensions are turned on. When they are enabled, a checkmark displays at the bottom corner of the tool icon.

4. Select the Terrain Perimeter by clicking on either the left or right vertical edges. Notice the temporary dimension indicating that the selected edge of the Terrain Perimeter is 100 feet from the opposite edge.

5. Click on the temporary dimension and enter 150 feet using an apostrophe to denote feet (150'), then press **Enter**. The program will default to inches if no apostrophe is included. For more information about using dimensions to relocate objects, see "Moving Objects Using Dimensions" on page 350 of the Reference Manual.

6. Select the top edge of the Terrain Perimeter and use the temporary dimension to position it 200 feet from the opposite edge using the same technique.

7. Click **Window> Fill Window** ⛶ to fill the screen with the Terrain Perimeter.
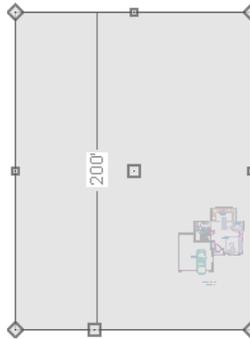

> 💡 The Reference Grid, or Virtual Graph Paper, is a visual aid that helps create a sense of scale when drawing. The Reference Grid is turned off for these tutorials but can be turned on or off in the Plan Defaults dialog. See "General Plan Defaults Dialog" on page 73 of the Reference Manual.

Your house may already be centered on the Terrain Perimeter. If it is not, you can move it.
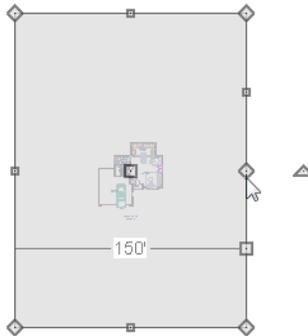
To move the terrain perimeter

1. Select the Terrain Perimeter and place your pointer over the Move edit handle.

2. Move the Terrain Perimeter so that the house is centered.
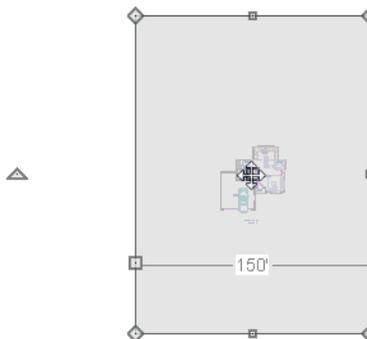
In addition to adjusting the size of your rectangular Terrain Perimeter, you can also use the **Change Line/Arc** 🔺 and **Break Line** ⤬ edit tools to modify its shape.

To edit the shape of the terrain perimeter

1. To place a break on the right segment of the Terrain Perimeter, creating a new corner edit handle at that location, and two separate edges on either side of that handle, use the **Break Line** ⤬ edit tool.


2. You can then use the new edit handles to adjust the size and shape of the Terrain Perimeter. For more information, see "Editing Closed-Polyline Based Objects" on page 171 of the Reference Manual.
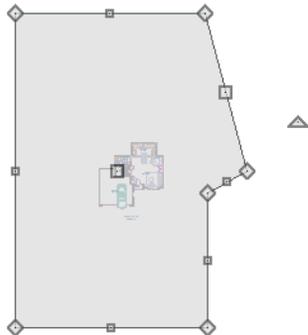
3. Select the bottom edge of the Terrain Perimeter, and click the **Change Line/Arc** 🔺 edit button, and notice that this segment changes in to an Arc, which can then be modified using its edit handles. For more information on modifying arcs, see "Editing Arc Based Objects" on page 163 of the Reference Manual.

4. Changes to the shape of the Terrain Perimeter can be seen in 3D views as well as in floor plan view.

• To tile floor plan view and a camera view, select **Window> Tile Vertically** ⬚.
• When a 3D view is active, press the I key or the O key to move the camera In or Out.
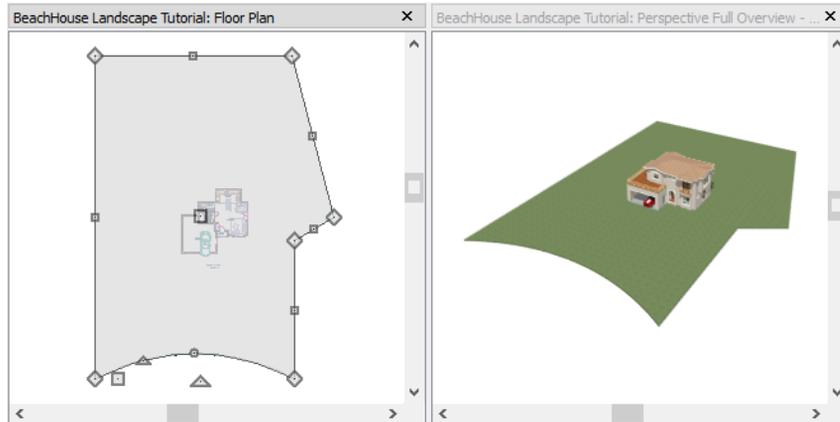

While you can work with two views tiled, you may see slower performance when you do. To avoid this, simply close a 3D view when you are done viewing or working in it.

Displaying Lot Line Information

When plans are submitted for approval, bearing information for the lot perimeter is often required.

To display bearing information in floor plan view

1. Select the Terrain Perimeter and click the **Open Object** 🔲 edit button.

2. On the LINE STYLE panel of the **Terrain Specification** dialog, check **Show Length** and **Show Angle**, then click OK. See "Terrain Specification Dialog" on page 889 of the Reference Manual.

3. Select **Edit> Default Settings** 🔧 to open the **Default Settings** dialog, browse to **CAD> General CAD** and click on the Edit button to open the **CAD Defaults** dialog. See "To display bearing information in floor plan view" on page 5.

4. Click the radio button to Display Line Angle as **Quadrant Bearing** and click OK.

5. Click Done to close the **Default Settings** dialog, and move the Terrain Perimeter so that it looks similar to the image below.
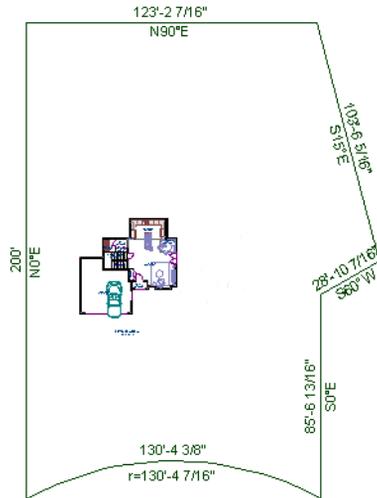
See "Creating a Plot Plan" on page 175 in the CAD Tutorial for information about creating a plot plan using a property's legal description.

# Creating a Walkout Basement

Our terrain is currently flat because there is no elevation data in the plan. For more information about elevation information, see "Elevation Data Tools" on page 877 of the Reference Manual.

> You can display all of the tools in the Terrain menu on your tool-bars by using the Terrain Configuration. See "Toolbar Configurations" on page 107 of the Reference Manual.

To add elevation information to your plan

1. Select **Window> Fill Window** to fill the window with the Terrain Perimeter.

2. Using the **Select Objects** tool, select the Terrain Perimeter and click on the **Open Object** edit button to display the Terrain Specification dialog.

3. On the GENERAL panel, make sure **Flatten Pad** and **Auto Calculate Elevation** are unchecked, and change the **Subfloor Height Above Terrain** to 12 inches.
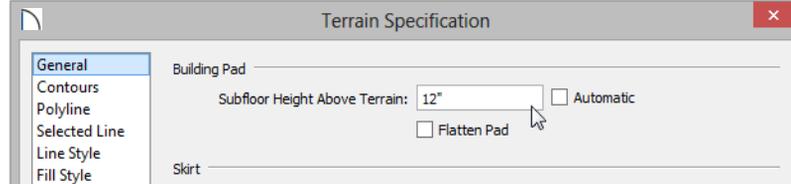
- **Flatten Pad** flattens the building pad around the house. When this is unchecked, the terrain can slope where it intersects the house.
- **Auto Calculate Elevation** places the house at average terrain height. When this is unchecked, the building's height relative to the terrain can be specified.
- The **Subfloor Height Above Terrain** is the distance between the default floor height of Floor 1 and a terrain elevation of 0". In this example, an Elevation of 12 inches is used to lower the terrain 12 inches below the first floor.

4. Click OK to close the **Terrain Specification** dialog.

5. Next, Select **Terrain> Elevation Data> Elevation Line** and draw elevation lines as shown in the following image.

   - When the ends of an Elevation Lines are drawn near one another, they will snap together to form a polyline.
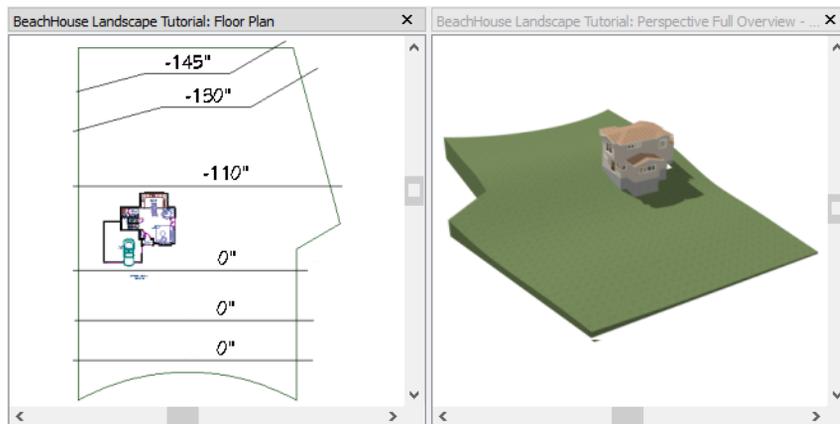
6. To enter elevation information, click the **Select Objects** button and select an Elevation Line.

7. Click the **Open Object** edit button and on the ELEVATION panel of the **Elevation Line Specification** dialog, enter an Elevation value.

   - Values entered are in inches unless the foot (') mark is added.
   - Negative values should be preceded with a hyphen (-).

8. Select **Terrain> Build Terrain** and notice the contour lines that are created in floor plan view in between the Elevation Lines that you drew.

9. To make it easier to draw, you may want to turn off the display of these lines. Select

   Tools> Display Options to open the **Layer Display Options** dialog. Remove the check from the Disp column for the layer "Terrain, Primary Contours" and click OK. See "Layer Display Options Dialog" on page 143 of the Reference Manual for more information.
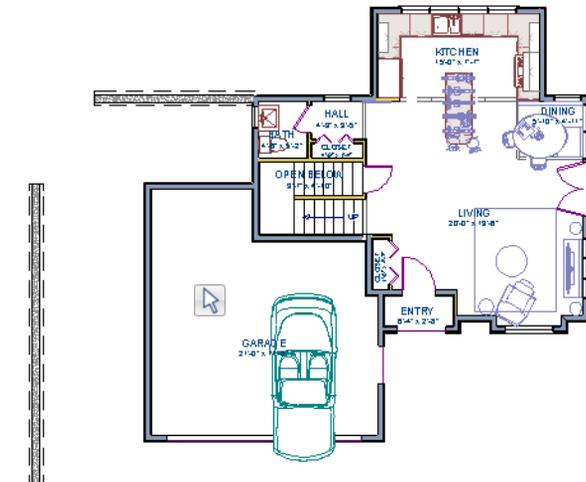
Creating a Retaining Wall

Adding a retaining wall helps create a flat building pad near the garage. For more information see "Retaining Walls" on page 886 of the Reference Manual.
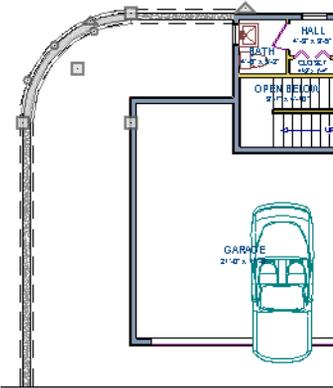
To draw a retaining wall

1. Go to Floor 1.

2. Select **Terrain> Wall and Curb> Straight Retaining Wall** . Draw two straight wall sections as shown in the following image.


3. Select **Terrain> Terrain Wall and Curb> Curved Retaining Wall** and draw a curved retaining wall that connects at both ends to the two straight sections. Don't worry about the angle now: it will be adjusted in a moment.

4. Click the **Select Objects** �️ button, then click and drag the small triangular Reshape edit handle that displays along the curved wall. As you drag this handle, the curved wall's centerpoint and length change.

5. Draw two **Elevation Lines** ⊟ just inside the retaining wall to define the height of this area when terrain is generated. These Elevation Lines can stay at their default height of 0″.
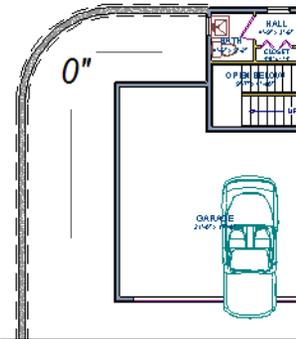
6. Take a look in a **Full Overview** ⊞. Your plan should look similar to the image below.

> 💡 Open 3D views are redrawn whenever changes are made to the plan, even if the 3D views are not active. Closing 3D views when they are not needed will help maximize your computer's performance.

Adding a Driveway

A driveway can now be added to the plan.

*To add a driveway to the plan*

1. Select **File> Close** to return to floor plan view. You should still be on Floor 1.

2. Click the **Fill Window** 🔲 button to fill your screen with the Terrain Perimeter.

3. Select **Terrain> Road and Sidewalk> Driveway Area** ⬛ then click and drag to draw a driveway ⬛.

4. Click and drag the Driveway's edit handles to customize its shape as desired. See "Editing Spline Based Objects" on page 178.

Once drawn, you can edit the driveway's shape using its edit tools.

To edit the driveway's shape

1. Click the **Select Objects** button, then click on the driveway to select it.

2. Click the **Break Line** edit button, then click along any edge of the driveway to place a new corner edit handle at that location. The edge that you clicked on becomes divided into two edges that join at the new handle.

3. Continue adding breaks to create as many edges as you wish. Click the **Select Objects** button when you are finished.

4. With the **Select Objects** tool active, click and drag any of the edit handles that display along the edges of the driveway to adjust its shape and size as needed.

5. If you would like to change a straight edge into a curved edge, click on that edge to select it and click the **Change Line/Arc** edit button.

6. To change a curved edge back into a straight edge, select it and click the **Change Line/ Arc** edit button once more.

7. Next, draw a **Terrain> Road and Sidewalk> Straight Road** and **Terrain> Road and Sidewalk> Straight Sidewalk** to complete the design.

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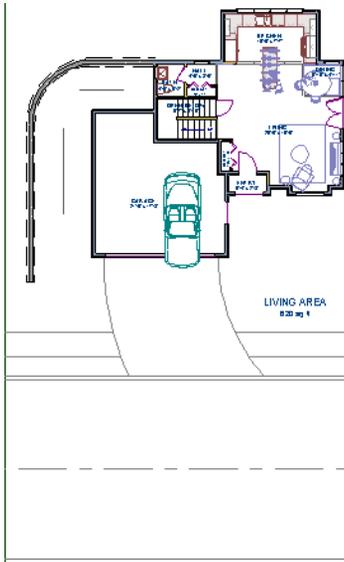
8. Finally, take a look at your plan in a **Perspective Full Overview** to see the results.
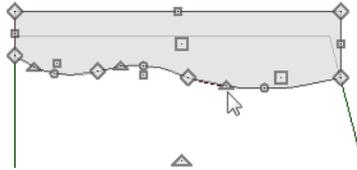

Adding Terrain Features

A beach, a water line, and a pathway to the house can be created using Terrain Features. For more information, see "Terrain Feature Tools" on page 882 of the Reference Manual.

To create a beach

1. Close the overview and return to floor plan view.

2. Select **Window> Fill Window** 　 then select **Window> Zoom Out** 　 to give us some working space outside the Terrain Perimeter.

3. Select **Terrain> Feature> Rectangular Feature** 　 and draw a Terrain Feature that extends to the boundaries of the Terrain Perimeter.
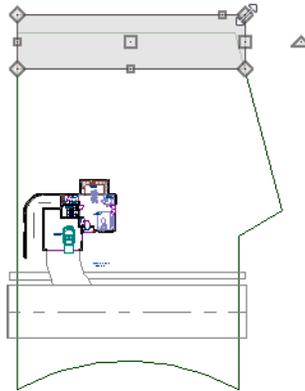
4. Select the Terrain Feature and click the **Open Object** 　 edit button to open the **Terrain Feature Specification dialog**.
    • On the GENERAL panel, the **Height** should be at 0 inches.
    • On the MATERIALS panel, select the Terrain Feature component in the tree list. Click the **Select Material** button and choose a sand material from the Landscaping folder.
    • Click OK to close the **Select Library Object** dialog then click **OK** to close the **Terrain Feature Specification** dialog and return to floor plan view.

5. With the Terrain Feature still selected, use the **Break Line** 　 edit tool to place two breaks in the front of the rectangular feature.

6. Next, select one of the segments you have created, and click the **Change Line/Arc** 　 edit tool, and use the triangular edit handle to adjust the shape of the curved segment, and repeat this procedure for the remaining front segments of the Terrain Feature, as in the image below.

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7. Take a look at the new beach in a **Perspective Full Overview** 🔲. Notice that only the portion of the Terrain Feature that is included within the Terrain Perimeter is modeled.


To create a body of water

1. Return to floor plan view, select **Terrain> Water Feature> Round Pond** 🔵 and draw another spline feature, within the existing beach Terrain Feature and resize it similar to the following image:
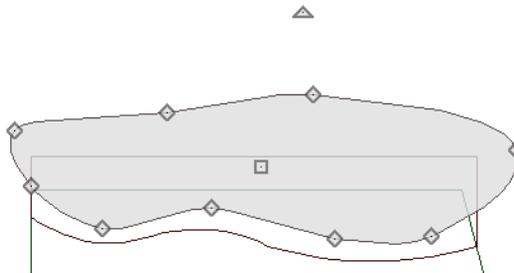
2. Select the pond and click the **Open Object** 🔲 edit button. On the GENERAL panel of the **Terrain Feature Specification** dialog, raise the **Height** to 1 inch. This will position the water material above the beach.

3. Click OK and take a look in a **Perspective Full Overview** 🔲.

4. Using the techniques described above, you can create nearly any type of landscaping features that you might want, such as raised garden beds, landscaping walls, stone patios and ponds.
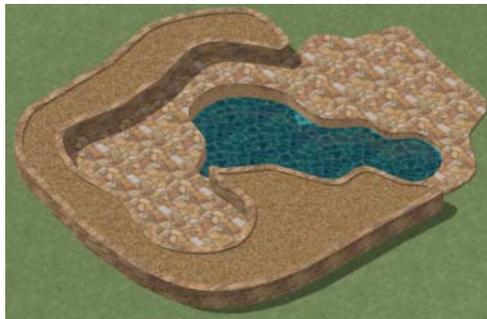
To use an Elevation Region

An Elevation Region contains absolute elevation data for an enclosed region and is ideal for creating a flat surface in your terrain.

1. Select **Terrain> Elevation Data> Elevation Region** , then click and drag to draw a rectangular region to the right of the structure in front of the door.
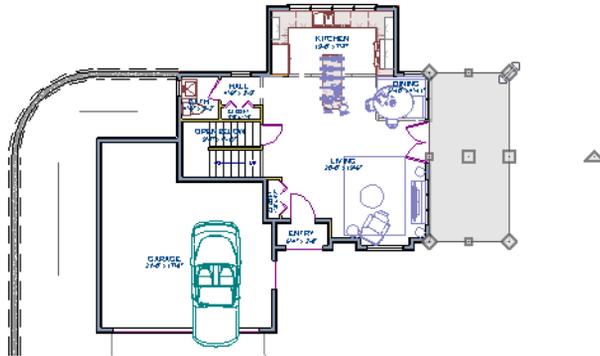
2. Select the Elevation Region and click the **Open Object** [icon] edit button. On the ELEVATION panel of the **Elevation Region Specification** dialog, enter an **Elevation** of -8" and click OK.

3. Create a **Perspective Full Overview** [icon] to see the changes that this makes to the terrain.

4. Return to floor plan view and select **Build> Stairs> Click Stairs** [icon], then click outside of the doorway to create a set of stairs from the door down to the newly created Elevation Region.
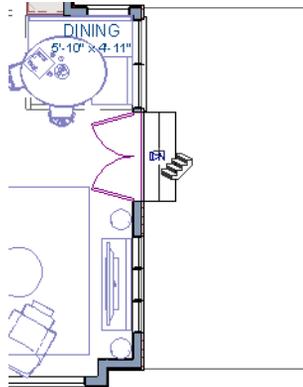
A typical walkout basement has an upper flat area where you enter the house on the first floor, and a lower flat area where you walk out to ground level from the basement. You can create the lower flat region by replacing the Elevation Line at that location with an Elevation Region that has the same Elevation value of -110".
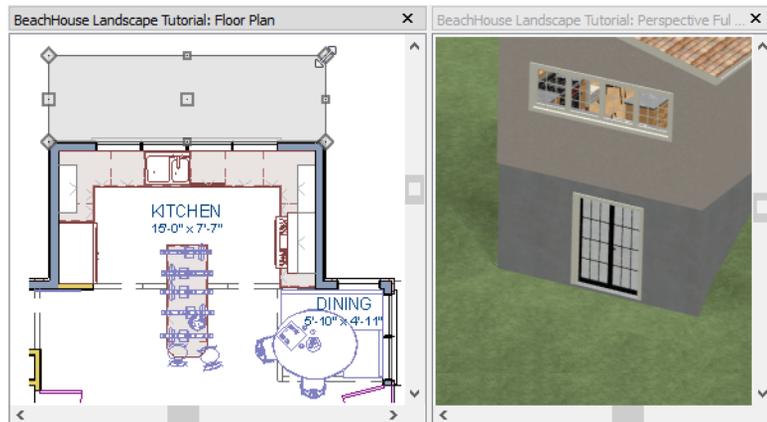
To add fencing and a gate

1. Select **Build> Fencing> Straight Fencing** then click and drag to create a basic fence.

2. If the Library Browser is not open, select **View> Library Browser** to open it.

3. In the Core Catalogs, browse to Architectural> Fences & Railings> Picket Gate, and click on the fence at the location you want to add the gate.

Adding Library Objects to Your Plan

The library contains many objects that can be added to a landscaping plan such as plant images, exterior fixtures, and outdoor furniture. There are two ways to find objects in the library: by browsing and by searching. For more information about library objects, see "The Library" on page 695 of the Reference Manual.

To browse the Plants library category

1. If the Library Browser is not open, select **View> Library Browser** to open it.
2. In the Core Catalogs, browse to Plants> Trees> Deciduous.
3. Note the many tree species to choose from. Many of these folders contain subfolders with different varieties of that species.

If you know exactly what tree you would like to place in your plan, browsing to it is an efficient way to find and select it; however, with so many options available it is often helpful to perform a search.

To search using the Plant Chooser

1. With the Library Browser still open, click the **Plant Chooser** button at the bottom of the Library Browser to open the **Plant Chooser** dialog. This dialog can also be opened by selecting **Terrain> Plant> Plant Chooser** .
2. On the PLANT INFORMATION panel, enter "palm" in the **Common Names** field, and click the **Search** button to see the search results on the right.
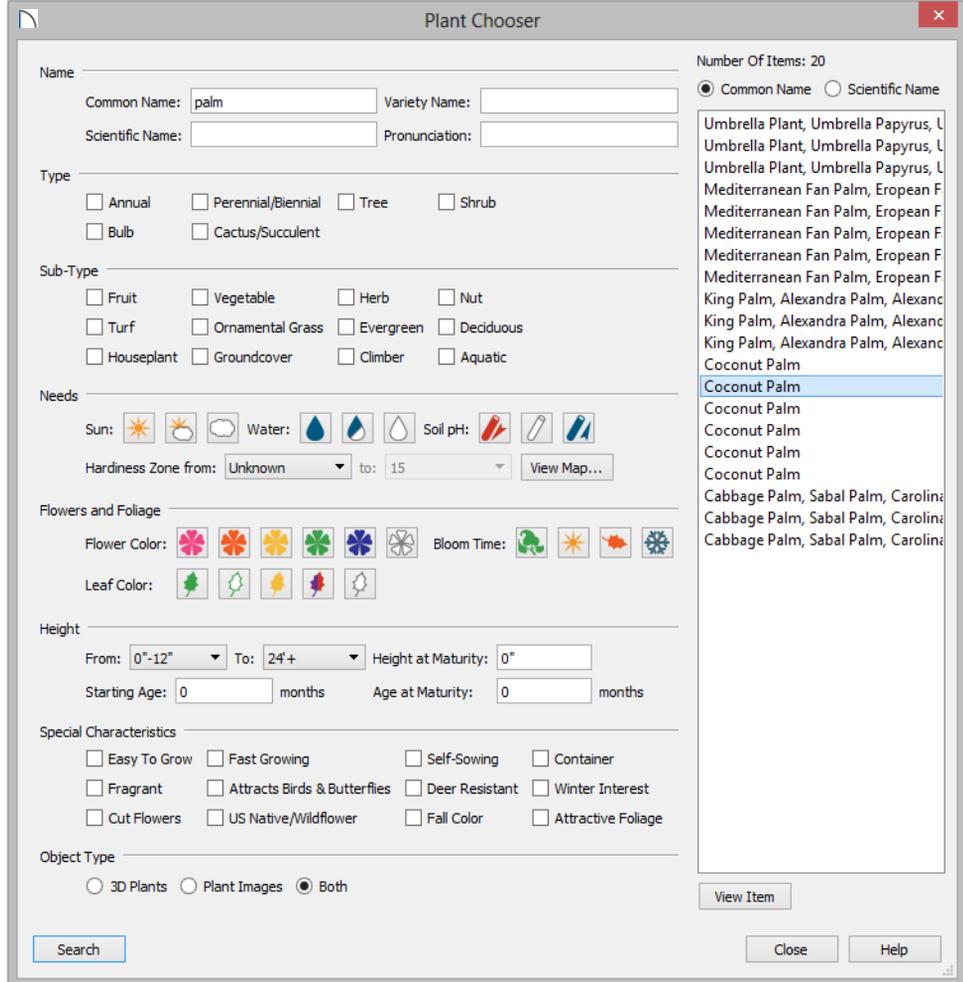
3. Above the search results, move the radio button to **Common Name**.

4. Select a Coconut Palm from the search results, then:
    - Click the **View Item** button to open the **Plant Information** dialog, where you can read size and growing information about the selected plant.
    - Click the **Close** button to close the dialog, locate the plant in the Library Browser, and select it for placement.

5. Click in floor plan view or a 3D view to place the selected plant at that location. You can continue placing the selected plant image until another tool or library object is selected.

6. Once you have placed a grouping of plants, hold down the Shift key on your keyboard and drag a marquee around the plant objects and click the **Make Architectural Block** 🔲 edit tool to block these items together.

7. Repeat this process for any additional plants that you want to place in your design.
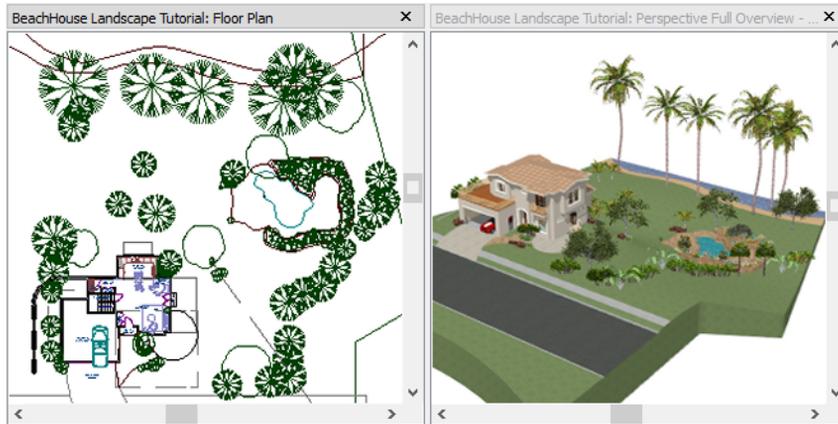
Finishing Touches

1. In the Library Browser 📚, expand the Core Catalogs.

2. The Exteriors catalog contains a selection of landscaping, deck and patio accessories, outdoor furniture, and other objects that you can place in your plan.

3. Additional objects, such as Sprinkler Heads, exterior fixtures, and other objects such as rocks can also be added to customize your landscaping design.

4. When you have finished your landscaping design, create a **Perspective Full Camera** 📷 view to see the results.

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