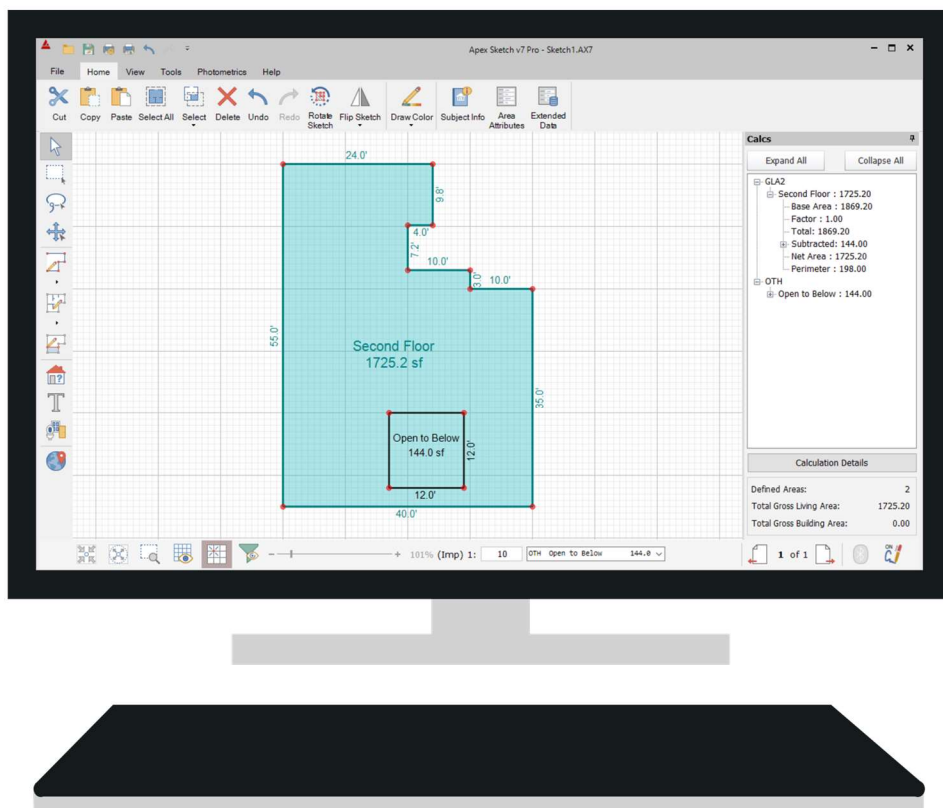# Apex Sketch v7

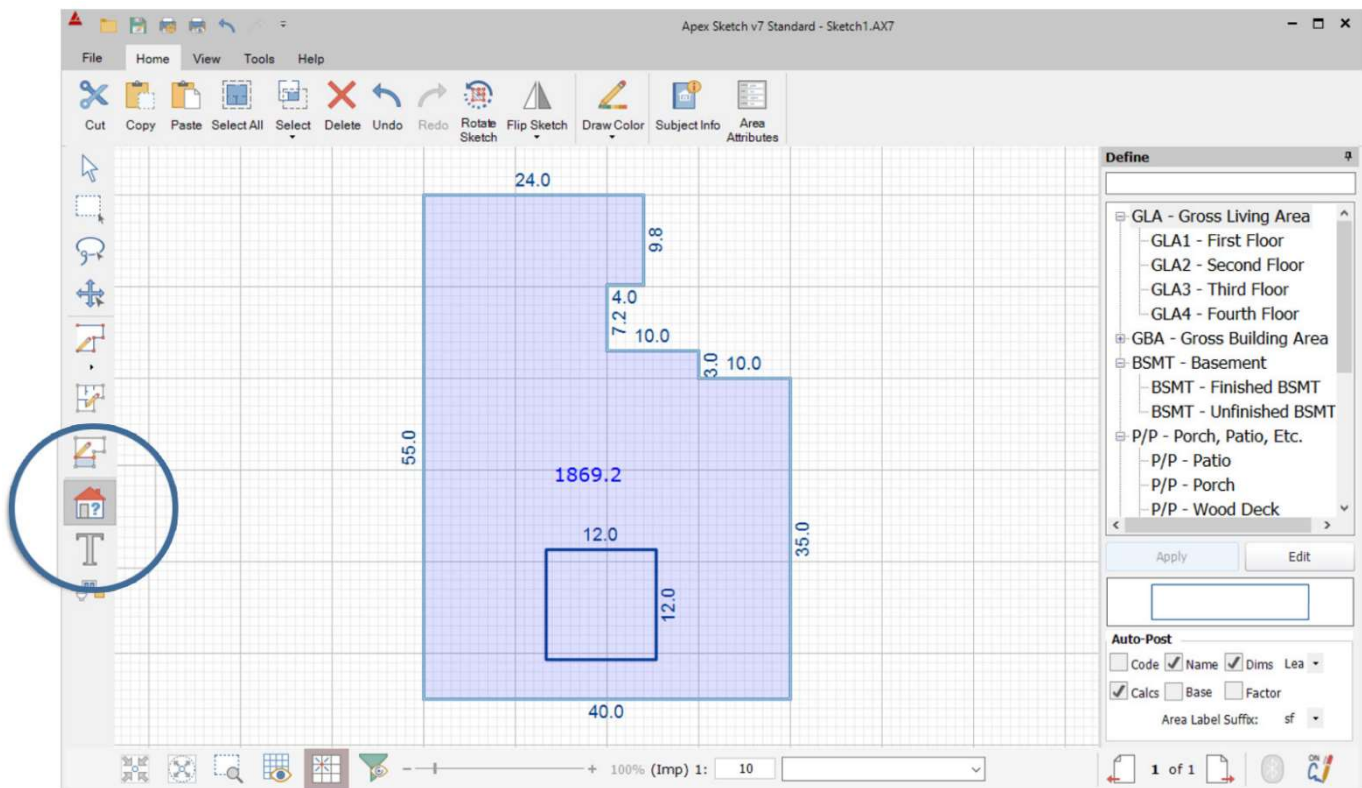## Draw First - Auto-Subtract

Apex Sketch Version 7 – Auto-Subtract

This tutorial covers the use of Auto-Subtract in Apex Sketch v7 (Av7) when using the Draw First drawing method. Auto-Subtract is a special Calculation Adjustment that allows you to define and subtract an Area from any other Area of your choice (except the same type of Area). Auto-Subtract is traditionally used when sketching wrap-around porches, pool aprons, staircases, open to below areas, etc.

In the example below, we have an Open to Below Area that needs to be subtracted from the Second Floor. The first thing you will need to do is Define the Areas as described below:

Defining the Areas

To Define an Area in Av7, you must first enable Define Mode. To do this click on the Define Area Tool located in the Drawing Toolbar.
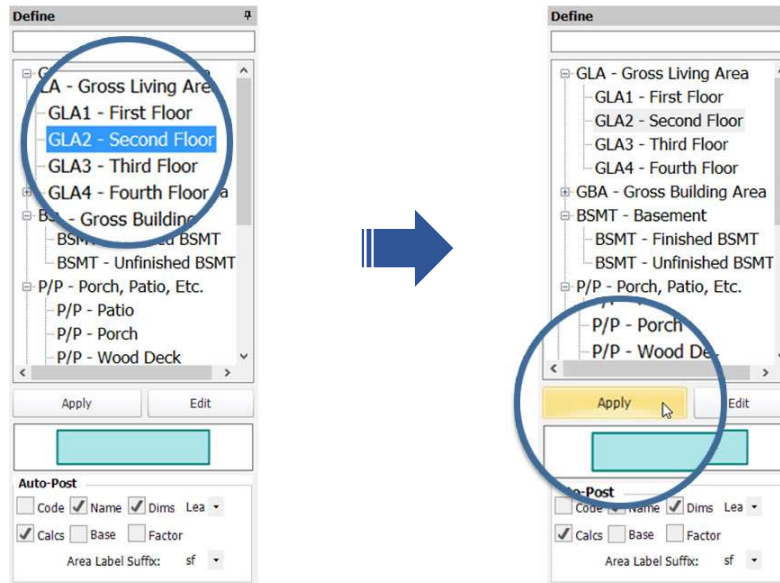
With the Define Tool selected click in the Second Floor area, it will become highlighted revealing the Square footage as seen in the image below.
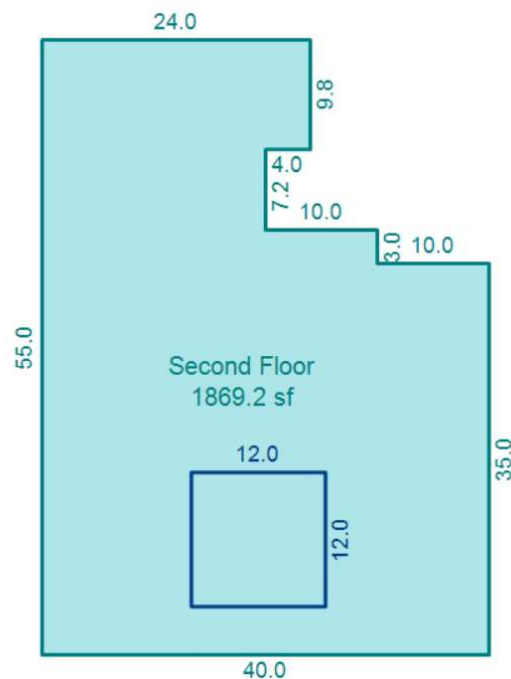
Defining the Areas (continued)

Next, we need to select the area type we would like to use to define the selected area (for this example the Second Floor). In the Area Code table click GLA2 – Second Floor.

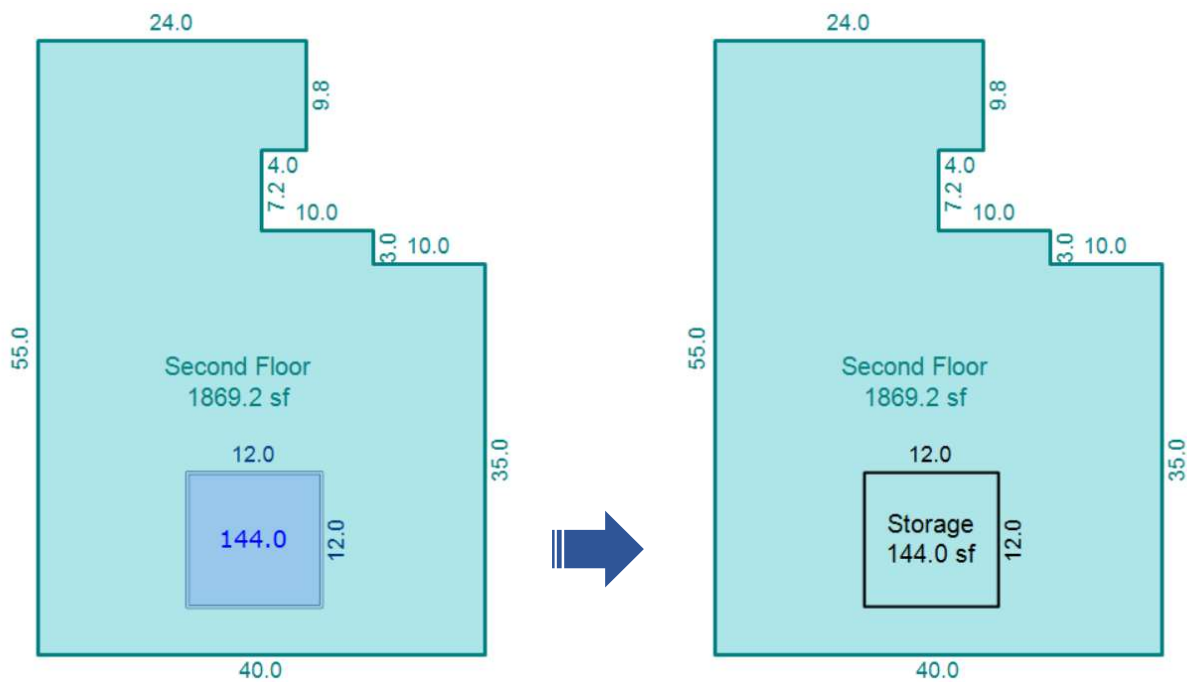With GLA2 – Second Floor selected in the list, click the Apply button.

Depending on your Auto-Post settings, the Area name (Second Floor) and the square footage will appear in the center of the shape indicating the area has been defined.
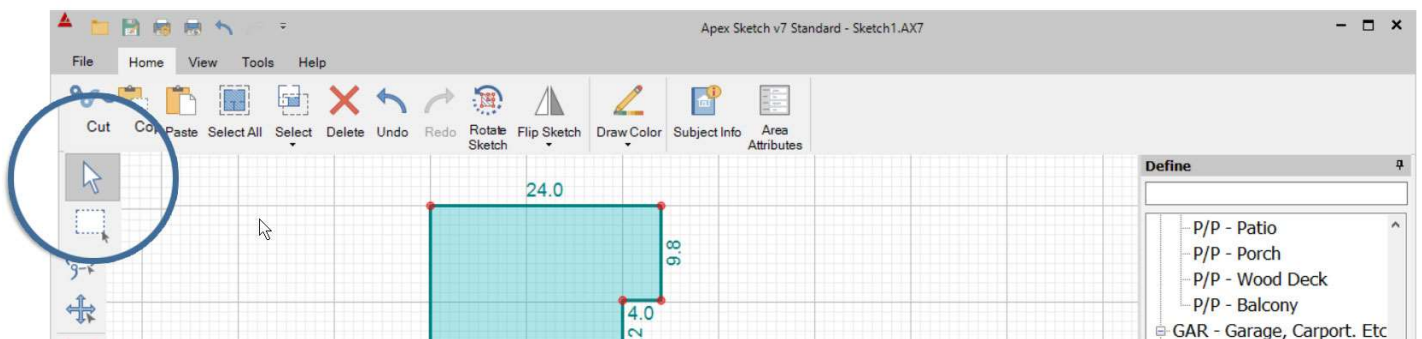
Defining the Areas (continued)

Now we need to define the Open to Below area. Click in the Open to Below area in the sketch to select it. Define the area as OTH – Storage (we will rename this area in a future step).
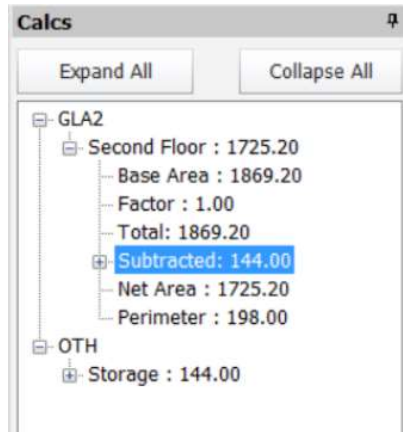

Subtracting the Area

Now that we have both areas (the main area and the area being subtracted) defined we can start the Auto-Subtract process.

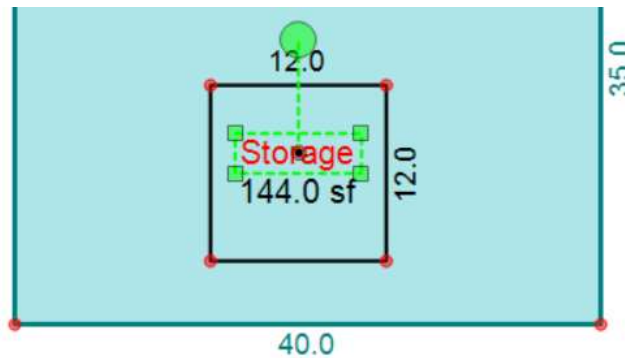To get started click on the Select Tool located at the top of the Drawing Toolbar.

Subtracting the Area (continued)

With Select Mode enabled click in the Open to Below area. The area should become highlighted in red indicating it is selected.

Note: *When selecting the area, make sure you have the entire area selected, not a line of the area or a dimension/text label.*

With the area selected, find and click on Auto-Subtract in the top Ribbon Bar. This will bring up the Area Selection dialog, select the area you would like to subtract the highlighted area from in the list.

For this example, we will select the Second Floor and click OK.

Checking the Calculations

Yes, it's that simple! The Open to Below area will now be subtracted from the Second Floor. You will notice the calculation posted for the Second Floor has been updated to reflect the subtracted square footage. You can check your calculations by clicking on the Calcs Tab (F6).
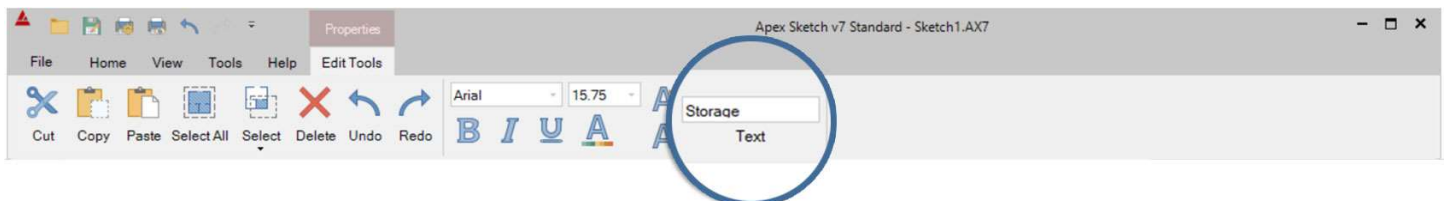

Renaming the Area

Now that the area has been subtracted, we can go in and change the area name from Storage to Open to Below. To accomplish this, ensure you are still in Select Mode with the Pointer arrow highlighted in the Drawing Toolbar. Click on the Storage label in the sketch. It will become highlighted as seen in the screen shot below.

With the Storage label highlighted, you will find a text entry window in the Ribbon Bar at the top of the Drawing Port.

Renaming the Area (continued)

Change the name from Storage to Open to Below (in the Text entry window). Once you have changed the name, press Enter on your keyboard or click anywhere in the drawing port to apply the changes. This will change the area name on the sketch page as well as in the Calculations.