Using Google Earth for Site Documentation

Google Earth is a great, free tool for mapping anything across the landscape. Here are some simple instructions for using it to map the locations and characteristics of archaeological sites and individual finds for documentation with the Avocational Site Form.

First, make sure to download and install the free Google Earth Pro software to your computer, which can be found here: https://www.google.com/earth/versions/

There are three ways to document sites and their characteristics.

1. Points can be documented with the Placemarks tool:

2. Lines can be documented with the Pathways tool:

3. Polygons can be documented with the Polygon tool:

Placemarks can be used to document the precise location of a find with accurate GPS coordinates, the locations of structures or features such as houses, rock piles, bottle dumps, etc. Here is a quick video to illustrate how placemarks are added and edited in Google Earth: https://www.youtube.com/watch?v=NNm0XH1P_DE

Pathways can be used to document linear features such as: old road beds, railroad lines, ditches or earthworks, or even local streams or natural springs and their waterflows. Here is a quick video to illustrate how pathways are added and edited in Google Earth: https://www.youtube.com/watch?v=KE451Yx8ILI

Polygons can be used to document the size and locations of overall sites, concentrations of certain artifact types, or large features of cultural materials or debris like large trash sites, a mill pond complex, or earthworks, etc. Here is a quick video to illustrate how polygons are added and edited in Google Earth: https://www.youtube.com/watch?v=x3jMCdbHpzY

Each of these tools will also allow you to add notes and information within a description field, which is found when right-clicking the layer file and selecting Properties. Within properties you can name the placemark, pathway, or polygon, access or input the Latitude and Longitude GPS coordinates, change the size, shape, and color of the icon as displayed on the map, and add information in the description field to describe the site, artifact, structure, feature, or concentration you are trying to map (Figure 1).

Additional layers are available within and for Google Earth, such as Topographic layers, roadways, state and county boundary lines, and many others. The most useful layers are those listed at the lower left of the screen and include borders and labels for states and counties as well as roads. These layers will help orient the location and geographic position of the site with surrounding landmarks.
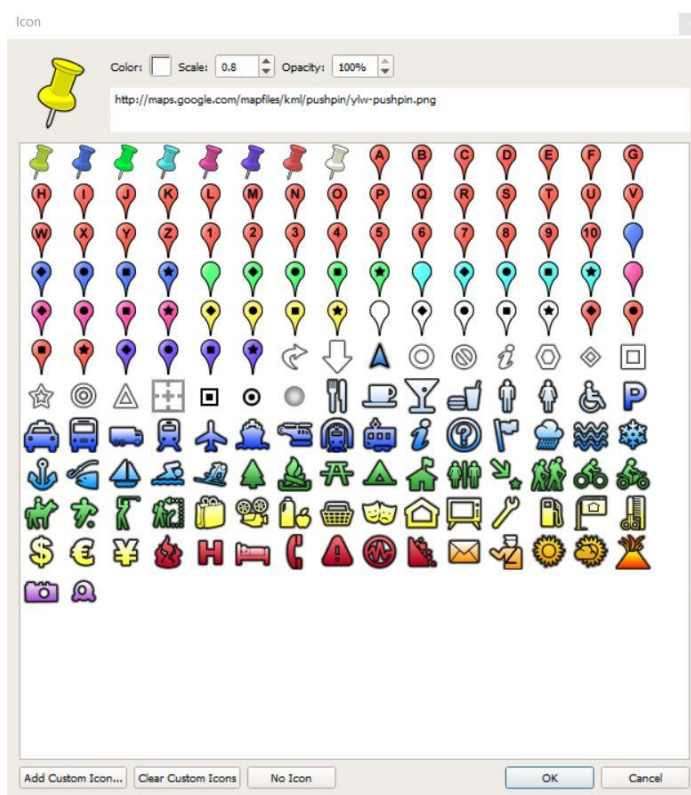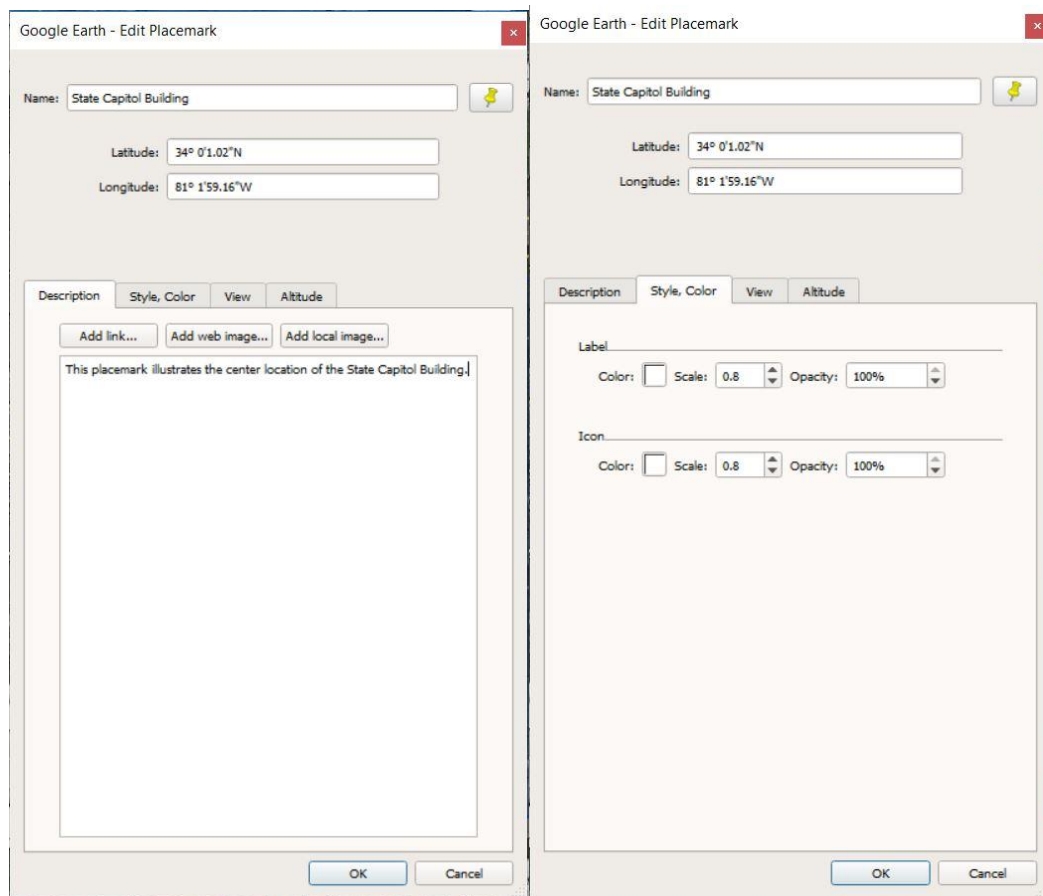
Figure 1 When you right-click a layer in the "Places" Table of Contents, and select properties, the above dialog boxes appear which allow you to name the layer, enter a description, and change the color, size, symbol and translucency of that layer in your map.

Figure 2 This is an illustration of how you can map points, lines, and polygons of different structures, features, and areas with various colors and labels to illustrate the size and characteristics of your site over aerial imagery.

Figure 2 is an example of how these tools can be used to label and illustrate different aspects of a site. This example uses the State House grounds to illustrate ways to label different features or structures on a site. Note that the placemark icons, pathway lines, and polygon border and fill can all be modified. The color and transparency of each can be adjusted to enhance the illustrations. How you map the features and concentrations is up to you, but it's best to keep it simple and to focus on accuracy in mapping concentrations and artifacts on a site.

Make sure to organize these features into a folder labeled by the site name. At the top of the Google Earth window, click Add -> Folder, then a new folder will appear in the "Places" Table of Contents on the left margin of the screen. Name the folder by your site name or temporary designation, then drag all the associated files into that folder.

Saving the Map and File for Submission

Once you have finished mapping your features and artifacts at a site, you may click the save image icon at the top of the screen, create a map, and save the map as a jpeg to submit with your site form. Figure 2 also illustrates how you can add a title and description to the map, and how the legend is generated from your recorded layers. Once you have saved your map image, then right click the folder or "Places" file in the table of contents on the left of the screen where the layers are organized and click "save place as" to save the place by the site name to your desktop which can then be emailed to the Avocational Site File Administrator. This .kmz or .kml file of your site will then be incorporated into the Avocational Site File Database.