Introduction to Parcels
# with Esri (ArcGIS Online) – Smart Cville

Objective

To examine sales and assessment parcel data that is available in the Charlottesville Open Data Portal. To practice interacting with map, loading, querying, and filtering data, as well as symbolizing maps.

Getting Started

Load an Existing Map

Type https://arcg.is/1nL1L9 into a new browser tab or window to load the Charlottesville 2017 Sales and Assessments map. Click on **Sign In**, enter your **Username** and **Password** and click **SIGN IN**.
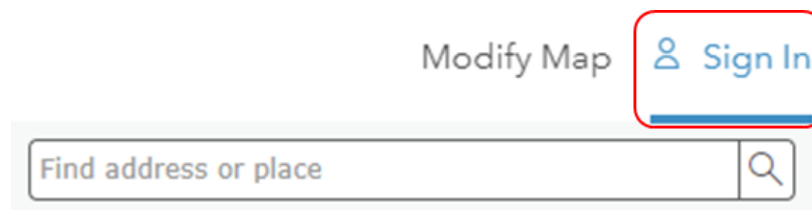

Pan/Zoom/Find

Use Pan/Zoom/Find to set your map to your area of interest. Experiment with panning and zooming. Type *Charlottesville, VA* in the **Find address or place** box. Click on the **X** in the upper right-hand corner of the **Search result** pop-up to remove the pop-up.
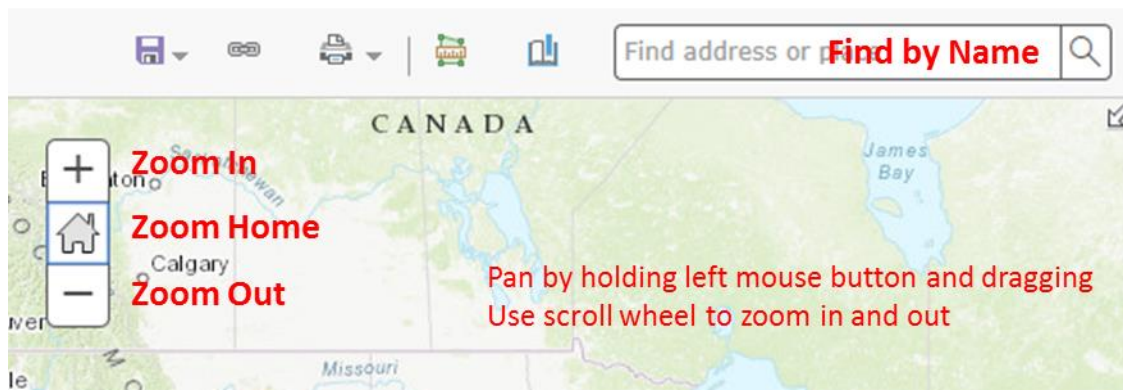
Turn on the Table of Contents

Click on the **Show Contents of Map** icon to open the Table of Contents. You will see two layers, **Planning Neighborhood Area** and **Light Gray Canvas** (the basemap).
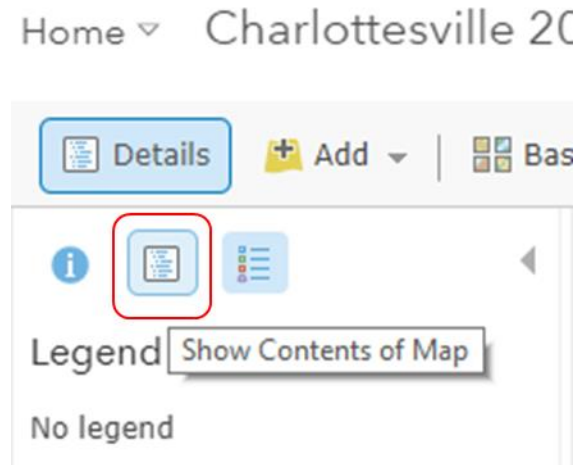
Turn Layers On and Off

Click on the **Planning Neighborhood Area** checkbox to turn the layer on. Zoom out so you see the entire city. Note: the labels will disappear when zoomed out … users can set the limits of where labels will appear or disappear.
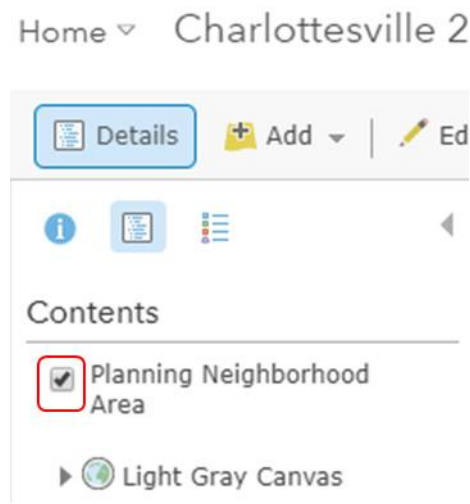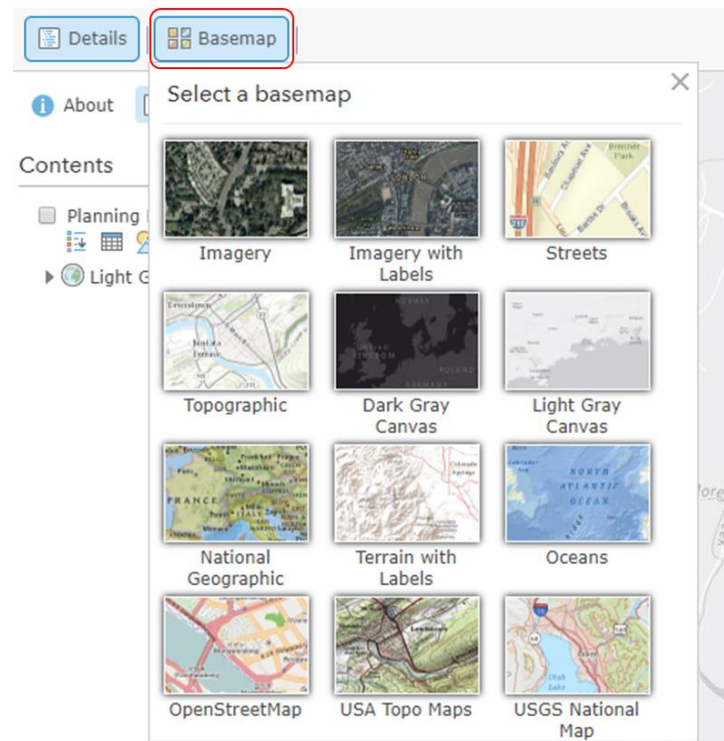
Explore Basemaps

Basemaps provide your map background. There are a number of different choices with different content, as well as look and feel.

These are worth exploring depending on the purpose of your web map. Use the Light Gray Canvas when you plan to overlay data, as it provides a simplified map background.

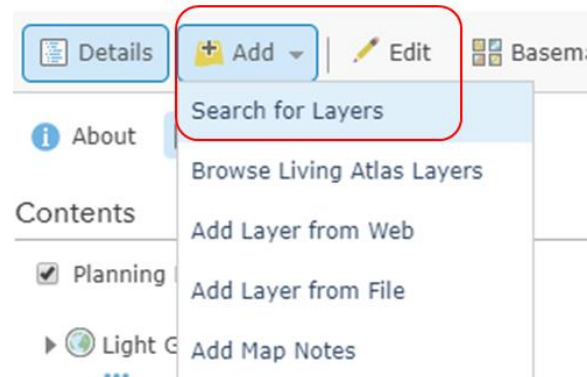When you are done exploring, select the **Light Gray Canvas** basemap**.**

Add Sales and Assessment Data

Click on **Add** and **Search for Layers** to open the search form.

Enter the information for **Find** and **In**. Type *cville_exercises* for **Find** and select ArcGIS Online from the dropdown menu for **In**. The click **GO**. There will be one result. Click on **Add** to add the layer and then click on **Done Adding Layers** at the bottom of the form to finish. (Note: to find and add Charlottesville Open Data Portal data type *cvilleodp* for **Find** and select ArcGIS Online from the dropdown menu for **In**.)


This layer is a custom layer constructed from data on the Charlottesville Open Data Portal. The Parcel Area Details layer and the Real Estate (Sales) layer were joined using the common PIN numbers. This layer reflects the 2017 Sales in Charlottesville for parcels with a single owner, having a valid assessed value, and sales price greater than $0. The following map will appear … the extent may differ.
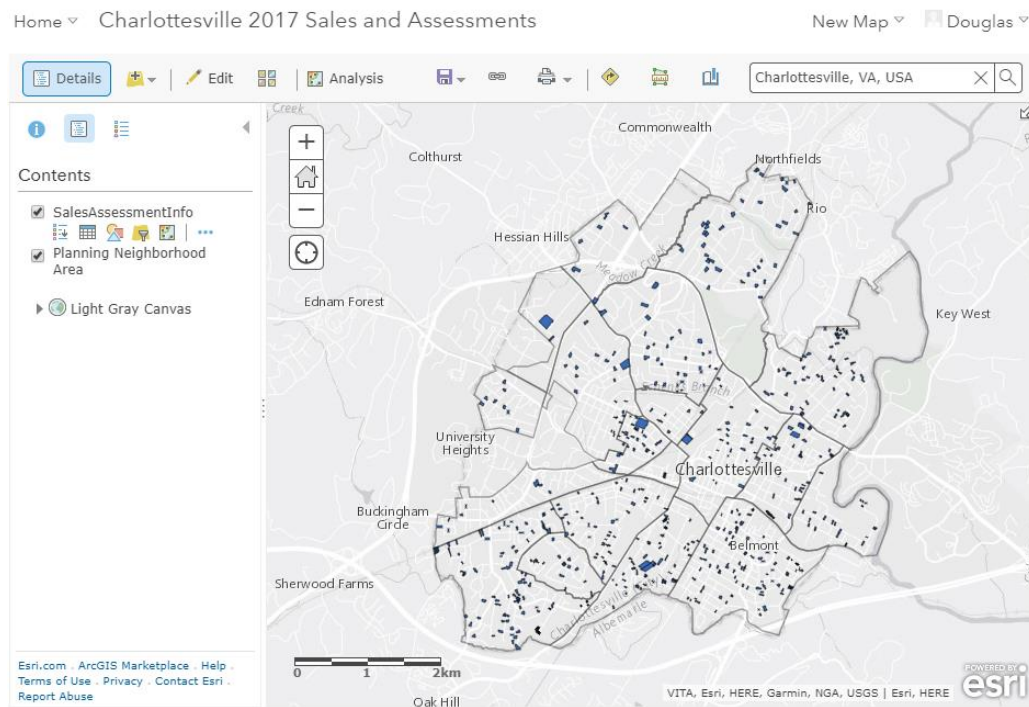
Find the Highest Sales Price

Open Attribute Table

Hover over the **SalesAssessmentInfo** layer and click on the **Show Table** icon.
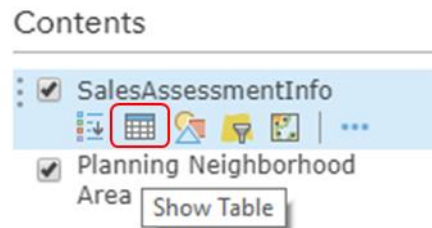
The attribute table will appear at the bottom of the display. You can move the scroll bar to see all the fields.

Examine Attributes

Scroll to the **SalesPrice** field. This field stores the sales price of the parcel. Click on the field name for options to display the field. There are options to **Sort Ascending** (lowest to highest), **Sort Descending** (highest to lowest), or to display summary **Statistics** for the field. Click on **Sort Descending** to show the most expensive sales first.

SalesAssessmentInfo (Features: 672, Selected: 0)

SalePrice	Assessmnt	SADiff
A↓ Sort Ascending	54,031	-5,031
Z↓ Sort Descending	56,900	7,600
Σ Statistics		
459,000	383,200	75,800
195,000	262,300	-67,300

Question 1. What parcel (**PIN**) sold for the greatest value? How much did it sell for (**SalePrice** in dollars)? When did it sell (**SaleDate**)? What is its address (**Address**)? What was the assessed value (**Assessmnt** in dollars – note spelling … shortened to meet database limitation)? What was the difference between the sales price and the assessed value (**SADiff** in dollars)?

This is The Pavilion at North Grounds Apartments. To view more complete information, open a new browser tab or window and go to the Charlottesville GIS View at http://gisweb.charlottesville.org/GisViewer/ and enter the PIN value from the table in the Parcel ID field. Then click **Search** to find the additional information.

Click on the **Statistics** to see the number of records, sum of record values, minimum, maximum, average, and standard deviation for the **SalesPrice** field.

Question 2. What are the minimum, maximum, and average values of the SalePrice field?

Click on the **X** in the upper right hand side of the window or the CLOSE button to close the window.

To close the attribute table, click on the **X** on the right hand side of the attribute table at the bottom of the map.

SalesAssessmentInfo (Features: 672, Selected: 0)

GPIN	SHAPESTAre	SHAPESTLen	PIN	Address
29	14,455.75	473.09278476227	42C119000	2324 GLENN CT
33	11,578	433.024582305954	42C118000	2328 GLENN CT

Make a Map of Parcels Sold for $1 Million or More

Filter Data

Hover over **SalesAssessmentInfo** and then click on the **Filter** icon.
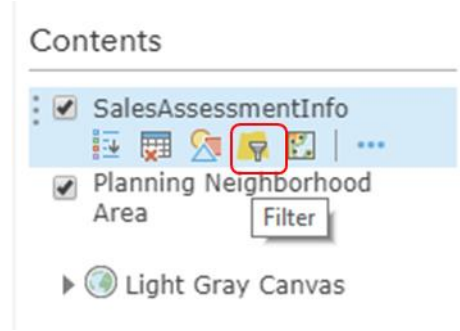
Fill in the Create form. Use select *SalePrice* from the left dropdown, *is at least* from the center dropdown, and type in *1000000* in the right hand textbox to select the features that have a sales price of at least $1,000,000. Then click the **APPLY FILTER** button to execute the query.

The resulting map shows only the parcels that are worth at least $1,000,000.
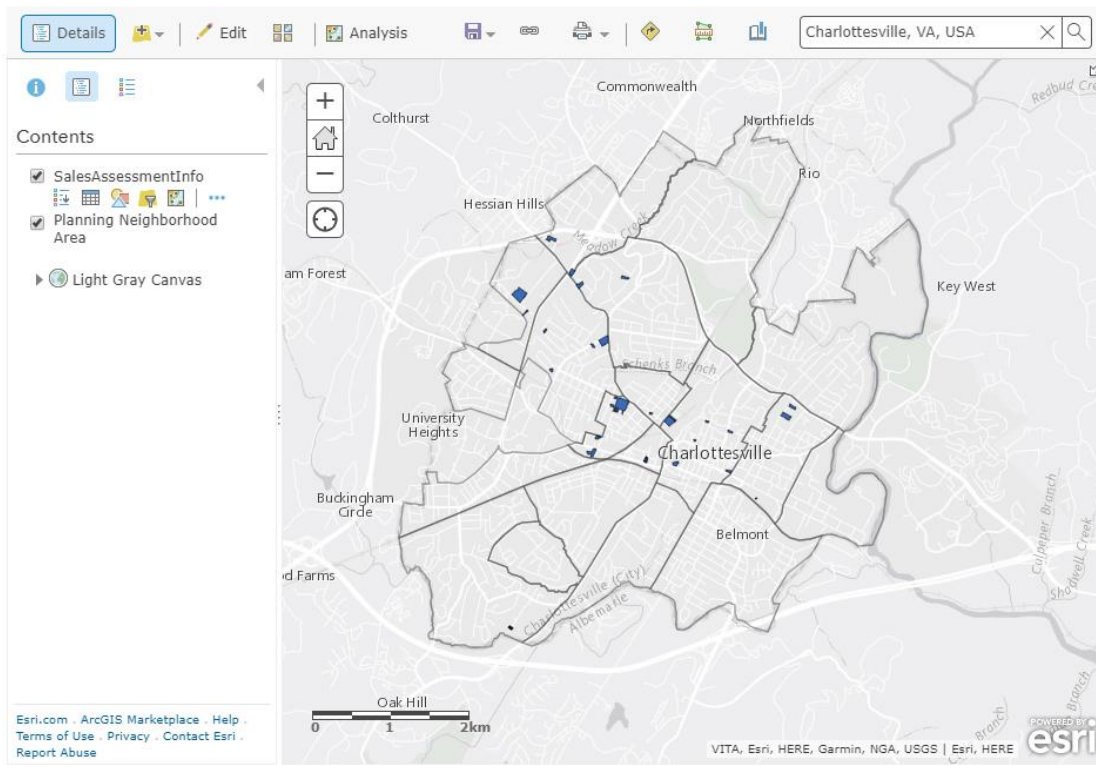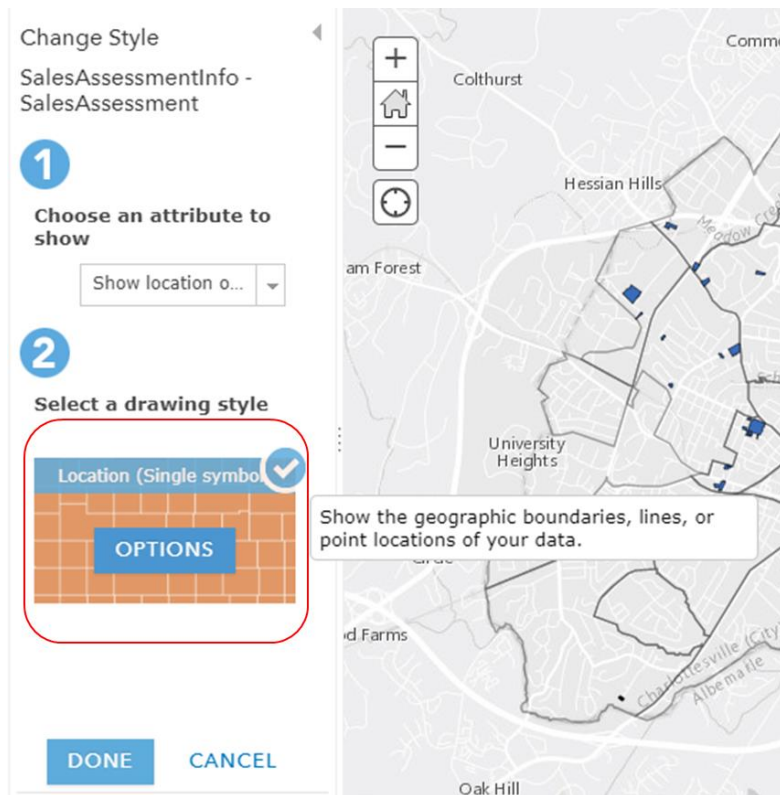
Change Map Symbols – Single Symbol Map

Hover over **SalesAssessmentInfo** and then click on the **Change Style** icon.
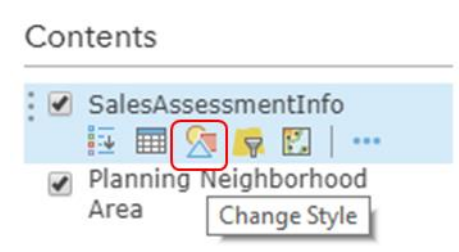
Click on **OPTIONS** to change the symbol style. This applies to maps where all features have the same symbol.

Click on the word **Symbols** to change the symbol.

Click on the Orange symbol (or select your own color) and adjust the **Transparency** slider to 50%. Then click **OK** on this form. Transparent features allow you to see the underlying basemap.
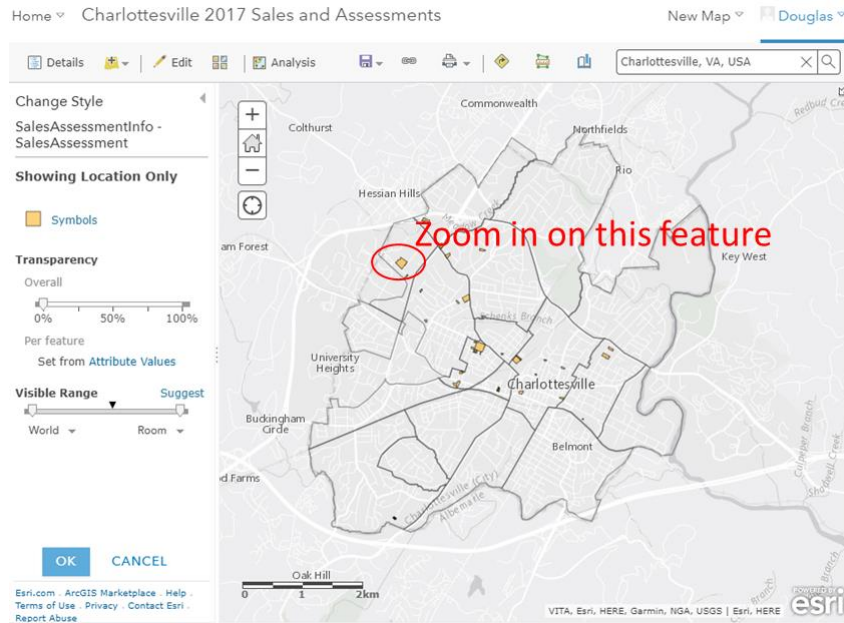

Then click on **OK** on the previous form, and **DONE** on the original Change Styles form when they appear.

This will be the resulting map. Zoom in on the feature highlighted in the feature highlighted in red. This was the most expensive sale in Charlottesville in 2017.


Once you have zoomed in on the feature, change the basemap to **Imagery with Labels** (see earlier section on Explore Basemaps for how to do this) and click on the feature to view the associated pop-up.
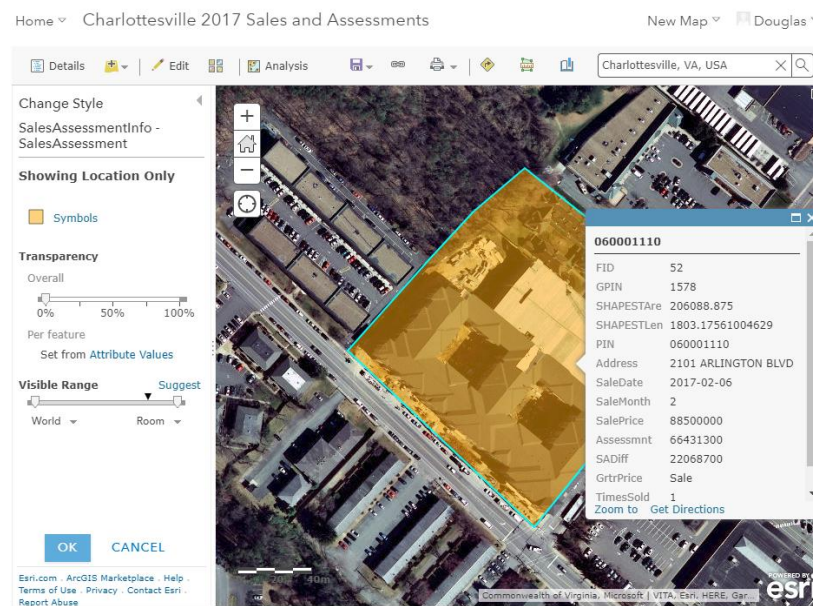
Click on the **X** in the upper right hand corner of the pop-up to remove the pop-up.

Add Labels to Features

Hover over **SalesAssessmentInfo** and click on the three dots to the right of the icons … this will bring up the additional options. Click on **Create Labels** to edit the labels.
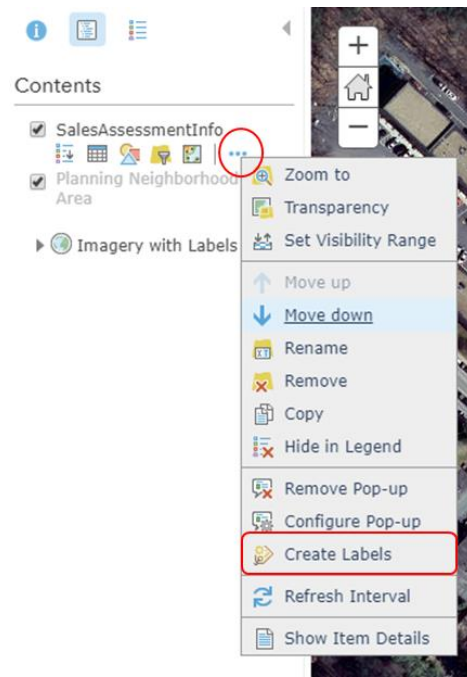
Fill out the form to label the features. Make sure that the Label Features checkbox is checked. For the **Text** to display, select the **SalePrice** field. Set the font size to 16 and make sure that the B for bold text is highlighted. Also check the **Halo** checkbox. Click **OK** when complete.

Label Features

SalesAssessmentInfo

☑ Label Features

Text: SalePrice ▾

16 ▾ **B** *I* U ■

☑ Halo 1 ▾ □

Visible Range:

World ▾   Room ▾

OK   CANCEL

The label now appears on the feature.

Change the basemap back to Light Gray Canvas and zoom back to Charlottesville. Note how the labels for the neighborhoods and the parcels disappear automatically when zoomed out … this prevents the map from being overcluttered. You can control the map scale at which labels appear.
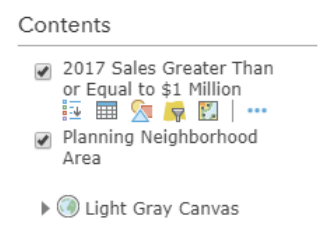
Rename Layer

Hover over **SalesAssessmentInfo** and click on the three dots to the right of the icons … this will bring up the additional options. Click on **Rename** to edit the labels.
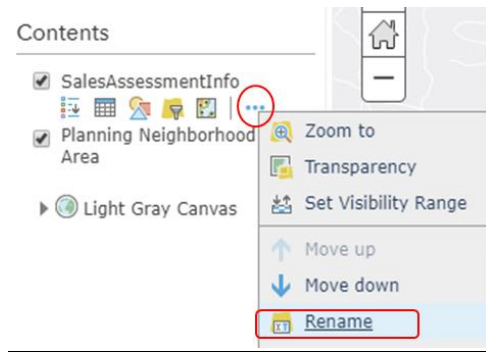
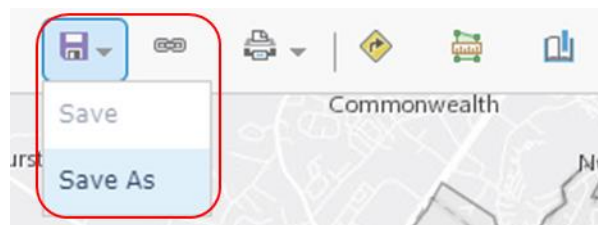Type *2017 Sales Greater Than or Equal to $1 Million* in the **Layer Name** text box. Click **OK** to accept the name.
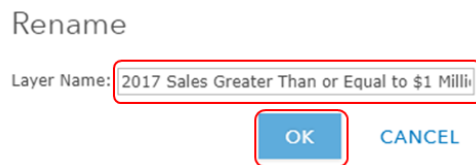
The new layer name appears in the Contents section.

Save Map

Click the **Disk** icon and **Save As** to save the map. You won't be able to save the original map because you are not the author. You will be able to **Save** your map if you make changes later.

Fill in the **Title**, **Tags**, and **Summary**. To enter a tag, type in a name and hit Tab or Enter. You may want to delete the *assessments* tag and the *civlle_exercises* tags by clicking on the **X**, as they are not related to your map. Click **Save Map** to save the map.

Share Map

Click the **Link** icon to share the map with other users.
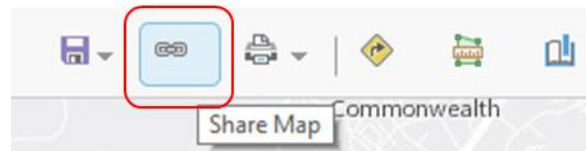
Check the **Everyone (public)** checkbox to share your map with everyone. Also check your own name (blacked out in this exercise). You can provide the URL in **Link to this Map** so others may view your map in a browser. Make sure that the **Share current map extent** checkbox is checked if you want the map to open with your current map extent. Click **Done** to complete sharing.

To check your ArcGIS Online content, click on the **Home** dropdown in the upper left-hand corner of the map and select the **Content** option to see your ArcGIS Online content.
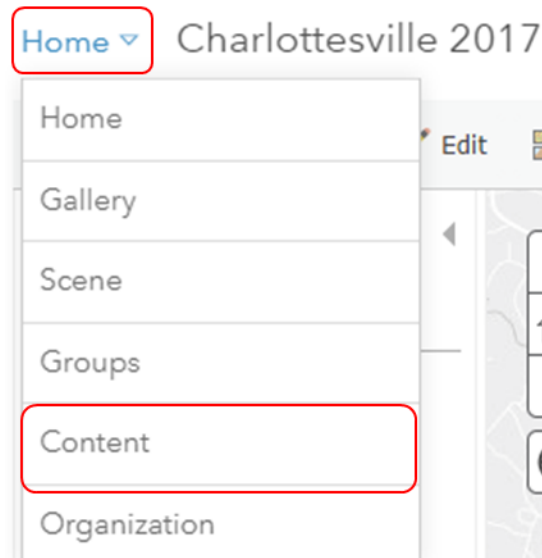
Answers to Questions

Question 1. The most expensive parcel, PIN 060001110, sold for $88,500,000 on February 6, 2017, and is located at the 2101 Arlington Blvd. The assessed value was $66,431,000 and the difference between the sale price and the assessed value was $22,068,700.

Question 2. The minimum sales price is $1,000 (remember that $0 sales prices have been excluded from the data set), the maximum sales price is $88,500,000, and the average sale price was $736, 690.

Additional Resources

ArcGIS Online allows you great flexibility in making webmaps. You can change the map symbols, label features, add comments to maps, import your own data, analyze data, and create web mapping applications that work equally as well on desktops as mobile devices. See these additional resources to learn about these capabilities.

Get Started with ArcGIS Online (Esri)
https://learn.arcgis.com/en/projects/get-started-with-arcgis-online/

Making Custom Maps with ArcGIS Online
http://clear.uconn.edu/geospatial/materials/CLCC/Handson_AGOL.pdf

Videos About Using ArcGIS Online (Esri)
http://doc.arcgis.com/en/arcgis-online/reference/videos.htm

YouTube Videos (search using "ArcGIS Online" to find many videos)
https://www.youtube.com/

Contact Information

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