

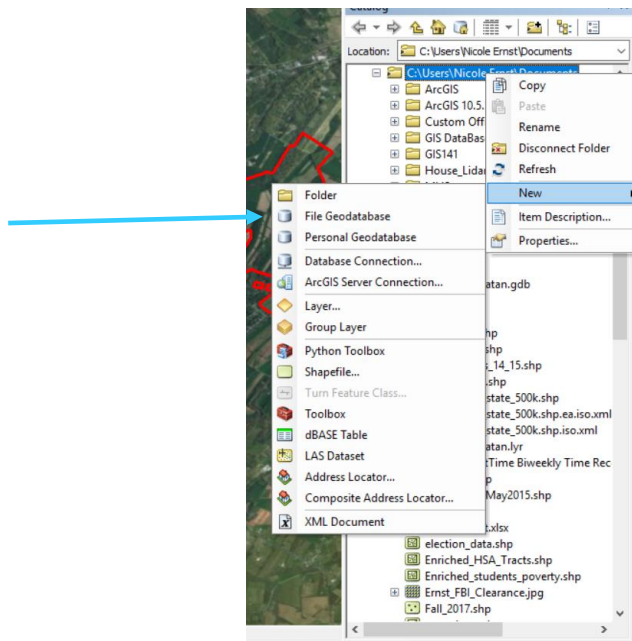
Using Collector for ArcGIS to Map the Monuments on the Gettysburg Battlefield

For this exercise you will build a Collector map to conduct an inventory and condition assessment of the monuments at the Gettysburg Battlefield. The information that you need to collect is as follows:

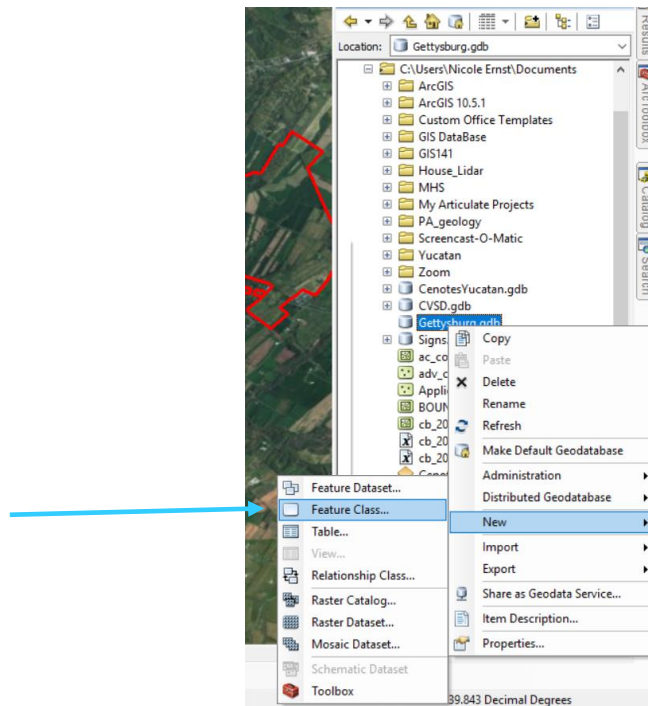
- Name of Monument
- Type (Union or Confederate Statue)
- Year
- Condition
 - Excellent
 - Good
 - Fair
 - Poor
- Picture

Building the Collector Map and Data Collection Form

- 1- Open a new ArcGIS project. Add the **boundary** for Gettysburg National Military Park.
- 2- Change the symbology on the boundary to remove the fill color (hollow out) and change the outline color to red and increase the width of the outline to a 2. Save your project.
- 3- Now that we have created the map for our data collection efforts, we will create the data collection form. To do this, open ArcCatalog, then create a new file geodatabase in your **Documents** folder. Call the file geodatabase **Gettysburg**.



- 4- Create a new feature class in your Gettysburg geodatabase. To do this, right click on the geodatabase, then select **New**, then **Feature Class**. Name your feature class **Monuments**, then select **Point Features** as the Type. Click **Next**.



- 5- Select the coordinate system for your new feature class. Select **Projected Coordinate Systems>State Plane>NAD 1983 (US Feet)>NAD 1983 StatePlane Pennsylvania South FIPS 3702 (US Feet)**. Click **Next**.
- 6- Keep the defaults on the XY Tolerance screen and click **Next**. Keep the defaults on the Configuration Keyword screen and click **Next**.
- 7- We now have to set up our **Fields**. Create the following fields with the listed data type then click **Finish** to close the feature class dialog box. The feature class will be added to your Table of Contents.
- Name – text
 - Type – text (this will be the field that indicates if a monument is a Union or Confederate monument)
 - Year- short integer
 - Condition - text
 - Excellent
 - Good
 - Fair
 - Poor

- 8- Now that our fields are set-up, we are going to create a **domain** for the **Condition** field so that we create pick list of values. To create the domain, right click on the Gettysburg geodatabase in ArcCatalog, then select **Properties**. Click the **Domains** tab on the dialog box that comes up. Create a new domain called **Condition** and set the **Field Type** to **text**. Create the four coded value: Excellent, Good, Fair, Poor (see graphic below).
- 9- Create a second domain called Type. Create two coded values: Union and Confederate. Click **OK** (see graphic below).

The image displays two side-by-side screenshots of the 'Domains' tab in the ArcCatalog 'Properties' dialog box. Both screenshots show the 'General' tab selected.

Left Screenshot (Condition Domain):

Domain Name	Description
Condition	Condition of monument
Type	Union or Confederate

Domain Properties:

Field Type	Text
Domain Type	Coded Values
Split policy	Default Value
Merge policy	Default Value

Coded Values:

Code	Description
Excellent	Excellent
Good	Good
Fair	Fair
Poor	Poor

Right Screenshot (Type Domain):

Domain Name	Description
Condition	Condition of monument
Type	Union or Confederate

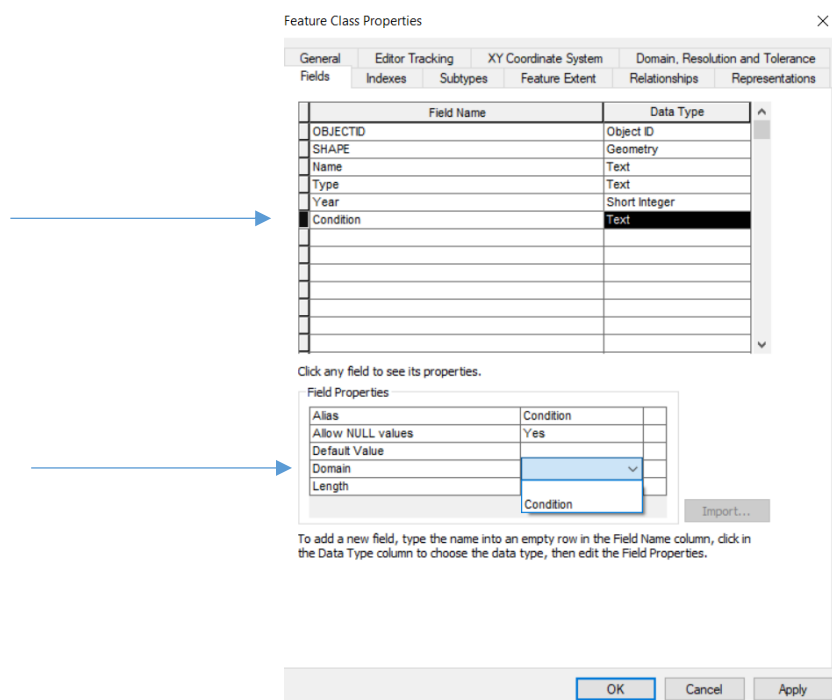
Domain Properties:

Field Type	Text
Domain Type	Coded Values
Split policy	Default Value
Merge policy	Default Value

Coded Values:

Code	Description
Union	Union
Confederate	Confederate

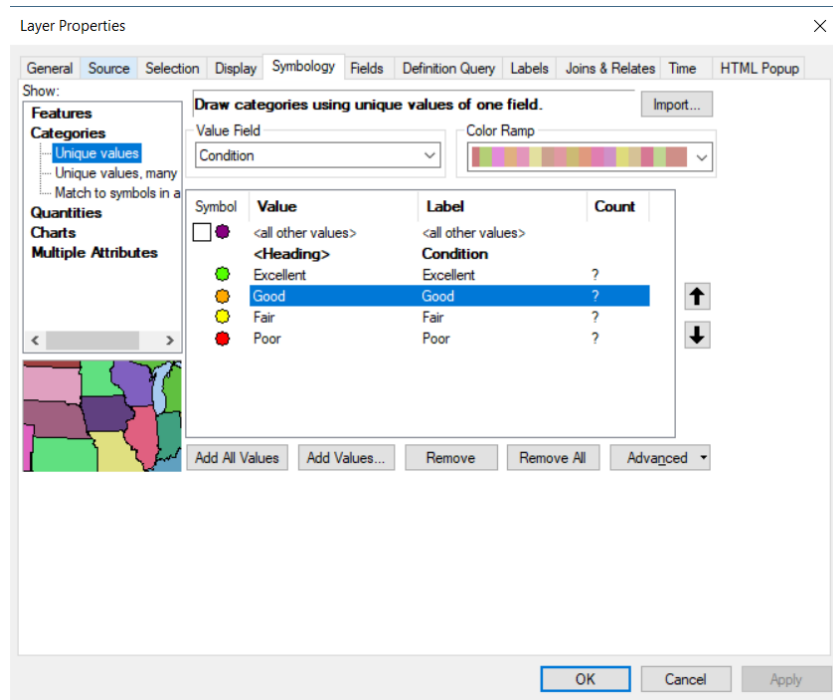
- 10- Now that the domains have been created, they need to be applied to the Monuments feature class. To do this, right click on your Monuments feature class in ArcCatalog, then select **Properties**. Click the **Fields** tab. Select the Conditions field, then under **Field Properties** select **Domain**, then select the **Condition** domain (see graphic below), then **OK**. Follow the same process to apply your Type domain. Click **OK**. **Save your project**.



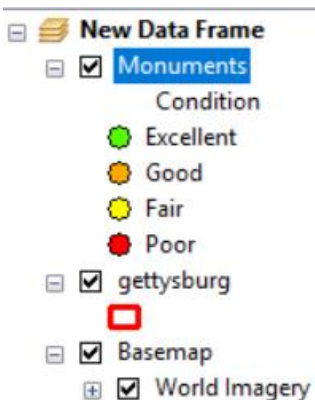
You have just set-up the data collection form to map the monuments at the Gettysburg Battlefield. We are now ready to finalize our map. The way that you symbolize your data in ArcMap is generally how it will look in ArcGIS Online. We are going to re-symbolize our Monuments feature class.

- 11- Double click on your **Monuments** feature class in your Table of Contents to open **Layer Properties**. Select your **Symbology** tab.

We are going to symbolize our monuments by Condition. Select **Categories>Unique Values**, then select your **Condition** field, then click **Add All Values**. Deselect the checkbox next to **All Other Values**. Change the size and color for Excellent, Good, Fair, Poor. Change the size of the point to an 8 and change the colors of each so that they stand out on the imagery basemap (see graphic below). Click **OK**.



Your Table of Contents should look similar to the graphic below. **Save your project.**

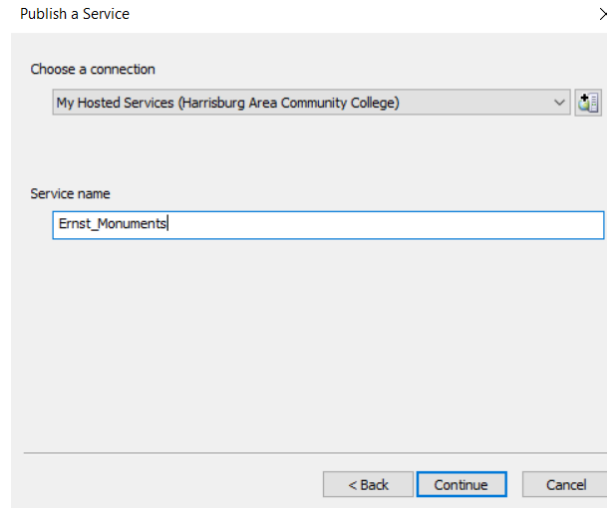


Publishing Your Data Collection Form and Map to ArcGIS Online

Now that we set up the data collection form and map, we must publish the map as a feature service to ArcGIS Online.

- 1- In ArcGIS, select your **File** menu, then **Sign In**. Sign In using the logon credentials provided to you at the beginning of the workshop.
- 2- After signing in, go to your File menu, then **Share As>Service**. On the screen that appears, select **Publish A Service**, then click **Next**.

- 3- On the **Select a Connection** screen, select **My Hosted Services (Harrisburg Area Community College)**, then name your service. Name your service YourLastName_Monuments being sure to replace YourLastName with your actual name (see graphic below). Click **Continue**. The Service Editor screen will then appear.



Publish a Service

Choose a connection

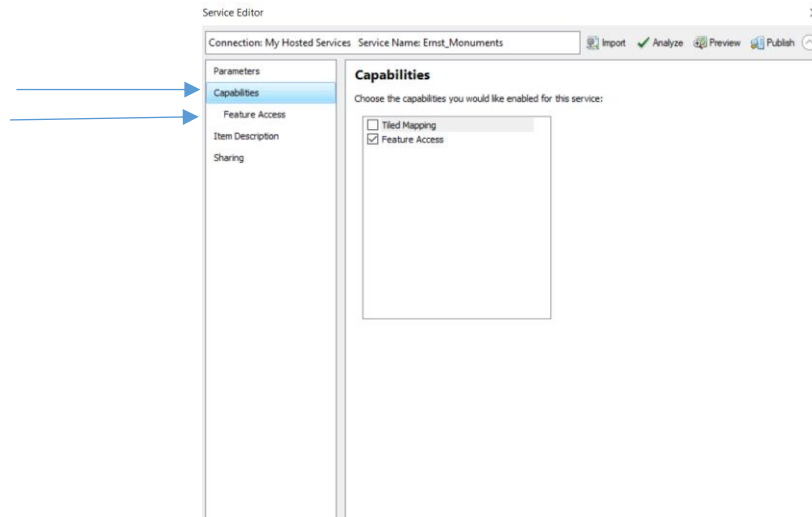
My Hosted Services (Harrisburg Area Community College)

Service name

Ernst_Monuments

< Back Continue Cancel

- 4- Click the **Capabilities** option and verify that the option for Feature Access is checked, then click the Feature Access option directly underneath Capabilities (second arrow is pointing to it).



Service Editor

Connection: My Hosted Services Service Name: Ernst_Monuments

Parameters Capabilities Feature Access Item Description Sharing

Capabilities

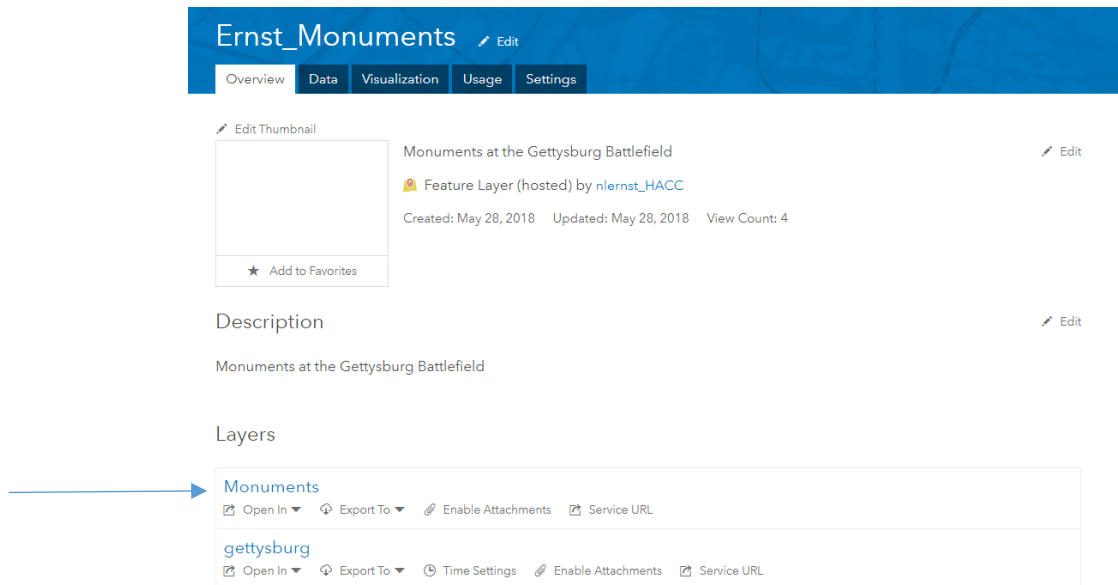
Choose the capabilities you would like enabled for this service:

☐ Tiled Mapping

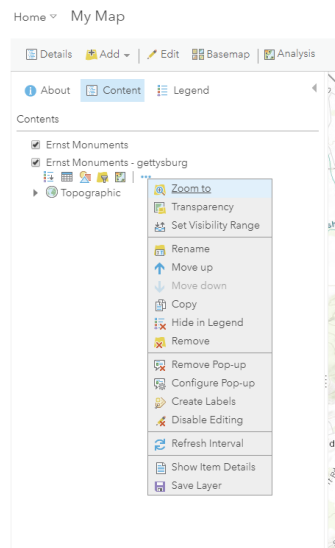
☒ Feature Access

- 5- For **Operations Allowed**, check **Create, Delete, Query, Sync, and Update**.
- 6- Click on the **Item Description** option and provide a **Summary** and **Tags** (keywords). These are required and must be filled in.
- 7- Click on the **Sharing** option and share with **Geotech Data Collection Workshop** group.

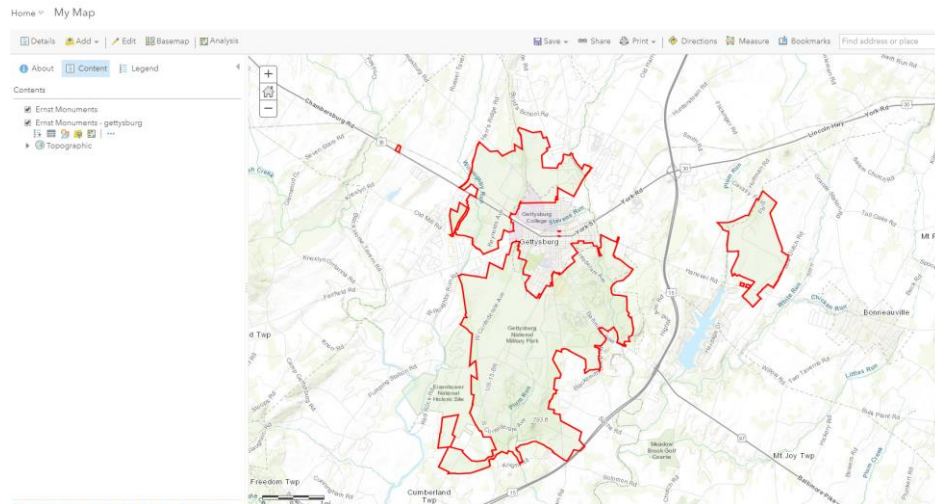
- 8- Click **Publish** to publish your map as a Feature Service. Minimize ArcMap.
- 9- Go to hacc.maps.arcgis.com and sign in using the credentials provided to you at the beginning of this workshop. Click the **Content** option. You should see your Feature Layer. Click the ..., then select **View Item Details**. This is where we can enable attachments so that the data collectors can take an image of each monument. To enable attachments, select **Monuments**, then click **Enable Attachments**. After you enable the attachment, select **Open in Map Viewer**>**Add to New Map**.



- 10- After the feature service is added to the map, **Zoom To** the Gettysburg boundary.



Your map should look similar to the map below.



- 11- Save your map by going to **Save**, then **Save As**. Name your map **YourLastName_Gettysburg** and provide appropriate tags.
- 12- Share your map so that data collection can begin! Go to **Share**, then share your map with the **Geotech Data Collection Workshop** group.
- 13- Grab your phone, open the Collector for ArcGIS app. Sign in if necessary. You should see your map on your phone! Hop in the car, drive to Gettysburg, and collect some data!
- 14- When you are finished mapping all the monuments, you may want to export them out of ArcGIS Online so that you can use them in ArcMap. You can export the data in a number of formats including shapefile, KML, Excel, and more. To export the data, go to the **DETAILS** page of your monuments feature class, then select the **Export Data** option.

