How to Add GNSS metadata and Orthometric Height in Esri Collector

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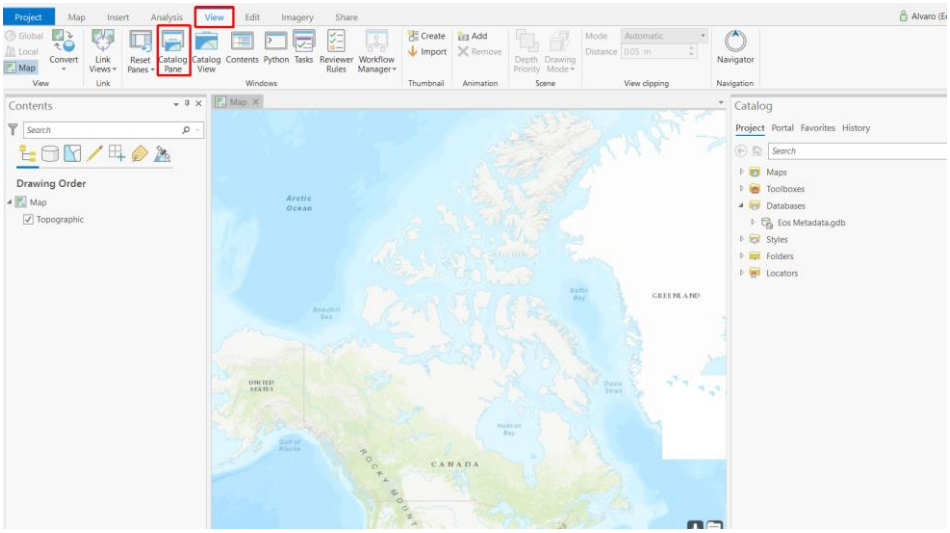
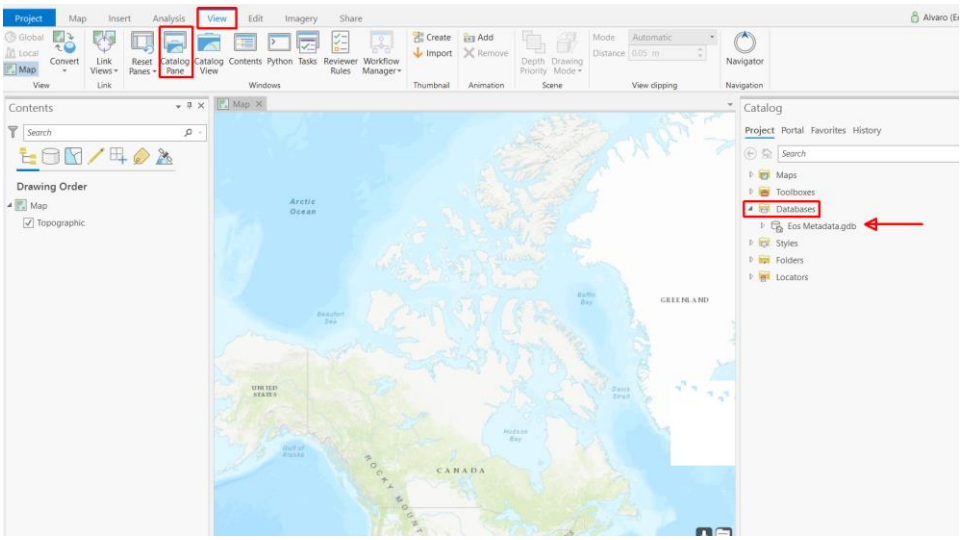
Creating your Feature Class (Point) Using ArcGIS Pro

Note: Make sure your ArcGIS Pro software is up to date. To be sure click on Project/About.

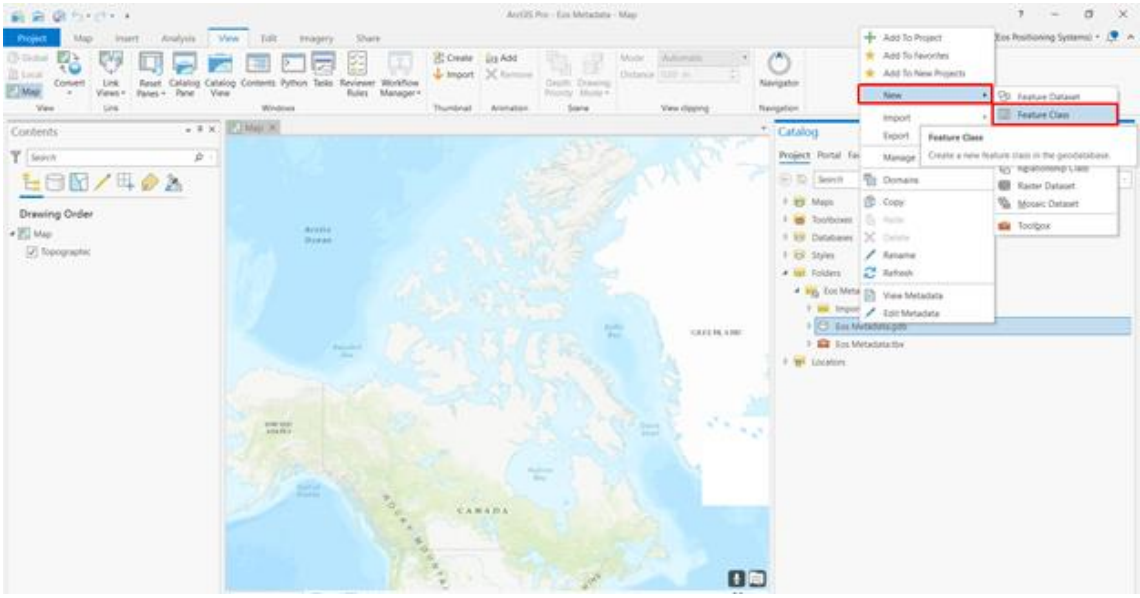
a) Open ArcGIS Pro and log in to your ArcGIS account (enterprise)
b) Create or Open a new Project
c) Click on **View** and select **Catalog Pane**



d) On the **Catalog Pane** (right side) select **DataBases** and right click on the database of your map.

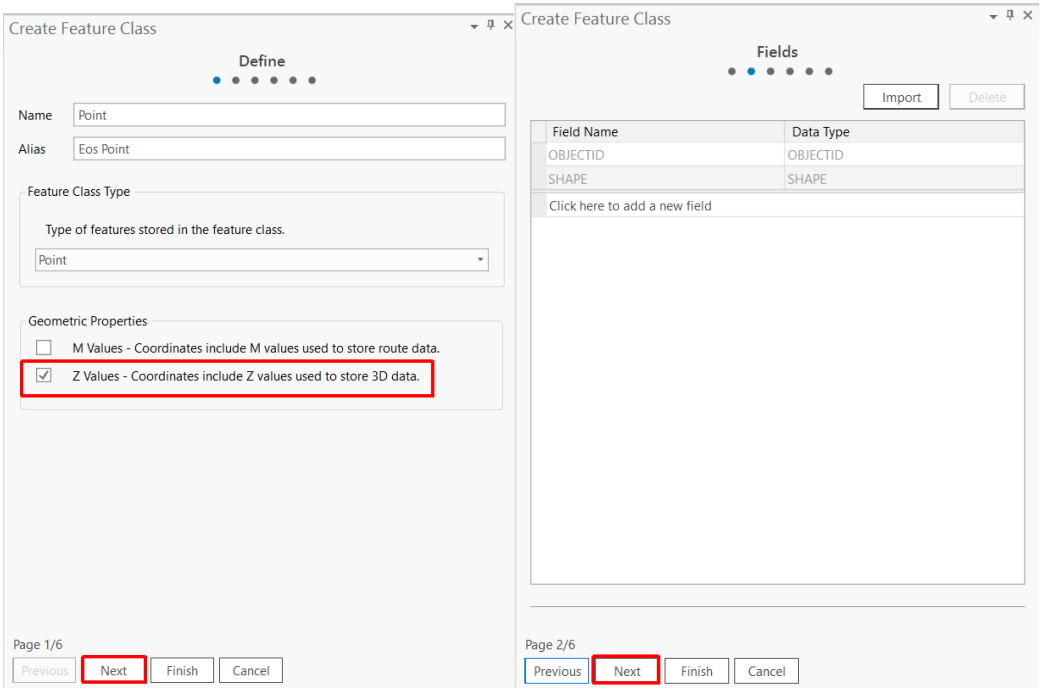


e) Select **New/Feature Class** to create the feature class that will be used with GNSS metadata.

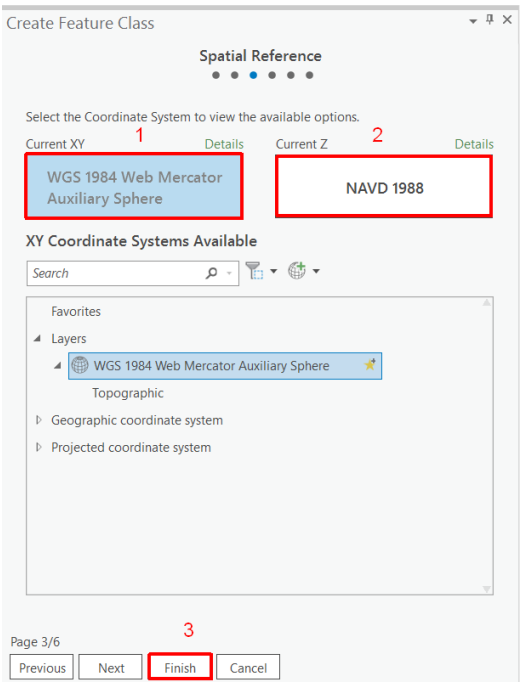


f) Enter a Name for your Feature Class and the Alias.

g) On the **Define** page, name your feature class/alias and select **Point** as the **Feature Class Type**. Make sure to check the ''**Z-Values**'' box in the **Geometric Properties**. Click **Next** 2 times**.**



h) In the Spatial Reference page (3), select ***WGS 1984 Web Mercator Auxiliary Sphere*** as the horizontal Coordinate System and ***NAD1988*** as the vertical Coordinate system/datum. Click on **Finish.**

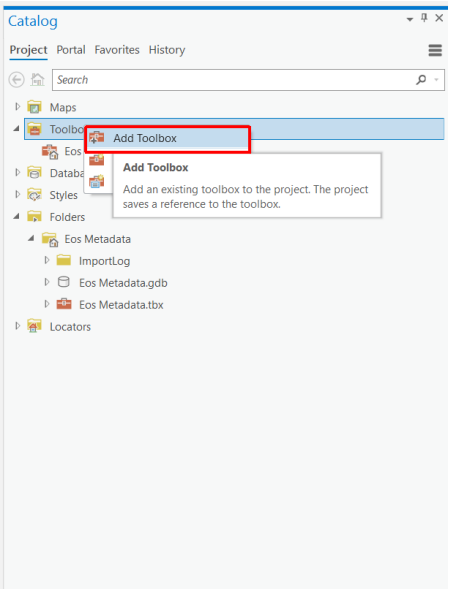


Note: The horizontal and vertical Coordinate Systems/datums could differ depending of your map. This example is what most clients uses.

Check with your GIS specialist to confirm your map coordinate system.

Adding GNSS meta data to your Feature Class using Collector Toolbox

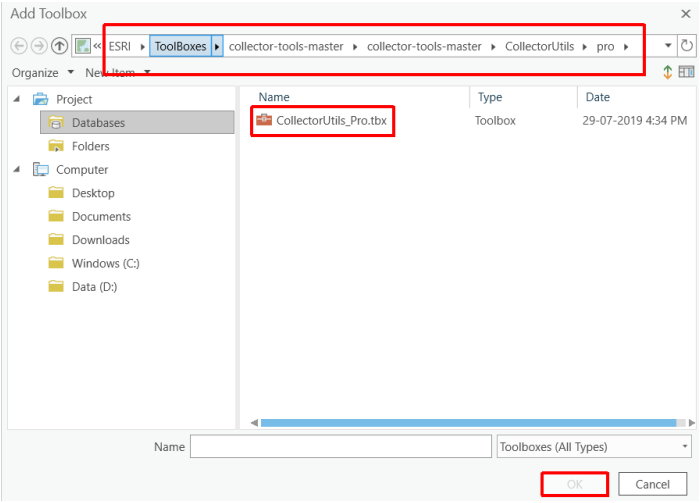
a) From the **Catalog Plane**, right click on **Toolbox** and select **Add Toolbox**.



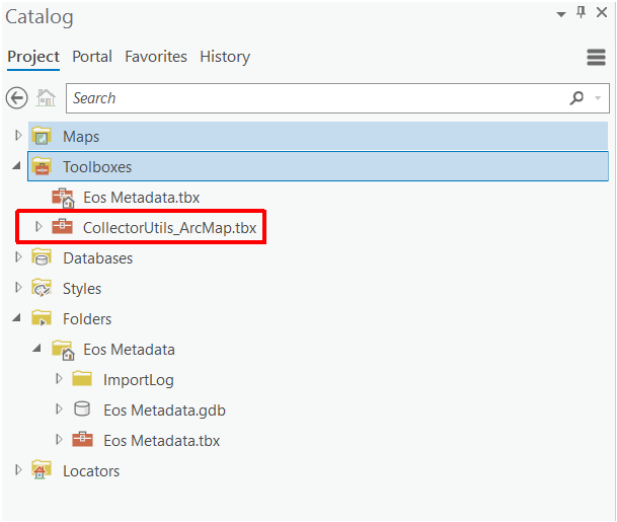
b) Download and save the **collector-tools-master file zip** file into your PC.

Note: Make sure to unzip the file after saving it.

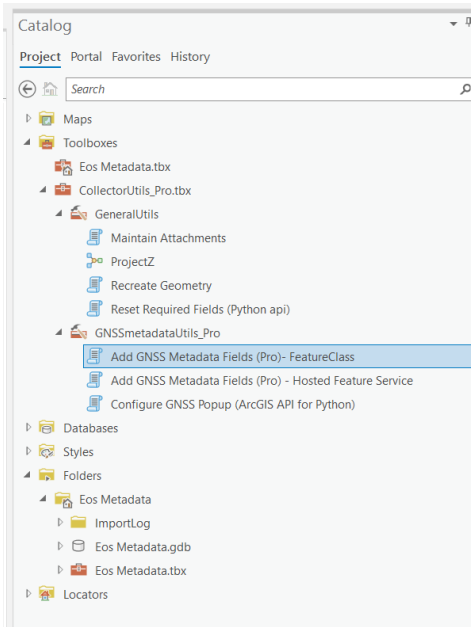
c) Browse/find (in the CollectorUtils/pro folder) the ***GNSSmedataUtils*** Toolbox and select the ***CollectorUtils_Pro.tbx.*** Click **OK**.



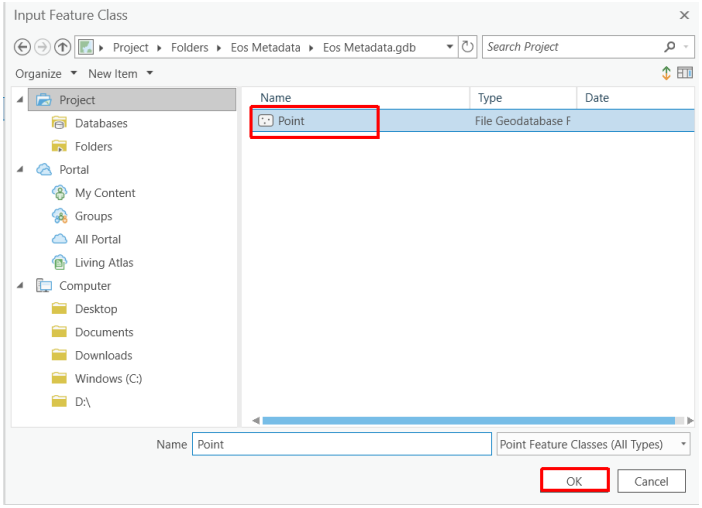
The ***CollectorUtils_ArcMap*** toolbox should now be listed under the **Toolboxes** menu.



d) Right click on ''**Add GNSS MetaData Fields (Pro)** – FeatureClass'' and click on **Open**.

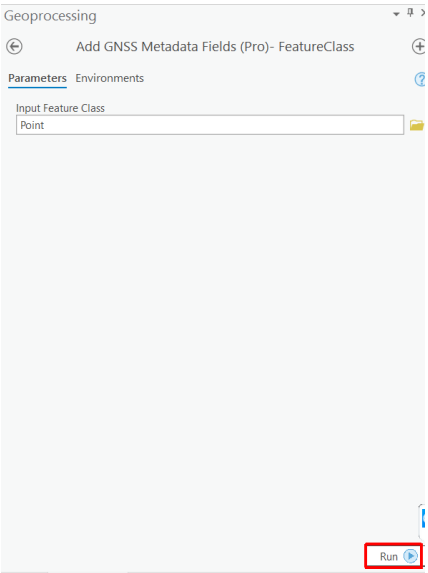


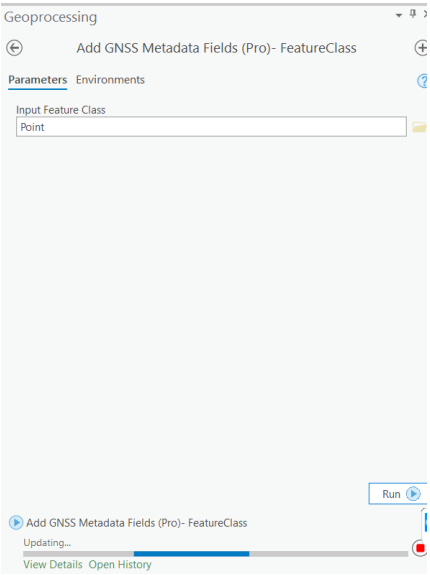
e) Select the point feature class that you want to implement the metadata and click **OK**.



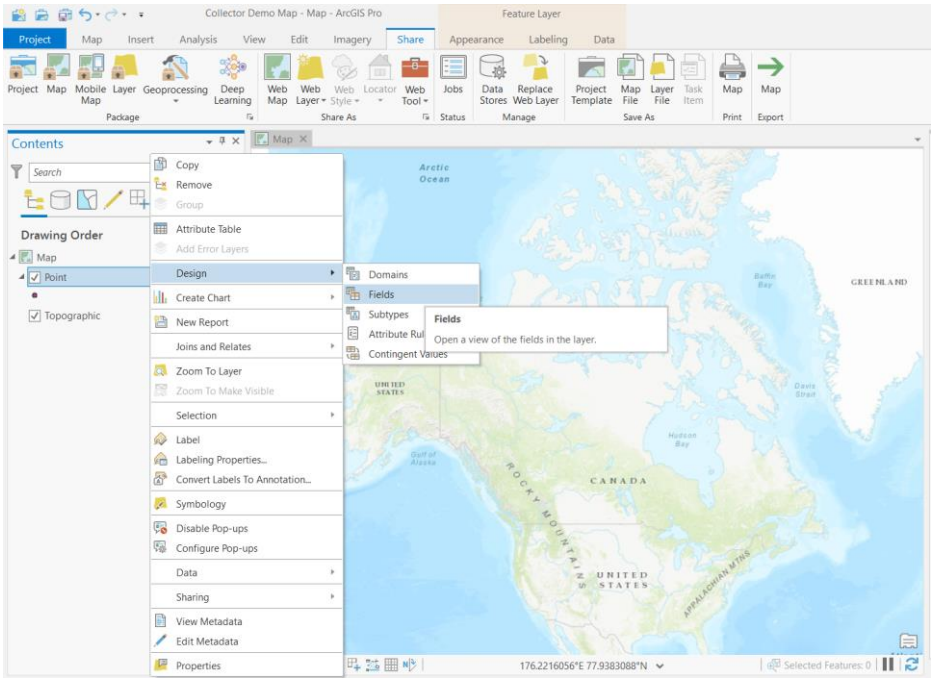
f) Click on **Run** to add the metadata to the feature class (point).

Note: The process can take some time.

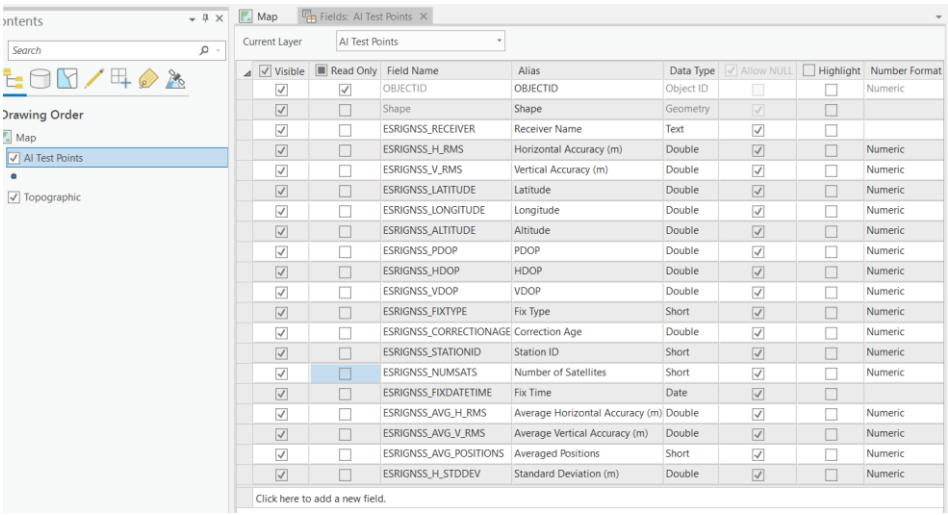




g) To verify that your Point Feature Class has now the GNSS metadata, select the Feature Class and right click on **Design/Fields**.



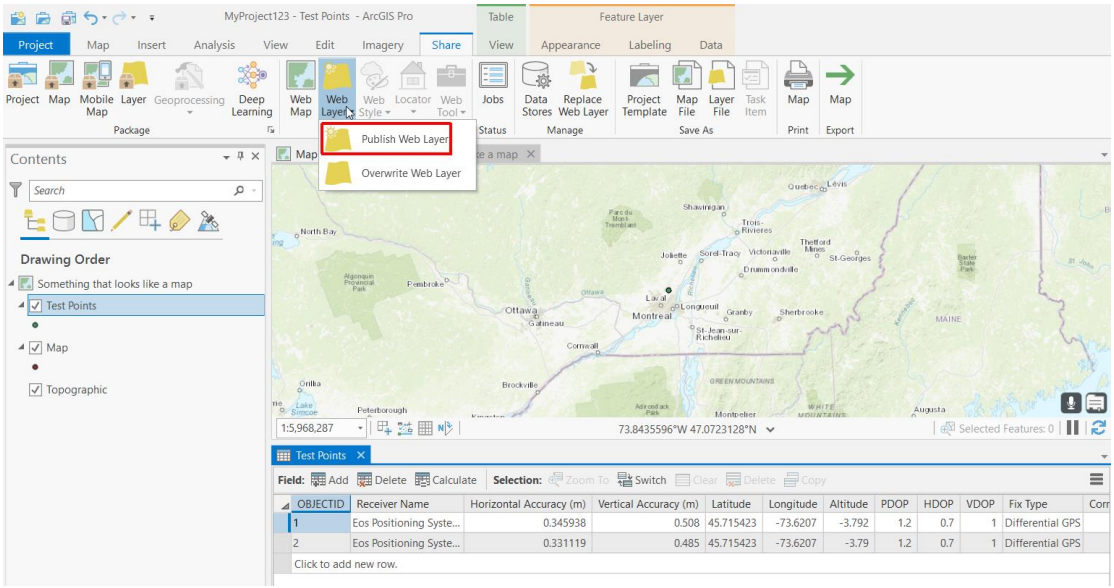
The fields should be displayed at bottom of the screen.



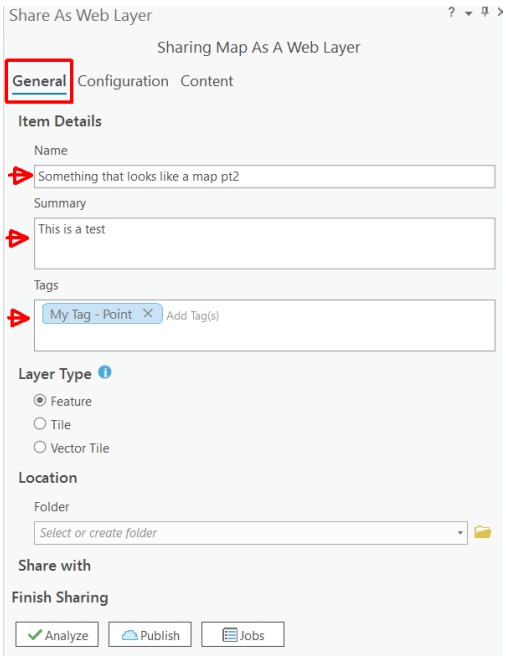
Visible	Read Only	Field Name	Alias	Data Type	Allow NULL	Highlight	Number Format
✓	✓	OBJECTID	OBJECTID	Object ID			Numeric
✓		Shape	Shape	Geometry	✓		
✓		ESRIGNSS_RECEIVER	Receiver Name	Text	✓		
✓		ESRIGNSS_H_RMS	Horizontal Accuracy (m)	Double	✓		Numeric
✓		ESRIGNSS_V_RMS	Vertical Accuracy (m)	Double	✓		Numeric
✓		ESRIGNSS_LATITUDE	Latitude	Double	✓		Numeric
✓		ESRIGNSS_LONGITUDE	Longitude	Double	✓		Numeric
✓		ESRIGNSS_ALTITUDE	Altitude	Double	✓		Numeric
✓		ESRIGNSS_PDOP	PDOP	Double	✓		Numeric
✓		ESRIGNSS_HDOP	HDOP	Double	✓		Numeric
✓		ESRIGNSS_VDOP	VDOP	Double	✓		Numeric
✓		ESRIGNSS_FIXTYPE	Fix Type	Short	✓		Numeric
✓		ESRIGNSS_CORRECTIONAGE	Correction Age	Double	✓		Numeric
✓		ESRIGNSS_STATIONID	Station ID	Short	✓		Numeric
✓		ESRIGNSS_NUMSATS	Number of Satellites	Short	✓		Numeric
✓		ESRIGNSS_FIXDATETIME	Fix Time	Date	✓		
✓		ESRIGNSS_AVG_H_RMS	Average Horizontal Accuracy (m)	Double	✓		Numeric
✓		ESRIGNSS_AVG_V_RMS	Average Vertical Accuracy (m)	Double	✓		Numeric
✓		ESRIGNSS_AVG_POSITIONS	Averaged Positions	Short	✓		Numeric
✓		ESRIGNSS_H_STDDEV	Standard Deviation (m)	Double	✓		Numeric

Sharing your Web layer online

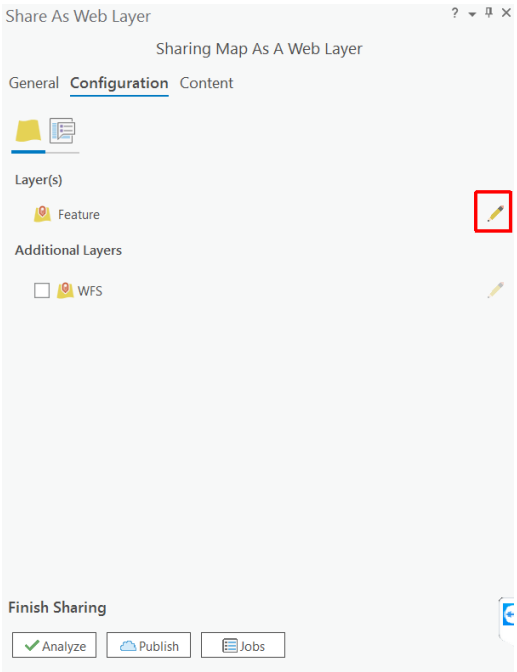
a) Go in the Share tab and select **Web Layer/Publish Web Layer.**



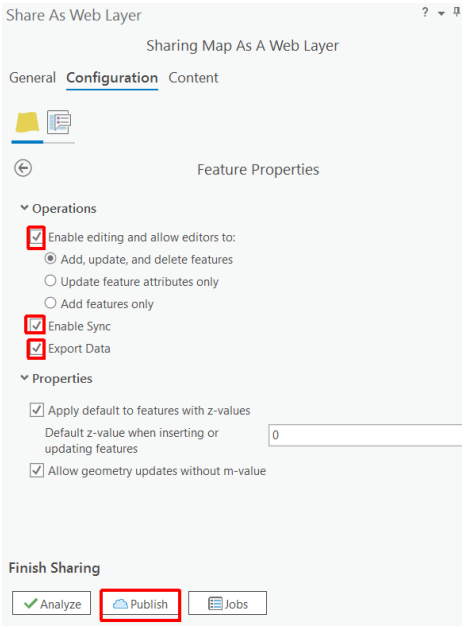
b) In the General window enter a Name, Summary and Tags.



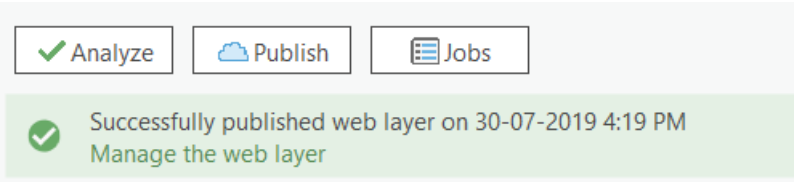
c) Tap on **Configuration** and enter the **Feature Properties** your layer by pressing the Edit button (pen).



d) Check the ''Enable editing and allow editors to'', ''Enable Sync'' and ''Export Data'' and click on **Publish**.



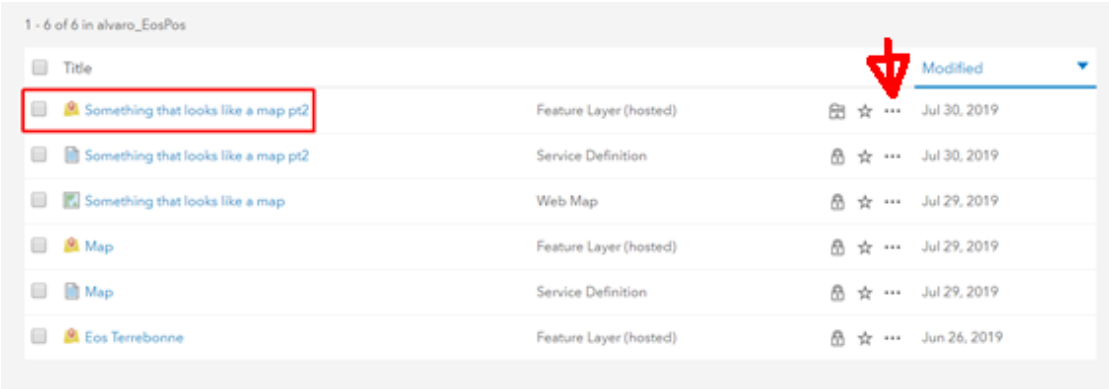
e) Make sure the layer is successfully published.



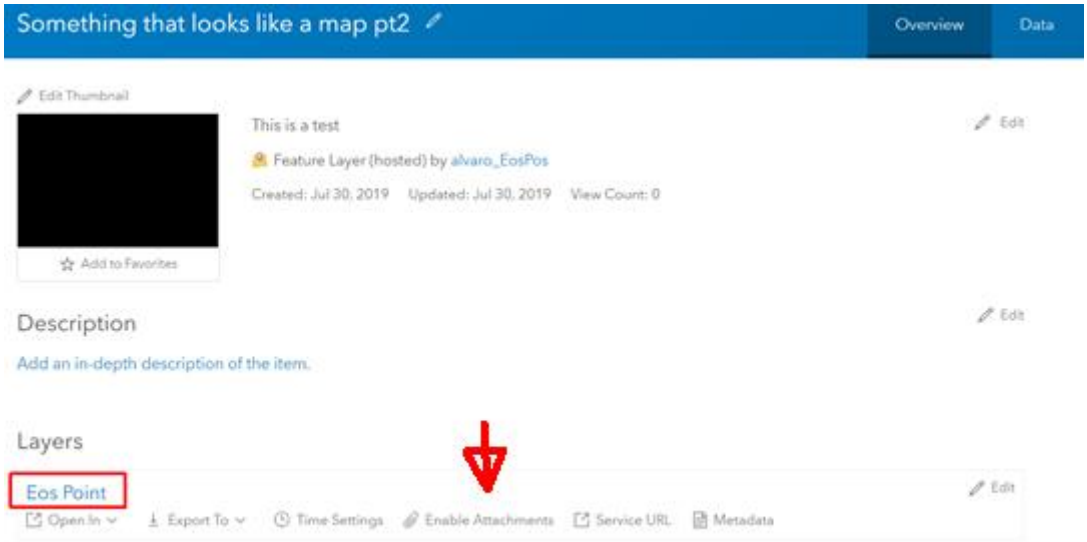
Creating a Webmap on ArcGIS Online

a) Open ArcGIS Online/Pro and click on **Content**.

b) If you want to enable attachments (like photos) to that Feature Class, click on your Feature Class or click on the three dots (''**…**'') followed by ''**View Item details**''.

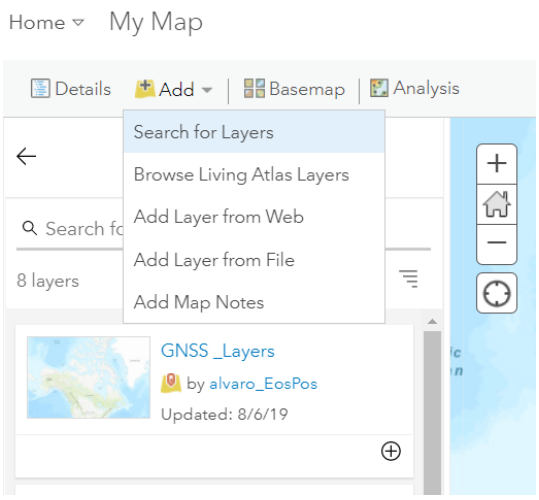


c) On the details, click on **Enable Attachments** and Save.

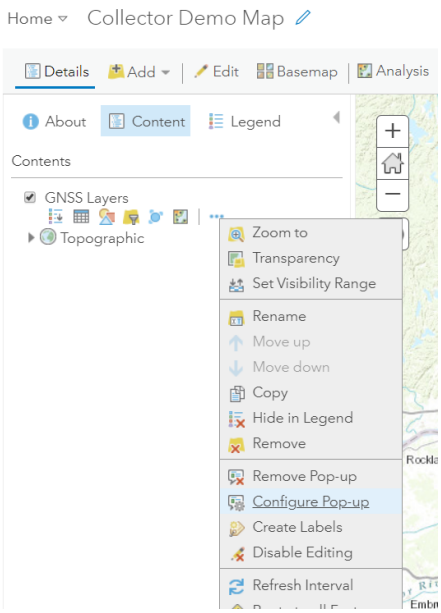


Go in the **Map** section and click on New Map.

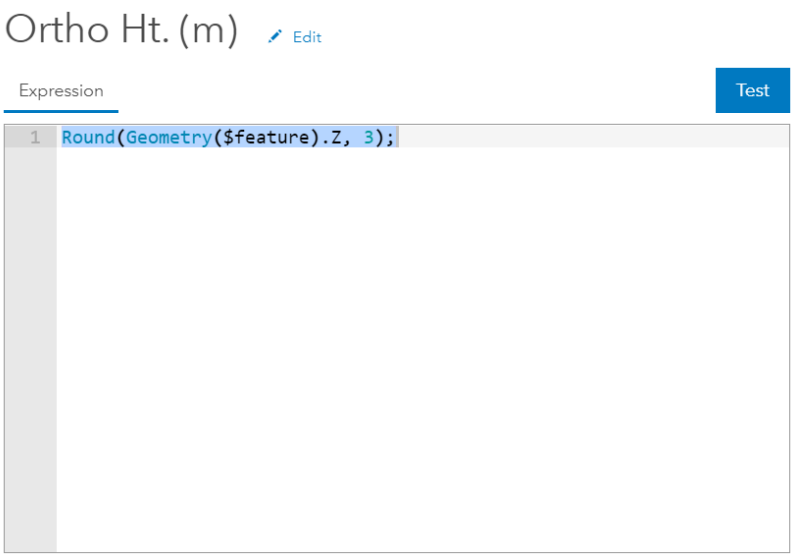
Click on **Add/Search for Layers** and find the layer you want to add into your web map.



Once the layer is added to the Web Map, click on the options (…) and select **Configure Pop-Up**.



Create a new Expression called ''Ortho Ht. (m)'' and input **Round(Geometry($feature).Z, 3)**.



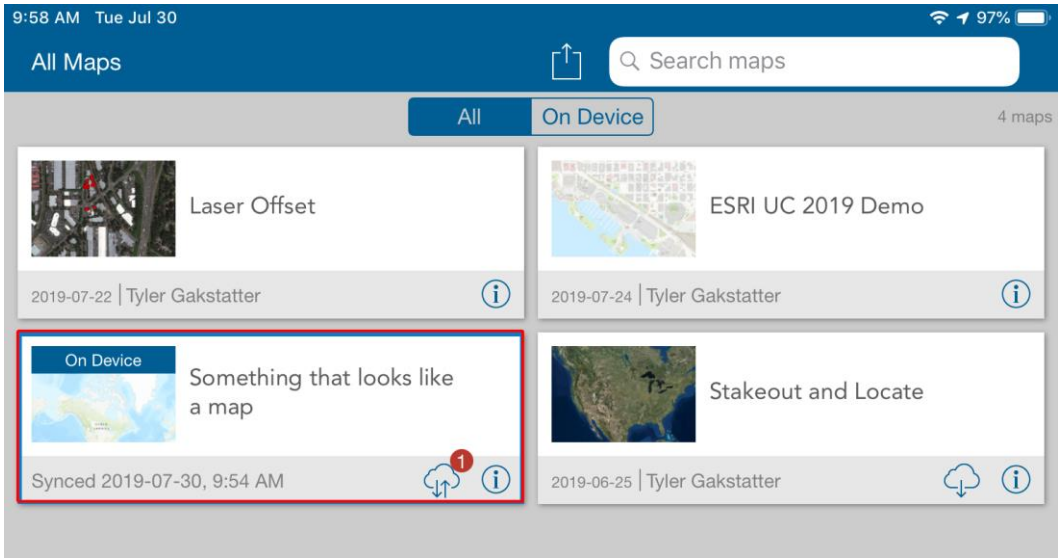
This will create the Orthometric Height Field in meters (with 3 decimals) in the layer.

Create a second Expression called ''Ortho Ht. (ft)'' and input **Round(Geometry($feature).Z*3.28084, 3).**

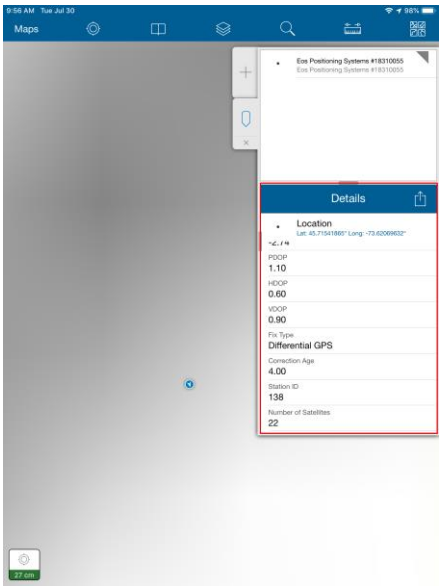
This will create the Orthometric Height Field in feet (with 3 decimals) in the layer. Click O**K** to finish the process.

Adding your map on Esri Collector

a) Open Esri Collector (Classic/Aurora) on your iPad/iPhone and log in to your ArcGIS Online account.
b) Go on **All Maps** and select the map that contain your Feature class (point).

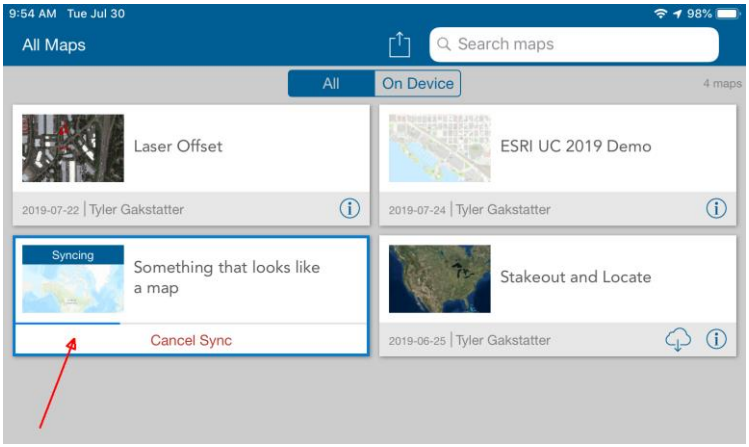


c) Take a point with the ''**+**'' button and click on **Submit**. If you check the information of your point should display all the metadata now.



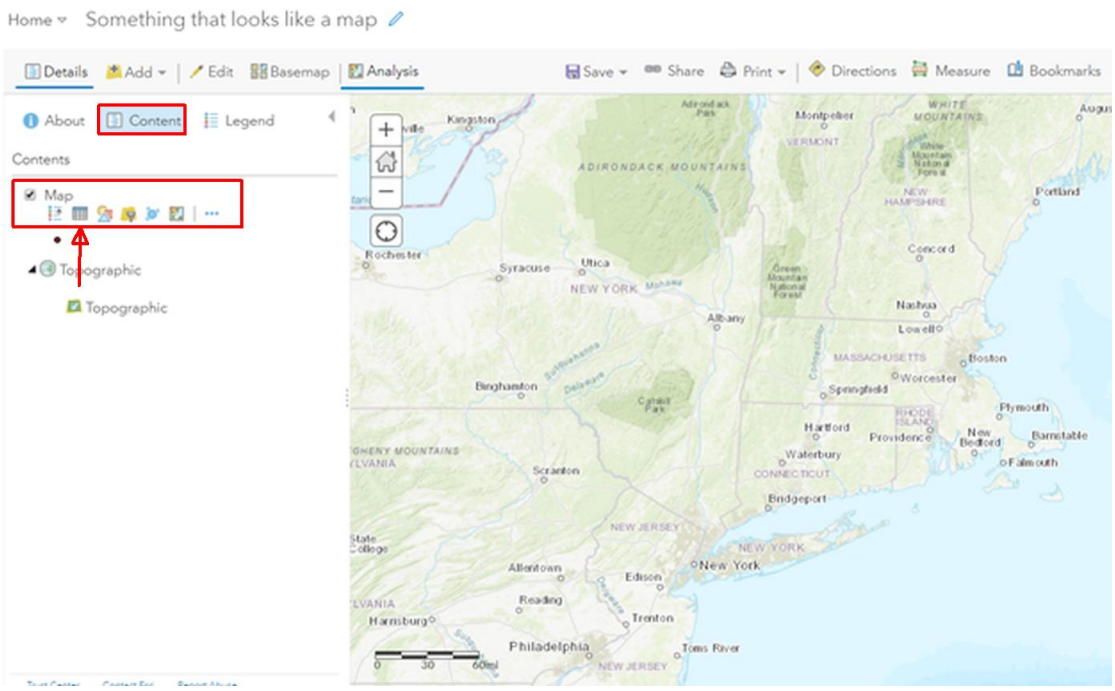
Note: Do not collect a point in average mode, it won't save the metadata on it.

To be able to see the new point on ArcGIS Online/Pro, make sure you sync your data on Collector.



Go back in your ArcGIS online account and select Content.

Found t



From your Feature Class, click on ''Attribute Table'' to see the metadata for the point (s) you have collected.