



Data Collection for ADA Transition Plans

Detailed GIS Methodology

Warren County, NY 2017



Methodology **outline**

Desktop



Create File Geodatabase

Add domains, layers and fields in
ArcGIS



Heads-Up Digitize Data

Use NYS aerial photography,
World Imagery,
Google Streetview



Set Up .mxd

Add Symbolology, etc



Publish Service

Create, edit, and share map in
ArcGIS Online



Methodology **outline**

Mobile

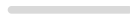


Install ArcGIS Collector

Download from Google Play or App Store and install on tablet or phone



Collect Field Data



Synch to ArcGIS Online

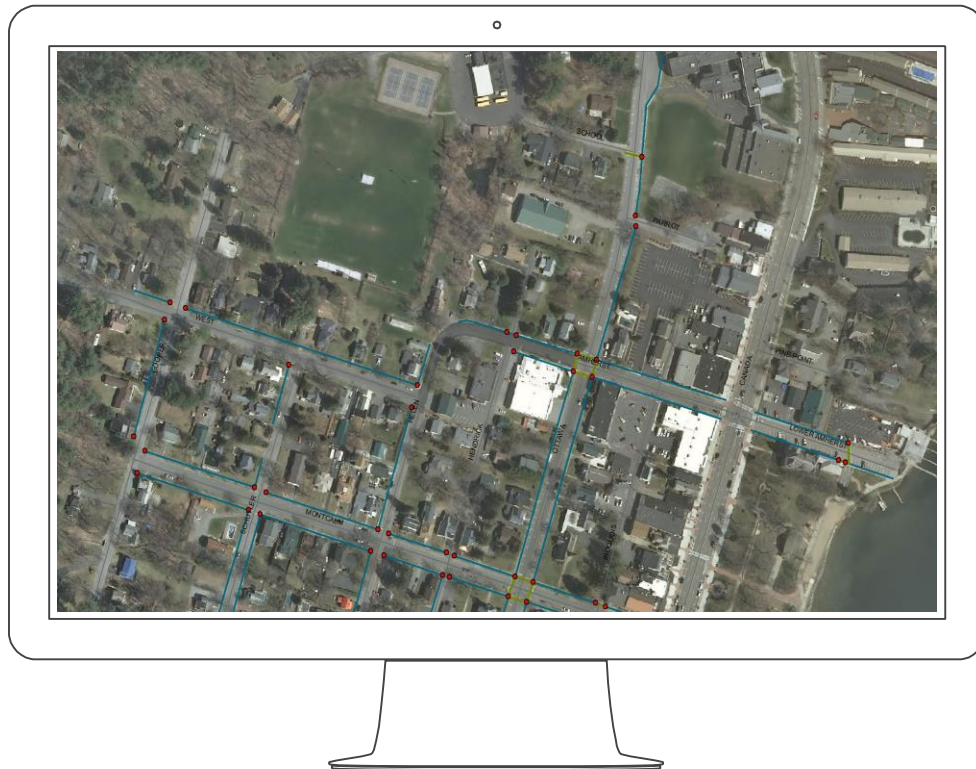
when in wifi



Download Field Data

From ArcGIS Online to ArcMap (if desired)

in-
office
work



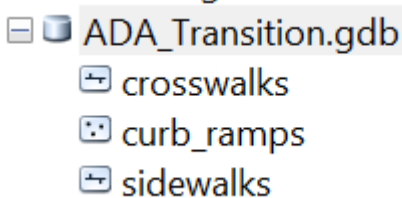


Create Geodatabase

1.

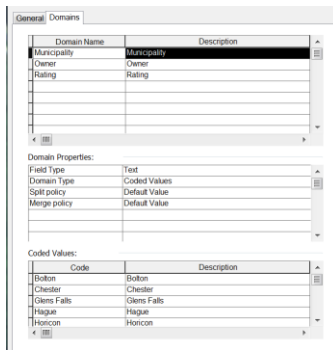
Create new file geodatabase with three feature classes

- a. sidewalks – line
- b. curb ramps – point
- c. crosswalks - line



2.

Add domains, at a minimum, “rating”. We also added owner (county, village, town, city) and municipality.



3.

Add fields to each layer. We added muni, owner, street, rating, and comments. Make sure field types match domains (you can use all text)

OBJECTID	Shape	Muni	Owner	Street	Comments	Shape_Length	Rating
263	Polyline	Glens Falls	City	Ridge St	<Null>	72.079459	<Null>
264	Polyline	Glens Falls	City	Glen St	<Null>	80.747622	<Null>
265	Polyline	Glens Falls	City	Glen St	<Null>	56.531925	<Null>
266	Polyline	Glens Falls	City	Glen St	<Null>	66.457341	<Null>
267	Polyline	Glens Falls	City	Glen St	<Null>	68.751966	<Null>
268	Polyline	Glens Falls	City	Bay St	<Null>	98.225701	<Null>
269	Polyline	Glens Falls	City	Glen St	<Null>	80.529751	<Null>
270	Polyline	Glens Falls	City	South St	<Null>	93.169606	<Null>
271	Polyline	Glens Falls	City	Hudson Ave	<Null>	96.010687	<Null>
272	Polyline	Glens Falls	City	Elm St	<Null>	74.230238	<Null>
273	Polyline	Glens Falls	City	Hudson Ave	<Null>	89.796462	<Null>
274	Polyline	Glens Falls	City	Elm St	<Null>	56.771349	<Null>
275	Polyline	Glens Falls	City	Leonard St	<Null>	54.82688	<Null>
276	Polyline	Glens Falls	City	Orchard St	<Null>	50.797751	<Null>
277	Polyline	Glens Falls	City	McDonald St	<Null>	36.55116	<Null>
278	Polyline	Glens Falls	City	Platt St	<Null>	48.177089	<Null>
279	Polyline	Glens Falls	City	Lapham Pl	<Null>	36.201771	<Null>



Digitize data

Imagery:

- NYS (precedence)
- World Imagery
- Google Streetview (second monitor)

Snapping:

- snap sidewalks at corners
- snap curb ramps to corners
- snap crosswalks to curb ramps

Sidewalks:

- digitize in continuous lines instead of breaking at driveway entrances





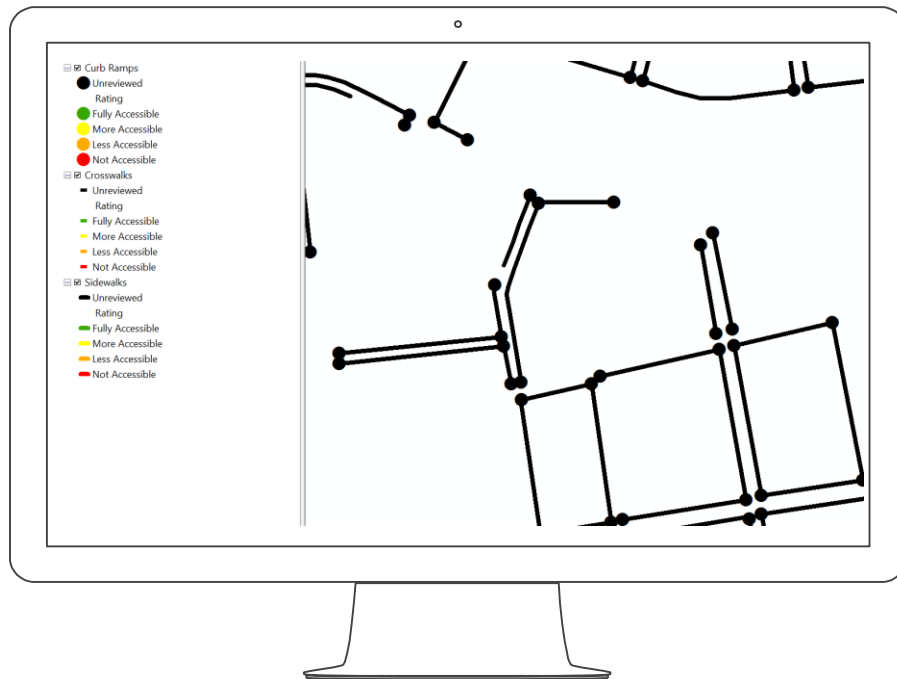
Set up Project

1. Symbolology

- should be easy for field workers to see on aerial photography
- based on rating. Have a “not rated” value for everything that hasn’t been reviewed (we used black)
- make all layers the same

2. Layers

- we included **only** the layers we were collecting in the field
- aerial photography added in ArcGIS Online





Publish Service in ArcGIS Online

1.

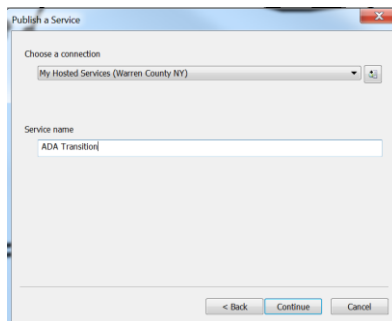
Setup ArcGIS Online account if you don't have one already

2.

From ArcMap, Sign In to account and choose File > share as > service

3.

Choose Publish a service. Choose My Hosted Services and enter a service name



4.


In Service Editor, click on Capabilities and make sure only Feature Access is checked.

Click on Feature Access and check all checkboxes except Create:

Feature Access

REST URL:

Operation allowed:

☒  ☒ Delete ☒ Query ☒ Sync ☒ Update

Properties



Publish Service in ArcGIS Online (cont'd)

5.

Click on Item Description and fill in fields

Item Description

Summary (required):

ADA Transition

Tags (required):

curb ramps, sidewalks, crosswalks

Choose Your Tags...

Description:

ADA Transition

Access and Use Constraints:

none

Credits:

Warren County GIS

☒ Update missing metadata in document based on item description.

6.

Click on Sharing and select who you will share your service with. You probably don't want to share it with everybody – just your organization

Sharing

Share your service with:

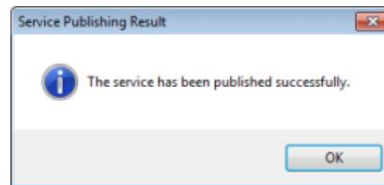
- ☒ My Content
- ☒ Warren County NY
- ☐ Everyone (public)

Members of these groups:

- ☒ Warren County

7.

Click on Publish.





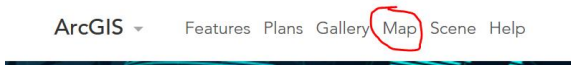
Create, Edit and Share Map

1.

Go to ArcGIS Online (arcgis.com) and sign in

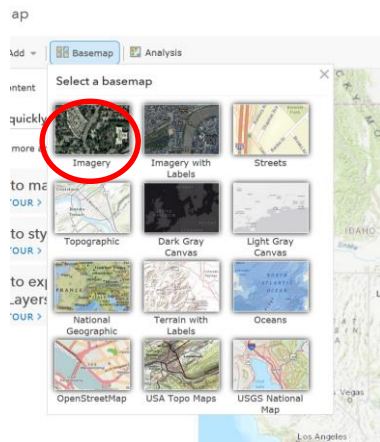
2.

Click Map from the ribbon at the top.




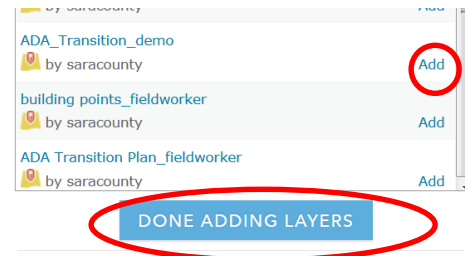
3.

Click Basemap and select Imagery.



4.

Click **Add**  and Search for Layers. Click Add next to the layer you just published and then click Done Adding Layers.

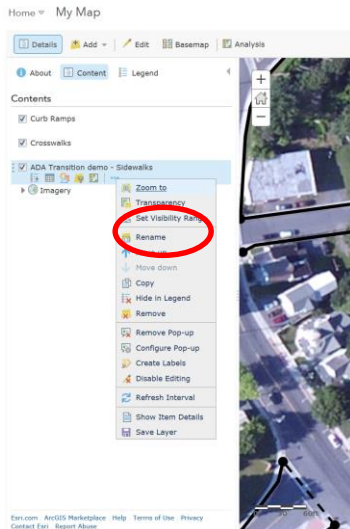




Create, Edit and Share Map (cont'd)

5.

If desired, click on the three dots, chose Rename, and simplify the layer names



6.

Click Save at the top and enter a title, tags, summary and click Save Map.

Save Map

Title:

Tags: [Add tag\(s\)](#)

Summary:

Save in folder:

SAVE MAP

CANCEL



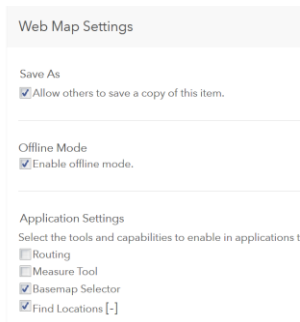
Customise application settings

1.

Click on  About and then on More Details...

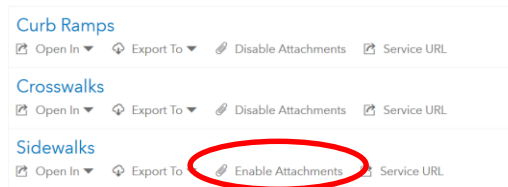
2.

Click Settings and scroll down to Web Map Settings. Make sure Enable Offline Mode is checked. Uncheck Routing and Measure Tool and click Save.



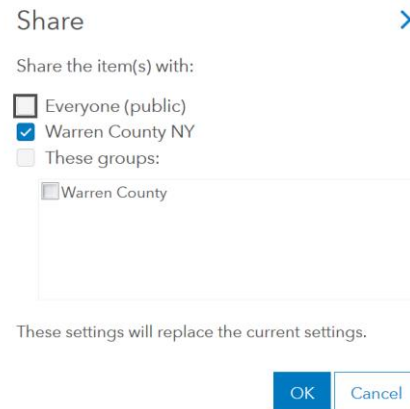
3.

Go back to Overview. Click one of the layer names and click on "Enable Attachments". Repeat for the other layers. This allows photos to be taken and attached in the field.

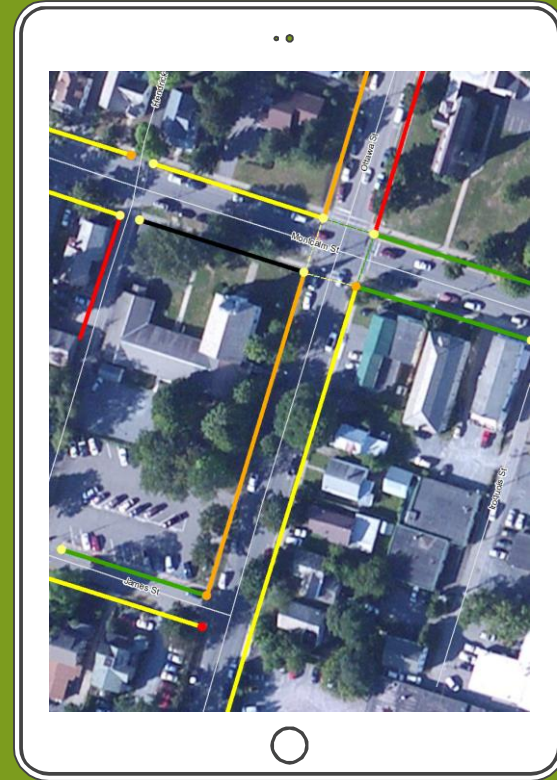


4.

Click Share and share with your group.



field work





Install and Set Up Collector for ArcGIS

1.

Go to Google Play or Apple App Store and install Collector for ArcGIS on your tablet or phone. Open the app.



2.

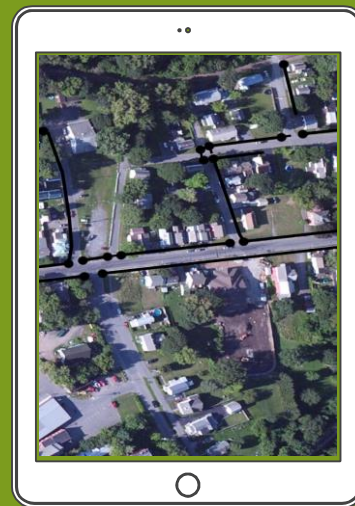
Sign in to ArcGIS Collector with your ArcGIS Online account

3.

Click on All Maps and you should see your recently created map. Click Download to save it to your device. You need to determine work area and level of detail for aerials.

4.

Open map.





Collect Field Data and Synch

1.

Go to Google Play or Apple App Store and install Collector for ArcGIS on your tablet or phone. Open the app.



2.

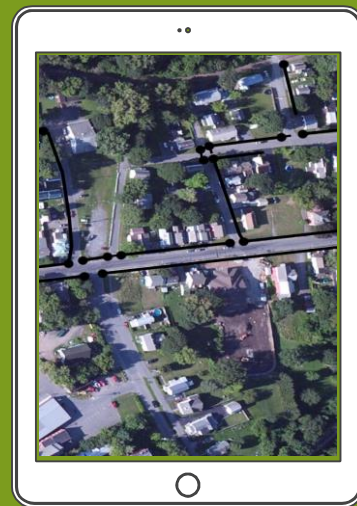
Sign in to ArcGIS Collector with your ArcGIS Online account

3.

Click on All Maps and you should see your recently created map. Click Download to save it to your device. You need to determine work area and level of detail for aerials.

4.

Open map.





Collect Field Data and Synch

1. GPS on device locates user/feature in field
2. Select feature on map by clicking on it
3. Enter data – two fields only: rating, comments
4. Features turn color in map as soon as they are rated
5. Optionally take and add picture(s) using attachment (paperclip) button
6. Click “DONE” when finished and move on to next feature.
7. Click Synch when back in office or wifi



Rating System

Red

Not accessible

Orange

Less accessible

Yellow

More accessible

Green

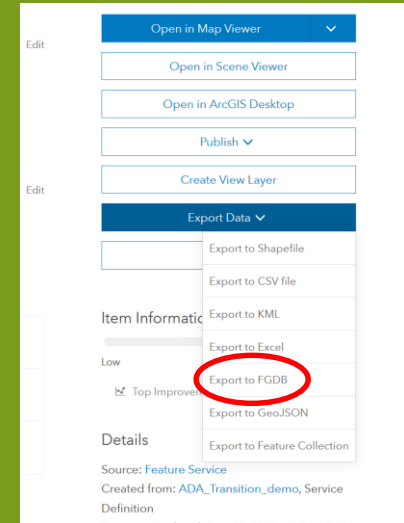
Fully accessible

<https://www.dot.ny.gov/programs/adamanagement/repository/ADA%20Tranition%20Plan%20Draft%20Final%20-%20Appendix%20A.pdf>



Download Field Data from ArcGIS Online

1. You can view progress of data collection (and photos) on your ArcGIS Online map
2. When data collection is finished, click on the About button on the map, and then choose Export Data > Export to FGDB. This will export your data, with pictures, to a file geodatabase that you can use in ArcMap.





A Few Notes

1. If you have an Android device, change the picture settings to be lower resolution.
2. Only synch when you're in wifi, but try to do it regularly
3. If you have multiple data collectors collecting at the same time, you will need multiple user accounts in ArcGIS Online. If multiple people are using Collector at different times, you should be able to use the same account, but that is not technically supported by ESRI.
4. You can't add a new feature if you don't allow editing. We did this purposefully, but if you have a good GPS you may want to try allowing it.
5. You can't republish your map in ArcMap if you are using synch, so make sure you digitize all your data ahead of time
6. Storing the pictures and features uses ArcGIS Online credits

Demo

<http://arcg.is/0nLKmq>





Thanks!

Any questions?

You can find me at frankenfelds@warrencountyny.gov