Data Collection for

ADA Transition Plans

Detailed GIS Methodology

Warren County, NY   2017

Methodology outline

Desktop

1

Create File Geodatabase

Add domains, layers and fields in ArcGIS

2

Heads-Up Digitize Data

Use NYS aerial photography,
World Imagery,
Google Streetview

3

Set Up .mxd

Add Symbology, etc

4

Publish Service

Create, edit, and share map in ArcGIS Online

2

Methodology outline

Mobile

① 1 ——— ② 2 ——— ③ 3 ——— ④ 4

Install ArcGIS Collector

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

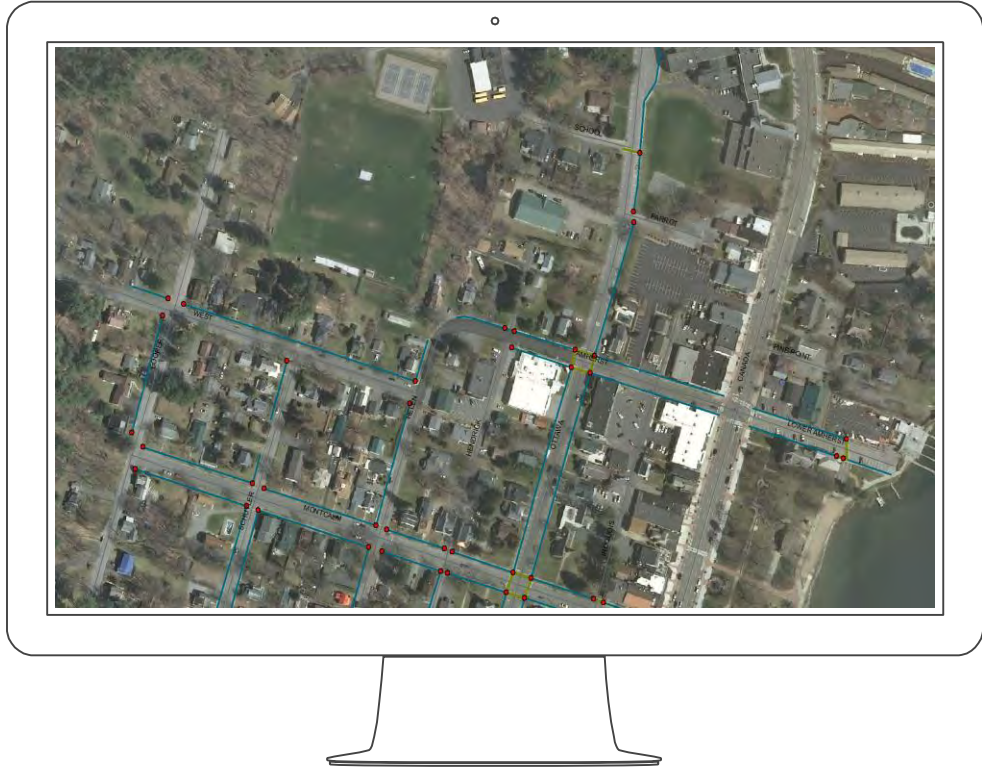**Collect Field Data**

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
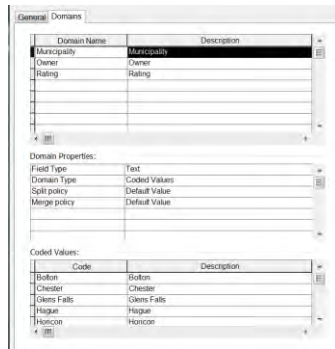   b. curb ramps – point
    c. crosswalks - line

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)

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
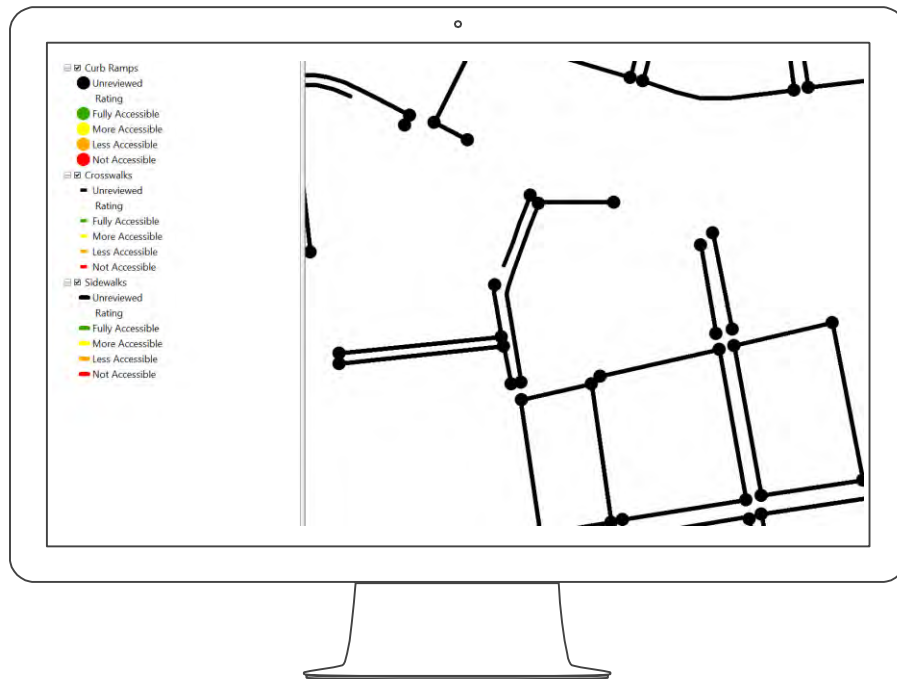 of breaking at driveway entrances

Set up **Project**

1. Symbology
- 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
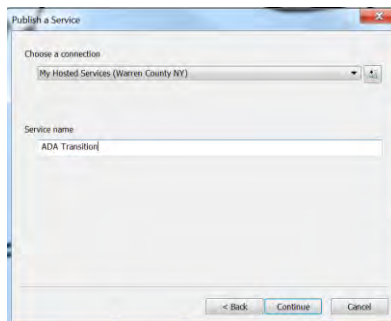- aerial photography added in ArcGIS Online

Publish Service in ArcGIS Online

1.
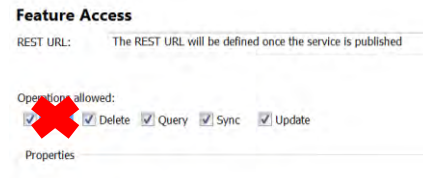Setup ArcGIS Online account if you don't have one already

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:

Publish Service in ArcGIS Online (cont'd)

5.
Click on Item Description and fill in fields

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

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.
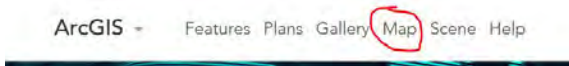
3.
Click Basemap and select
Imagery.
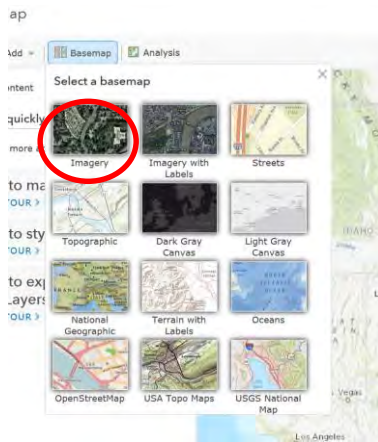
4.
Click **Add** and Search for
Layers. Click Add next to the
layer you just published and
then click Done Adding Layers.
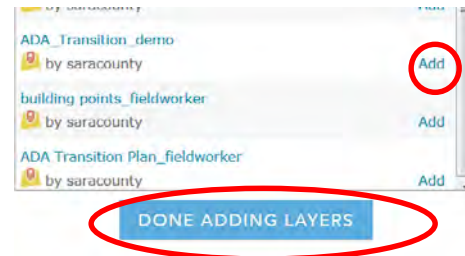
Create, Edit and Share **Map** (cont'd)

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.

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.

Web Map Settings

Save As
☑ Allow others to save a copy of this item.
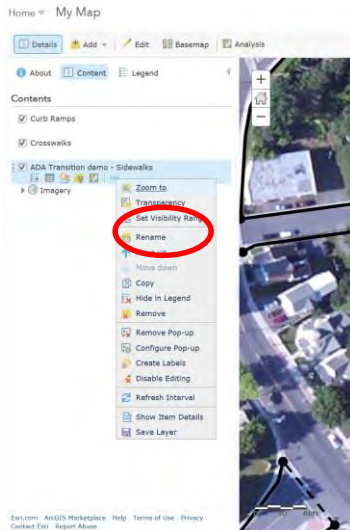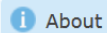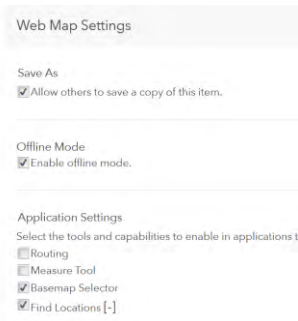
Offline Mode
☑ Enable offline mode.

Application Settings
Select the tools and capabilities to enable in applications t
☐ Routing
☐ Measure Tool
☑ Basemap Selector
☑ Find Locations [-]

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.

Curb Ramps
☑ Open In ▼   ◉ Export To ▼   ⬚ Disable Attachments   ☑ Service URL

Crosswalks
☑ Open In ▼   ◉ Export To ▼   ⬚ Disable Attachments   ☑ Service URL

Sidewalks
☑ Open In ▼   ◉ Export To ▼   ⬚ Enable Attachments   Service URL
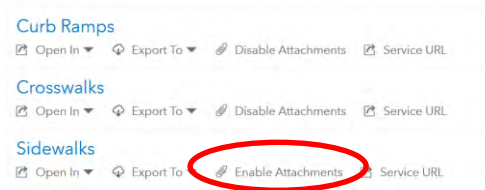
4.
Click Share and share with your group.

Share   ✕

Share the item(s) with:

☐ Everyone (public)
☑ Warren County NY
☐ These groups:
   ☐ Warren County

These settings will replace the current settings.

OK   Cancel

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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

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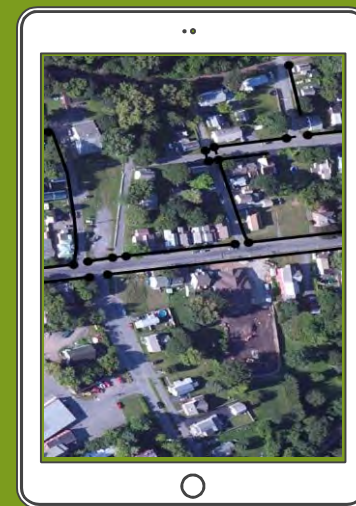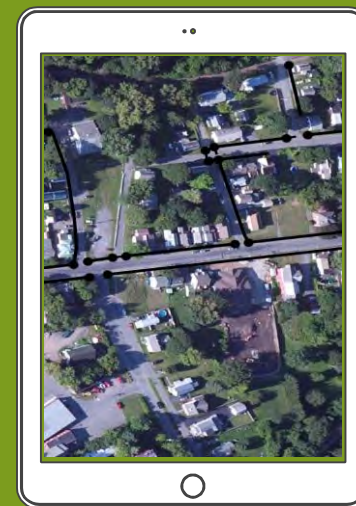

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Collect Field Data and Synch

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%20Tranisition%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.

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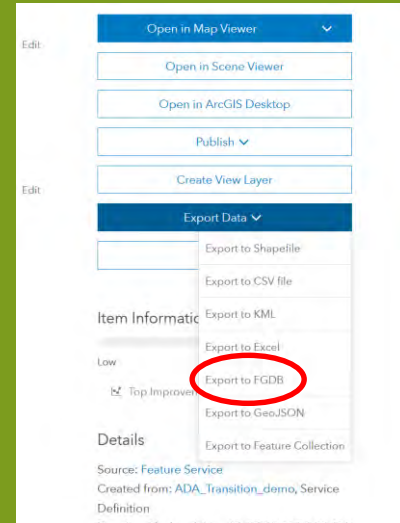
A Few **Notes**

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