



# REVAMP Phase II



# Workflow, Tutorials, Files & Contacts

This PowerPoint presentation will be available at <https://www.valorgis.com/REVAMP> along with YouTube videos, reference files, and automation tools.

*If you have any problems accessing files on the website, please contact Spencer Ely at [sely@sgrc.us](mailto:sely@sgrc.us) or 229-333-5277.*



## Phase 2 Pilot Team

- Coastal Regional Commission, ArcGIS Pro Tasks/Automation
- Heart of GA Regional Commission, Advisor
- Middle Georgia Regional Commission, Project Management
- Southern GA Regional Commission, Foundational Workflow
  
- Lawton Brantley, ITOS
- Paul Tanner, GDOT liaison
- GDOT Office of Transportation Data



# Features to be validated and captured

- School Locations \*Prerequisite for beginning Phase 2
- Sidewalks within 1 mile of schools
- School Zones
- Crosswalks
- Pedestrian Signals
- Turn Lanes
- On-Street Parking



# Foundational Workflow

The following slides show a breakdown of the methods used to prepare the data for validation. However, this process has been automated by Tasks in ArcGIS Pro by Coastal Regional Commission. We give a breakdown here simply to show the process we chose to go with and explanations as to why. CRC will give a demo of their process after this presentation.

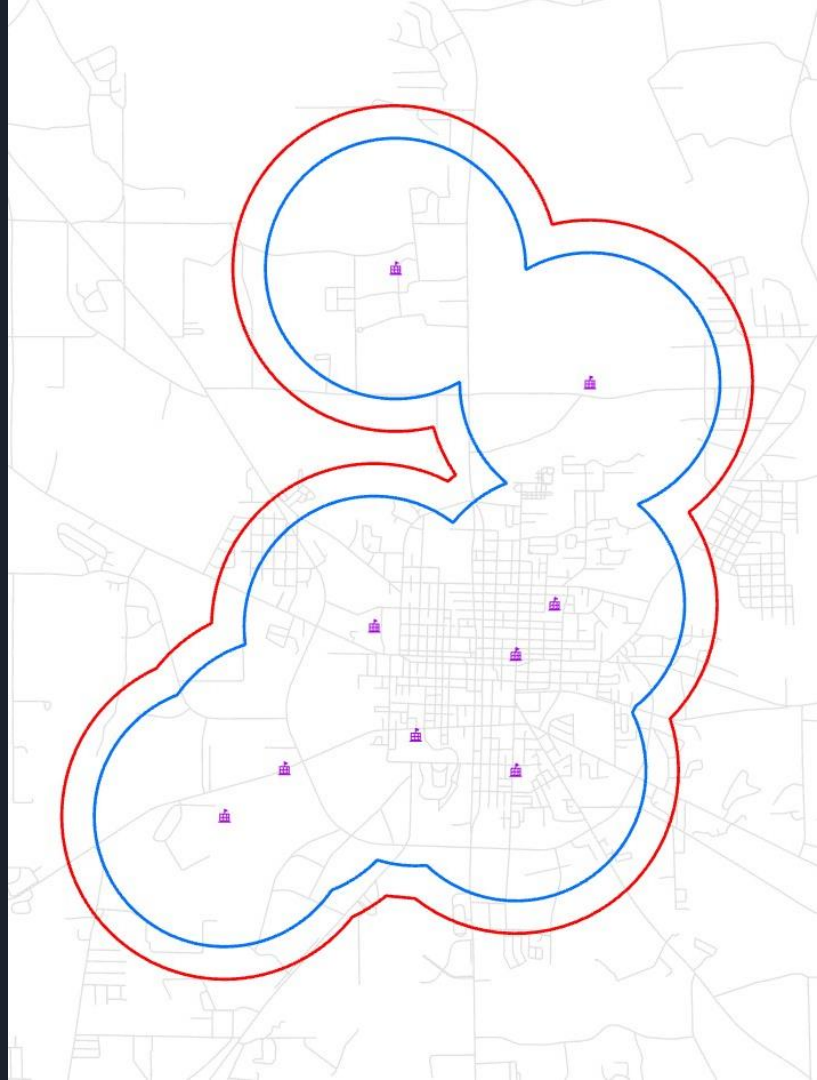


# Sidewalks and Schools

- Collecting data for both local routes and state routes
- Collecting data within 1 mile of schools
- County-wide data collection, not limited to incorporated areas

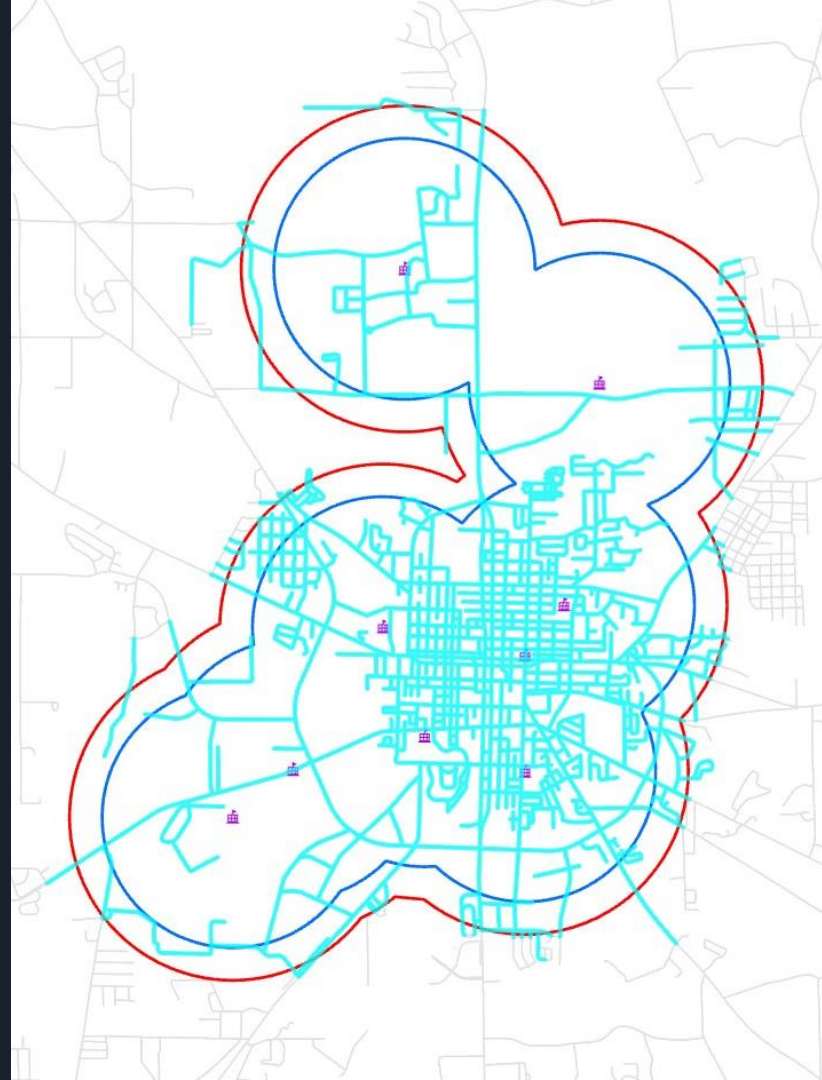
# Sidewalks

- The schools were buffered at 1 mile and at 1.25 miles.
- In the image, the inner 1 mile blue buffer is the target area, and the outer 1.25 mile red buffer is an overflow area that allows for a little margin of error in case the school location is off just a bit – or in case you'd like to capture more of the route
- The next step is to split the sidewalk layer at intersections
  - Since sidewalks typically begin and end at intersections, this makes it easier to select the route segments that contain sidewalks



# Splitting Routes & Narrowing Search Area

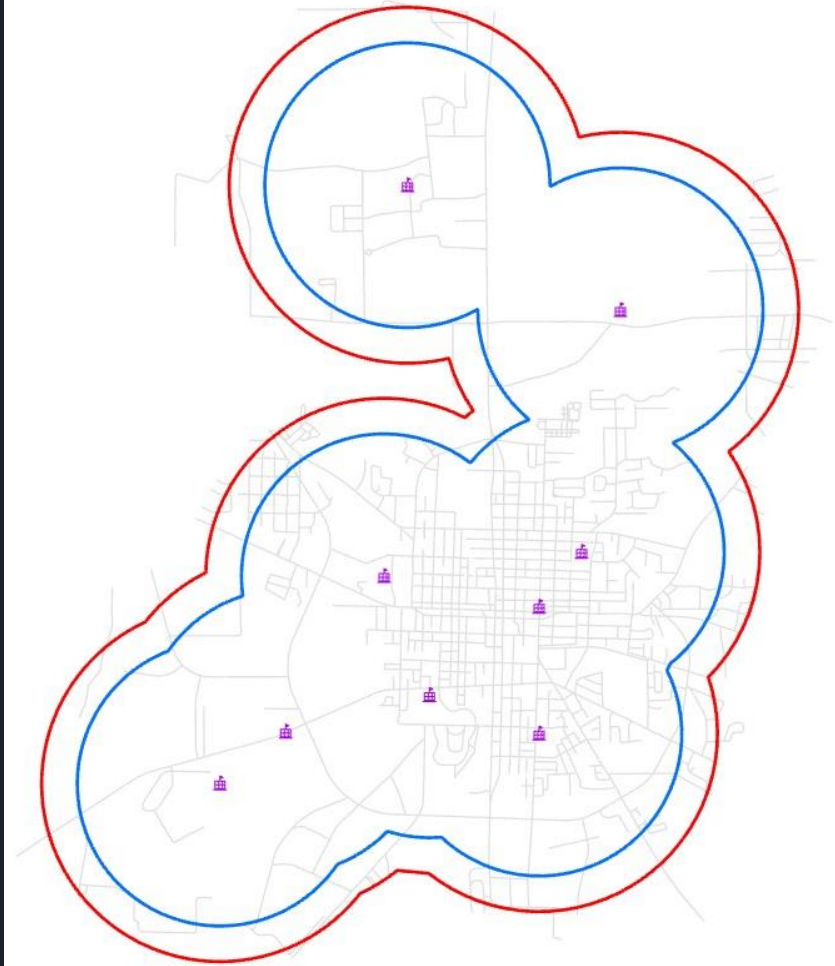
- Now that we're working with segments of the routes in the sidewalk layer (sidewalks\_split) we can remove the routes outside of the target area to make it easier to see which areas need to be captured.
- We then do a Select by Location on this new sidewalks\_split layer where the routes intersect with the 1.25 mile buffer we created earlier.





# Clipping vs Exporting Selected Features

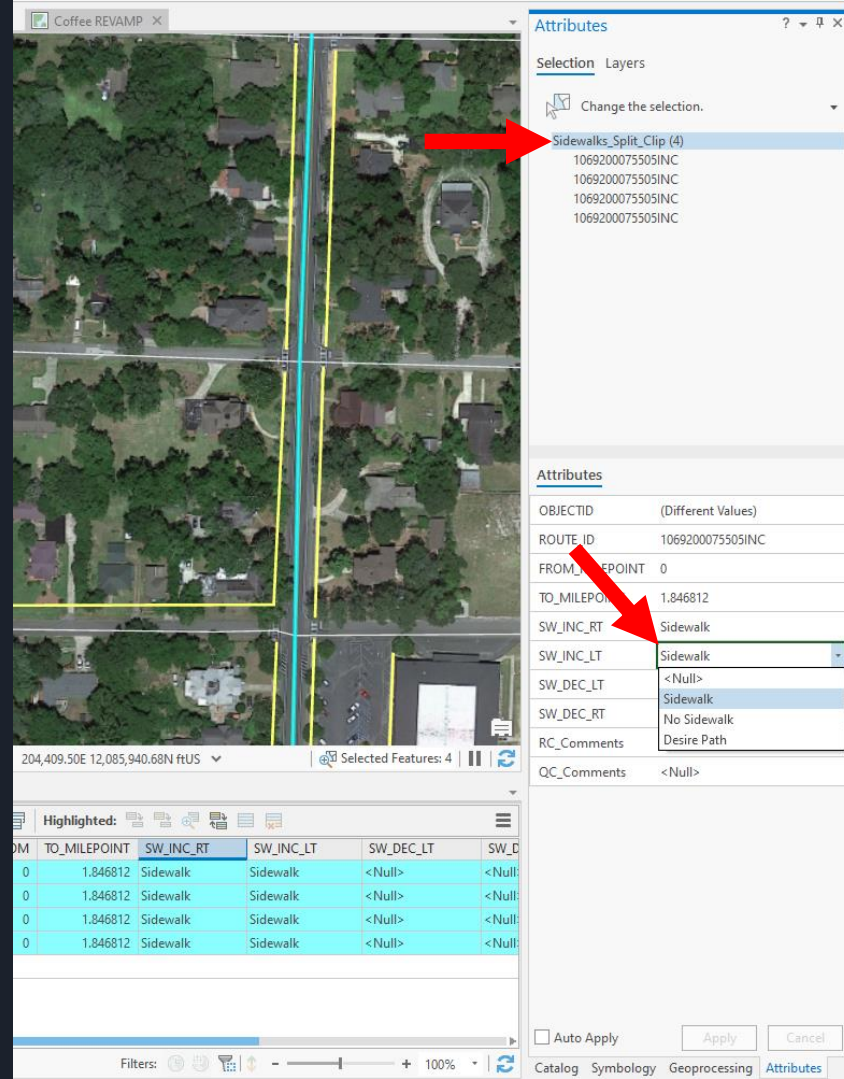
- If we were to do a hard clip on these routes, it would be counterproductive to our mission of being able to capture the routes to the end of the intersection or subdivision, etc.
- Instead, when we export these selected features, we are left with something like you see in the image here.





# Sidewalk Capture

- Turn on the GIO Imagery or newer imagery if you have it
- Utilize any existing sidewalk layer you have. The yellow sidewalks in the image were from a grant map for the City of Douglas.
- In this image, I have selected multiple segments that have sidewalks on both sides, so I've used the attributes pane to choose "Sidewalk" for both the INC Right and INC Left fields.



The screenshot displays a GIS interface with an aerial view of a street. Yellow lines on the map represent sidewalk segments. The 'Attributes' pane is open, showing a list of selected features and a table of attributes. A red arrow points to the 'Sidewalks\_Split\_Clip (4)' feature in the list, and another red arrow points to the 'SW\_INC\_RT' field in the table, which is set to 'Sidewalk'.

**Attributes**

Selection Layers

Change the selection.

- Sidewalks\_Split\_Clip (4)
  - 1069200075505INC
  - 1069200075505INC
  - 1069200075505INC
  - 1069200075505INC

**Attributes**

OBJECTID	(Different Values)
ROUTE_ID	1069200075505INC
FROM_MILEPOINT	0
TO_MILEPOINT	1.846812
SW_INC_RT	Sidewalk
SW_INC_LT	Sidewalk
SW_DEC_LT	<Null>
SW_DEC_RT	No Sidewalk
RC_Comments	Desire Path
QC_Comments	<Null>

204,409.50E 12,085,940.68N ftUS

Selected Features: 4

Highlighted:

OBJECTID	TO_MILEPOINT	SW_INC_RT	SW_INC_LT	SW_DEC_LT	SW_DEC_RT
0	1.846812	Sidewalk	Sidewalk	<Null>	<Null>
0	1.846812	Sidewalk	Sidewalk	<Null>	<Null>
0	1.846812	Sidewalk	Sidewalk	<Null>	<Null>
0	1.846812	Sidewalk	Sidewalk	<Null>	<Null>

Filters: 100%

Auto Apply Apply Cancel

Catalog Symbology Geoprocessing Attributes

# School Zones

The only additional step for school zone collection is an additional buffer at 1500 ft from a school point. When collecting data for our pilot counties, we found that this buffer offered a good place to start looking for school zone signs on roads that bordered school properties.

This screen shot is from Coffee County. The purple lines are the 1500 ft buffer and the thick red lines here are the school zones.



# Crosswalks

- Crosswalk types are defined and illustrated on page 120 and 121 of the MIRE 2.0 manual
- For easy reference, these pages are available on the [REVAMP website](#)



Unmarked crosswalk



Marked crosswalk



Marked crosswalk with supplemental devices



Marked crosswalk with refuge island



Marked crosswalk with refuge and supplemental devices



Raised crosswalk

Sources: 1. City of Portland, OR, 2. [www.pedbikeimages.org](#) / Dan Burden, 3. [www.pedbikeimages.org](#) / Tom Harned, 4. [www.pedbikeimages.org](#) / Adam Fukushima, 5. [www.pedbikeimages.org](#) / Lyubov Zuyeva, 6. [www.pedbikeimages.org](#) / Dan Burden

Figure 22. Illustration of Crosswalk Types.

# Crosswalks - Collection

- Crosswalks will be collected where the sidewalk and road intersect in incorporated areas AND countywide only within a 1 mile radius of a K-12 public/private school



Selection Layers

Change the selection.

Crosswalks (2)

1

2

Attributes

OBJECTID (Different Values)

ROUTEID <Null>

MILEPOINT <Null>

CROSSWALK\_TYPE <Null>

OBJECTID	SHAPE	ROUTEID	MILEPOINT	CROSSWALK_TYPE
1	Point M	<Null>	<Null>	<Null>
2	Point M	<Null>	<Null>	<Null>

Field: Add Calculate Selection: Select By Attributes Zoom To Switch Clear Delete Copy

Click to add new row.

<Null>

Unmarked Crosswalk

Marked Crosswalk

Marked Crosswalk with supplemental devices

Marked Crosswalk with refuge island

Marked with refuge island and supplemental devices

Raised Crosswalk

Pedestrian Crossing prohibited at this location

Other

# Pedestrian Signals

- Pedestrian Signals are defined and illustrated on page 122 and 123 of the MIRE 2.0 manual

## 149. Pedestrian Signal Presence/Type

**Definition:** Presence and type of pedestrian signal for crossing this approach.

**Recommended Attributes:**

1. None.
2. Pedestrian Signal with countdown indicator (with Accessible Pedestrian Signal [APS])
3. Pedestrian Signal with countdown indicator (w/o APS)
4. Pedestrian Signal without countdown indicator (with APS)
5. Pedestrian Signal without countdown indicator (w/o APS)

See Figure 23 on page 123 for additional detail.

Note: This is a new element in MIRE 2.0.



Countdown pedestrian signal



Accessible pedestrian signals

Figure 23. Illustration of Pedestrian Signal Types.

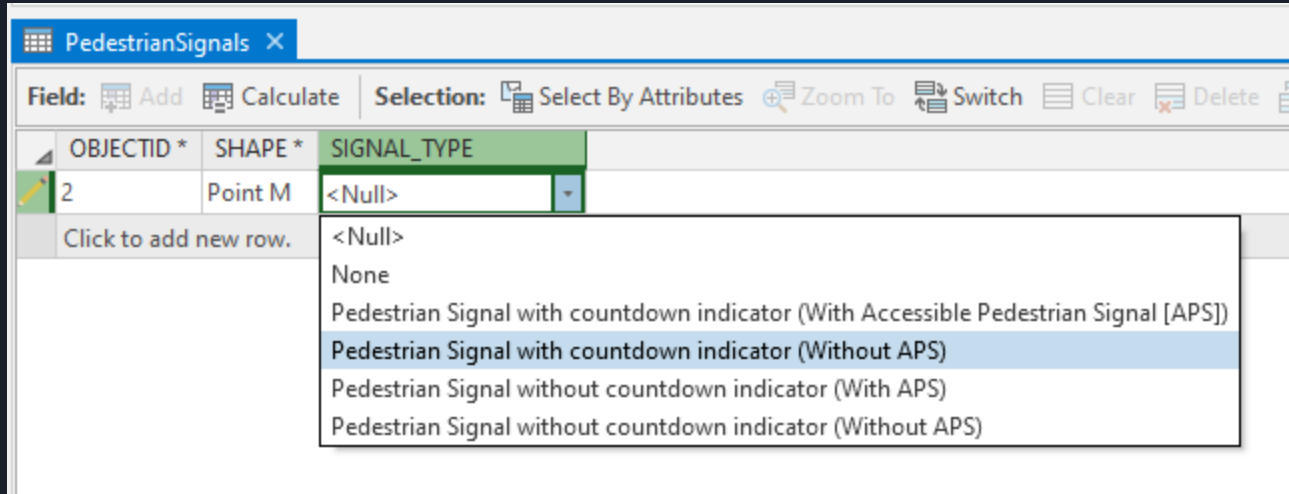
# Pedestrian Signals - Collection

Pedestrian signals will be collected close to their real-world locations, off of the road segments and close to the actual devices in incorporated areas AND countywide only within a 1 mile radius of a K-12 public/private school





# Pedestrian Signals - Collection



The screenshot shows a data table with the following structure:

OBJECTID *	SHAPE *	SIGNAL_TYPE
2	Point M	<Null>
Click to add new row.		<Null>

The dropdown menu for the SIGNAL\_TYPE field in the second row is open, displaying the following options:

- <Null>
- None
- Pedestrian Signal with countdown indicator (With Accessible Pedestrian Signal [APS])
- Pedestrian Signal with countdown indicator (Without APS)**
- Pedestrian Signal without countdown indicator (With APS)
- Pedestrian Signal without countdown indicator (Without APS)

# Turn Lanes

Turn lanes are defined and illustrated on pages 93 – 102 of the HPMS Field Manual

TurnLanes												
OBJECTID *	SHAPE *	ROUTE_ID	FROM_MILEPOINT	TO_MILEPOINT	TL_INC_RT	TL_INC_LT	TL_DEC_LT	TL_DEC_RT	TL_INC_CCL	RC_Comments	QC_Comments	SHAPE_Length
1	Polyline ZM	1069200044800INC	0	10.005869	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	52830.986014
2	Polyline ZM	10692000005000INC	0	3.17997	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	16790.243712
3	Polyline ZM	1005200033300INC	0	0.019002	1 Lane	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	100.329421
4	Polyline ZM	10692007575000INC	0	0.16443	2 Lanes	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	868.188543
5	Polyline ZM	10692000858000INC	0	0.807094	3 Lanes	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	4261.456734
6	Polyline ZM	10692000358000INC	0	2.123206	4 Lanes	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	11210.528667
7	Polyline ZM	1069200000112INC	0	0.083646	Continuous one side	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	441.652119
8	Polyline ZM	10692000615000INC	0	1.066221	Continuous both sides	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	5629.647533
9	Polyline ZM	1069200090405INC	0	0.808598	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	4269.398179
10	Polyline ZM	10692000866000INC	0	0.231432	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1221.962889
11	Polyline ZM	10692000815000INC	0	1.117637	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	5901.122748
12	Polyline ZM	10692001211000INC	0	0.110362	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	582.712299
13	Polyline ZM	10692000470000INC	0	0.822953	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	4345.19326
14	Polyline ZM	1069200094705INC	0	0.279186	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1474.102534
15	Polyline ZM	1069200052303INC	0	0.275784	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	1456.137859
16	Polyline ZM	10692000383000INC	0	0.472822	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	2496.501042
17	Polyline ZM	10692006663000INC	0	0.048383	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	<Null>	255.460854



# Turn Lanes - Collection

## Collecting along local roads in incorporated areas

- While searching in a grid pattern, pay close attention to intersections where traffic lights or beacons/flashers are present. Turn lanes are common around these locations.
- Aside from paying attention around these intersections, pay attention to the aerial photography for areas where the road seems to widen, indicating turn lane presence.

# On-Street Parking

Collecting along local roads in incorporated areas

- While searching in a grid pattern, pay attention to spots along roadways where parked cars/parking spots are painted on the roadway

SHAPE *	ROUTE_ID	FROM_MILEPOINT	TO_MILEPOINT	Parking Type Left	Parking Type Rt	RC_Comments	QC_Comments	RouteDir
Polyline	1069200109000NC	0	0.044087	<Null>	<Null>	<Null>	<Null>	NC
Polyline	10032000218000NC	0	0.005056	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200105705NC	0	0.313555	Perpendicular Parking	<Null>	<Null>	<Null>	NC
Polyline	1069200067905NC	0	0.987671	Parallel Parking	<Null>	<Null>	<Null>	NC
Polyline	1069200055605NC	0	0.059362	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200050110NC	0	0.148297	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200048600NC	0	0.113621	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200107500NC	0	0.080222	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200100900NC	0	0.238501	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200091605NC	0	0.091704	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200094800NC	0	0.676774	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200113100NC	0	0.343589	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200078605NC	0	0.202306	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200056200NC	0	1.087163	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200041100NC	0	0.327964	<Null>	<Null>	<Null>	<Null>	NC
Polyline	1069200090005NC	0	0.193339	<Null>	<Null>	<Null>	<Null>	NC



# Data Capture Tips

- Use any existing sidewalk layer that may be available to you from previous grants or transportation plans, etc
- For Crosswalks & Pedestrian Signals, pull in the Traffic Control Devices layer from Phase 1
  - Pay close attention to intersections where four way stops or traffic lights are present, as these generally contain crosswalks and possibly pedestrian signals
- Pull in any available walking/nature trail layer that may be available. This may help in finding crosswalks that do not occur at road intersections



# Automating the Setup

Coastal Regional Commission has created ArcGIS Pro Tasks to automate setup. In addition, they will show a validation process using the Pro project that is set up via the tasks.

The data is available on <https://www.valorgis.com/REVAMP>.

If you have questions about the Pro tasks, contact Megan Hunnicutt at [mhunnicutt@crc.ga.gov](mailto:mhunnicutt@crc.ga.gov).



Questions