Why?
The need for creating prototype tools for facilitating inspector operations -

- Construction and development in Austin has been increasing over last five years.
- Subsequently the work load on inspectors has also increased.
Requirements
What the tools need to accomplish

- Inspectors need to see the route they should take to their assigned inspections. This route does not have a designated start point or end point.

- Inspectors need to have the ability to reorder their inspection stops.

- Staff/ Supervisors need to be able to have an idea of where inspectors are and at some point this information can also be accessed by the public to get an idea on inspection windows.
Process

Phase I

- Create Routes and Stops

Phase II

- Consume Routes

Phase III

- Update other stakeholders
Phase I
Creating Routes and Stops
Routing Methods
Methods Considered

Criteria for Evaluation:
1. Ease of Use
2. Automation on a daily basis
3. Credit Usage

- Network Analyst on ArcGIS Desktop
- Routing on AGOL
- FME (AGOL functionality)
- ArcPy script for creating routes
Phase 1

Data from AMANDA (City of Austin’s Application Management and Data Automation database)

Network Dataset

Python script using Network Analyst

Routes created for each Inspector
Phase II
Consuming Routes and Stops
Phase II

Routes and Stops uploaded to ArcGIS Online as a service

Web Map for all inspections for a day

Web App Builder Application
Phase III

Update Other Stakeholders
Phase III

Routes and Stops uploaded to ArcGIS Online as a feature service

Web Map for each inspection team

Operation Dashboard for each inspection team
Operations Dashboard

Inspections Assigned to each Inspector:

- Door Durante: 43
- Mike Martinez: 20
- Mary Darwell: 19
- Jim Davis: 12
- Joe Ramirez: 2
- James Smith: 26
- Hydra Durante: 38
- Ali Zimmermann: 54
- Daniel Ramirez: 36
- Chris Cortez: 41
- Carl Thompson: 3
- Bruce Creek: 23
- Alan Andree: 14

This bar graph shows the number of inspections assigned to each inspector.

Inspection Status:

This pie chart shows the number of inspections to be done and the number of inspections completed.
Obstacles /Issues

- Credit Usage (how credit usage affects decision making – AGOL Routing vs. FME vs. Python, testing for credit usage for directions widget with custom geocoder)

- Why WebAppBuilder and not Collector

- Navigator incompatible with Windows

- Reverse geocoding to coordinates instead of street address when using custom geocoder
Questions?