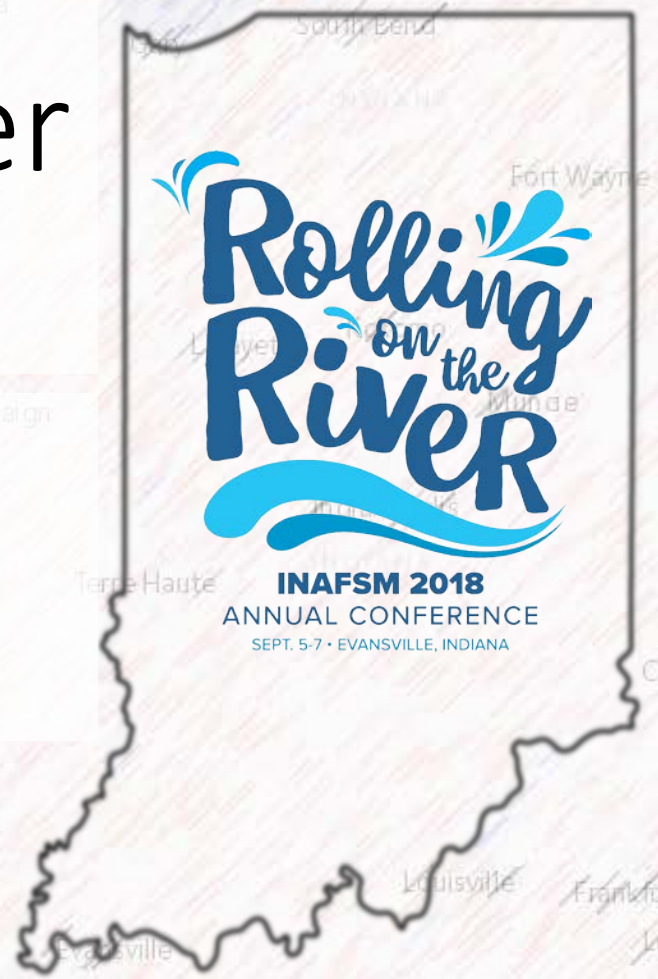
Mobile GIS Tools for Stormwater Quality Management

Covering your Assets with Mobile Utility Mapping

Mark Butler



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Geocaching

https://www.geocaching.com/blog/

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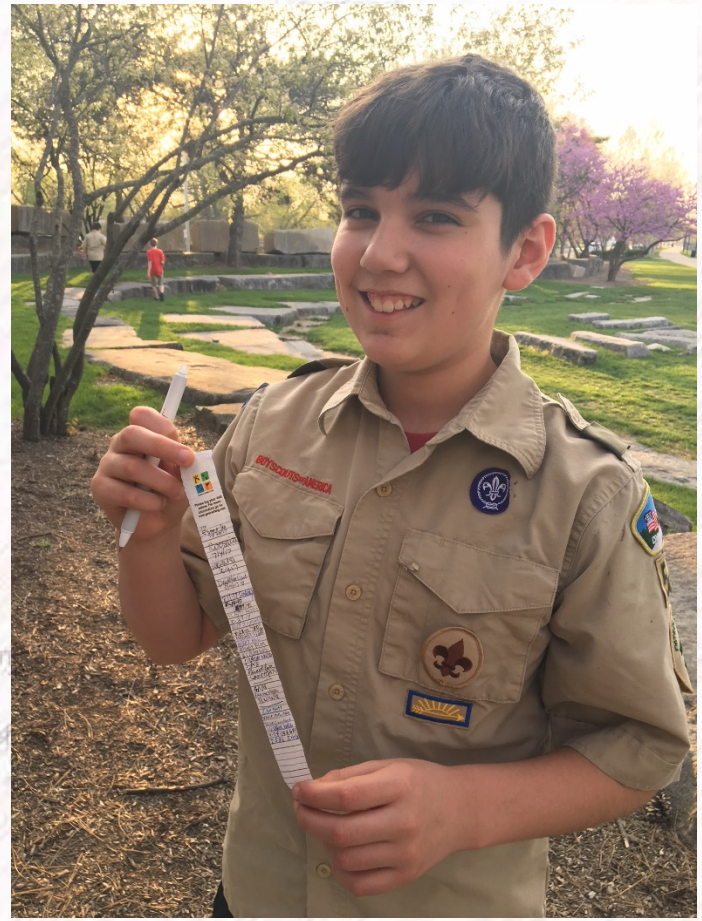
Geocaching



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For Comparison

Geocaching

VS

Treasure Hunt

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http://www.brassbinnacle.com/Pirate-Treasure-Chest_p_1842.html

Treasure Hunt

More Hunting…….less Finding

http://www.brassbinnacle.com/Pirate-Treasure-Chest_p_1842.html

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How does this apply to Stormwater Quality Management ?

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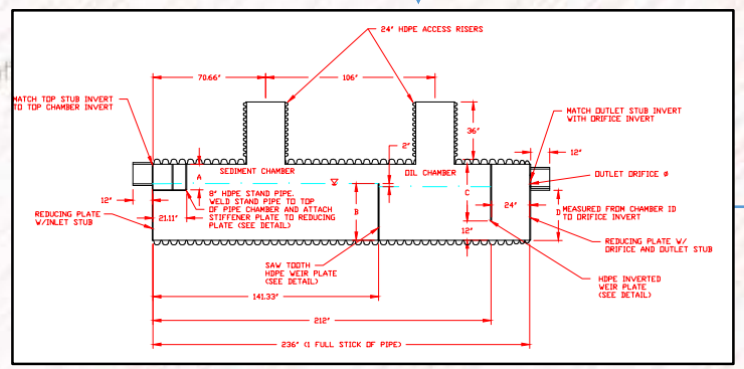
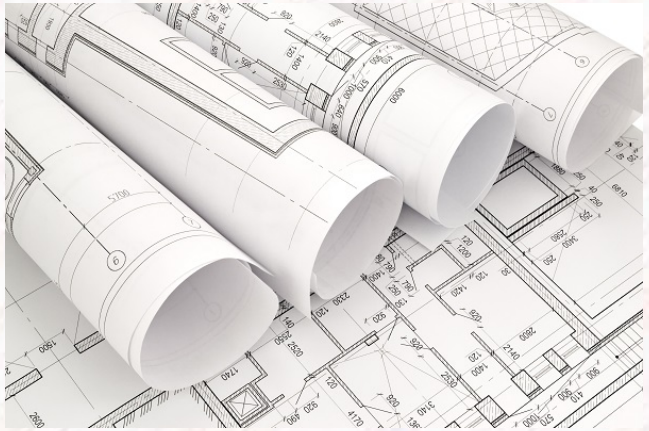
Birth of a Water Quality Project

Need + Funding → Design → Construction → Record Drawings





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https://en.wikipedia.org/wiki/United_States_one-dollar_bill,
https://www.ads-pipe.com/products/water-quality/ads-hdpe-water-quality-unit-wqu
https://www.tarrantcounty.com/en/transportation/engineering.html
https://www.conteches.com/Stormwater-Management/Treatment/Stormwater-Management-StormFilter

Evolution of a Capital Facility

Record Drawings → Record Drawing Filing → Never to be Found Again….easily

https://medium.com/neuroscience-internet/how-to-make-edits-to-the-search-engine-of-your-mind-194fe84b571a

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The Problem

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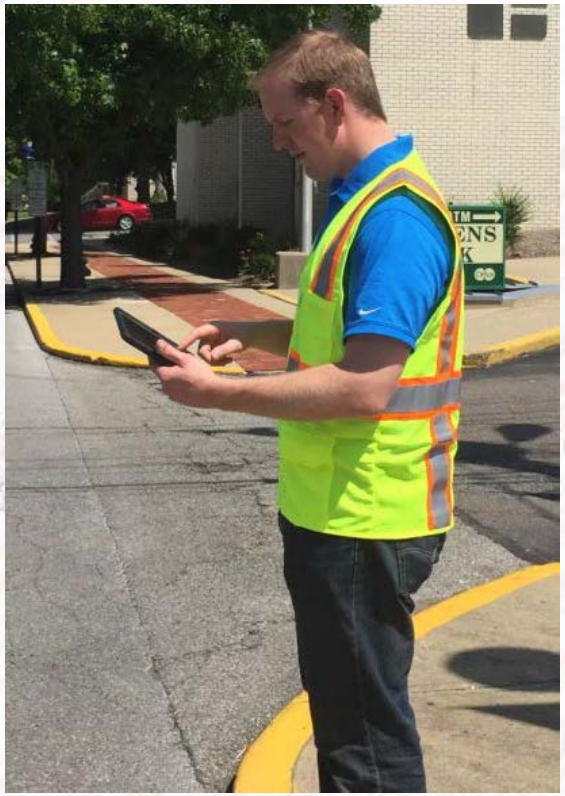
For Comparison

Treasure Hunt for BMP units



“Geocaching” for BMP units

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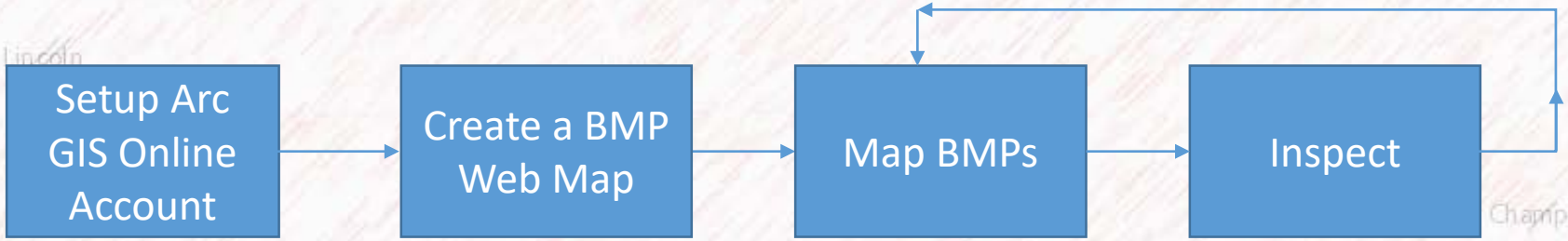
The Process: Overview



https://www.esri.com/en-us/legal/terms/web-link-logo-agreement
https://luminfire.com/technology/arcgis-online/
https://twitter.com/eaglegis/status/915024117455142912
https://www.energy.gov/em/articles/savannah-river-site-takes-another-environmental-cleanup-challenge-coal-fired-ash

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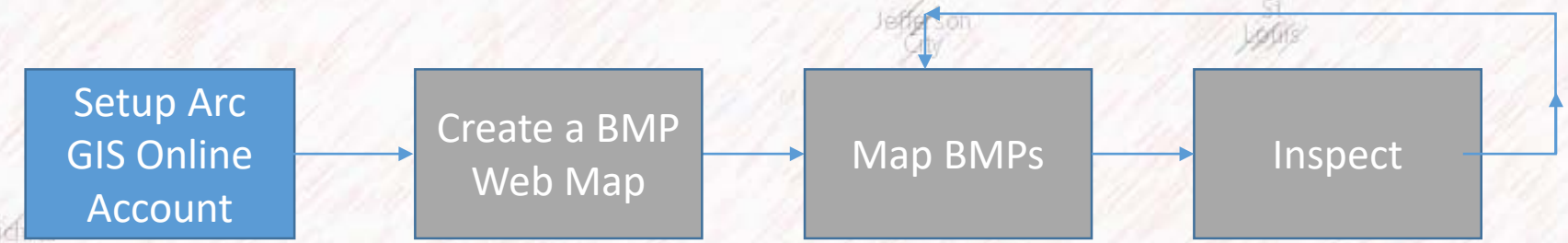
ArcGIS Online Account

Website: https://www.arcgis.com/home/index.html

- Security
- Cloud space
- Credits
- Access to Mobile Apps
- Level 2 User = $500/year



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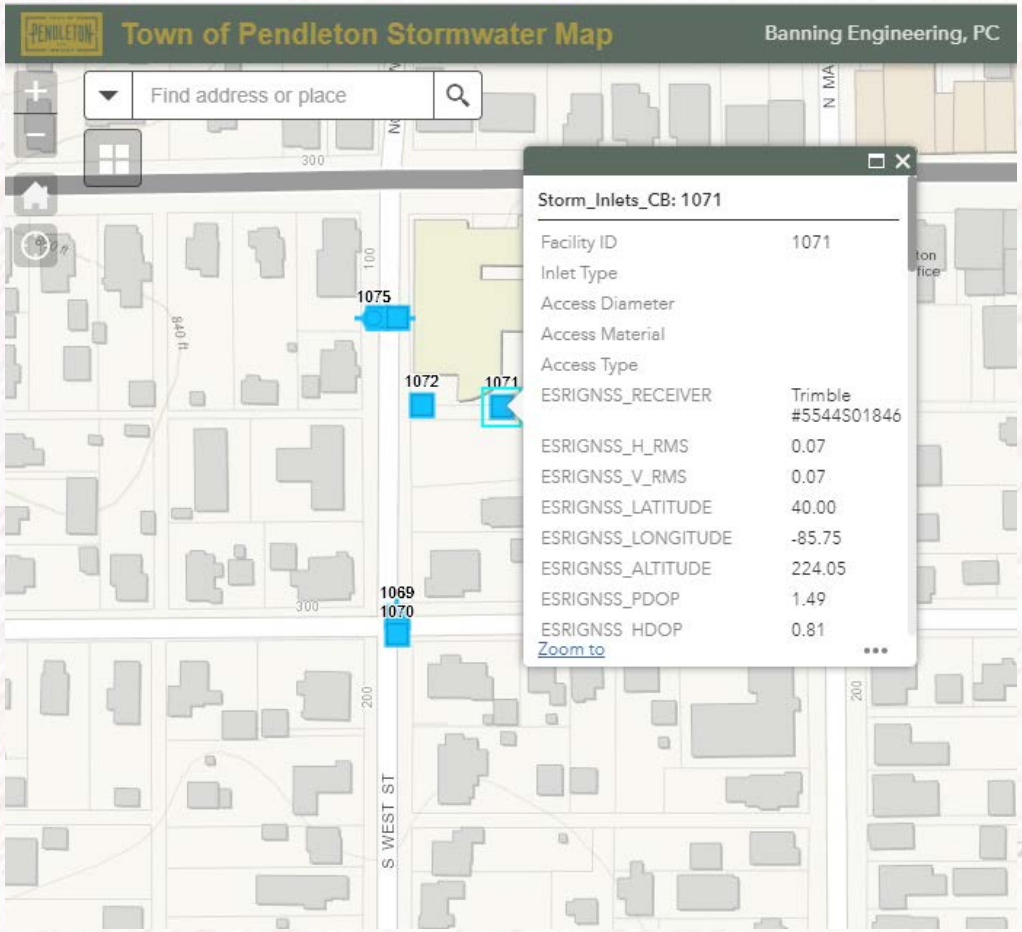
Create a BMP Webmap



Constructed Wetlands Operation, Maintenance, and Management Inspection Checklist for BMP Owners

Site Name: _____ Owner changed since last inspection? Y N

Owner name, address, phone number: _____

Location: _____

Date: _____

Time: _____

Inspector Name: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Embankment and Emergency Spillway (Inspect annually and after major storms)		
1. Vegetation		
2. Erosion on embankment		
3. Animal burrows		
4. Cracking, bulging or sliding of dam		
A. Location:		
B. Describe		
5. Drains clear and functioning		
6. Leaks or seeps on embankment		
A. Location		
B. Describe		
7. Slope protection failure		
8. Emergency spillway clear of obstructions		
9. Other (describe)		

FIGURE 702-11: Private Operation, Maintenance & Management – Constructed Wetlands

Setup Arc GIS Online Account → Create a BMP Web Map → Map BMPs → Inspect

http://www.indy.gov/eGov/City/DPW/Business/Specs/Documents/Chapter%20700.pdf

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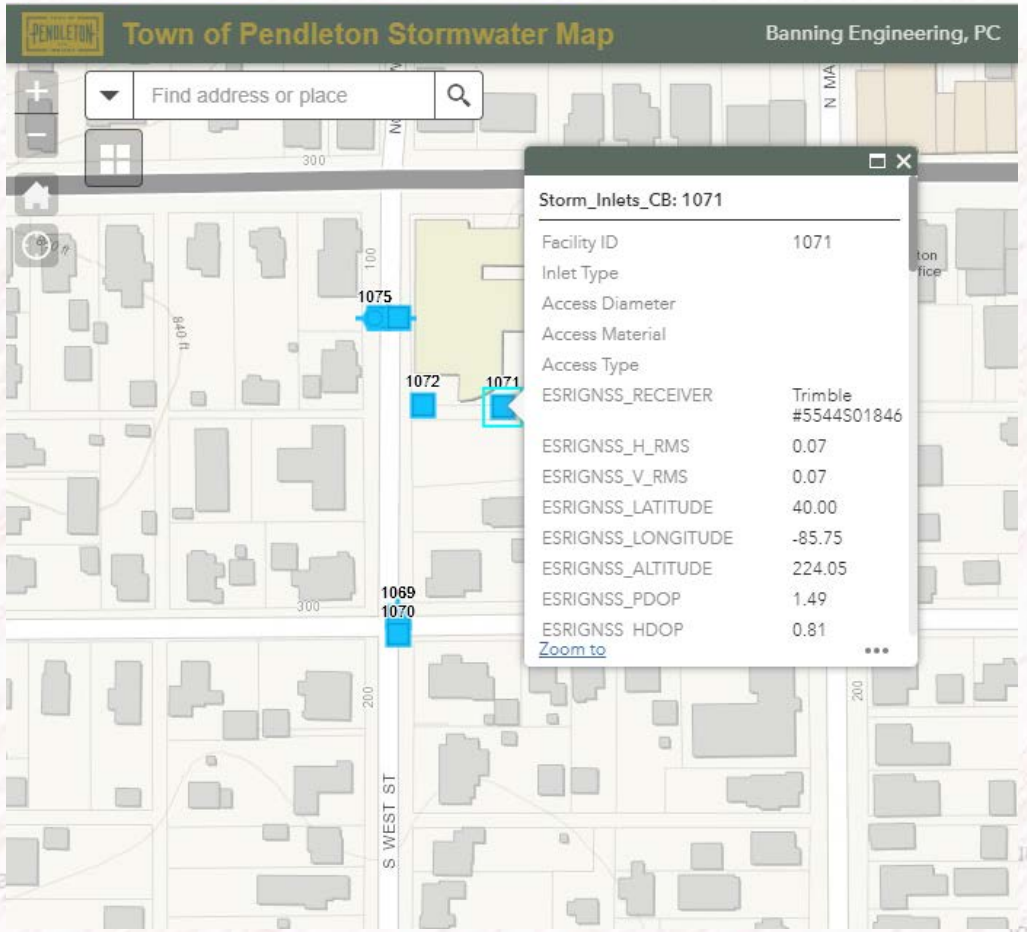
Map the BMPs



Setup Arc GIS Online Account → Create a BMP Web Map → Map BMPs → Inspect

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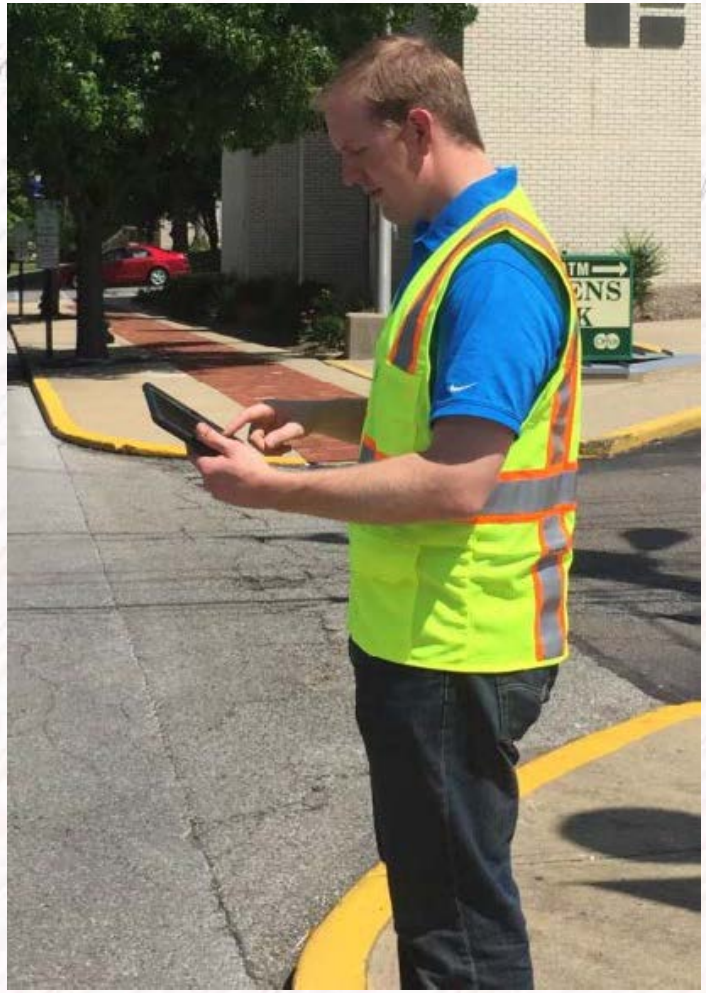
Routine Inspections



http://stormwaterworks.blogspot.com/2010/06/terrekleen-hydrodynamic-separator.html

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Demo

Town of Pendleton Stormwater System – Using ArcGIS Online and Collector for more than just mapping

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Questions?

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Banning Engineering
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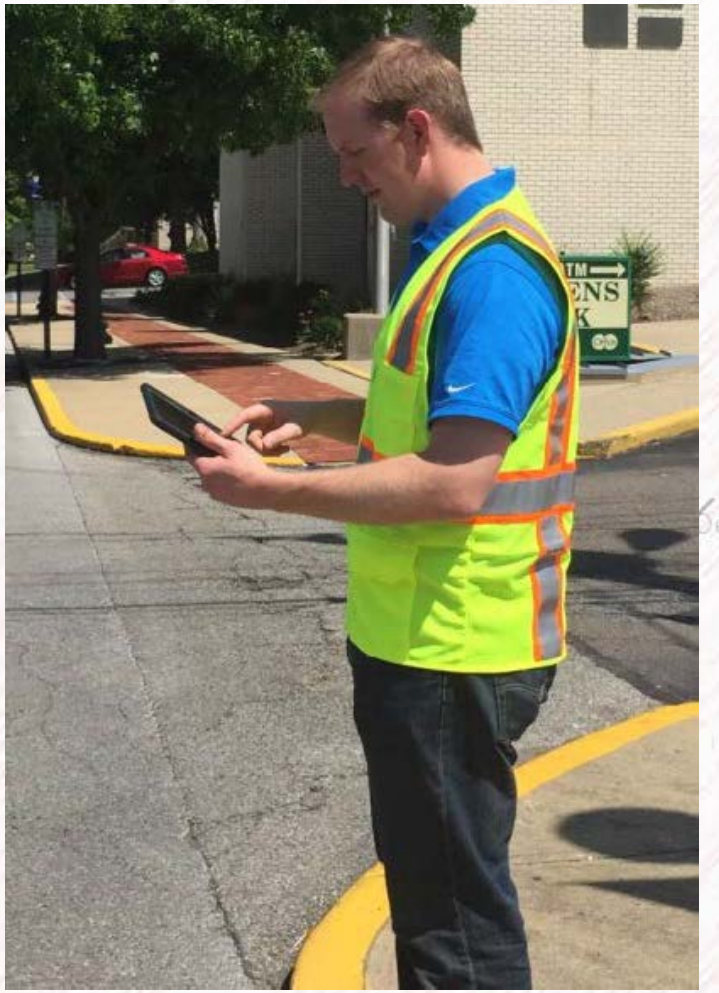
(317) 707-3735



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