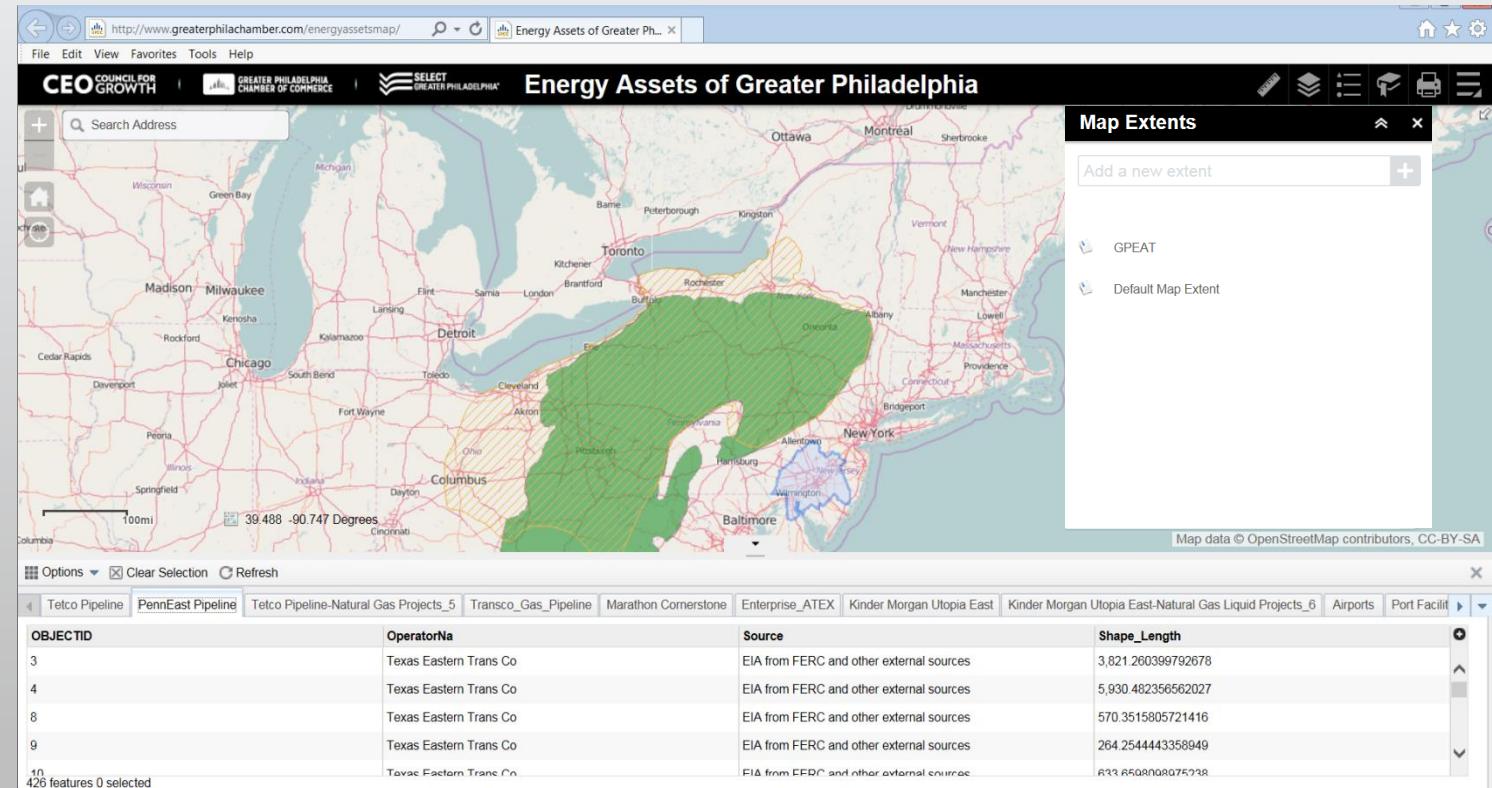


# Work Samples

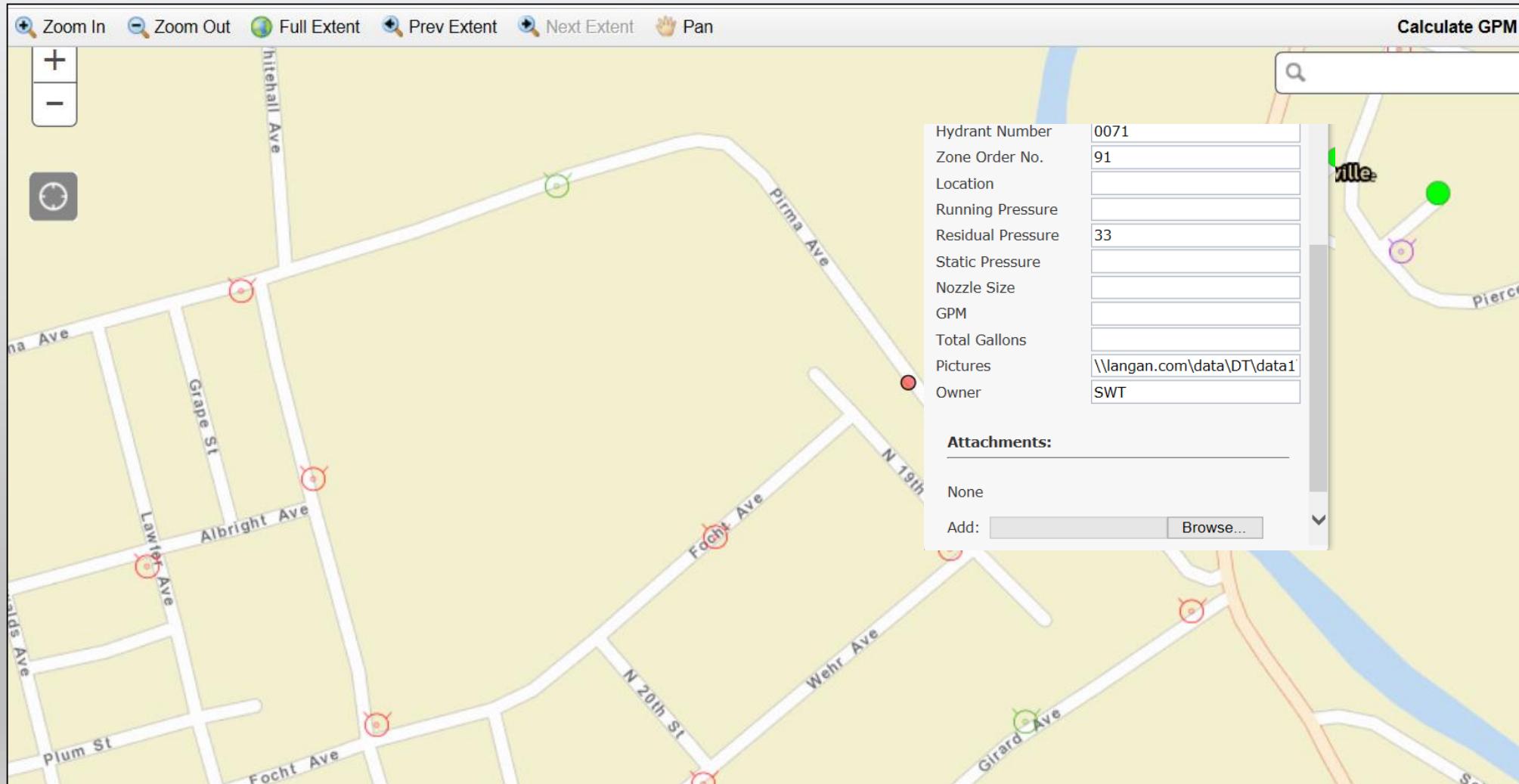
Jayashree Surendrababu

# Greater Philly Chamber of Commerce

Web and Mobile App  
for Greater  
Philadelphia Energy  
Action Team



# Hydrant app: GPM Calculator



# Field Inspection Form

Flow Test and Plan Review Forms

The map displays an aerial view of a residential area with several sewer manholes marked by orange dots. One specific manhole, identified by the ID NEA01M0294, is highlighted with a green line and a callout box. The callout box contains the following information:

(1 of 4) **Sewer Manholes**

To Edit Manhole: [Click Here](#)

**Manhole ID:** NEA01M0294

**City, Town:**

**Rim Elev:** 16.05000038

**Bottom Elev:** 3.96000022

[Zoom to](#)

Options: Options ▾ Zoom to Clear Selection Refresh

OBJECTID_1	OBJECTID	Town	Street1	Street2	ProjectDes	MHLocation	Meter_Type	MeterID	LocX	LocY	Start_Date	End_Date	ConductedB	ReviewNumb
1	1	New Haven	Prospect Street		Yale - Forestry Building	P13N170	Development		952,031	675,687	10/18/2007, 8:00 PM	11/11/2007, 7:00 PM	NEPCCO	2007-020
2	2	New Haven	Prospect Place		Yale - Forestry Building	P13N010	1		951,928	675,489	9/4/2007, 8:00 PM	10/18/2007, 8:00 PM	NEPCCO	2007-020
3	3	New Haven	Dell Drive		Dell Drive -	X12N400	Development		967,778	677,812	3/19/2007, 8:00	4/12/2007, 8:00	NEPCCO	2006-022

# Field Inspection Form

Flow Test and Plan Review Forms

Search Address:

Flow Tests

ID	3693
Town	East Haven
Street1	293 EAST ST
Street2	
ProjectDescription	
FlowMeterLocation	
LocX	956,118.863166874
LocY	672,398.727452461
Date Conducted From	
Date Conducted To	
ConductedBy	

Edit Flow Tests

Select a template to create features

Flow Tests

Flow Test

Options Zoom to Clear Selection Refresh

Flow Tests Plan Review Sewer Manholes Pump Stations Sewer Connection Sewer Lateral Sewer Main Sewer Structure Catch Basin Drain Manhole Drain Lateral Drain Line Stormwater Structure Customer Private Mains Regulators CSO Outfalls

OBJECTID_1	OBJECTID	Town	Street1	Street2	ProjectDes	MHLocation	Meter_Type	MeterID	LocX	LocY	Start_Date	End_Date	ConductedB	ReviewNumb
1	1	New Haven	Prospect Street		Yale - Forestry Building	P13N170	Development		952,031	675,687	10/18/2007, 8:00 PM	11/11/2007, 7:00 PM	NEPCCO	2007-020
2	2	New Haven	Prospect Place		Yale - Forestry Building	P13N010	1		951,928	675,489	9/4/2007, 8:00 PM	10/18/2007, 8:00 PM	NEPCCO	2007-020
3	3	New Haven	Dell Drive		Dell Drive -	X12N400	Development		967,778	677,812	3/19/2007, 8:00	4/12/2007, 8:00	NEPCCO	2006-022

# PDF Report Generation

**Manhole Inspection Form**

\* required fields

Operator's Name: <input type="text" value="RC"/>	*	Date: <input type="text" value="2/29/2016"/> *			
City/Town: <input type="text" value="NEWHAVEN"/>	Location(Street): <input type="text" value="EASEMENT EAST ST"/>				
Sewershed: <input type="text" value="EA"/>	Manhole Number: <input type="text" value="NEA01M0294"/>				
Cover Size: <input type="text"/> inches	Cover Vented: <input type="button" value="▼"/>	Potential for Runoff: <input type="button" value="▼"/>			
Cover Condition: <input type="button" value="▼"/>	Evidence of Surcharge: <input type="button" value="▼"/>				
Depth (Rim to Inv.): <input type="text"/> inches	Additional Information: (Max Characters: 200) <div style="border: 1px solid black; padding: 5px; height: 100px; width: 100%;">test 2/29/2016</div>				
Frame Condition: <input type="button" value="▼"/>					
Wall Material: <input type="button" value="▼"/>					
Wall Condition: <input type="button" value="▼"/>					
I&I: <input type="button" value="▼"/>					
Bench Material: <input type="button" value="▼"/>					
Bench Condition: <input type="button" value="▼"/>	MH Structural Rating: <input type="text" value="5"/>	*			
Inspection Status: <input type="button" value="▼"/>	MH O/M Rating: <input type="text" value="5"/>	*			
Sheet Picture #: <input type="text"/>	MH Picture #: <input type="text"/>				
Pipe Rating:					
Picture #:	Pipe Number: <input type="text" value="NEA01P0348"/>	Pipe Material: <input type="button" value="▼"/>	Pipe Diameter: <input type="text"/> inches	Structural: <input type="text" value="5"/>	O/M: <input type="text" value="5"/>
Out:	<input type="text"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="text"/>	*
In 1:	<input type="text" value="NEA01P0347"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="text"/>	
In 2:	<input type="text"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="text"/>	
In 3:	<input type="text"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="text"/>	

**LANGAN**

# Hospitals Data Viewer

## Hospital Data Viewer

Basemaps

Legend

Layers

Hospital Locations

Langan Projects

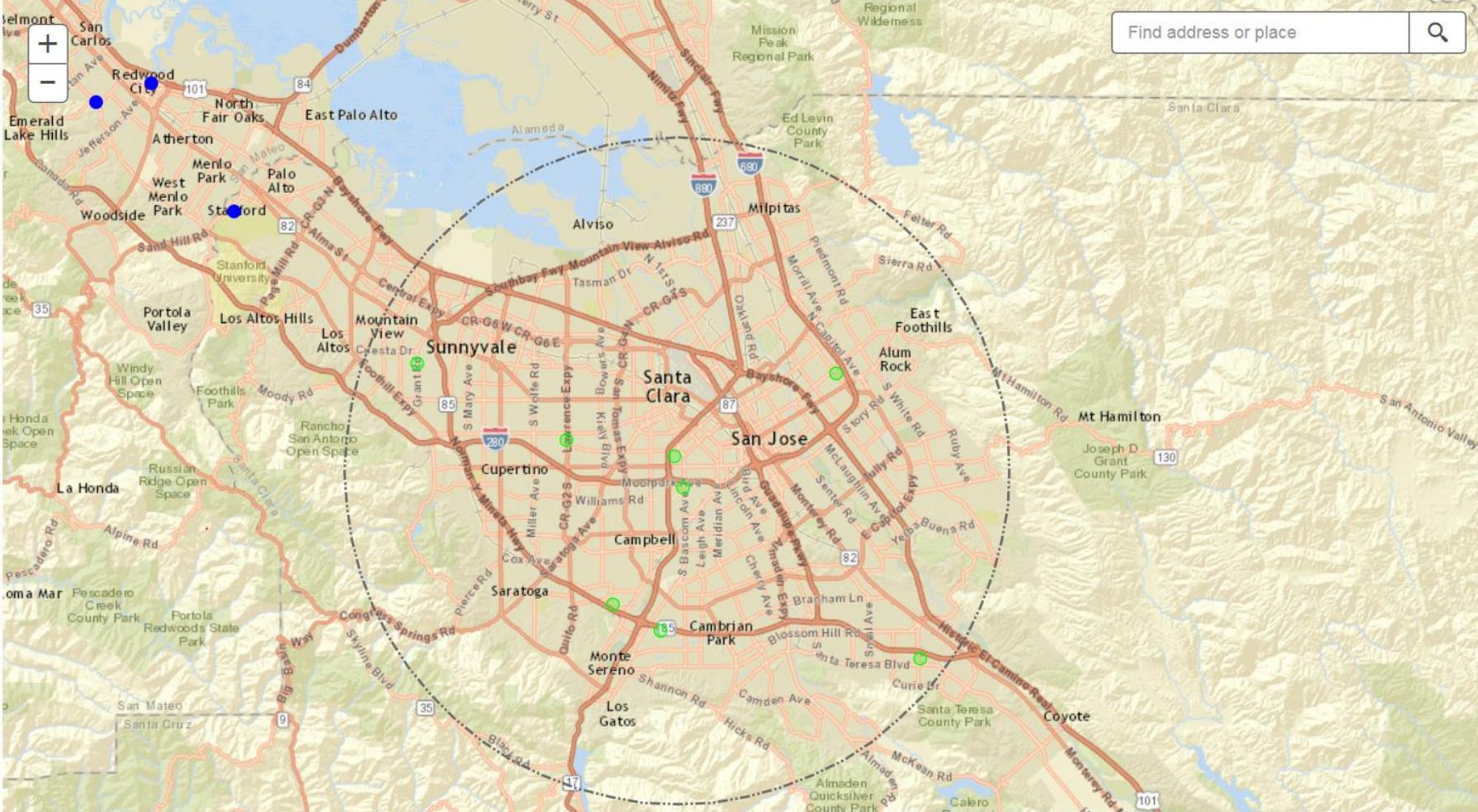
Buffer

Double click on map location to draw buffer

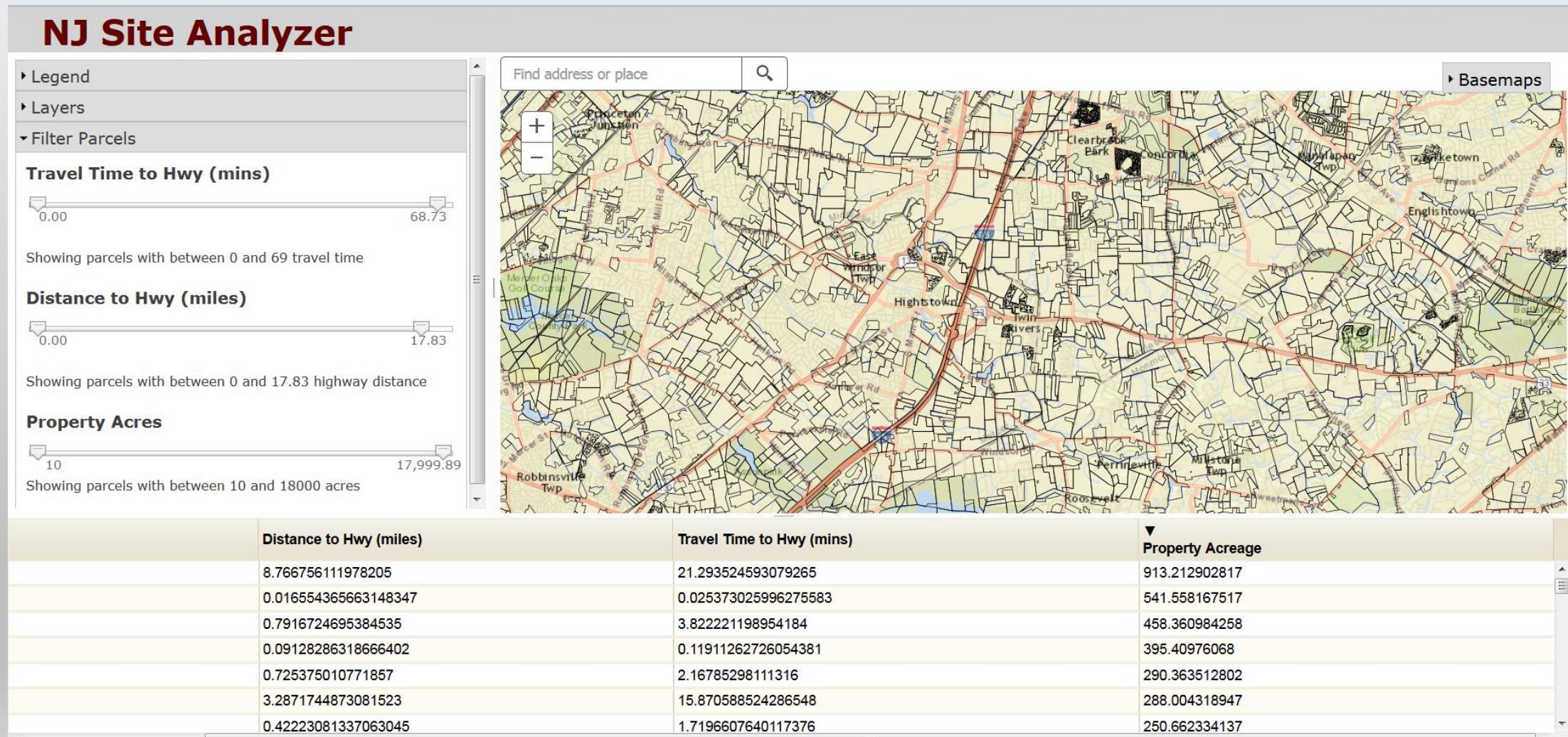
10 Miles ▾

Export

Find address or place



# Site Analyzer



**LANGAN**

# Office Seating Plan

Kimball Viewer

giswebext.langan.com/prototypes/kimball/viewer/

Most Visited Suggested Sites Getting Started Web Slice Gallery

## Kimball Viewer

**Legend**

**Seating Plan**

- Asbestos
- Accounting
- BD/Marketing
- CAD/GIS
- Survey/BIM
- Environmental
- Executive
- Geotechnical
- HR
- IT
- LA+P
- NR/Traffic
- Site/Civil
- Office Services

**Floor Plan**

**Furniture**

The screenshot shows a computer interface for the Kimball Viewer application. At the top, there's a browser-like header with the URL 'giswebext.langan.com/prototypes/kimball/viewer/'. Below the header, the main title 'Kimball Viewer' is displayed in a large, bold, dark red font. To the right of the title is a red 'RESET' button. On the left side, there's a vertical legend titled 'Seating Plan' containing 14 categories with corresponding color-coded icons. The main area shows a floor plan with several green rectangular workstations. Each workstation has a name and a seat ID number above it. A tooltip window is open over one of the stations, labeled 'CrystalEggers', providing detailed information: Seat ID : 96-2, Room : null, Furniture Code : WS-2, Type of Space : undefined, No. Of Crates : undefined, Printer : PAR-Cad\_OCECIDS600, Plotter : undefined, Furniture Full View WS-2, Furniture. The station is highlighted with a red dashed border. The bottom of the screen features a taskbar with various icons and a system tray showing the date and time as 12:01 PM on 11/4/2015.

Joseph Elint  
Dominick Azzolini  
Richard Dos Santos  
Rajeev Rama  
Adam Kent  
Diana Rooney

85-1 Jim Demick  
89-1 Juan Osorio  
85-2 Lou Mastriani  
89-2 John Coutinho

96-2 Crystal Eggers  
102-4 DiGiacinto

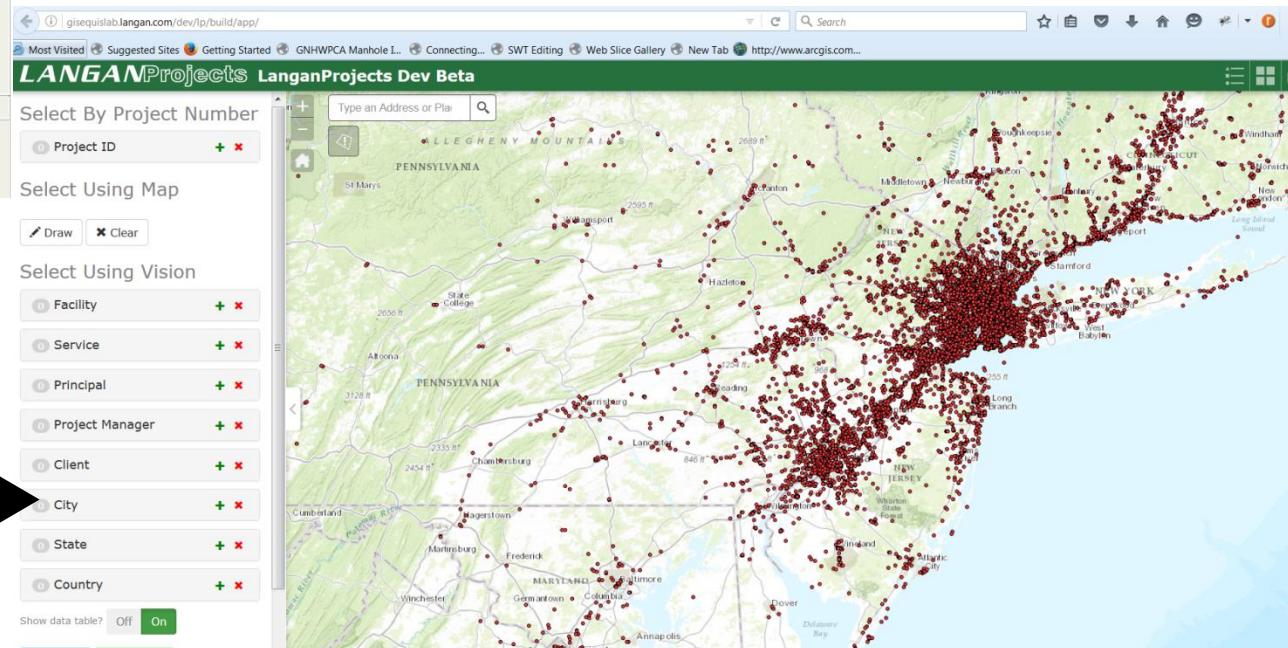
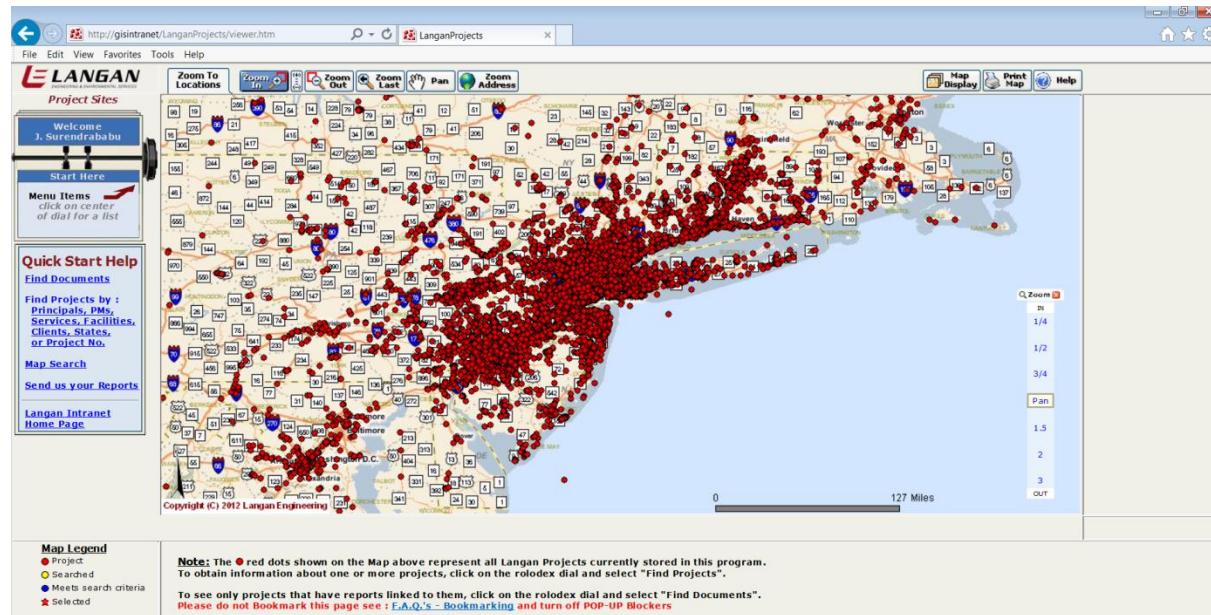
105-3 Claudia Correa  
106-3 Theodore Herbert  
105-4 Joseph Yannucci  
106-4

CrystalEggers

Seat ID : 96-2  
Room : null  
Furniture Code : WS-2  
Type of Space : undefined  
No. Of Crates : undefined  
Printer : PAR-Cad\_OCECIDS600  
Plotter : undefined  
Furniture Full View WS-2  
Furniture

12:01 PM  
11/4/2015

# Intranet Mapping Site



# Intranet Mapping Site

gisequislab.langan.com/dev/lp/build/app/

Most Visited Suggested Sites Getting Started GNHWPCA Manhole I... Connecting... SWT Editing Web Slice Gallery New Tab http://www.arcgis.com...

## LANGANProjects LanganProjects Dev Beta

Select By Project Number

Project ID

Select Using Map

Select Using Vision

**2 Facility**

Airport    
Distribution / Wareh

**0 Service**

**0 Principal**

**0 Project Manager**

**0 Client**

**0 City**

**0 State**

**0 Country**

Type an Address or Place

Powered by Esri

# Save Settings

**LANGAN** GeoTech Belmont County Pipelines INT Developed By: Langan Engineering & Environmental Services, Inc.

Piedmont  
Holloway  
Flushing  
Lafferty  
Bannock  
Colerain  
Mt Pleasant  
Dillon  
Harrisville  
New Athens  
Fairview  
Old Washington  
Lore City  
Salesville  
Quaker City  
Barnesville  
Senecaville  
Batesville  
Malaga  
Jerusalem  
Wilson  
Allegheny  
Alledonia  
Powhatan Point  
Glen Easton

**Save Map Session**

Save the current map settings

Name:

**Save**

**Saved Sessions**

Session	Actions
Test Session 1	

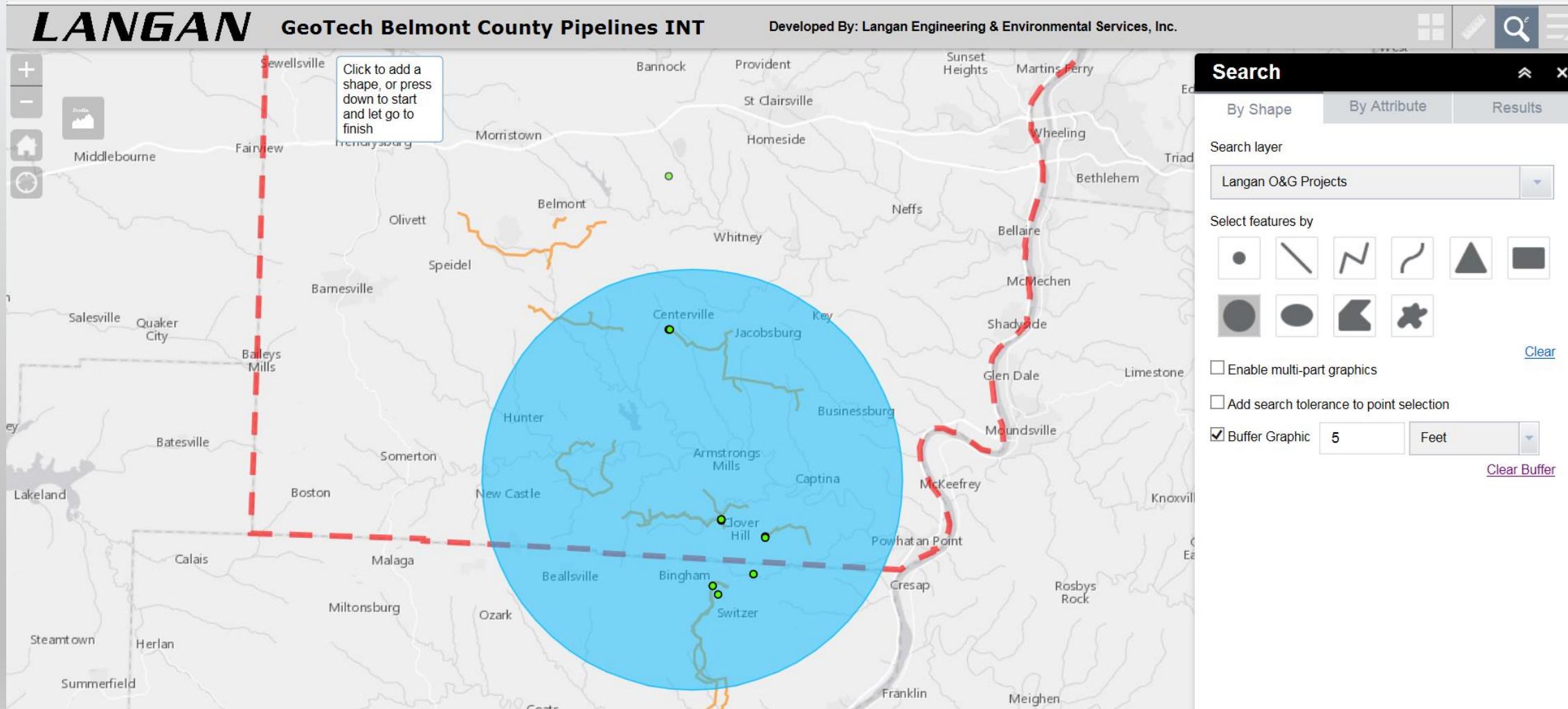
[Load from file](#) [Save to file](#)

Load sessions from file

Choose the file to load:  
[Browse...](#) No file selected.

Ok Cancel

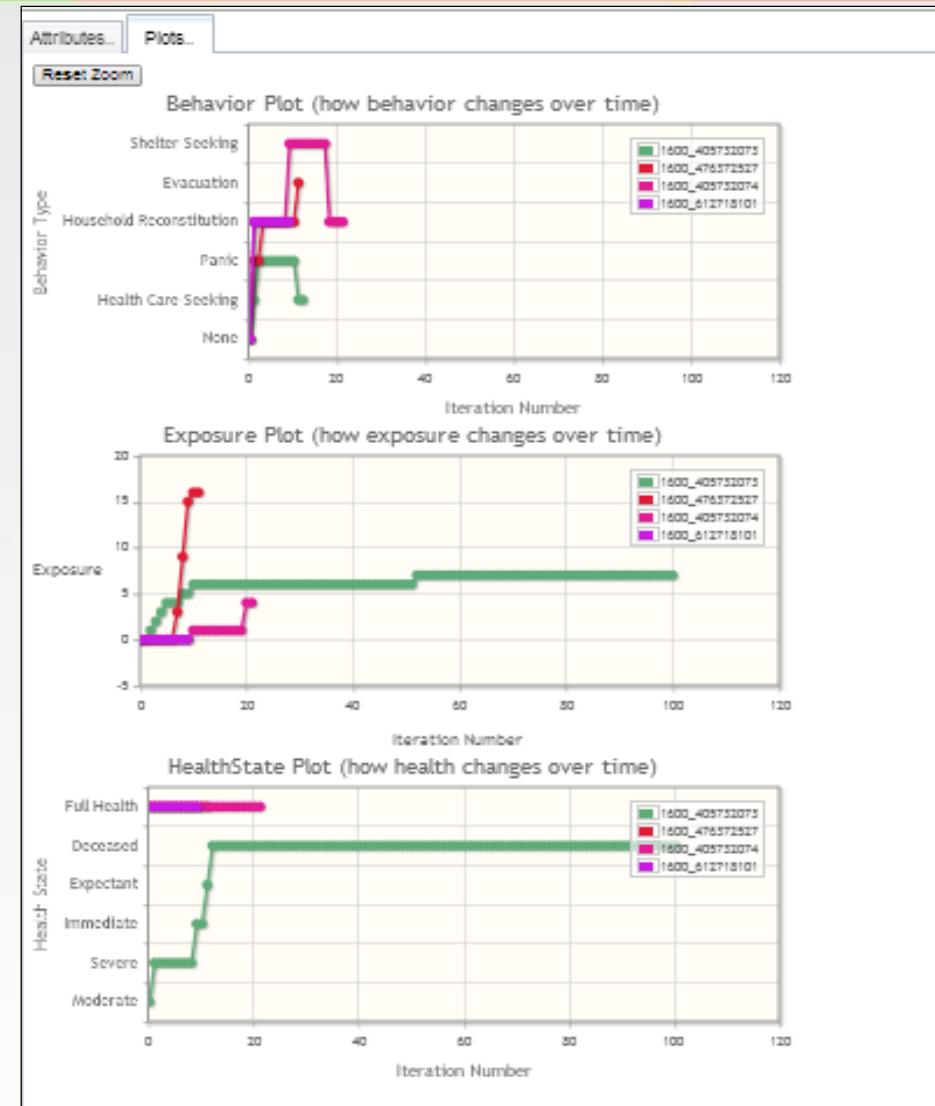
# Spatial Querying





# Dynamic Behavior Visualizer

Visualize and Plot  
people's behavior,  
Health state,  
Interaction in a  
disaster  
simulation study





# Dynamic Behavior Visualizer

← → ⌂ ndssl.vbi.vt.edu/gis/dbv/v2.0/ ⌂ Apps ⌂ Folder: /

Routes from 11:15:00 to 11:35:00 [About DBV](#)

Add Persons  
Step 1: Choose a Run No\*: 1727 (C1)  
Step 2: Enter Person Ids (comma separated) OR No Of Persons:  
Person Ids (PID)\*:  
No Of Persons\*: 2  
Health State (optional): Immediate  
Step 3: (optional)  
 Show Family Members  
Submit  
Job Completed  
Show/Hide Analysis

Map Output [GUI - PID Generator](#) [Query - PID Generator](#)

RunNo:1727 - ID:405584825 - Age:80

Person	Location
Location Id: 12408480	Loc_Type: 1
Power: 0	Cellphone: 0
People Present: 28	

MASSACHUSETTS AVE NW  
RHODE ISLAND AVE NW  
VERMONT AVE  
N ST NW  
I ST NW  
19TH ST NW  
18TH ST NW  
CONNECTICUT AVE NW  
L ST NW  
K ST NW  
PENNSYLVANIA AVE NW  
H ST NW  
19TH ST NW  
E ST NW  
NEW YORK AVE NW  
F ST NW  
15TH ST NW  
EXECUTIVE AVE NW  
G ST NW  
14TH ST NW  
Esn, HERE, DeLorme, MapmyIndia, © OpenStreetMap, Esri

Attributes... Plots...

Reset Zoom

Behavior Plot (how behavior changes over time)

Iteration Number	Household Reconstitution	None
0	0	1727_405512474
1	1727_405584825	0
2	1727_405584825	0
3	1727_405584825	0
4	1727_405584825	0
5	1727_405584825	0
6	1727_405584825	0
7	1727_405584825	0
8	1727_405584825	0
9	1727_405584825	0
10	1727_405584825	0
11	1727_405584825	0
12	1727_405584825	0
13	1727_405584825	0
14	1727_405584825	0

Exposure Plot (how exposure changes over time)

Iteration Number	Exposure
0	-100
1	220
2	220
3	220
4	220
5	220
6	220
7	400
8	450
9	450
10	450
11	220
12	220
13	220
14	220

HealthState Plot (how health changes over time)

Iteration Number	Immediate	Minor
0	1727_405512474	1727_405584825
1	1727_405512474	1727_405584825
2	1727_405512474	1727_405584825
3	1727_405512474	1727_405584825
4	1727_405512474	1727_405584825
5	1727_405512474	1727_405584825
6	1727_405512474	1727_405584825
7	1727_405512474	1727_405584825
8	1727_405512474	1727_405584825
9	1727_405512474	1727_405584825
10	1727_405512474	1727_405584825
11	1727_405512474	1727_405584825
12	1727_405512474	1727_405584825
13	1727_405512474	1727_405584825
14	1727_405512474	1727_405584825

Network Dynamics & Simulation Science Laboratory



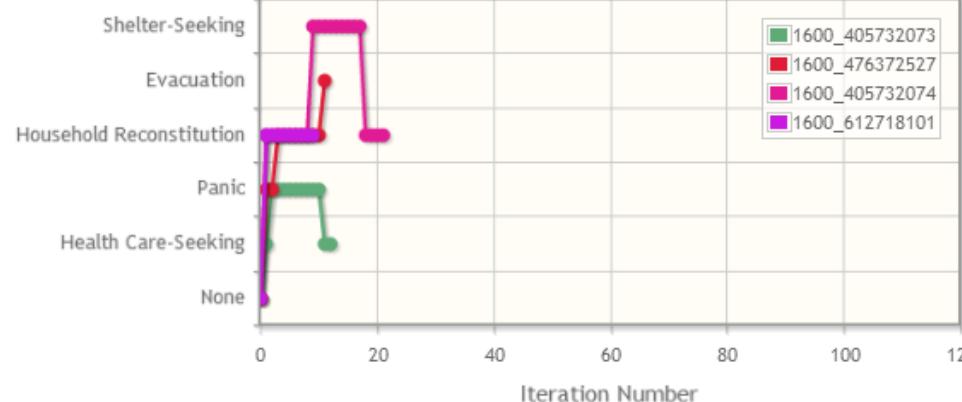
# Dynamic Behavior Visualizer

Routes from 19:35:00 to 20:55:00

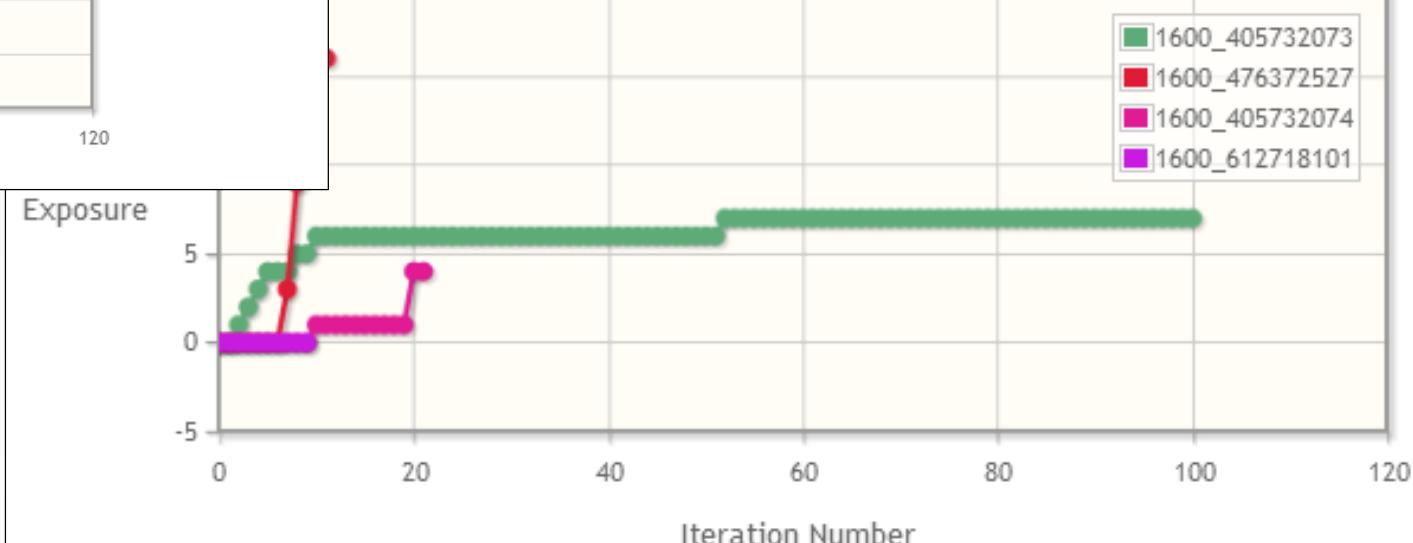
Attributes.. Plots..

Reset Zoom

Behavior Plot (how behavior changes over time)



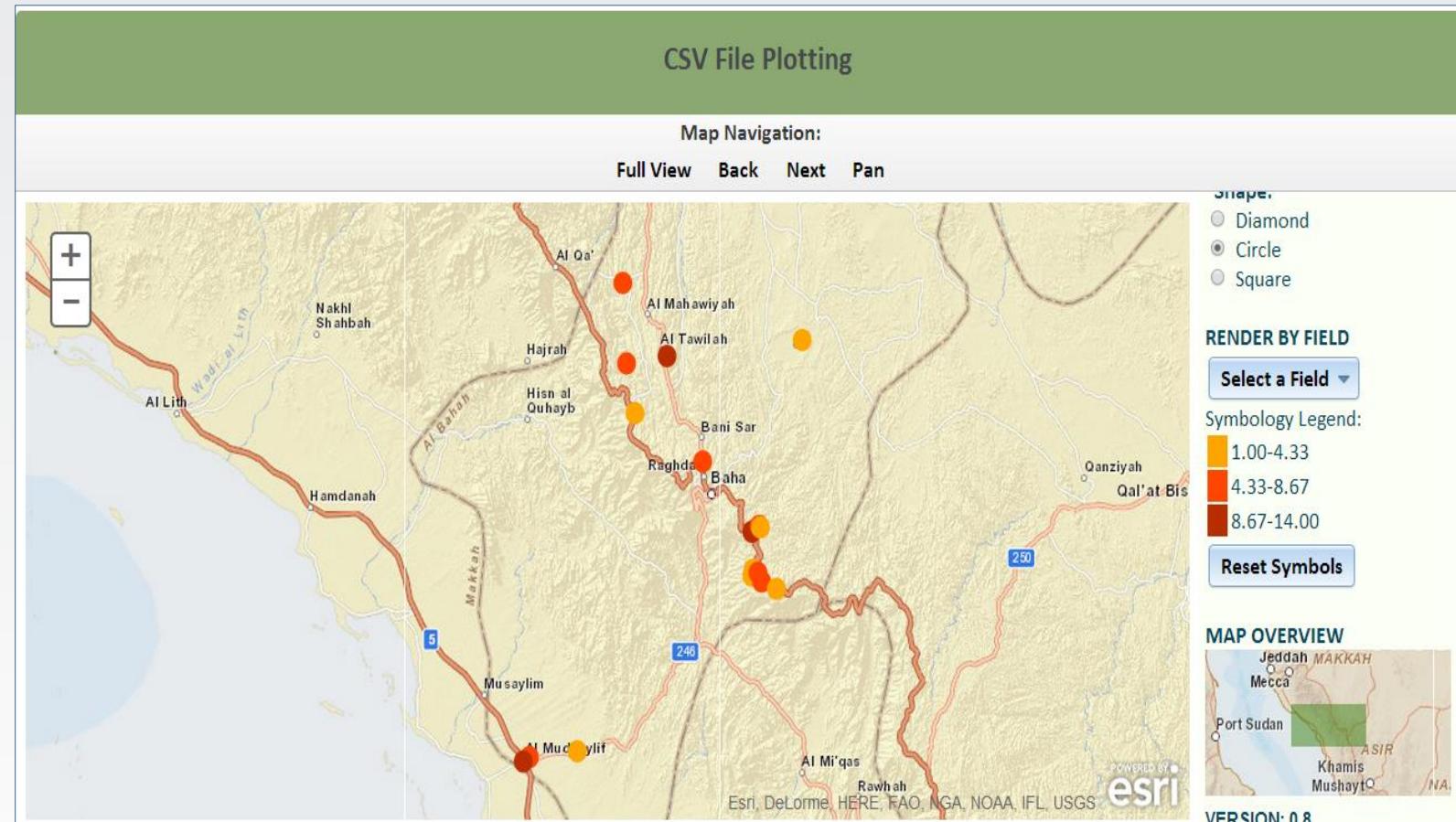
Exposure Plot (how exposure changes over time)





# CSV Plotting

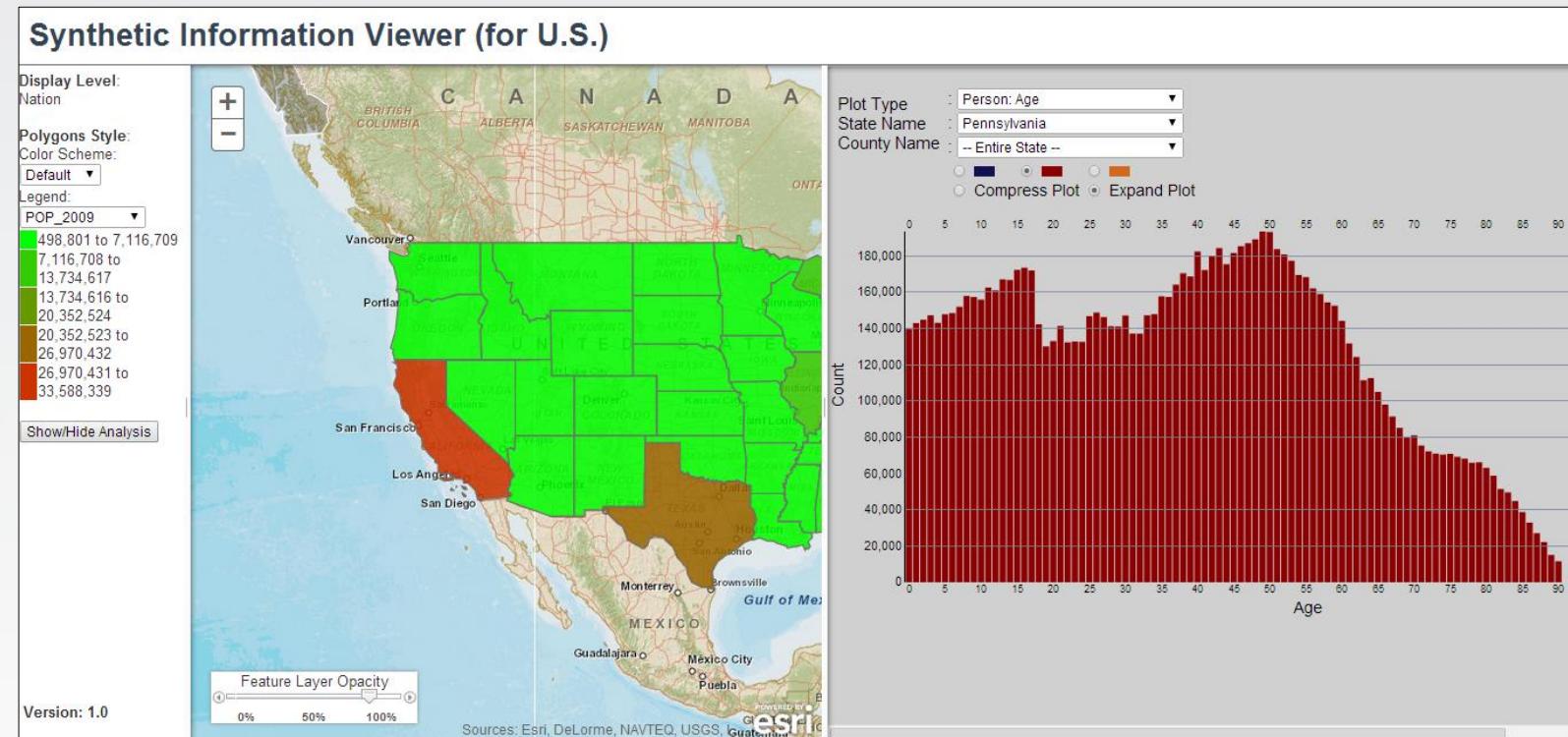
- Plot & visualize CSV Files on Maps
- Map click to show associated attribute information of features
- Color based rendering for the plotted CSV features





# Synthetic Information Viewer for the US

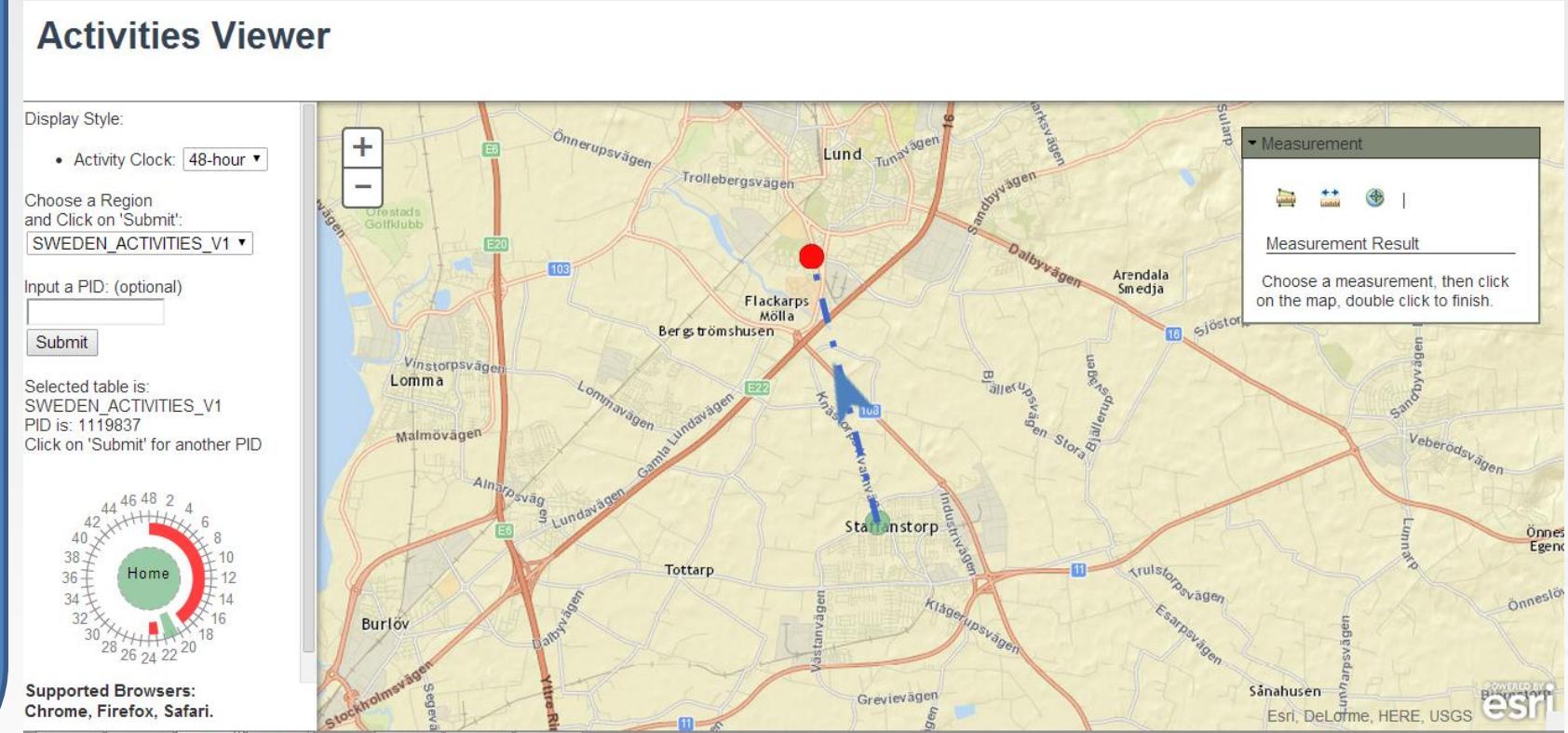
- Aggregate data on different admin region levels(state, county, block group level for the United States)
- Analysis panel complements to plot attributes for user selected level





# Activities Viewer

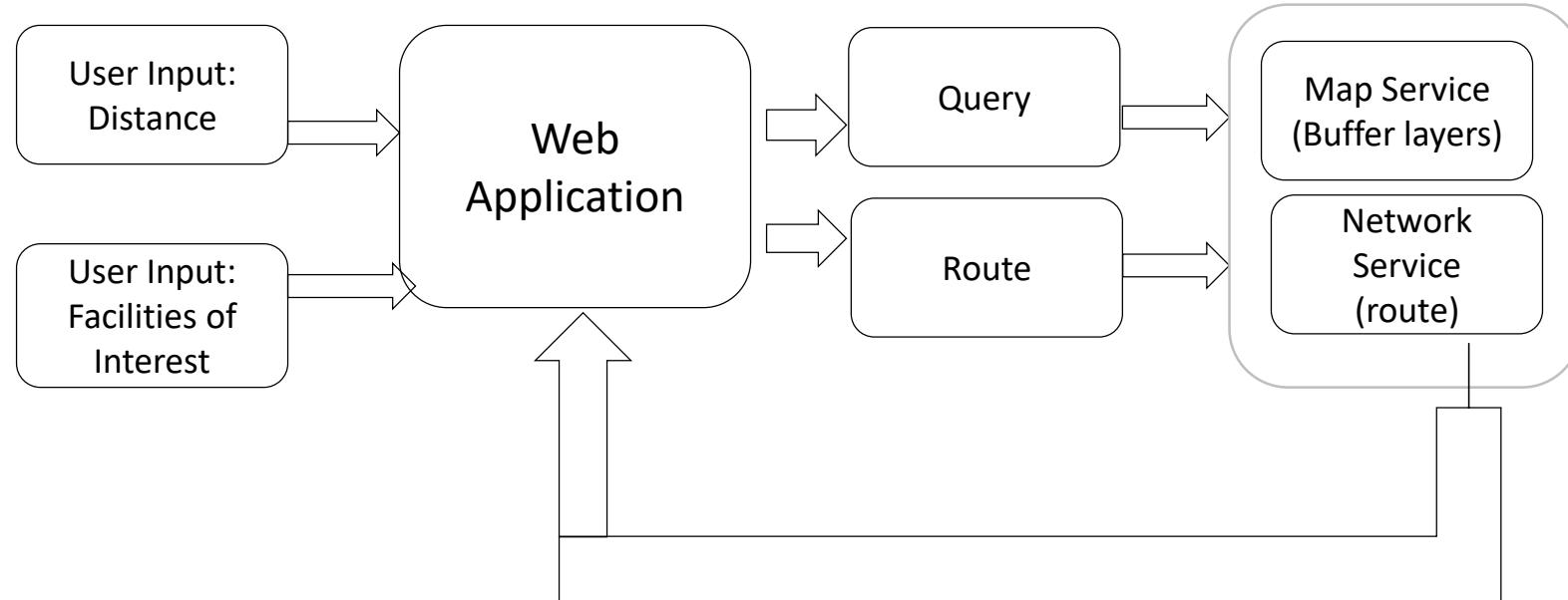
- Prototype application to view a random/specific person's activities
- Clock-Map interactions will be improved and used for Synthetic Viewer





# Internship Project

Web app for tourists  
commuting via  
Charlotte Light Rail  
System to explore  
uptown Charlotte



# Charlotte Walks

Your walkability guide for Charlotte

Enter Your Walking Limit

.25 Miles



Places of interest

- Retail
- Parks
- Restaurants
- Theatres
- Transportation
- Banks
- Educational
- Hotels
- Museums
- Other Attractions
- Police
- PostOffice

Clear Graphics

[Clear Route](#)

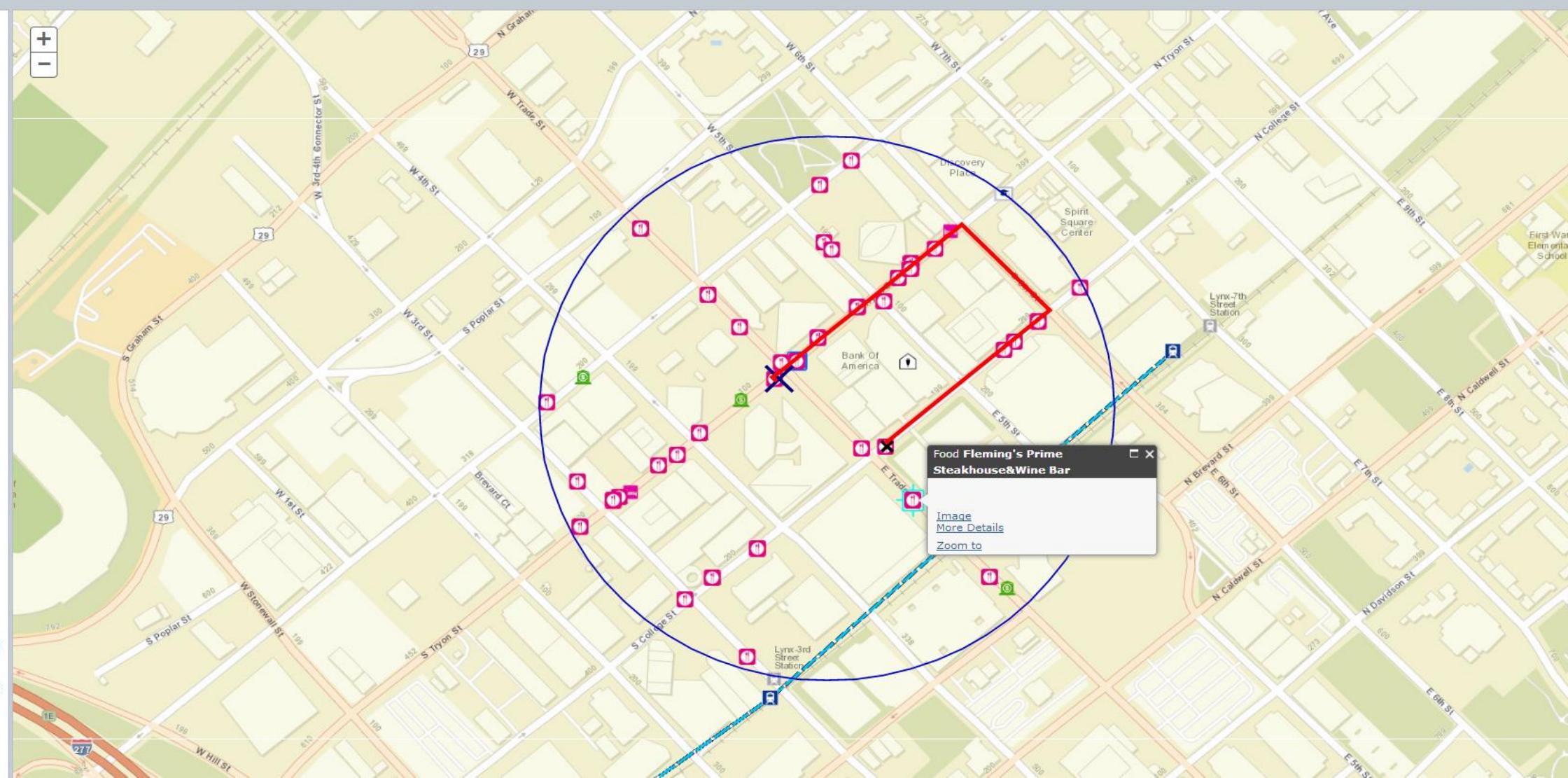
[Clear Buffer](#)

Reach Your Destination!

[Add Point](#)

[Find Route](#)

1. Start at Location 1
2. Go northeast on N College St toward E 5th St
3. Turn left on E 6th St
4. Turn left on N Tryon St
5. Continue on S Tryon St
6. Turn left to stay on S Tryon St
7. Finish at Location 2, on the left



# Geoleague Challenge 2013: Winner

---

## **Objective**

ArcGIS tool to implement a Least Cost Algorithm for Mapping Trails

## **Purpose**

Designed and implemented ArcGIS tool for the Boy Scout of America (BSA)

- To generate a map
- To Parameterize trails using the Least Cost Path algorithm

## **Team size**

7

## **My Role**

Application Developer

# Geoleague Challenge 2013: Winner

- Choose trail characteristics
- Select points to connect
- Generate the trail
- Output (trail) opens as a new map document

**My new trail**

Points of Interest:

- Mountain
- Staffed Camp
- Trail Camp
- Base Camp
- Proposed trail

Difficulty Level:

- Easy
- Medium
- Difficult

Points of Interest:

- Camps
- Mountains
- Water Features

Trail Use:

- Hiking
- Biking
- Equestrian
- ATV
- Multipurpose

Trail Length: \_\_\_\_\_

Trail difficulty: \_\_\_\_\_

Intended Use: \_\_\_\_\_

Average slope: \_\_\_\_\_

Desired features: \_\_\_\_\_

0 0.25 0.5 0.75 1 Km

**Geoleague Dockable Window**

Difficulty Level:  Easy  Medium  Difficult

Points of Interest:  Camps  Mountains  Water Features

Trail Use:  Hiking  Biking  Equestrian  ATV  Multipurpose

**Table**

trail4a

OBJECTID*	SHAPE*	MI_LENGTH	NAME	USE	START_POINT
1	Polyline	3.89	NewTrail	Multipurpose	492643.62 4033838.00

1 (0 out of 1 Selected)

Thank you