



NYS GIO GIS Team Meeting

February 4, 2014

GIS Program Office

NYS Office of Information Technology Services

Today's Agenda

- What is the SAM Project?
- Background
- Project status
- Files provided to counties
- Future Web-based data maintenance tool
- SAM Project impacts on geocoding
- The future of geocoding in New York State

SAM Project Objective

***Create a statewide authoritative
address point database to support
Next Generation 9-1-1
and other purposes***



Phone Number

Automatic Number Identification (ANI)



Add Street Address

Automatic Location Identifier (ALI)



Add Emergency Service Zone

Master Street Address Guide (MSAG)



Look up Police, Fire, EMS

Emergency Service Provider
Lookup Table



Current Land Line Tabular look-up



Phone Number
or email, text, video
and **X, Y**
(no Address)

Next Generation ~~Mobile Phone~~ Device



Add Street Address
NYS Address Point File

OCS



Background

- NYS GIS Program Office
 - 10+ years building GIS Address Points
 - Awarded NTIA Broadband Mapping supplemental funds
- NYS 9-1-1 Coordinators
 - Understood NG 9-1-1 will **require** GIS data
 - Desired a Statewide Master Address file
- Big Picture
 - Huge range of needs for address data statewide
 - One master address point database
 - Building to highest level requirements (i.e. 9-1-1) will support all lower requirements
 - Eliminate duplication of effort

Common Goals

- Address point data will:
 - *Support 9-1-1 dispatch and NG 9-1-1*
 - *Support high-quality geocoding*
 - *Be publically available for widespread uses*
 - *Contain no personal or sensitive information*
- Build to NENA Standards
- Reduce data build and maintenance costs
- **Do it right, do it once**

Statewide Address Point Build: 2 Stages

Stage 1:

State contracts for:

- “Principal” (main structure) point on building footprint
- Parcel centroids for vacant addressed parcels
- Addresses in draft NENA standard

State in-house tasks:

- Outreach to counties for data
- QA/QC of data deliverables



Stage 1
Building Rooftops
Centroids of Vacant Parcels

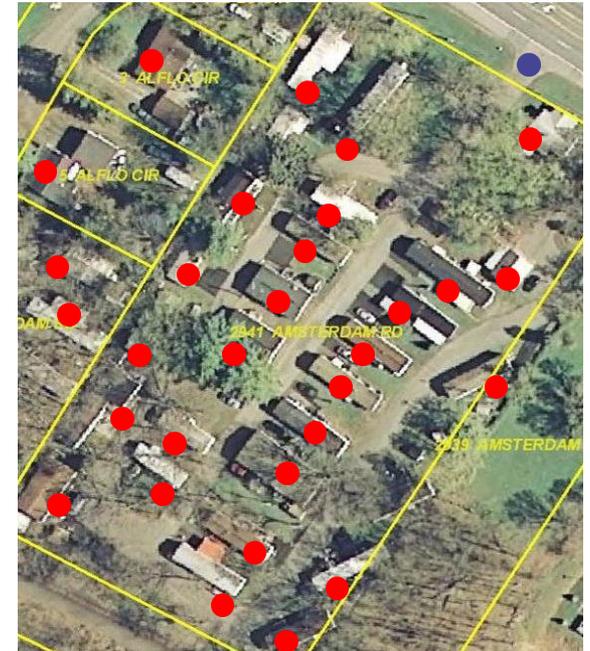


Statewide Address Point Build: 2 Stages

Stage 2:

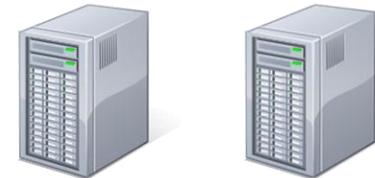
Counties use NENA standards to:

- **Locate** addresses identified in exception report
- **Add new points**
- **Refine** locations
- Map **subaddresses**

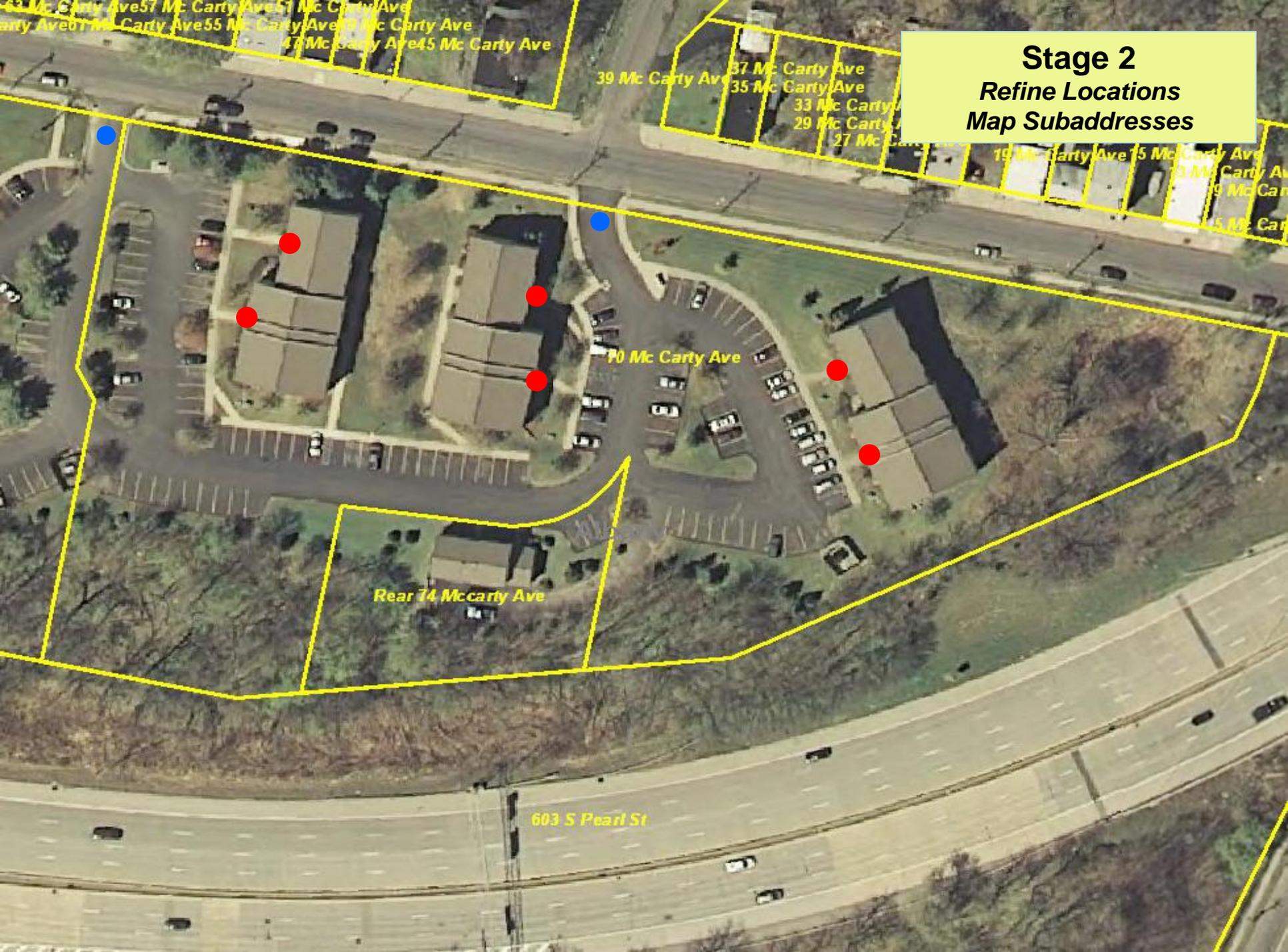


State provides:

- Data maintenance tools
- Data hosting/distribution services



Stage 2
Refine Locations
Map Subaddresses



61 Mc Carty Ave 57 Mc Carty Ave 51 Mc Carty Ave
45 Mc Carty Ave 47 Mc Carty Ave 45 Mc Carty Ave

39 Mc Carty Ave 37 Mc Carty Ave
35 Mc Carty Ave 33 Mc Carty Ave
29 Mc Carty Ave 27 Mc Carty Ave

19 Mc Carty Ave 15 Mc Carty Ave
13 Mc Carty Ave 11 Mc Carty Ave
9 Mc Carty Ave 5 Mc Carty Ave

70 Mc Carty Ave

Rear 74 Mccarty Ave

603 S Pearl St

Developing the Partnership

- Leadership meetings
- Jointly identified:
 - Common goals
 - Individual strengths
 - Appropriate roles
 - Potential problems
 - Needed standards
 - Other stakeholders
- Developed an outreach plan



Stakeholder Outreach Meetings

- Regional NYS 9-1-1 Coordinator Meetings
- County Real Property Tax Directors
- NYS Association of Counties
- NYS GIS community
- County/Local IT Directors
- NENA
- US Census Bureau
- CAD vendors / consultants
- GIS software vendors



Follow Up with Individual Counties

- Initial information collection
 - Contact sheet
 - Questionnaire
- On site meetings with County-level stakeholders
- Post meeting
 - Sample data
 - Source Usage Document
 - Data Usage Agreement
- Pilots
 - Data Build
 - QA/QC



Involvement in NENA GIS Standards

- *Civic Location Data Exchange Format (CLDXF) Standard*
 - Parses addresses into smallest data elements
 - Pending final publication (March 2014)
- *NG9-1-1 GIS Data Model Standard*
 - Identifies the GIS data layers & defines attributes
 - To be submitted for NENA All Committee Review (Spring 2014)
- *Site/Structure Address Point GIS Data for 9-1-1*
 - Where to place a point & how many points
 - In development with first NENA review in summer 2014
- *Provisioning and Maintenance of GIS data to ECRF/LVF Standard*
 - Loading local GIS data into regional, statewide, and national databases
 - Completed public review (January 16, 2014)
- *NG9-1-1 Data Management Standard*
 - Discrepancy Reports for errors discovered during data provisioning
 - Submitted for NENA All Committee Review (February 2014)
- NENA web site: www.nena.org

SAM Contract

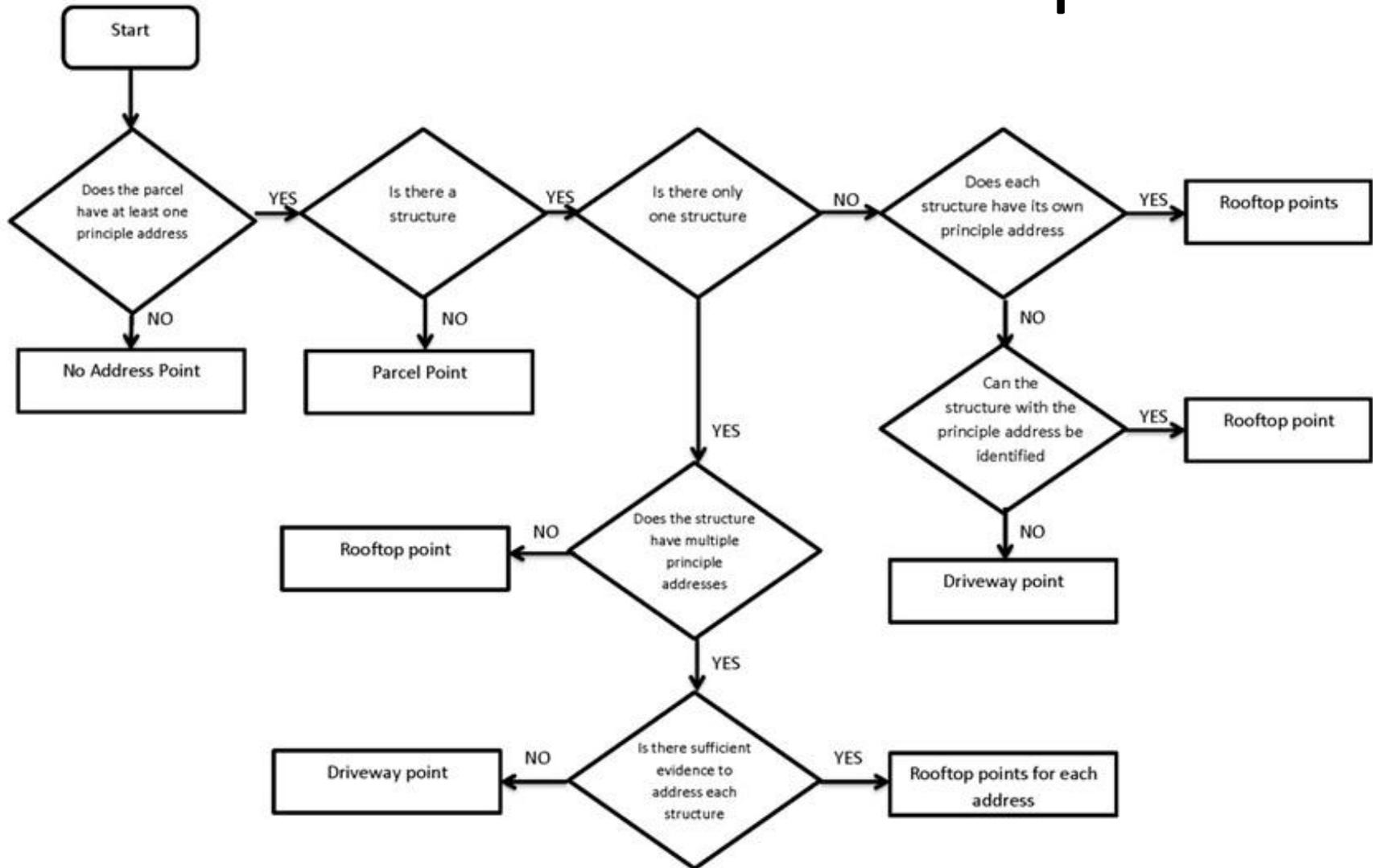
- Intrado/GDR team selected
- Kickoff meeting March 18, 2013
- Funds expire September 30, 2014
- Deliverable schedule by county
 - Projected total of 5 million principal address points
 - Schedule order is flexible
- Intrado/GDR providing available subaddresses
- **\$2 million investment in core 9-1-1 GIS data**

 intrado®

 **GDR**
GIS Data Resources, Inc.



Point Placement Examples



Residential House with Multiple Buildings Moved to Rooftop



In this example, there are multiple buildings within a single parcel but only one parcel centroid address point. Since there is only a point for the main structure within the parcel and no additional point for the barn, the centroid point gets moved to the rooftop of the house.

Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
4533	HURST RD	ALTAMONT	NY	12009

Albany County Tax Parcel Data			
SBL	PROP_CLASS	LOC_NUM	LOC_NAME
3800000030200010000	210	4533	Hurst Rd

Driveway Entrance Points to Rooftop Points



In this example, the driveway entrance address points along Frisbee Hill Road have been moved to the rooftop of the principle structure within the parcel.

Source Data

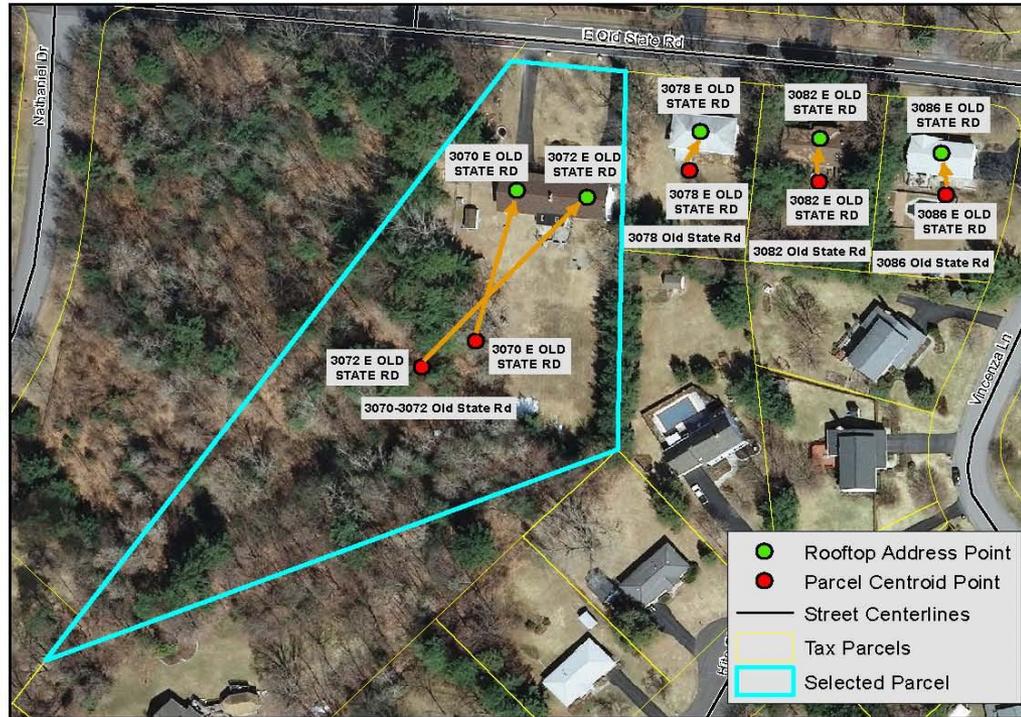
Monroe County Address Points					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26280003301000020330000000	346	Frisbee Hill Road	210	1 Family Res	
26280003301000020320000000	336	Frisbee Hill Road	210	1 Family Res	
26280003301000020310000000	330	Frisbee Hill Road	210	1 Family Res	
26280003301000020300000000	324	Frisbee Hill Road	210	1 Family Res	
26280003301000020290000000	318	Frisbee Hill Road	210	1 Family Res	

Monroe County Tax Parcel Data					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26280003301000020330000000	346	Frisbee Hill Road	210	1 Family Res	
26280003301000020320000000	336	Frisbee Hill Road	210	1 Family Res	
26280003301000020310000000	330	Frisbee Hill Road	210	1 Family Res	
26280003301000020300000000	324	Frisbee Hill Road	210	1 Family Res	
26280003301000020290000000	318	Frisbee Hill Road	210	1 Family Res	

Map created by NYS OCS, July 11, 2012



Single Parcel with Multiple Points Moved to Rooftop



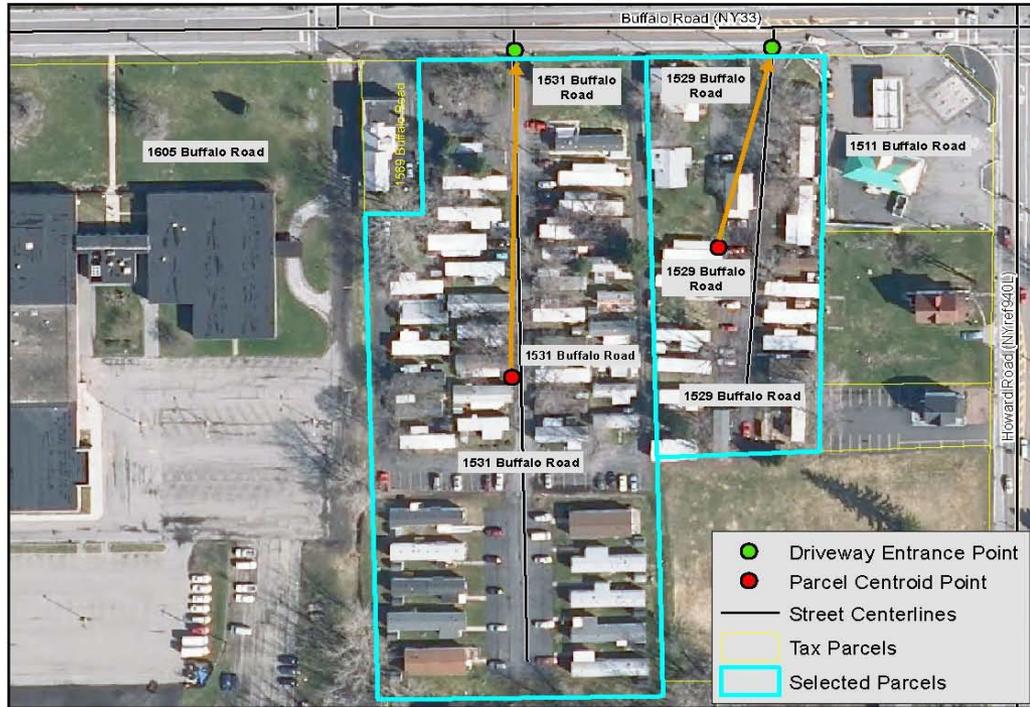
In this example, the Duplex in the selected parcel has 2 principle addresses in the same parcel and requires 2 points. Since the address numbers are increasing to the right, the lower numbered point was placed on the left of the roof and the higher numbered point was placed on the right of the roof. Since the three parcels to the right only have one building per parcel, the addresses were matched between the centroid points and parcels and points were moved to the rooftop.

Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
3070	OLD STATE RD	SCHENECTADY	NY	12303
3072	OLD STATE RD	SCHENECTADY	NY	12303

Albany County Tax Parcel Data				
SBL	LOC_NUM	LOC_NAME	PROP_CLASS	
02701900020370000000	3070-3072	Old State Rd	220	

Mobile Home Park with Single Point Moved to Driveway Entrance



In this example, there were only parcel centroid address points for these two mobile home communities. There were no addresses or points for the individual mobile homes in the data. Since there is no principle building within these two mobile home communities, the centroid points were moved to the driveway entrance.

Source Data

Monroe County Address Points				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26260011910000030530000000	1531	Buffalo Rd	416	Mfg Housing Pk
26260011910000030540000000	1529	Buffalo Rd	416	Mfg Housing Pk

Monroe County Tax Parcel Data				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26260011910000030530000000	1531	Buffalo Rd	416	Mfg Housing Pk
26260011910000030540000000	1529	Buffalo Rd	416	Mfg Housing Pk



Multiple Building Mall Plaza with Parcel Centroid Point Moved to Driveway



In this example, the plaza is made up of multiple buildings and there is only one address for the whole strip mall. The parcel centroid is moved to the driveway entrance since there is not one principle structure within the parcel or subaddress information for each of the stores within the strip mall.

Source Data

NYS Address Points				
ADD_NUM	STREETNAME	CITY	STATE	POSTAL
1475	WESTERN AVE	ALBANY	NY	12203

Albany County Tax Parcel Data		
SBL	LOC_NUM	LOC_NAME
05200400020080000000	1475	Western Ave



Delivery Acceptance

- County-wide review of:
 - Schema compliance
 - Domain values
- ANSI statistical sample
 - Random selection of points to be reviewed
 - Validate positional accuracy
 - Validate attribute accuracy
 - Tightened inspectional only allows 18 errors
- Acceptance/rejection required within 10 days of delivery
- ***Approximately one County delivered every 5-7 days***

Post Data Build

- ITS tasks:
 - ✓ Error corrections
 - ✓ Post processing
 - ✓ Build new geocoding locators
 - ✓ Review Exception file and error flags
 - ✓ Data distribution
 - [County address data flow discussions](#)
 - Train Counties to use data maintenance tool
- County Tasks:
 - Spatially Invalid file and Exception file review
 - Submit edits via data maintenance tool or other agreed upon edit submission process
 - Review proposed street and address edits from ITS

Files Provided to Counties



Address Points Deliverable

(symbolized by Point Type)



Address Points Deliverable

(symbolized by Point Type)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Spatially Invalid Address Points (addresses geocode only to street centerlines)



Exception Report

(addresses do not geocode to parcels or centerlines)

	A	B	C	D
1	ADDRESS	SOURCE	REASON	EXCEPTION_FLAG
29	7036 Third Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
30	81 Willard Dtc Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
31	8405 Bassett Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
32	8453 A 7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
33	8453 A-20 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
34	8453 A21 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
35	8453 D-7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
36	8565 Mann Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
37	8588 # 1 Farris Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
38	8897 Arden Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
39	9224 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
40	9248 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
41	9922 County Line Camp Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
42	Foreign Exchange Trumansburg Territory	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
43	4400 Seybolt Rd Seneca Falls 13148	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
44	6150 State Route 96 Romulus 14541	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
45	68 Elizabeth Blackwell St Geneva 14456	NAVTEQ	Address was successfully geocoded to NYS Centerlines, but could not be accurately located	Not Found
46	10435 Hatch Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
47	12135 Armitage Rd Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
48	146 Strang Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
49	1707 Beaujon Rd Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
50	20e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
51	21e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
52	2942 Knauss Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
53	3395 Us Route 20 Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
54	3996 County Road 153 Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
55	43 1/2 Center St Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
56	4902 Mcgrane Rd Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
57	5693 Colonels Dr Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG

GeoComm Tool

- Web based data maintenance tool
- No cost for counties and select state agencies to use
- Edit data directly
 - Editing limited by geographic footprint
 - Add, delete, or reposition address points
 - Edit attributes on address points and streets
 - Add, delete or realign streets*
- Notification only option
 - Provide information/attachments for needed changes
 - Edits outside of your geographic footprint

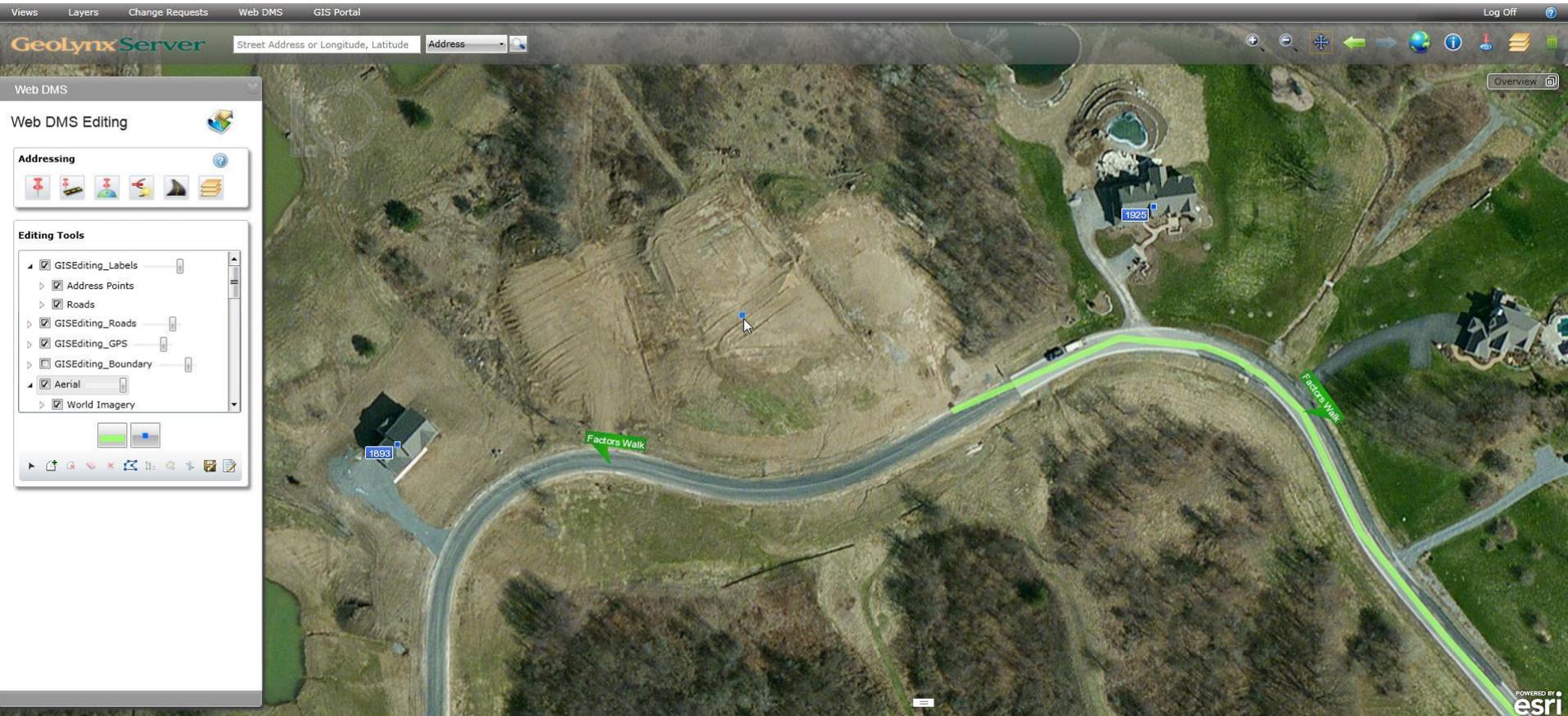
Add/Extend a Street

The screenshot displays the Geolynx Server web application interface. At the top, there is a navigation bar with links for 'Views', 'Layers', 'Change Requests', 'Web DMS', and 'GIS Portal', along with a 'Log Off' button. Below this is a search bar labeled 'Street Address or Longitude, Latitude'. The main area is an aerial map showing a residential area with a street highlighted in bright green. The map includes various address points labeled with numbers like 1825, 1931, 1937, 1941, 1945, 1947, 1881, 1879, 784, 1852, 1849, 1880, 1893, 1870, 1868, 1858, 1854, 1853, 1852, 1851, 1850, 1849, 1848, 1847, 1846, 1845, 1844, 1843, 1842, 1841, 1840, 1839, 1838, 1837, 1836, 1835, 1834, 1833, 1832, 1831, 1830, 1829, 1828, 1827, 1826, 1825, 1824, 1823, 1822, 1821, 1820, 1819, 1818, 1817, 1816, 1815, 1814, 1813, 1812, 1811, 1810, 1809, 1808, 1807, 1806, 1805, 1804, 1803, 1802, 1801, 1800. A sidebar on the left is titled 'Web DMS' and contains 'Web DMS Editing' tools. The 'Addressing' section includes icons for pin, add, delete, and other functions. The 'Editing Tools' section has checkboxes for 'GISEditing_Labels', 'Address Points', 'Roads', 'GISEditing_Roads', 'GISEditing_GPS', 'GISEditing_Boundary', 'Aerial', and 'World Imagery'. The map also shows 'State Route 64', 'Farmers Walk', and 'Unnamed Street'.

Add/Edit Street Attributes

The screenshot displays the Geolynx Server GIS interface. At the top, navigation tabs include Views, Layers, Change Requests, Web DMS, and GIS Portal. A search bar for 'Street Address or Longitude, Latitude' is visible. The main map area shows an aerial view with a cyan street boundary and a green street line. A 'Web DMS Editing' sidebar on the left contains 'Addressing' tools and 'Editing Tools' such as GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, and World Imagery. An 'Attributes' dialog box is open, showing fields for 'LeftFromAddress', 'LeftToAddress', 'RightFromAddress', 'RightToAddress', 'CompleteStreetName' (set to 'Factors Walk'), 'PreModifier', 'PreDirectional', 'PreType', 'SeparatorElement', 'StreetName', and 'PostType'. 'Update' and 'Delete' buttons are at the bottom of the dialog. The top right corner features a 'Log Off' button and an 'Overview' map.

Add an Address Point



Add Address Point Attributes

The screenshot displays the GeolynxServer GIS interface. At the top, navigation links include Views, Layers, Change Requests, Web DMS, GIS Portal, and Log Off. The main header shows 'GeolynxServer' and a search bar with 'Street Address or Longitude, Latitude' and 'Address' as input. On the left, the 'Web DMS Editing' sidebar contains 'Addressing' tools (pin, delete, add, edit, undo, redo) and 'Editing Tools' (GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, World Imagery). The central 'Attributes' dialog box is open, showing the following fields: PrefixAddressNumber (empty), AddressNumber (1899), SuffixAddressNumber (dropdown), PreModifier (empty), PreDirectional (dropdown), PreType (dropdown), SeparatorElement (dropdown), StreetName (Factors Walk), PostType (dropdown), PostDirectional (dropdown), PostModifier (empty), and SuffixAddress (empty). 'Update' and 'Delete' buttons are at the bottom of the dialog. The background is an aerial map of a residential area with a road labeled 'Factors Walk' highlighted in green. Address points are marked with blue labels: 1893, 1899, and 1826. An 'Overview' button is in the top right corner. The bottom right corner features the 'POWERED BY esri' logo.

Reposition an Address Point

The screenshot displays the GeolynxServer web application interface. At the top, there are navigation tabs for Views, Layers, Change Requests, Web DMS, and GIS Portal. A search bar labeled 'Street Address or Longitude, Latitude' contains the text 'Address'. The main map area shows an aerial view of a residential area with a road highlighted in green. Several address points are visible, with labels like '1925', '1931', and '1937'. A red box highlights the 'Parcel Centroid' option in the 'PointType' dropdown menu of the 'Attributes' dialog box. The 'Attributes' dialog box contains the following fields:

ZipName	Ionia
State	New York
ZipCode	14475
PointType	Parcel Centroid
AddressSource	County Building Footprint
SourceOfData	
DateUpdated	9/10/2013 7:00:00 PM
PrimaryPoint	Yes
CityTownName	West Bloomfield
PlaceName	
PlaceType	

Buttons for 'Update' and 'Delete' are located at the bottom of the dialog box. On the left side, there is a 'Web DMS Editing' panel with 'Addressing' and 'Editing Tools' sections. The 'Addressing' section includes icons for various address-related functions. The 'Editing Tools' section includes checkboxes for GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, and World Imagery.

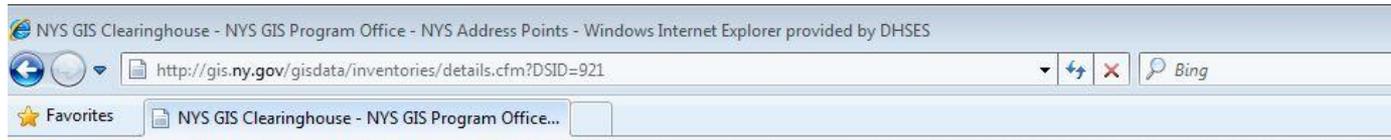
Change PointType Attribute

The screenshot displays the GeolynxServer GIS interface. At the top, there are navigation tabs: Views, Layers, Change Requests, Web DMS, and GIS Portal. A search bar contains the text "Street Address or Longitude, Latitude" and "Address". The main map area shows an aerial view of a residential area with a road labeled "Fascosa Walk" highlighted in green. Several address points are visible, including 1925, 1931, and 1937. On the left, the "Web DMS Editing" panel is open, showing "Addressing" tools and "Editing Tools" with a list of checked options: GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, and World Imagery. On the right, the "Attributes" dialog box is open, displaying the following data:

ZipName	Ionia
State	New York
ZipCode	14475
PointType	Rooftop
AddressSource	County Building Footprint
SourceOfData	
DateUpdated	9/10/2013 7:00:00 PM
PrimaryPoint	Yes
CityTownName	West Bloomfield
PlaceName	
PlaceType	

The "PointType" dropdown menu is highlighted with a red box. At the bottom right of the map, there is a "POWERED BY esri" logo.

Accessing SAM Data



GIS Data Set Details

Data Set Name	Description	Theme	Metadata
NYS Address Points	Point files of addressed properties in New York State. Data is not complete statewide. Data is copyright protected.	Cadastral (tax parcels) Miscellaneous	n/a

Supporting Documentation

[Data Dictionary-Streets and Address Points \(Revised 01/14\)](#)

[Geocoding - ESRI Instructions](#)

A web service of the SAM Address Point file is available here:
<http://gisservices.dhSES.ny.gov/arcgis/rest/services>. The web service named SAM_Address_Points_Symbolized has different symbology for each of the 5 PointType values (see image). The web service named SAM_Address_Points has all points symbolized the same way. The SAM Address Point files are projected in Web Mercator (Auxiliary Sphere).

If the purpose of downloading the address points is for geocoding, NYS ITS has a publicly available geocoding service which includes the address points along with other layers. The geocoding service is named NYS_Points_Streets and can be found here:
<http://gisservices.dhSES.ny.gov/arcgis/rest/services>.

The NYS Address Point File is changing! Please see the [SAM project](#) about future updates to the statewide address point file.

Address Point Type

- Rooftop
- Primary Structure Entrance
- Driveway Entrance
- Parcel Centroid
- Miscellaneous

Files available to the Public

Files	Download	Metadata
Address Points - SAM	GEODATABASE SHAPE	Metadata Metadata

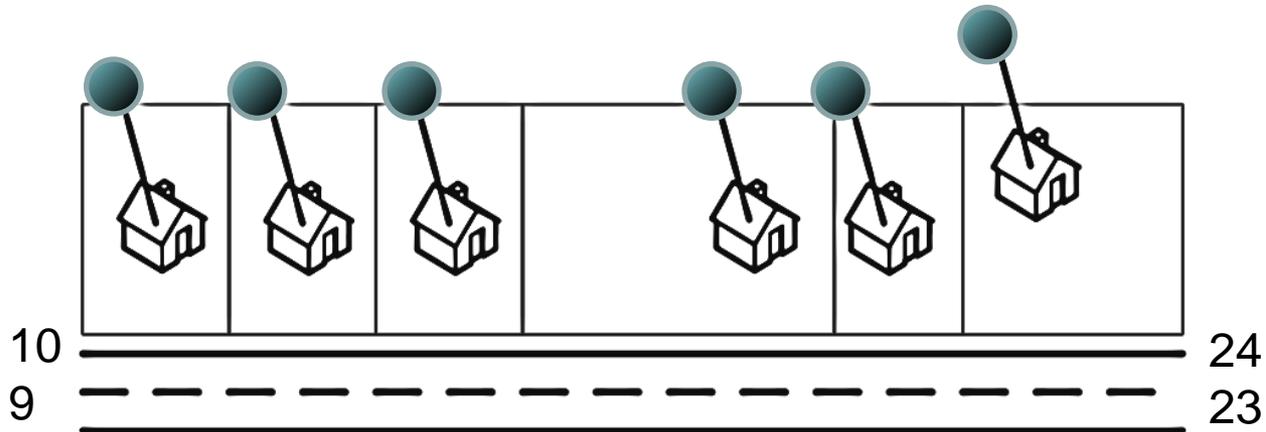
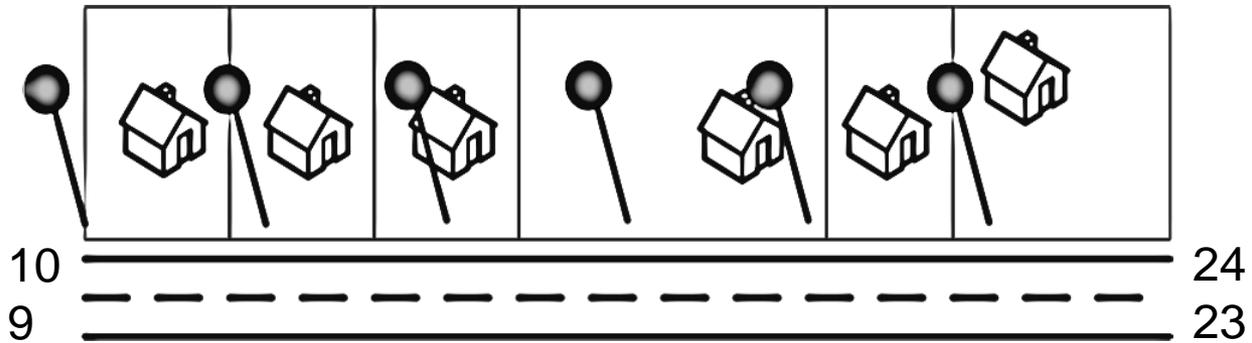
<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>

Geocoding and SAM



Geocoding Basics

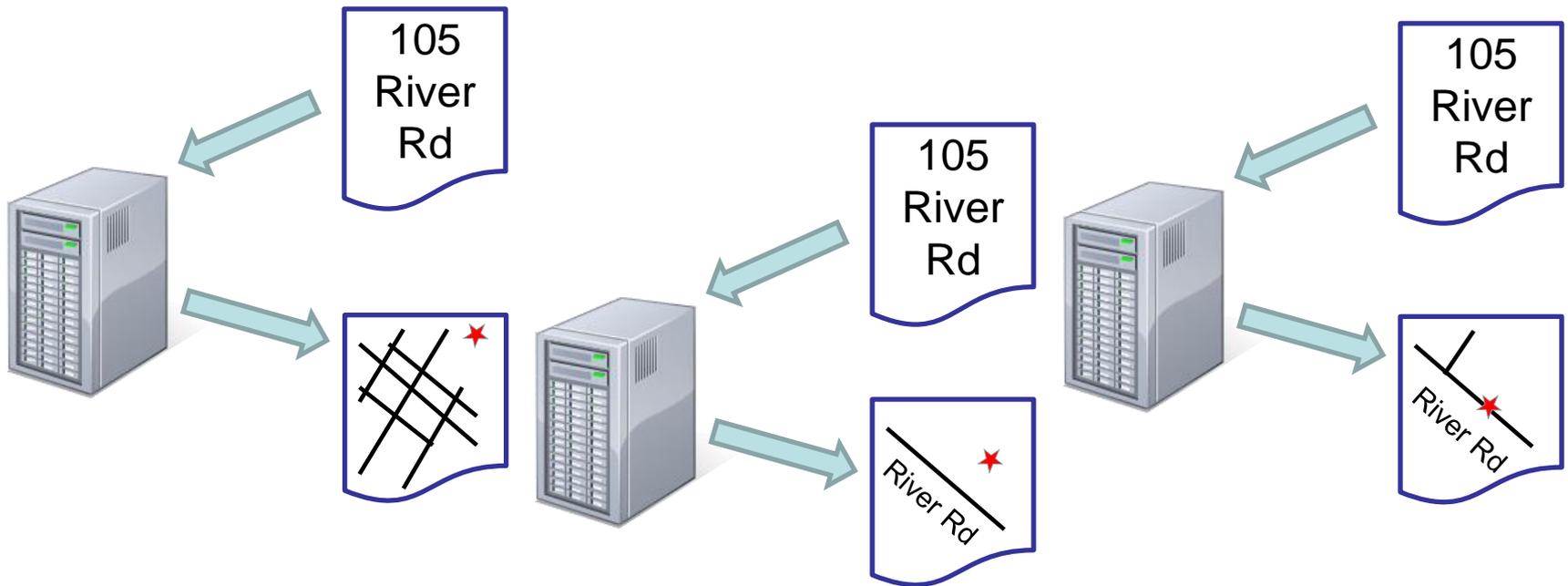
Address matching vs. interpolation



Past Geocoding

Identical input addresses yield different results!

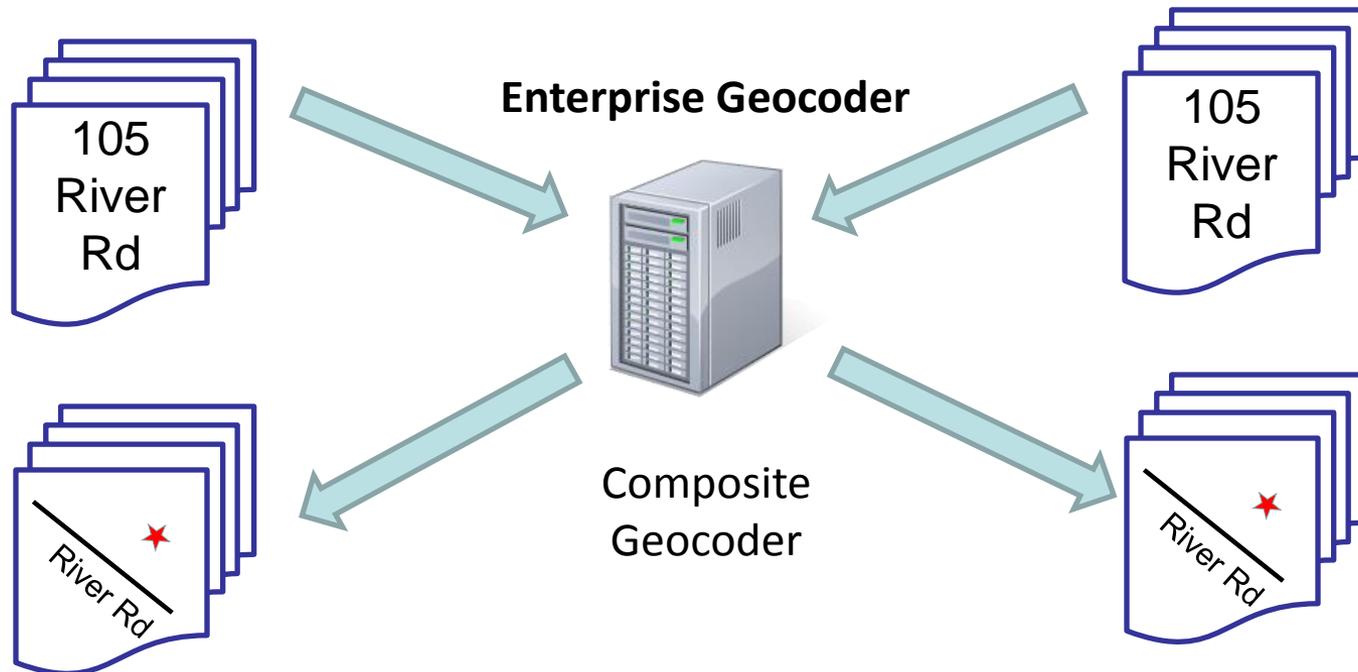
State & local agencies currently use their own data for geocoding, yielding different results



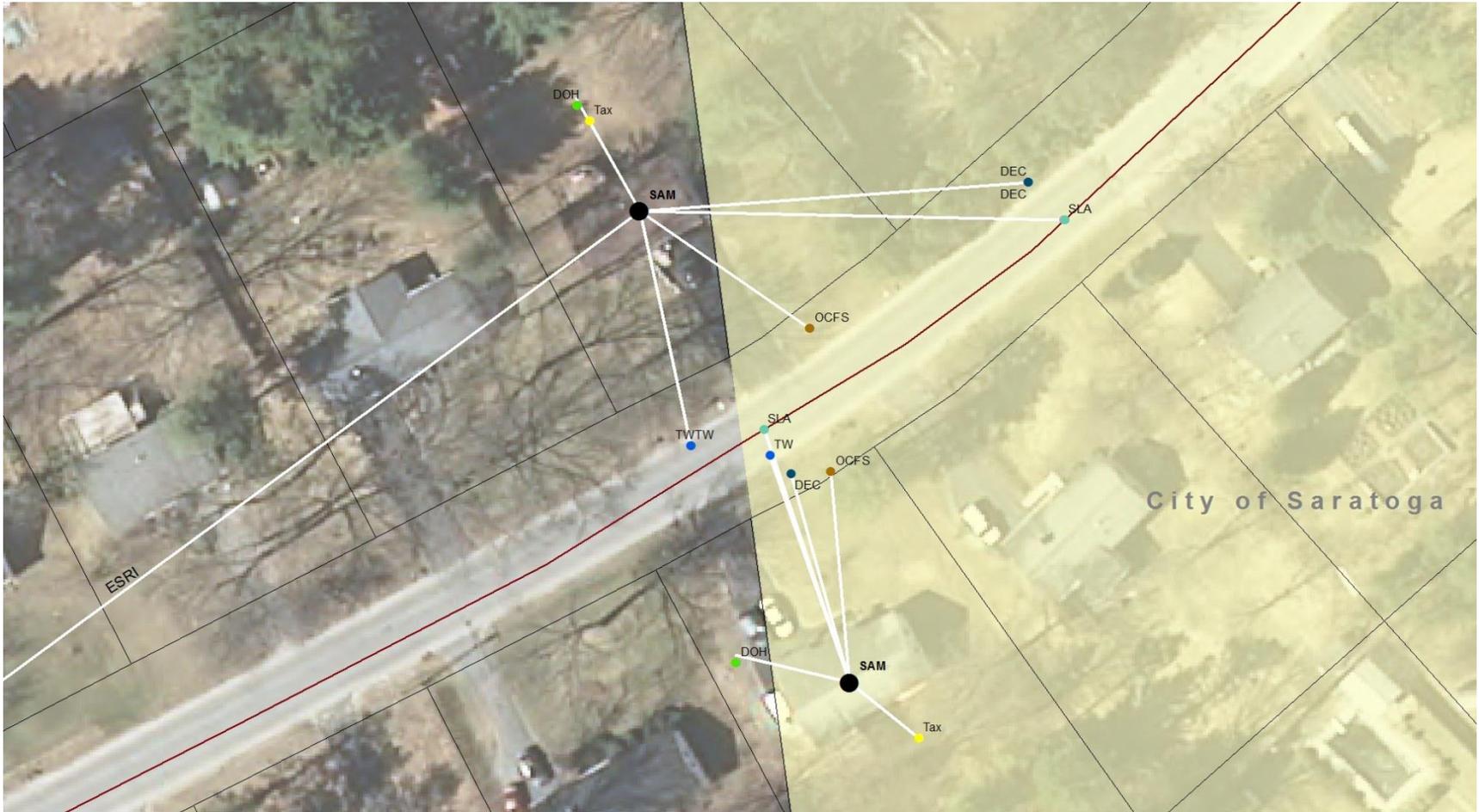
Present Geocoding

Identical input addresses yield identical results

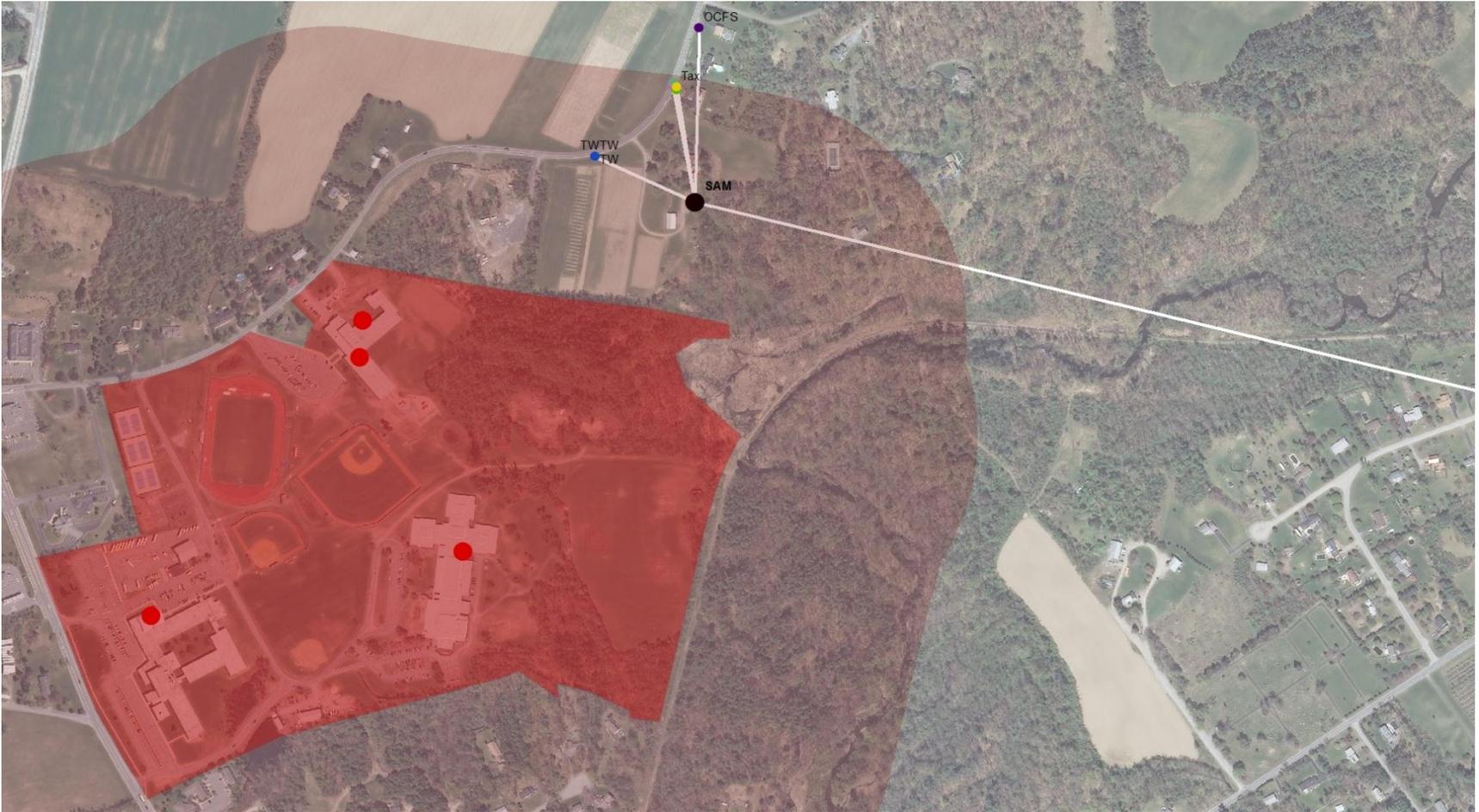
<http://gisservices.dhSES.ny.gov/arcgis/services>



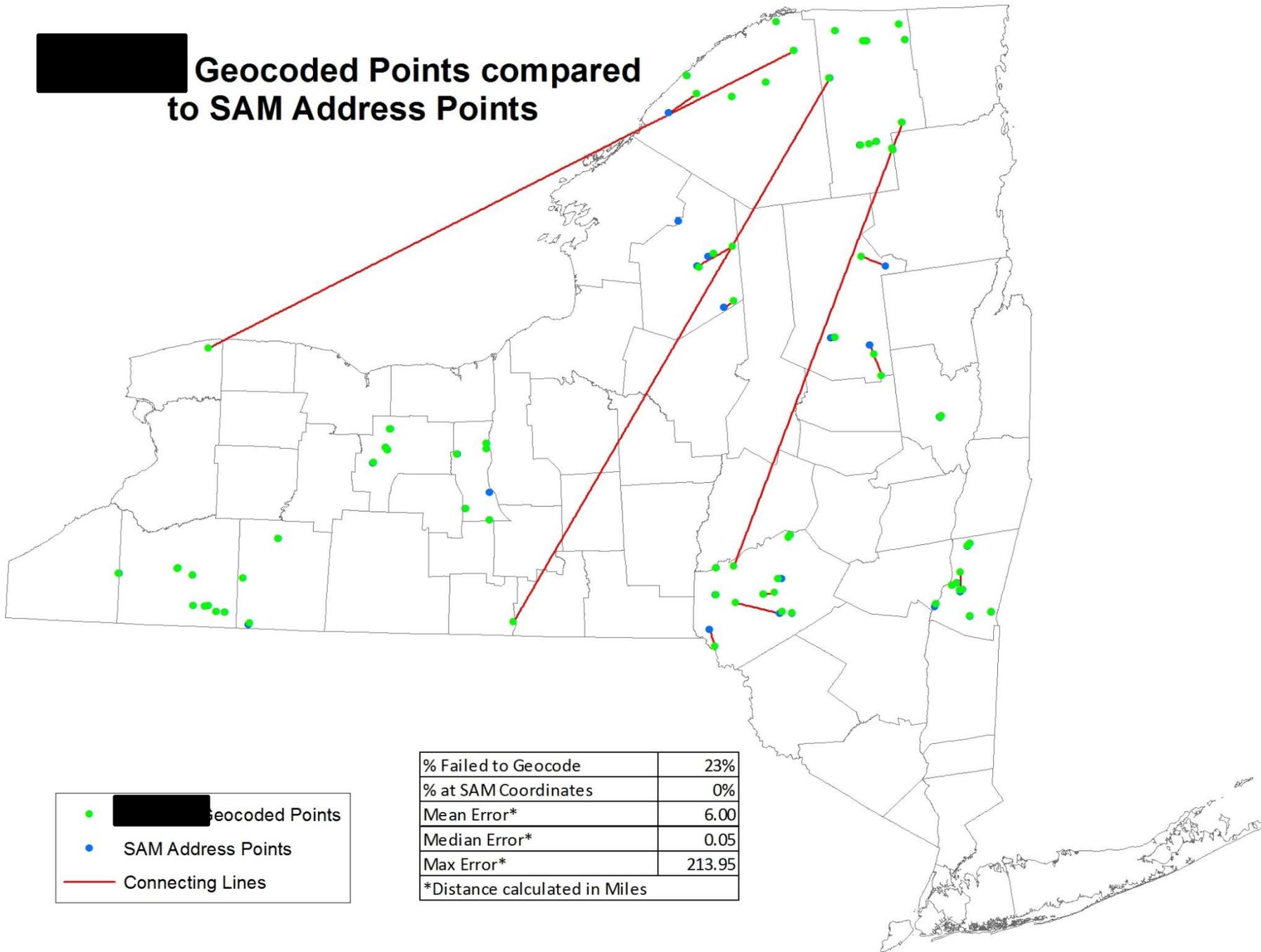
City of Saratoga



School Buffer

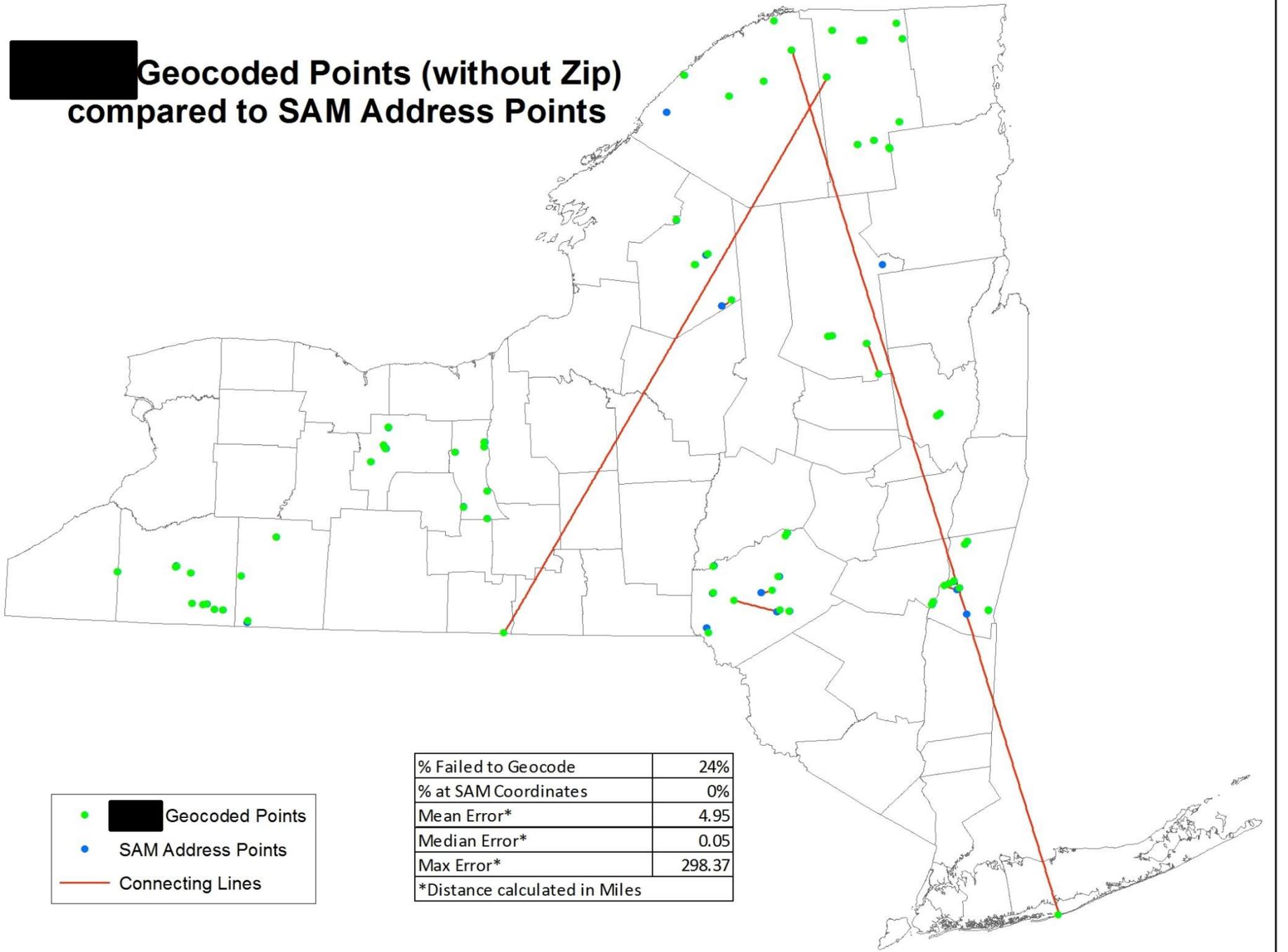


Geocoded Points compared to SAM Address Points



- Geocoded Points
- SAM Address Points
- Connecting Lines

Geocoded Points (without Zip) compared to SAM Address Points



- Geocoded Points
- SAM Address Points
- Connecting Lines

% Failed to Geocode	24%
% at SAM Coordinates	0%
Mean Error*	4.95
Median Error*	0.05
Max Error*	298.37
*Distance calculated in Miles	

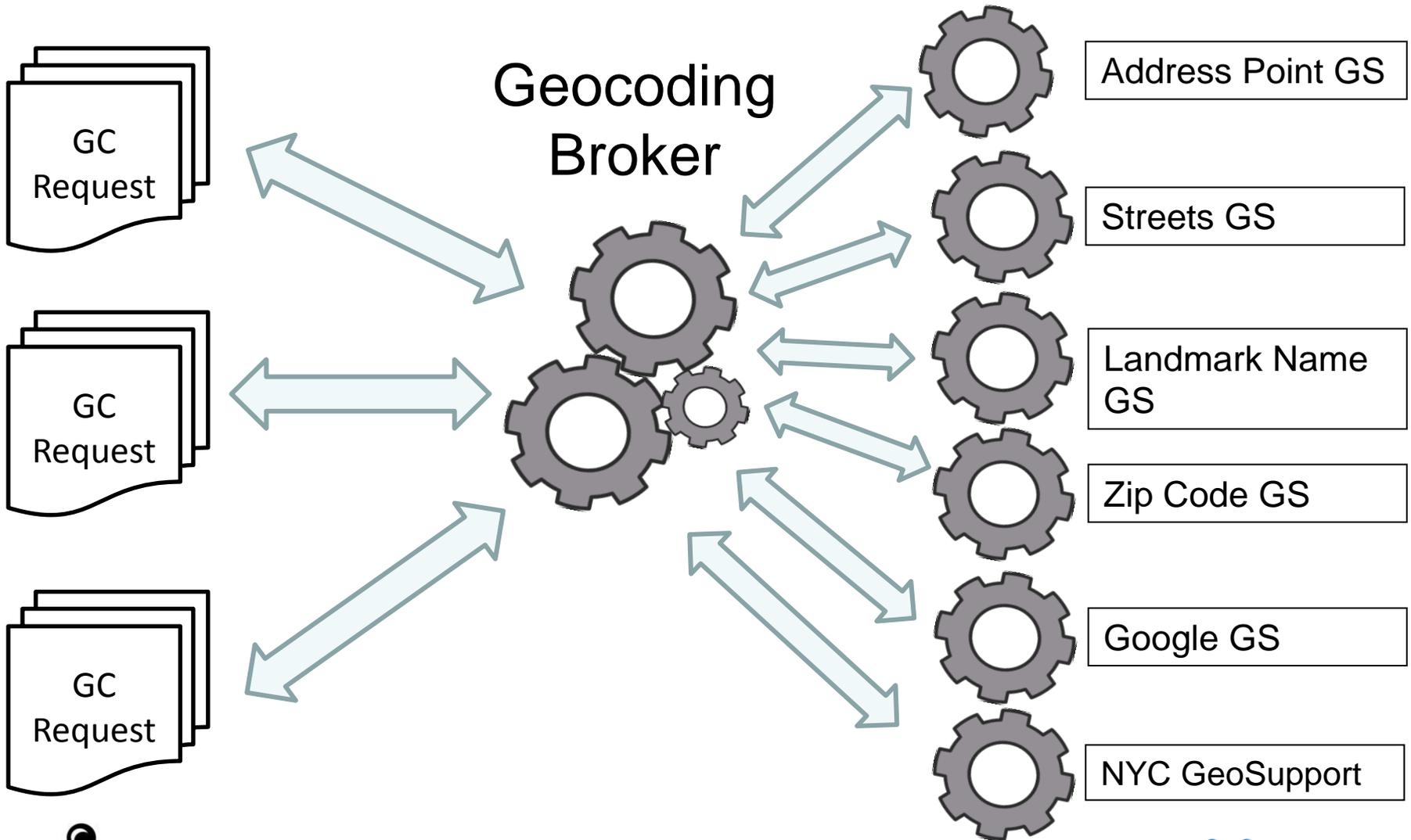
Present Geocoding

- Cascading – 2 Composite Locators created for more hits
- Intended to run through 1 then 2
- Locator 1:
 - SAM Address Points
 - NYS Address Points – *zipname* for city
 - Street Centerlines – *zipname* for city
- Locator 2:
 - NYS Address Points – *citytown* and *placename*
 - Street Centerlines – *citytown* and *placename*
 - Streets with no address range – *zipname*, *citytown*, *placename*
 - Placename
 - Zipcodes
- Duplicate data removed from lower tier locators
- Currently searches through all locators even if you get an address point match (match [Addresscandidate](#) function only available in Desktop, [AddresscandidateS](#) must be used in 10.2 server)

Present Geocoding

- Performance – 80% hit on initial geocoder
- About 500K addresses/hr
- Locator 1 is faster than Locator2 – generally faster to geocode against points than lines
- Locator 2 produces more ties

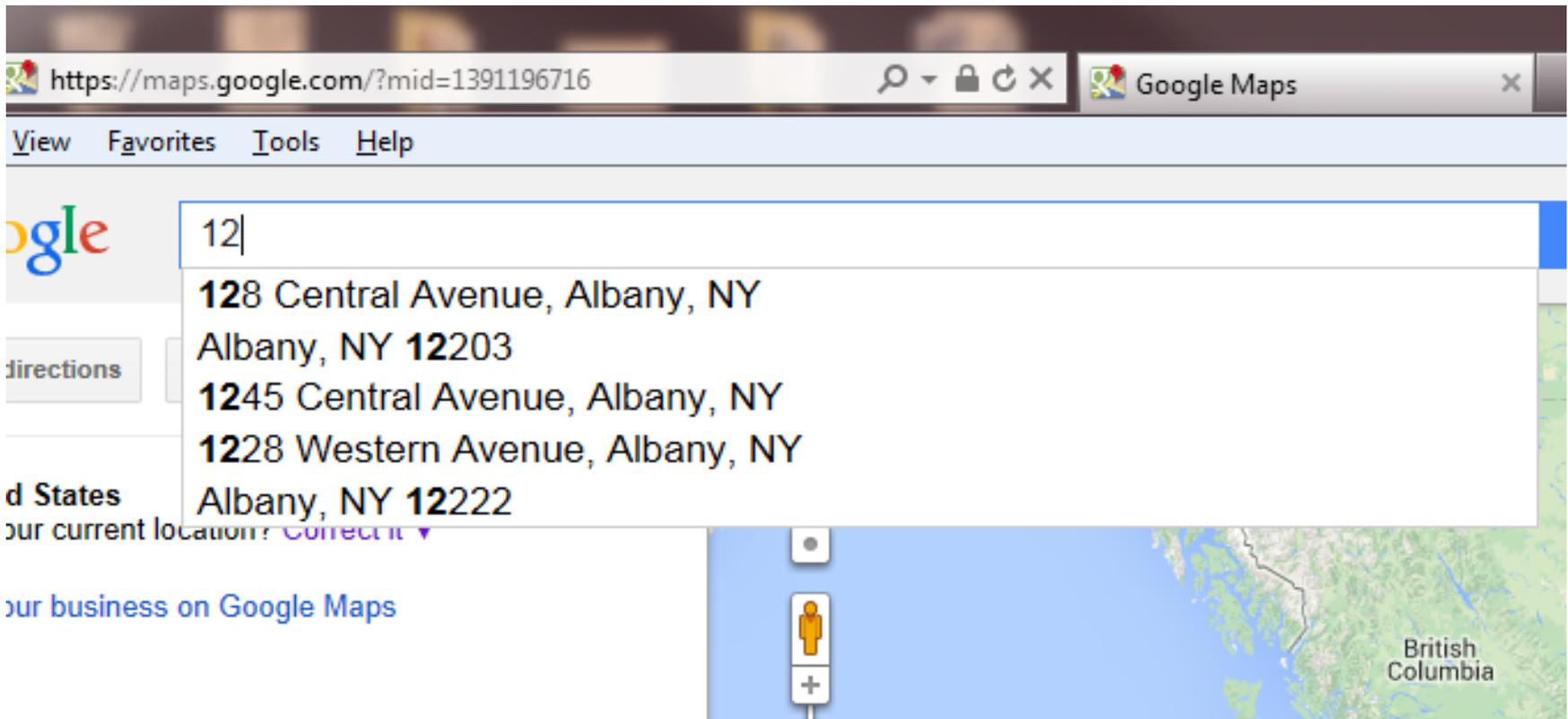
Future Geocoding



Geocoding Broker

- Broker has intelligence to send addresses to the right service
- If it gets a hit it stops
- If it doesn't match to Address Point, request is logged for follow up
- By using the SAM Address Points and streets every day, they are improved for Emergency Response

When should addresses be geocoded?



Thank you!

SAM Project Web Page:

<http://www.dhSES.ny.gov/ocs/streets>

SAM Address Point Data:

<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>