

# **NYS 9-1-1 GIS Standards Workgroup Webinar**

*March 20, 2014*

# Agenda

1. NENA NG9-1-1 & GIS Training Class Survey
2. Parsing addresses using NENA's CLDXF standard
3. How to use the NYS ITS Geocoding service
4. Future webinar topics?
5. Upcoming webinar dates

# ***GIS Data Preparation for NG9-1-1***

- FREE NENA training (modest lunch fee)
- Class size is 40 people
- 5 regional locations
  - Monday, April 28 – Western New York
  - Tuesday, April 29 – Central New York
  - Wednesday, April 30 – Northern New York
  - Monday, June 2 – Capital District/Upper Hudson Valley
  - Tuesday, June 3 – Lower Hudson Valley/NYC/Long Island
- Suggested attendees
  - Maintainers of GIS Address files, MSAGs, and ESZ files
  - Those involved in address verification
- Upcoming survey
  - Willing to host?
  - What nearby counties are you able to send people to?
  - Number of attendees from each office that would attend

# Parsing Civic Addresses using NENA's CLDXF format

# Street Address Elements

## NENA CLDXF

Address Number Prefix

Address Number

Address Number Suffix

Milepost

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

## FGDC

Address Number Prefix

Address Number

Address Number Suffix

Address Number Prefix/Address Number

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Separator Element

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

## PIDF-LO

HNP

HNO

HNS

MP

PRM

PRD

STP

STPS

RD

STS

POD

POM

# Address Number Prefix

- 123 Main Street
- 119 ½ Oakwood Avenue
- 52B Limerick Drive
- **112**-34 Rockaway Beach Boulevard
- **17-06** Murray Street
- **111**-16 ½ 43<sup>rd</sup> Avenue

# Address Number

- **123** Main Street
- **119** ½ Oakwood Avenue
- **52B** Limerick Drive
- 112-**34** Rockaway Beach Boulevard
- 17-**06** Murray Street
- 111-**16** ½ 43<sup>rd</sup> Avenue

# Address Number Suffix

- 123 Main Street
- 119  $\frac{1}{2}$  Oakwood Avenue
- 52**B** Limerick Drive
- 112-34 Rockaway Beach Boulevard
- 17-06 Murray Street
- 111-16  $\frac{1}{2}$  43<sup>rd</sup> Avenue

# Milepost\*

- **Milepost 252** State Route 9
- **Milepost 34.4** Interstate 90
- **Mile Marker 12** County Route 121
- **Station 122** Appalachian National Trail

*\*In the FGDC standard:*

| <b>Address Number Prefix</b> | <b>Address Number</b> |
|------------------------------|-----------------------|
| Milepost                     | 34.4                  |
| Mile Marker                  | 12                    |
| Station                      | 122                   |

# Street Name Pre Modifier

- **Old** North First Street
- **Alternate** North Avenue B
- **Old** China Spring Road
- **The** Oaks Drive
- **Northwest** East 14th Street
- **Bypass** North Highway 22
- Bypass Highway 22

# Street Name Pre Directional

- **North** Main Street
- **Southwest** North Street
- **East** 400 South
- Bypass **North** Highway 22
- North Avenue (“North” is the Street Name)
- South Carolina Avenue (“South” is part of the Street Name if referring to the state)

# Street Name Pre Type

- **Avenue** A
- **Avenue** of the Americas
- **Avenue** at Port Imperial
- **Alameda** de las Pulgas
- **Rue** d'Armour
- **Avenue** C Loop
- **New York Route** 43
- Old **County Road** 14A
- **Bypass Highway** 22

# Street Name Pre Type Separator

- Avenue **of the** Americas
- Alameda **de las** Pulgas
- Rue **des** Etoiles
- Circle **in the** Woods
- Loop **at the** Park

# Street Name

- **Main** Street
- **MacIntyre** Drive
- **Third** Avenue
- **3rd** Avenue
- Avenue of the **Americas**
- East **400** South
- Old County Road **14A**
- **Clarence D Lane** Road (“Lane” is a family name)

# Street Name Post Type

- Main **Street**
- Boston-Providence **Turnpike**
- Third **Avenue**
- 3rd **Avenue** Extended
- Avenue C **Loop**
- Genesee **Street Road**
- Genesee Street **Road\*** (a continuation of existing Genesee St)
- Lee **Highway** Access Road

*\* As in SAM Address Points for consistent parsing*

# Street Name Post Directional

- Cherry Street **North**
- North Avenue **SouthWest**
- East 400 **South**
- Yorktown Road **East** Extension

# Street Post Modifier

- East End Avenue **Extended**
- Banner Fork Road **Number 1**
- Horizon Lane West **Southeast**
- Yorktown Road East **Extension**
- Lee Highway **Access Road**
- Interstate Highway 90 **westbound**

# Can you stump us?

*\*\*Please note that the NENA CLDXF Standard was not finalized when the SAM Address Points build began. Decisions in regards to unique parsing situations were made by reviewing the FGDC Address Standard and the draft NENA CLDXF Standard as well as considering the capabilities of geocoding software at that time. Potential discrepancies with CLDXF are noted in the examples.*



# 1 Folly Farm Fields Road

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 1 Folly Farm Fields Road

Address Number Prefix

Address Number 1

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name Folly Farm Fields

Street Name Post Type Road

Street Name Post Directional

Street Name Post Modifier

*\* As in SAM Address Points for consistent parsing*

# 43 Seven Wells Brook Road

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 43 Seven Wells Brook Road

Address Number Prefix

Address Number

**43**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

**Seven Wells Brook  
Road**

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

*\* As in SAM Address Points for consistent parsing*

# 17A North Union Street

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 17A North Union Street

|                                |               |
|--------------------------------|---------------|
| Address Number Prefix          |               |
| Address Number                 | <b>17</b>     |
| Address Number Suffix          | <b>A</b>      |
| Street Name Pre Modifier       |               |
| Street Name Pre Directional    | <b>North</b>  |
| Street Name Pre Type           |               |
| Street Name Pre Type Separator |               |
| Street Name                    | <b>Union</b>  |
| Street Name Post Type          | <b>Street</b> |
| Street Name Post Directional   |               |
| Street Name Post Modifier      |               |

# 17A North Union Street

Address Number Prefix

Address Number **17**

Address Number Suffix **A**

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **North Union\***

Street Name Post Type **Street**

Street Name Post Directional

Street Name Post Modifier

*\*When North Union is a place name (requires local knowledge)*

# 120 West 45 Street

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 120 West 45 Street

Address Number Prefix

Address Number **120**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional **West**

Street Name Pre Type

Street Name Pre Type Separator

Street Name **45**

Street Name Post Type **Street**

Street Name Post Directional

Street Name Post Modifier

# 10 Lake Road East Fork 1

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 10 Lake Road East Fork 1

Address Number Prefix

Address Number **10**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Lake**

Street Name Post Type **Road**

Street Name Post Directional **East**

Street Name Post Modifier **Fork 1**

# 23 Private Drive A

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 23 Private Drive A

|                                |                |
|--------------------------------|----------------|
| Address Number Prefix          |                |
| Address Number                 | <b>23</b>      |
| Address Number Suffix          |                |
| Street Name Pre Modifier       | <b>Private</b> |
| Street Name Pre Directional    |                |
| Street Name Pre Type           | <b>Drive</b>   |
| Street Name Pre Type Separator |                |
| Street Name                    | <b>A</b>       |
| Street Name Post Type          |                |
| Street Name Post Directional   |                |
| Street Name Post Modifier      |                |

*\*As in SAM Address Points for consistent parsing (not clear in CLDXF)*

# 6 Old State Road B

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 6 Old State Road B

Address Number Prefix

Address Number **6**

Address Number Suffix

Street Name Pre Modifier **Old**

Street Name Pre Directional

Street Name Pre Type **State Road**

Street Name Pre Type Separator

Street Name **B**

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 13 Top O' The Hill Road

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 13 Top O' The Hill Road

Address Number Prefix

Address Number 13

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Top O The Hill**

Street Name Post Type **Road**

Street Name Post Directional

Street Name Post Modifier

*\*SAM Address Points limit punctuation to hyphens (not clear in CLDXF)*

# 1500 Robert Moses Causeway Drive

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 1500 Robert Moses Causeway Drive

Address Number Prefix

Address Number **1500**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Robert Moses Causeway**

Street Name Post Type **Drive**

Street Name Post Directional

Street Name Post Modifier

*\* As in SAM Address Points for consistent parsing*

# 236 The Crossing

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 236 The Crossing

Address Number Prefix

Address Number **236**

Address Number Suffix

Street Name Pre Modifier **The**

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Crossing**

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 123 West Bluff

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 123 West Bluff

Address Number Prefix

Address Number

**123**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

**West**

Street Name Post Type

**Bluff**

Street Name Post Directional

Street Name Post Modifier

# 1 East Gate

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 1 East Gate

Address Number Prefix

Address Number **1**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **East**

Street Name Post Type **Gate**

Street Name Post Directional

Street Name Post Modifier

# 29 North Plaza

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 29 North Plaza

Address Number Prefix

Address Number **29**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **North**

Street Name Post Type **Plaza**

Street Name Post Directional

Street Name Post Modifier

# 4930 Big Vista Drive

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 4930 Big Vista Drive

Address Number Prefix

Address Number **4930**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Big Vista**

Street Name Post Type **Drive**

Street Name Post Directional

Street Name Post Modifier

# 4930 Big Vista Drive

Address Number Prefix

Address Number **4930**

Address Number Suffix

Street Name Pre Modifier **Big\***

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name **Vista**

Street Name Post Type **Drive**

Street Name Post Directional

Street Name Post Modifier

*\*When there is a Vista Drive or Little Vista Drive nearby*

# 123 Villa At The Woods

Address Number Prefix

Address Number

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

# 123 Villa At The Woods

Address Number Prefix

Address Number

**123**

Address Number Suffix

Street Name Pre Modifier

Street Name Pre Directional

Street Name Pre Type

Street Name Pre Type Separator

Street Name

**Villa at the Woods**

Street Name Post Type

Street Name Post Directional

Street Name Post Modifier

*\* Villa is not a Street Type (it is referring to a building)*

# Subaddress Elements

## NENA CLDXF

*Building*

*Floor*

*Unit*

*Room*

*Seat*

*Additional Location Information*

## PIDF-LO

BLD

FLR

UNIT

ROOM

SEAT

LOC

## FGDC

*Subaddress Type*: Building, Wing, Floor, Room, Apartment, Suite

*Subaddress Identifier*: 4, Zero, 2D, Mezzanine, Penthouse, Basement

# Subaddress Element Definitions

- **Building** – One among a group of buildings that have the same address number and complete street name
- **Floor** – A floor, story, or level within a building
- **Unit** – A group or suite of rooms within a building that are under common ownership or tenancy, typically having a primary entrance
- **Room** – A single room within a building
- **Seat** – A place where a person might sit in a building
- **Additional Location Information** – A part of a subaddress that is not a building, floor, unit, room or seat

# Subaddress Parsing Examples

## Building 7A, Floor 4

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Building 7A, Floor 4

Building

**Building 7A**

Floor

**Floor 4**

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Building C, Apartment 206

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Building C, Apartment 206

Building

**Building C**

Floor

Unit

**Apartment 206**

Room

Seat

Additional Location

Information

# Subaddress Parsing Examples

## Terminal 3, Concourse B

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Terminal 3, Concourse B

Building

Terminal 3

Floor

Unit

Room

Seat

Additional Location

Concourse B

Information

# Subaddress Parsing Examples

## Empire State Building, 86<sup>th</sup> Floor

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Empire State Building, 86<sup>th</sup> Floor

Building

Floor

**86<sup>th</sup> Floor**

Unit

Room

Seat

Additional Location

Information

*\*Building names are placed in the Landmark element*

# Subaddress Parsing Examples

## Tower B, Penthouse

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Tower B, Penthouse

Building

**Tower B**

Floor

Unit

**Penthouse**

Room

Seat

Additional Location

Information

# Subaddress Parsing Examples

## Mezzanine, Room 450F

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Mezzanine, Room 450F

Building

Floor

Unit

Room

Seat

Additional Location  
Information

**Mezzanine**

**Room 450F**

# Subaddress Parsing Examples

## Lot 28

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

**Lot 28**

Building

**Lot 28**

Floor

Unit

Room

Seat

Additional Location

Information

*\* As in SAM Address Points for consistent parsing (not clear in CLDXF)*

# Subaddress Parsing Examples

## Lobby, Registration Desk

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Lobby, Registration Desk

Building

Floor

Unit

Room

Seat

Additional Location  
Information

**Lobby**

**Registration Desk**

# Subaddress Parsing Examples

## Basement

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Basement

Building

Floor

Unit

Room

Seat

Additional Location

Information

**Basement\***

*\*When Basement represents a Floor (a level within a building)*

# Subaddress Parsing Examples

## Basement

Building

Floor

Unit

**Basement\***

Room

Seat

Additional Location

Information

*\*When Basement represents a Unit (a collection of rooms)*

# Subaddress Parsing Examples

## Rear

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

**Rear**

Building

Floor

Unit

Room

Seat

Additional Location

Information

**Rear\***

*\*When Rear represents a Room (a single room) in a building*

# Subaddress Parsing Examples

## Rear

Building

Floor

Unit

Room

Seat

Additional Location

Information

**Rear\***

*\*As in SAM Address Points for consistent parsing (often more than a single Room)*

# Subaddress Parsing Examples

## Loading Dock

Building

Floor

Unit

Room

Seat

Additional Location  
Information

# Subaddress Parsing Examples

## Loading Dock

Building

Floor

Unit

Room

Seat

Additional Location  
Information

**Loading Dock**

# How to use the NYS ITS Geocoding Service



# Geocoding

- Software Version – At least ArcGIS 10.0
- URL:  
<http://gisservices.dhSES.ny.gov/arcgis/rest/services>
- Documentation available upon request
- Demo
  - Find Tool (single address geocoding)
  - Batch geocoding

# Next Workgroup Meeting

- Potential topics for future calls?
- When to have the next call?
  - April 17
  - June 26
- Discuss remaining 2014 dates:
  - July 17
  - August 21
  - September 18
  - November 20
  - December 18