



Virginia Information Technologies Agency

Address Points Data Standard Workgroup

9 Sept. 2016
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April Branton





Welcome and Introductions

Virginia Geographic Information Network meeting of the Address Points Data Standard work group committee.

VGIN leads:

- **April Branton: Geospatial Data Analyst**
- **Michael Vojta: Geospatial Data Analyst**
- **Dan Widner: VGIN Coordinator**



Agenda

1. Welcome and Introductions – roll call
2. Address Points Proposed Attributes changes
3. Comments on tentative Attribute Table
4. Introduction into Address Point placement (geometry)
5. Dates for next tele-meetings



Workgroup Tasks

Review and comment on Address Points attribution

Goal – support NG9-1-1 AS WELL AS geo-spatial geolocation functions.

- Will attribute changes needed to support NG9-1-1 and not “break” existing systems?
- Are proposed attribution able to support potential growth of current and future systems?
- If current AP values and coding do not meet Data Standards how much work would be needed to meet the standard?
- How does the proposed attribution work for the actual end user’s (first responder) navigational needs?
- Other operational needs?



Address Points Attribute Standardization

Review and comment on Address Points attribution

Commented and considered:

- COUNTY field vs MUNICIPALITY – single field or both (?)
- STREET_NAME – allow abbreviations within (?)
- ESN nixed?
- NEIGHBORHOOD field recommended
- Subaddressing – fields based on type or type coded field
- ADDRESS_RANGE field nixed (?)
- LANDMARK field – what about types (?)
- Secondary street naming
- Carry IDs to connect to Buildings, Parcels, Centerlines, ...



Address Points Attribute Standardization

COUNTY field and MUNICIPALITY field

Separate out Cities and Incorporated Towns from Counties in a single “jurisdiction” field into separate COUNTY and MUNICIPALITY fields.

Example: Richmond City would reside as ‘RICHMOND’ in the MUNICIPALITY field and

Richmond County would reside as ‘RICHMOND’ in the COUNTY field.

How should Unincorporated towns be handled?

*Civic Location Data Exchange Format (CLDXF) Standard
NENA-STA-004.1.1-2014, March 23, 2014*



Address Points Attribute Standardization

STREET_NAME – allow abbreviations within?

If MT. VIEW RD is defined by the addressing authority then should this name reside in the Street Name field with the abbreviation?

Currently the RCL Standard is to spell out all abbreviations in the Street Name field:

Mt. View Rd	
Mt. View	RD
MOUNT VIEW	RD
MOUNTIAN VIEW	RD



Address Points Attribute Standardization

Subaddressing

Option 1) two fields based on nominal designation of the unit and coding for the type of unit.

- SUB_UNIT_NUMBER name/number
- SUB_UNIT_TYPE

Or

Option 2) (NENA-CLDXF) Separate fields for

- Building
- Unit
- Floor
- Seat



Address Points Attribute Standardization

Address Range field nixed (?)

Should it exist that a single address point have an ADDRESS_RANGE specified such that a multi-unit structure have units with individual address numbers (not subaddressed units) that are then combined into a minimum to maximum address range?

Alternative approach would be to either stack multiple address points with individual addressing each or offset individual points.



Address Points Attribute Standardization

Landmark field

- what about types of landmarks(?)
- recreational park, named building, named site, named transportation node, bridge names, ...

Should additional LANDMARK coding field exist for:

- Can the site accommodate first responder vehicles?
- Can the site accommodate additional responder crew vehicles?
- Can a helicopter land with in a site safely?
- Can a rescue water craft beach or access shore area safely?



Address Points Attribute Standardization

Secondary street naming

- Can secondary addressing support USPS mail delivery?
- Are secondary street names authorized by local govt?
- Are secondary street names a concatenation of intersecting streets?
- Are secondary street names commonly used and reported to PSAP?



Address Points Attribute Standardization

Field Name	Data Type	Length/Precision	Description	LOV/Domain	M/C/O/V
OBJECTID	Object ID	Default	ESRI geodatabase feature ID	None	System-Generated
Shape	Geometry	Default	Feature geometry. Coordinates defining the features.	None	System-Generated
STREET_NAME_ID	Double	16	Unique statewide VGIN Address	None	Conditional
ADDRESS_ID	Double	16	Unique statewide VGIN Address Points ID	None	VGIN
LOCAL_ADDR_ID	Double	16	Address Points ID from Locality	None	Mandatory
BUILDING_ID	Double	16	Foreign ID key link to building footprint layer	None	Conditional
PARCEL_ID	Text	20	Property parcel ID if identified from source.	None	Conditional
ADDPTGEO_ID	Double	8	Geo ID generated by VGIN	None	VGIN
MFIPS	Text	7	Maintenance FIPS code of locality	FIPS	Mandatory



Address Points Attribute Standardization

GEOMETRY_EDIT_TYPE	Short	Default	Type of edit made to geometry	EDIT_TYPE	Optional
GEOMETRY_EFFECTIVE_DATE	Date	Default	Date of segment entry	None	Optional
GEOMETRY_EDIT_DATE	Date	Default	Date of segment edit	None	VGIN
ADDRESS_TYPE	Text		Single numeric, numeric range, intersection, or named structure	Under review	Optional
ADDRESS	Long	Default	Address (single unit numeric)	None	Mandatory
ADDRESS_RANGE	Text	11	From - To numeric code range where applicable, i.e.: #####-#####	None	Conditional
SUB_ADDRESSES_UNIT	Text	10			Conditional
SUB_ADDRESSES_TYPE	Text	10	APT, FLOOR, SUITE, UNIT, Department	Domain	Optional
LANDMARK_NAME	Text	60	Common name	None	Conditional



Address Points Attribute Standardization

STREET_PRE MODIFIER	Text	10	USPS Street Modifier - PRE	MODIFIER	Conditional
STREET_PREF IX_DIRECTION	Text	2	USPS / NENA Standard Street Prefix	DIRECTION	Conditional
STREET_NAME	Text	75	Standardized Street Name	None	Required
STREET_SUFFIX	Text	4	USPS/NENA Street Suffix Type	SUFFIX	Required
STREET_SUFFIX DIRECTION	Text	2	USPS/NENA Street Suffix Direction	DIRECTION	Conditional
STREET_POST MODIFIER	Text	10	USPS Street Modifier - Post	MODIFIER	Conditional
STREET_NAME FULL	Text	100	Full title concatenated street name	None	VGIN
STREET_NAME SOURCE	Text	4	Source of street name	SOURCE	Optional
STREET_NAME EDIT_DATE	Date	Default	Date of street name edit	None	Optional
ROUTE_IDENTIFI FIER	Text	20	VDOT Route	None	Optional
ADDRESS_LA BEL	Text	50	Fully concatenated address as found in mailing label	None	VGIN
POST_OFFICE	Text	40	Name of postal office servicing area	None	VGIN
POSTAL_CODE	Text	5	5-digit Postal Code	None	Mandatory



Address Points Attribute Standardization

SEC_STREET_PREFIX	Text	2	Secondary Standard Prefix	Direction	Conditional
SEC_STREET_NAME	Text	75	Secondary Standard Street Name	None	Conditional
SEC_STREET_SUF	Text	4	Secondary Standard Street Type	Suffix	Conditional
SEC_STREET_DIR	Text	2	Secondary Stand Street Suffix	Direction	Conditional
SEC_STREET_MOD	Text	10	Secondary USPS Street Modifier - Post	Modifier	Conditional
SEC_STREET_FULL	Text	100	Secondary Street Name concatenated	None	Conditional



Address Points Attribute Standardization

MUNICIPALITY	Text	60	Name of town or city	None	Conditional
COUNTY	Text	40	County	County	Conditional
STATE	Text	2	US Postal abbreviated state	??	Required
US_NAT_GRID	Text	20	US National Grid coordinates to 10 digits (1 meter)	None	VGIN
ESN	Text	5	Emergency Service number	None	VGIN
PSAP	Text	4	Public Safety Answer Point	None	Required
LAT	Integer		Latitude	None	VGIN
LONG	Integer		Longitude	None	VGIN
CAPTURE_METHOD	Text	30	Automated or manual	None	VGIN



Address Points Geometry Standardization

Address Point Placement Rules

Entities considered for Point placement:

- an addressed structure (residential, commercial, industrial, or institutional)
- property parcel center
- named site (named as in a colloquial or commonly understood name / Landmark)
- access point (driveway or entrance to large structure)
- Multiple points of one addressed entity based on the above conditions.



Address Points Geometry Standardization

Address Point Placement Rules

- Structure – best option?
- Site – next best option?
- Property Access – conditionally best option?
- Parcel centroid – acceptable option?
- Geocoding from street centerlines– least desirable?
- Multiple points for one address? (both structure center and access point?)



Address Points Geometry Standardization

Address Point Placement - matrix

Point Placement Method	Public Safety Application				
	NG9-1-1 Location Validation / Call Routing	9-1-1 Map Display	Computer Aided Dispatch	Vehicle Routing	Emergency Notification
Geocoding	*	*	*	**	*
Parcel	**	**	**	*	**
Site	**	**	**	*	**
Structure	***	***	***	*	***
Property Access	*	**	**	***	**

NENA generated support matrix

Address Points Geometry Standardization

Address Point Placement – property center



NENA sourced graphics

Address Points Geometry Standardization

Address Point Placement – access point



NENA sourced graphics

Address Points Geometry Standardization

Address Point Placement - landmark



Address Points Geometry Standardization

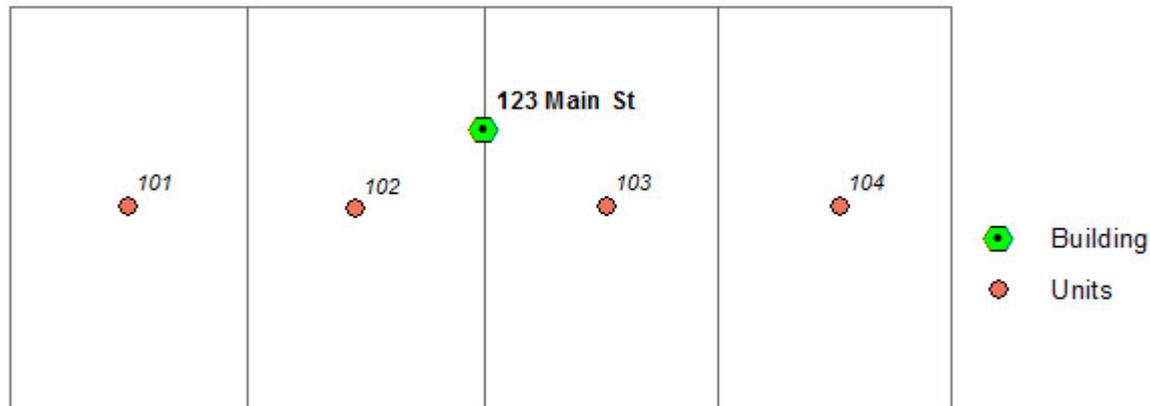
Address Point Placement – address ranges



Address Points Geometry Standardization

Subaddressing - Placement Considerations

Multiple Unit Dwelling – Unit access at ground floor. Unit designation makes each point unique



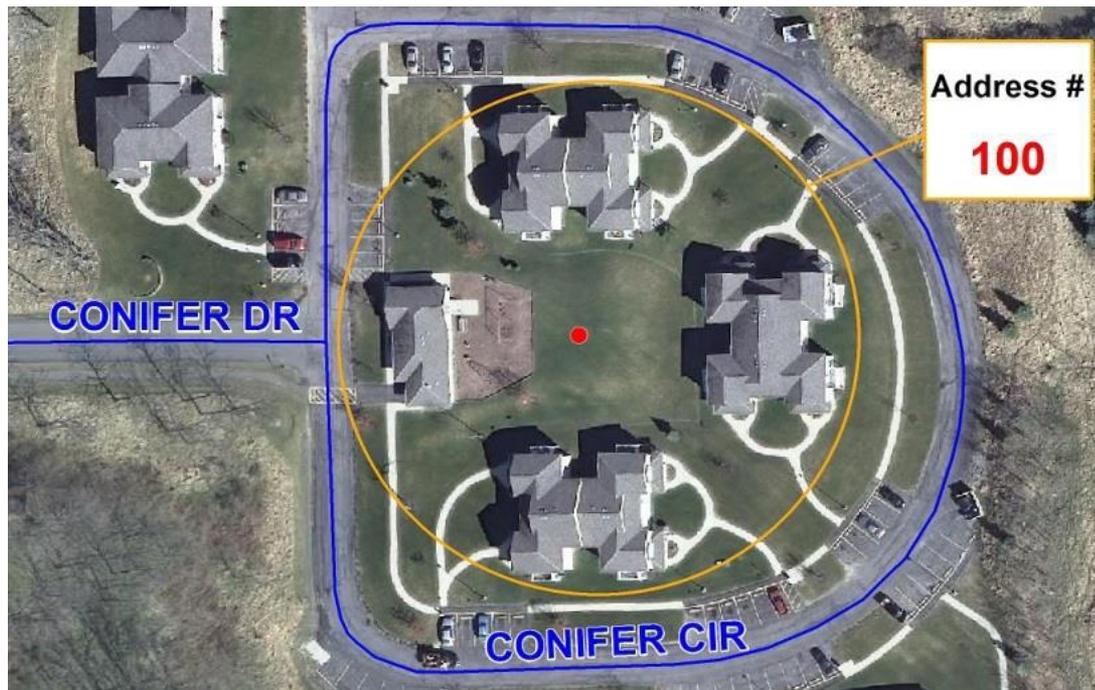
Address Points Geometry Standardization

Address Point Placement – Multipoint



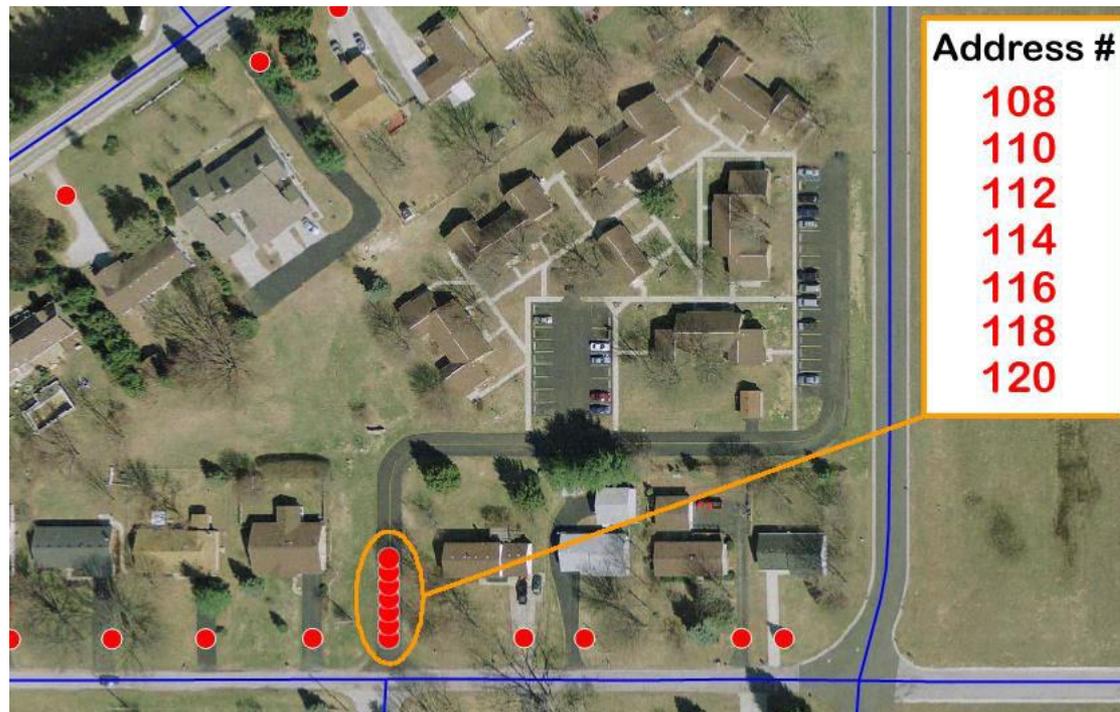
Address Points Geometry Standardization

Address Point Placement – property center



Address Points Geometry Standardization

Address Point Placement – multipoint access



Address Points Geometry Standardization

Address Point Placement – property access





Address Points Quality Considerations

Criteria 1 Completeness The degree to which all addresses are represented as points within a data layer

Criteria 2 Logical consistency A description of an address point location in the context of other features

Criteria 3 Positional accuracy How closely the captured location of an address point represents its real location on the earth's surface

Criteria 4 Temporal quality How well the information in the database reflects the current state of the address points being captured

Criteria 5 Thematic accuracy The consistency of the types of data in a data set



Next steps

Meeting schedule and topics

1. Charter kickoff (17 August 2016)
2. AP attributes (31 August 2016)
3. AP geometry issues (7 Sept 2016)
4. Findings and Summary (date/time ?)

DoodlePoll for scheduling