

NAD Schema

This is the proposed (v1) NAD Schema for storing data in the NAD, including all attribute fields and domains. This schema is in line with the NAD Minimum Content approach.

The full schema is included in [appendix 5](#).

A few key points regarding this schema:

- The data will be stored in **WGS 1984 Web Mercator**. All submissions must be projected properly into WGS 1984 Web Mercator
- This schema stores address points, with one point per address record.
- It is anticipated that this schema will evolve over time as the NAD becomes a reality.
- This is not a minimum schema for submission - it is anticipated that many of the fields may be null for many records, or perhaps nonexistent depending on the source data.
- The proposed schema is a single flat table (non-relational) based largely on the [NENA CLDXF](#) standard.
- Data may be harvested or contributed that has more content than the NAD schema. In these cases some data elements provided by the contributor will be stripped out of the NAD incarnation.

The “Expected Use” column is included simply to indicate whether a field is generally “always used”, “commonly used”, “occasionally used”, or “rarely used” within a dataset to give submitters a sense of expectations. (Note: a “commonly used” attribute may be null for the majority of records, but is still likely to be utilized within an address database).

	Field Name	Field Alias	Type	Length	Domain	Expected Use
Address	State	State	Text	2	✓	always used
	County	County	Text	40	✓	always used
	Inc_Muni	Incorporated Municipality	Text	100		commonly used
	Uninc_Comm	Unincorporated Community	Text	100		commonly used
	Nbrhd_Comm	Neighborhood Community	Text	100		commonly used
	Post_Comm	Postal Community Name	Text	40		commonly used
	Zip_Code	ZIP Code	Text	7		always used
	Plus_4	Zip Plus 4 Addition	Text	7		occasionally used
	Bulk_Zip	Bulk Delivery ZIP Code	Text	7		rarely used
	Bulk_Plus4	Bulk Delivery ZIP Plus 4 Addition	Text	7		rarely used
	StN_PreMod	Street Name Pre Modifier (PRM)	Text	15		commonly used
	StN_PreDir	Street Name Pre Directional (PRD)	Text	50	✓	commonly used
	StN_PreTyp	Street Name Pre Type (STP)	Text	25	✓	commonly used
	StN_PreSep	Street Name Pre Type Separator (STPS)	Text	20	✓	commonly used
	StreetName	Street Name (RD)	Text	60		always used
	StN_PosTyp	Street Name Post Type (STS)	Text	15	✓	commonly used
	StN_PosDir	Street Name Post Directional (POD)	Text	50	✓	commonly used
	StN_PosMod	Street Name Post Modifier (POM)	Text	25		commonly used
	AddNum_Pre	Address number prefix (HNP)	Text	15		commonly used
	Add_Number	Address number (HNO)	Long	6		always used
	AddNum_Suf	Address number suffix (HNS)	Text	15		commonly used
	LandmkPart	Landmark Name Part (LMKP)	Text	150		occasionally used
	LandmkName	Landmark (LMK)	Text	150		occasionally used
Building	Building (BLD)	Text	75		commonly used	
Floor	Floor (FLR)	Text	75		commonly used	
Unit	Unit (UNIT)	Text	75		commonly used	
Room	Room (ROOM)	Text	75		rarely used	
Addtl_Loc	Additional Location Info (LOC)	Text	225		rarely used	
Milepost	Milepost	Text	50		rarely used	
Location	Longitude	Address Longitude	Float	12		always used
	Latitude	Address Latitude	Float	11		always used
	NatGrid_Coord	National Grid Coordinates	Text	50		always used
Metadata	GUID	GUID	GUID			always used
	Addr_Type	Address Type	Text	50	✓	commonly used
	Placement	Address Placement	Text	25	✓	commonly used
	Source	Address Source	Text	75		always used
	AddAuth	Address Authority	Text	75		commonly used
	UniqWithin	Unique Within	Text	75		occasionally used
	LastUpdate	Date Last Updated	Date	26		always used
	Effective	Effective Date	Date	26		commonly used
	Expired	Expiration Date	Date	26		commonly used

Appendix 5

Proposed NAD Schema

The section contains the proposed (v1) NAD Schema for storing data in the NAD, including all attribute fields and domains. This schema is in line with the NAD Minimum Content Guidance laid out in section II. It is anticipated that this schema will evolve over time as the NAD becomes a reality.

Please note that this is not a minimum schema for submission - it is anticipated that many of the fields may be null for many records, or perhaps nonexistent depending on the source data. The “Expected Use” column indicates whether a field is generally “always used”, “commonly used”, “occasionally used”, or “rarely used” within a dataset to give submitters a sense of expectations. (Note: a “commonly used” attribute may be null for the majority of records, but is still likely to be utilized within an address database). The proposed schema is a single flat table (non-relational) based largely on the NENA CLDXF standard ([NENA CLDXF standard](#)).

Field Name	Field Alias	Type	Length	Domain	Description	Expected Use
State	State	text	2	Domain	Name of the state or state equivalent	always used
County	County	text	40	Domain	Name of county or county-equivalent where the address is located	always used
Inc_Muni	Incorporated Municipality	text	100	None	Name of the incorporated municipality or other general -purpose local governmental unit where the address is located	commonly used
Uninc_Comm	Unincorporated Community	text	100	None	Name of an unincorporated community, either within an incorporated municipality or in an unincorporated portion of a county, or both where the address is located.	commonly used
Nbrhd_Comm	Neighborhood Community	text	100	None	Name of an unincorporated neighborhood, subdivision or area, either within an incorporated municipality or in an unincorporated portion of a county or both, where the address is located.	commonly used
Post_Comm	Postal Community Name	Text	40	none	A city name for the ZIP code of an address, as given in the USPS City State file	commonly used
Zip_Code	ZIP Code	Text	7	none	For standard street mail delivery (with a corresponding geographic delivery area), the system of 5-digit codes that identifies the individual USPS Post Office associated with an address.	always used
Plus_4	Zip Plus 4 Addition	text	7	none	The ZIP plus 4 code (without the dash) Example: 1234	occasionally used
Bulk_Zip	Bulk Delivery ZIP Code	Text	7	none	For Bulk Delivery (e.g., government mailroom) zip codes with no corresponding geographical area, the system of 5-digit codes that identifies the individual delivery location associated with an address.	rarely used

Proposed NAD Schema (cont.)

Field Name	Field Alias	Type	Length	Domain	Description	Expected Use
Bulk_Plus4	Bulk Delivery ZIP Plus 4 Addition	text	7	none	For Bulk Delivery (e.g., government mailroom) zip codes with no corresponding geographical area, The ZIP plus 4 code (without the dash) Example: 1234	rarely used
StN_PreMod	Street Name Pre Modifier (PRM)	Text	15	None	Word or phrase that precedes and modifies the Street Name element or is placed outside the Street Name element so that the Street Name element can be used in creating a sorted list of complete street names	commonly used
StN_PreDir	Street Name Pre Directional (PRD)	Text	50	Domain	Word preceding the Street Name element that indicates the direction taken by the street from an arbitrary starting point or line, or the sector where it is located	commonly used
StN_PreTyp	Street Name Pre Type (STP)	Text	25	domain	Word or phrase that precedes the Street Name element and identifies a type of thoroughfare in a complete street name	commonly used
StN_PreSep	Street Name Pre Type Separator (STPS)	Text	20	domain	Preposition or prepositional phrase between the Street Name Pre Type and the Street Name	commonly used
StreetName	Street Name (RD)	text	60	None	The element of the complete street name that identifies the particular street (as opposed to any street types, directionals, and modifiers).	always used
StN_PosTyp	Street Name Post Type (STS)	Text	15	domain	Word or phrase that follows the Street Name element and identifies a type of thoroughfare in a complete street name	commonly used
StN_PosDir	Street Name Post Directional (POD)	Text	50	domain	A word following the Street Name element that indicates the direction taken by the street from an arbitrary starting point or line, or the sector where it is located.	commonly used
StN_PosMod	Street Name Post Modifier (POM)	Text	25	None	A word or phrase that follows and modifies the Street Name element, but is separated from it by a Street Name Post Type or a Street Name Post Directional or both	commonly used
AddNum_Pre	Address number prefix (HNP)	Text	15	None	An extension of the Address Number that precedes it and further identifies a location along a thoroughfare or within a defined area	commonly used
Add_Number	Address number (HNO)	Long	6	None	The whole number identifier of a location along a thoroughfare or within a defined community.	always used

Proposed NAD Schema (cont.)

Field Name	Field Alias	Type	Length	Domain	Description	Expected Use
AddNum_Suf	Address number suffix (HNS)	Text	15	None	An extension of the Address Number that follows it and further identifies a location along a thoroughfare or within a defined area.	commonly used
LandmkPart	Landmark Name Part (LMKP)	Text	150	None	The name or collection of names by which a prominent feature is publicly known.	occasionally used
LandmkName	Landmark (LMK)	Text	150	None	The name by which a prominent feature is publicly known.	occasionally used
Building	Building (BLD)	Text	75	None	One among a group of buildings that have the same address number and complete street name.	commonly used
Floor	Floor (FLR)	Text	75	None	A floor, story, or level within a building.	commonly used
Unit	Unit (UNIT)	Text	75	None	A group or suite of rooms within a building that are under common ownership or tenancy, typically having a common primary entrance.	commonly used
Room	Room (ROOM)	Text	75	None	A single room within a building.	rarely used
Addtl_Loc	Additional Location Information (LOC)	Text	225	None	A part of a subaddress that is not a building, floor, unit, or room.	rarely used
Milepost	Milepost	text	50	none	A posted numeric measurement from a given beginning point, they may or may not be actual milepost. Milepost numbers are useful for specifying locations along interstate highways, recreational trails, and other unaddressed routes, as well as stretches of county, state, federal, and other routes where distance measurements is posted. Milepost numbers may be given in place of or in addition to Address Numbers Example: Mile Marker 231.5	rarely used
Longitude	Address Longitude	Float	12	None	Address Longitude, derived based on point placement	always used
Latitude	Address Latitude	Float	11	None	Address Latitude, derived based on point placement	always used
NatGrid_Coord	National Grid Coordinates	text	50	None	National Grid Coordinate, derived based on point placement	always used
GUID	GUID	GUID		None	Globally Unique Identifier (also known as Universally Unique Identifier - <i>UUID</i>), automatically generated	always used

Proposed NAD Schema (cont.)

Field Name	Field Alias	Type	Length	Domain	Description	Expected Use
Addr_Type	Address Type	Text	50	domain	Indicates the general use of the address (residential, commercial, etc) The type of feature identified by the address	commonly used
Placement	Address Placement	Text	25	domain	Method used to place the address point	commonly used
Source	Address Source	text	75	None	Entity that provided the data to the NAD (this could be different than the authority. For example, the state may aggregate from the counties and then submit to the NAD. In this case, the state would be the source and the authority would be the county.)	always used
AddAuth	Address Authority	text	75	None	Entity responsible for the address assignment and maintenance	commonly used
UniqWithin	Unique Within	text	75	None	The name of the area within which the address should be assumed to be unique.	occasionally used
LastUpdate	Date Last Updated	date	26	None	Date that the address was last updated in the database	always used
Effective	Effective Date	date	26	None	Date that the address becomes effective (may be past or future)	commonly used
Expired	Expiration Date	date	26	None	Date that the address expires	commonly used

Appendix 6

Proposed NAD Schema Domains

Street Name Pre Directional

North
Northeast
East
Southeast
South
Southwest
West
Northwest

Street Name Pre Type

As referenced in the CLDXF standard, these values are found in the USPS Publication 28 Appendix C1
(http://pe.usps.gov/text/pub28/28apc_002.htm)

Street Name Pre Type Separator

of the
at
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des
in the
to the

Street Name Post Type

As referenced in the CLDXF standard, these values are found in the USPS Publication 28 Appendix C1
(http://pe.usps.gov/text/pub28/28apc_002.htm)

Street Name Post Directional

North
Northeast
Northwest
South
Southeast
Southwest
East

West
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State

<http://pe.usps.gov/cpim/ftp/pubs/Pub28/Pub28.pdf>

County

www.census.gov/geo/reference/codes/cou.html

Address type

Residential (Housing)
Commercial (Office, Retail, Restaurant, Banking)
Multi-Use (mixed commercial/residential)
Open Space (Forest, vacant, cemeteries)
Industrial
Gov't/Public Services (Fire/Police, Library, Gov't offices)
Religious
Recreation (Ball fields, parks, golf courses, ski area)
Educational (Schools, Universities)
Institutional (Hospitals, group homes, Prisons, etc)
Other
Unknown

Address Placement

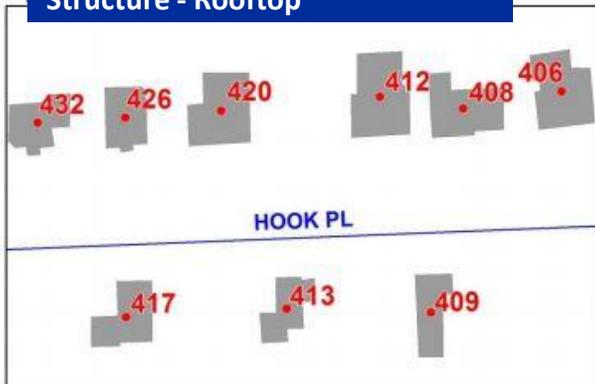
Structure - Rooftop
Structure - Entrance
Structure - Interior Unit Location
Parcel - Centroid
Parcel - Other/Manual Placement
Linear Geocode
Property Access Point
Site Placement
Other (some other method not listed)
Unknown (unknown address placement method)

(see next page for examples of address placement)

Address Placement Examples

Images are from the [NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1](#)

Structure - Rooftop



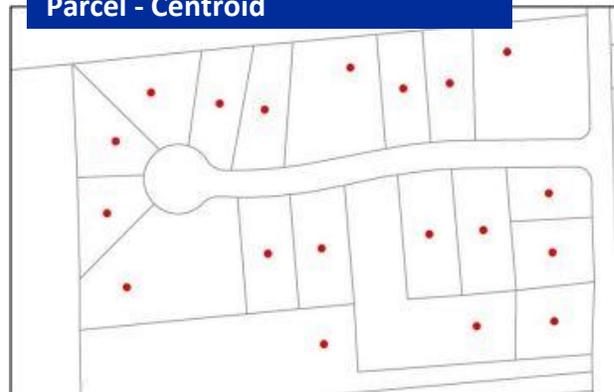
Structure - Entrance



Structure - Interior Unit Location



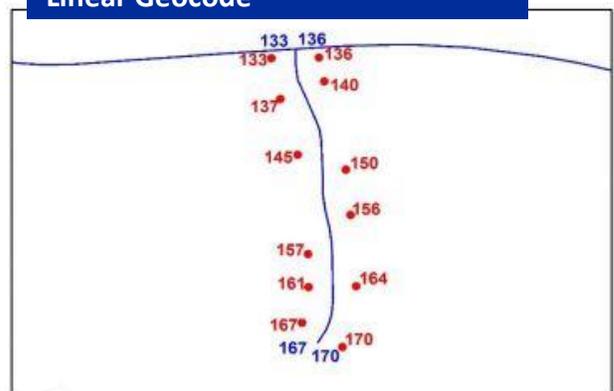
Parcel - Centroid



Parcel - Other/Manual Placement



Linear Geocode



Property Access



Site Placement

