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
--- | --- | --- | --- | --- | ---
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
Longitude | Address Longitude | Float | 12 |  | always used
Latitude | Address Latitude | Float | 11 |  | always used
NatGrid_Coord | National Grid Coordinates | Text | 50 |  | always used
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

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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).

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Alias</th>
<th>Type</th>
<th>Length</th>
<th>Domain</th>
<th>Description</th>
<th>Expected Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>State</td>
<td>text</td>
<td>2</td>
<td>Domain</td>
<td>Name of the state or state equivalent</td>
<td>always used</td>
</tr>
<tr>
<td>County</td>
<td>County</td>
<td>text</td>
<td>40</td>
<td>Domain</td>
<td>Name of county or county-equivalent where the address is located</td>
<td>always used</td>
</tr>
<tr>
<td>Inc_Muni</td>
<td>Incorporated</td>
<td>text</td>
<td>100</td>
<td>None</td>
<td>Name of the incorporated municipality or other general-purpose local governmental unit where the address is located</td>
<td>commonly used</td>
</tr>
<tr>
<td></td>
<td>Municipality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninc_Comm</td>
<td>Unincorporated</td>
<td>text</td>
<td>100</td>
<td>None</td>
<td>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.</td>
<td>commonly used</td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nbrhd_Comm</td>
<td>Neighborhood</td>
<td>text</td>
<td>100</td>
<td>None</td>
<td>A city name for the ZIP code of an address, as given in the USPS City State file</td>
<td>commonly used</td>
</tr>
<tr>
<td></td>
<td>Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post_Comm</td>
<td>Postal Community</td>
<td>Text</td>
<td>40</td>
<td>none</td>
<td>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.</td>
<td>commonly used</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zip_Code</td>
<td>ZIP Code</td>
<td>Text</td>
<td>7</td>
<td>none</td>
<td>The ZIP plus 4 code (without the dash) Example: 1234</td>
<td>occasionally used</td>
</tr>
<tr>
<td>Plus_4</td>
<td>Zip Plus 4 Addition</td>
<td>text</td>
<td>7</td>
<td>none</td>
<td>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.</td>
<td>rarely used</td>
</tr>
<tr>
<td>Bulk_Zip</td>
<td>Bulk Delivery ZIP</td>
<td>Text</td>
<td>7</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Code</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Proposed NAD Schema (cont.)

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Alias</th>
<th>Type</th>
<th>Length</th>
<th>Domain</th>
<th>Description</th>
<th>Expected Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk_Plus4</td>
<td>Bulk Delivery ZIP Plus 4 Addition</td>
<td>text</td>
<td>7</td>
<td>none</td>
<td>For Bulk Delivery (e.g., government mailroom) zip codes with no corresponding geographical area, The ZIP plus 4 code (without the dash) Example: 1234</td>
<td>rarely used</td>
</tr>
<tr>
<td>StN_PreMod</td>
<td>Street Name Pre Modifier (PRM)</td>
<td>Text</td>
<td>15</td>
<td>None</td>
<td>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</td>
<td>commonly used</td>
</tr>
<tr>
<td>StN_PreDir</td>
<td>Street Name Pre Directional (PRD)</td>
<td>Text</td>
<td>50</td>
<td>Domain</td>
<td>Word or phrase that precedes 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</td>
<td>commonly used</td>
</tr>
<tr>
<td>StN_PreTyp</td>
<td>Street Name Pre Type (STP)</td>
<td>Text</td>
<td>25</td>
<td>Domain</td>
<td>Word or phrase that precedes the Street Name element and identifies a type of thoroughfare in a complete street name</td>
<td>commonly used</td>
</tr>
<tr>
<td>StN_PreSep</td>
<td>Street Name Pre Type Separator (STPS)</td>
<td>Text</td>
<td>20</td>
<td>Domain</td>
<td>Preposition or prepositional phrase between the Street Name Pre Type and the Street Name</td>
<td>commonly used</td>
</tr>
<tr>
<td>StreetName</td>
<td>Street Name (RD)</td>
<td>text</td>
<td>60</td>
<td>None</td>
<td>The element of the complete street name that identifies the particular street (as opposed to any street types, directionals, and modifiers).</td>
<td>always used</td>
</tr>
<tr>
<td>StN_PosTyp</td>
<td>Street Name Post Type (STS)</td>
<td>Text</td>
<td>15</td>
<td>Domain</td>
<td>Word or phrase that follows the Street Name element and identifies a type of thoroughfare in a complete street name</td>
<td>commonly used</td>
</tr>
<tr>
<td>StN_PosDir</td>
<td>Street Name Post Directional (POD)</td>
<td>Text</td>
<td>50</td>
<td>Domain</td>
<td>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</td>
<td>commonly used</td>
</tr>
<tr>
<td>StN_PosMod</td>
<td>Street Name Post Modifier (POM)</td>
<td>Text</td>
<td>25</td>
<td>None</td>
<td>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</td>
<td>commonly used</td>
</tr>
<tr>
<td>AddNum_Pre</td>
<td>Address number prefix (HNP)</td>
<td>Text</td>
<td>15</td>
<td>None</td>
<td>An extension of the Address Number that precedes it and further identifies a location along a thoroughfare or within a defined area</td>
<td>commonly used</td>
</tr>
<tr>
<td>Add_Number</td>
<td>Address number (HNO)</td>
<td>Long</td>
<td>6</td>
<td>None</td>
<td>The whole number identifier of a location along a thoroughfare or within a defined community</td>
<td>always used</td>
</tr>
</tbody>
</table>
## Proposed NAD Schema (cont.)

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Alias</th>
<th>Type</th>
<th>Length</th>
<th>Domain</th>
<th>Description</th>
<th>Expected Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>AddNum_Suf</td>
<td>Address number suffix (HNS)</td>
<td>Text</td>
<td>15</td>
<td>None</td>
<td>An extension of the Address Number that follows it and further identifies a location along a thoroughfare or within a defined area.</td>
<td>commonly used</td>
</tr>
<tr>
<td>LandmkPart</td>
<td>Landmark Name Part (LMKP)</td>
<td>Text</td>
<td>150</td>
<td>None</td>
<td>The name or collection of names by which a prominent feature is publicly known.</td>
<td>occasionally used</td>
</tr>
<tr>
<td>LandmkName</td>
<td>Landmark (LMK)</td>
<td>Text</td>
<td>150</td>
<td>None</td>
<td>The name by which a prominent feature is publicly known.</td>
<td>occasionally used</td>
</tr>
<tr>
<td>Building</td>
<td>Building (BLD)</td>
<td>Text</td>
<td>75</td>
<td>None</td>
<td>One among a group of buildings that have the same address number and complete street name.</td>
<td>commonly used</td>
</tr>
<tr>
<td>Floor</td>
<td>Floor (FLR)</td>
<td>Text</td>
<td>75</td>
<td>None</td>
<td>A floor, story, or level within a building.</td>
<td>commonly used</td>
</tr>
<tr>
<td>Unit</td>
<td>Unit (UNIT)</td>
<td>Text</td>
<td>75</td>
<td>None</td>
<td>A group or suite of rooms within a building that are under common ownership or tenancy, typically having a common primary entrance.</td>
<td>commonly used</td>
</tr>
<tr>
<td>Room</td>
<td>Room (ROOM)</td>
<td>Text</td>
<td>75</td>
<td>None</td>
<td>A single room within a building.</td>
<td>rarely used</td>
</tr>
<tr>
<td>Addtl_Loc</td>
<td>Additional Location Information (LOC)</td>
<td>Text</td>
<td>225</td>
<td>None</td>
<td>A part of a subaddress that is not a building, floor, unit, or room.</td>
<td>rarely used</td>
</tr>
<tr>
<td>Milepost</td>
<td>Milepost</td>
<td>text</td>
<td>50</td>
<td>none</td>
<td>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</td>
<td>rarely used</td>
</tr>
<tr>
<td>Longitude</td>
<td>Address Longitude</td>
<td>Float</td>
<td>12</td>
<td>None</td>
<td>Address Longitude, derived based on point placement</td>
<td>always used</td>
</tr>
<tr>
<td>Latitude</td>
<td>Address Latitude</td>
<td>Float</td>
<td>11</td>
<td>None</td>
<td>Address Latitude, derived based on point placement</td>
<td>always used</td>
</tr>
<tr>
<td>NatGrid_Coord</td>
<td>National Grid Coordinates</td>
<td>text</td>
<td>50</td>
<td>None</td>
<td>National Grid Coordinate, derived based on point placement</td>
<td>always used</td>
</tr>
<tr>
<td>GUID</td>
<td>GUID</td>
<td>GUID</td>
<td>None</td>
<td></td>
<td><strong>Globally Unique Identifier</strong> (also known as Universally Unique Identifier - <strong>UUID</strong>), automatically generated</td>
<td>always used</td>
</tr>
</tbody>
</table>
## Proposed NAD Schema (cont.)

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Alias</th>
<th>Type</th>
<th>Length</th>
<th>Domain</th>
<th>Description</th>
<th>Expected Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUID</td>
<td>PUID</td>
<td>PUID</td>
<td>25</td>
<td>None</td>
<td>Correlating Parcel Unique ID</td>
<td>always used</td>
</tr>
<tr>
<td>Addr_Type</td>
<td>Address Type</td>
<td>Text</td>
<td>50</td>
<td>domain</td>
<td>Indicates the general use of the address (residential, commercial, etc) The type of feature identified by the address</td>
<td>commonly used</td>
</tr>
<tr>
<td>Placement</td>
<td>Address Placement</td>
<td>Text</td>
<td>25</td>
<td>domain</td>
<td>Method used to place the address point</td>
<td>commonly used</td>
</tr>
<tr>
<td>Source</td>
<td>Address Source</td>
<td>text</td>
<td>75</td>
<td>None</td>
<td>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.)</td>
<td>always used</td>
</tr>
<tr>
<td>AddAuth</td>
<td>Address Authority</td>
<td>text</td>
<td>75</td>
<td>None</td>
<td>Entity responsible for the address assignment and maintenance</td>
<td>commonly used</td>
</tr>
<tr>
<td>UniqWithin</td>
<td>Unique Within</td>
<td>text</td>
<td>75</td>
<td>None</td>
<td>The name of the area within which the address should be assumed to be unique.</td>
<td>occasionally used</td>
</tr>
<tr>
<td>LastUpdate</td>
<td>Date Last Updated</td>
<td>date</td>
<td>26</td>
<td>None</td>
<td>Date that the address was last updated in the database</td>
<td>always used</td>
</tr>
<tr>
<td>Effective</td>
<td>Effective Date</td>
<td>date</td>
<td>26</td>
<td>None</td>
<td>Date that the address becomes effective (may be past or future)</td>
<td>commonly used</td>
</tr>
<tr>
<td>Expired</td>
<td>Expiration Date</td>
<td>date</td>
<td>26</td>
<td>None</td>
<td>Date that the address expires</td>
<td>commonly used</td>
</tr>
</tbody>
</table>
### 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  
de las  
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
N -- North  
NE -- Northeast  
NW -- Northwest  
S -- South  
SE -- Southeast  
SW -- Southwest  
E -- East  
W -- West

#### State

#### 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)*

#### PUID: Parcel Unique ID field
This field is part of a relational database and will be auto-populated based upon geographic location.
Address Placement Examples

Structure - Rooftop

Structure - Entrance

Structure - Interior Unit Location

Parcel - Centroid

Parcel - Other/Manual Placement

Linear Geocode

Property Access

Site Placement

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