



# West Virginia Statewide Addressing and Mapping System Data Specification

September 2008

**West Virginia Statewide Addressing and Mapping Board**

*Making the Safety of West Virginians Our #1 Priority – One Address at a Time.*

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## **1.0 INTRODUCTION**

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The State Legislature created the West Virginia Statewide Addressing and Mapping Board (WVSAMB) in 2001 to enable city-type addressing in rural areas of the state for 9-1-1 service. A city-type address, such as 250 Mountain Road, clearly identifies where a telephone is physically located when dialing 9-1-1. Current rural postal addresses are not sufficient to provide this location based information. The WVSAMB is providing long-needed assistance to counties, and where necessary, to municipalities, for the creation of city-type addresses where none currently exist.

The WVSAMB has implemented a statewide E9-1-1 addressing and mapping system (WVSAMS). County 9-1-1 Addressing Coordinators, 9-1-1 Directors and their staff that agree to continue participating in the WVSAMB project will have access to this system at <http://www.wvsams.com/wvsams>. WVSAMB grant monies and GPS equipment will be available to those counties who begin using WVSAMS to GPS collect roads and sites in the field using WVSAMS. WVSAMS will contain all of the data management tools necessary to develop a county's E9-1-1 mapping and addressing database. Because data are entered directly into a State-operated system, counties will benefit from the value-added data validation, reporting, printing, and support services

WVSAMS will be operated and maintained by The West Virginia Department of Military Affairs and Public Safety (WVDMAPS) Division of Homeland Security and Emergency Management (WVDHSEM). An Addressing Coordination Office (ACO) is being established within WVDHSEM. The ACO will maintain the system and provide technical support to the counties using WVSAMS. WVSAMS was designed for county E9-1-1 organizations that need to perform mapping and addressing but can not afford to purchase their own desktop mapping equipment, software, training, and related costs.

However, some counties may already have GIS assets in place, and will want to use them for the completion of the addressing project. Other counties may

want to invest in GIS, CAD or related products and training in order to complete the addressing project. And still others may wish to hire a contractor to complete their county's portion of the overall statewide addressing project. This specification was designed to offer West Virginia Counties more flexibility in performing E9-1-1 addressing and related postal and telephone company conversion activities.

This document provides technical data specification for the collection and compilation of street centerline and address information for submittal to the WVSAMB Website. This specification is intended to serve as a minimum set of data requirements and standards for each of the data layers captured, developed, or maintained to create the Centerline and site-specific address layers. These requirements will enable the data to be collected using existing systems.

Participating counties wanting to use their own systems or contractors will have to comply with this specification. Proposals must be submitted in writing to the WVSAMB for approval, and must contain a detailed scope of work and methodology section. Counties that use their own systems or contractors will receive WVSAMB grant moneys upon delivery of data to the WVSAMB in the format specified in this document. The WVSAMB will ensure that final deliverables meet these minimum specifications. All data will be loaded into the WVSAMS database.

## 2.0 GENERAL REQUIREMENTS

### 2.1 DATA LAYERS AND TABLES

The following data layers and tables will be compiled to meet the minimum addressing requirement. The Data Element presents the name of the Feature/Table. Type defines the feature type or if it is a nonspatial table. Description provides a general description of the table. Detailed descriptions and details are presented below.

| Data Element     | Type        | Description  |
|------------------|-------------|--|
| Street           | Line Layer  | This layer contains street centerline segments.  |
| Street_Name      | Table       | This table contains the street name(s).  |
| Street_Name_Join | Table       | This table joins the Street_Name and Street tables.  |
| Street_Type      | Table       | Domain Table for the STREET_TYP field in the Street table  |
| Surface_Type     | Table       | Domain Table for the SURFACE_TY field in the Street table  |
| MSAG_LLC         | Table       | Domain Table for the Last Line MSAG Community field in the Street/Site tables                                  |
| Site             | Point Layer | Contains unique point locations for addressable and non-addressable structures.                                |
| Unit             | Table       | This table captures sub-address information for multiple addresses within a single Site.                       |
| Old_Address      | Table       | This table captures the old or historic address. It is linked to both the Site table as well as the Unit Table |

| <b>Data Element</b> | <b>Type</b>    | <b>Description</b>  |
|---------------------|----------------|---|
| Site_Picture        | Table          | Table provides link to associated photos of a Site  |
| Site_Type           | Table          | Domain Table for the SITE_TYPE field in the Site table  |
| Emergency_Zone      | Polygon Layer  | This table contains the Emergency Zone Information.   |
| Agency              | Table          | Listing of Fire, Law Enforcement, EMS and PSAPs   |
| Unnamed_Road        | Line Layer     | Catch all feature for trails, driveways, unidentified roads, etc.   |
| Postal_LLC          | Table          | Domain Table listing unique Last Line Community Names by County   |
| County              | Table          | Domain Table listing of Counties  |
| Drop_Line           | Polyline Layer | Drop Line is a WVSAMB Generated feature included in the download for informational purpose. It is not necessary for upload. |
| Job                 | Table          | Drop Line is a WVSAMB Generated Table included in the download for informational purpose. It is not necessary for upload.   |

## 2.2 DATA FORMATS

All GIS Data layers must be delivered as ESRI shapefiles according to the database design in this specification. Database tables must be delivered in a standard database format such as Microsoft Access, DBF files, Oracle, or Microsoft SQL/Server. Database field names must be capitalized and consist of no more than 10 characters to be shapefile compatible.

While this specification allows for the delivery of “Flat” GIS data layers and associated tables, there are however relationships inherent in this design. The domain tables listed above are provided in Appendix A and contain the universe of acceptable values for certain columns in the tables described in Section 3. With the exception of POSTAL\_LLC, these values must be used. No other values are



acceptable unless approved in writing by the WVSAMB. POSTAL\_LLC domain is an exception as the core dataset has not been completed. Once completed, the same rule will apply.

MSAG\_LLC is not provided below but can be requested as a download from WVSAMB. It contains > 4000 records and is too large to list in Appendix A. The Postal\_LLC is also not included as it has > 1100 records. It can be requested as a download from WVSAMB as well.

### **2.3 COORDINATE SYSTEM AND PROJECTION**

The GIS data layers must conform to the following coordinate system:

- Universal Transverse Mercator Zone 17 (UTM 17)

The coordinate system used will be referenced to North American Datum 1983 (NAD 1983) and North American Vertical Datum 1988 (NAVD 1988). Metadata describing the project used and the projection files must be included with the delivery.

Discussion concerning this Coordinate Systems, datum and their requirement is recorded on the West Virginia GIS Steering Committee Website at [http://wvgis.wvu.edu/otherdocs/standardsandpubs/wv\\_coordinate\\_systems\\_aug02.html](http://wvgis.wvu.edu/otherdocs/standardsandpubs/wv_coordinate_systems_aug02.html) (Standardization of Coordinate Systems and Datums for Data Exchange by West Virginia State and Local Government Agencies).

### **2.4 METADATA**

Metadata must be maintained for all datasets following the Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata. The metadata must be provided in XML format and accompany all data deliveries. The metadata XML file should follow the same naming convention as the GIS data set. For example the metadata file for a street shape file (street.shp) would be named street.xml. Reference to the FGDC metadata standards can be found at [http://www.fgdc.gov/metadata/meta\\_stand.html](http://www.fgdc.gov/metadata/meta_stand.html).

If the county data has been extracted from the WVSAMB, an additional table, JOB, has been included with the set. This table provides metadata concerning the extracted data and is not necessary for uploaded.

## **2.5 ADDRESSING STANDARDS**

This specification as a standalone document is not intended to be an “Addressing Standard.” It is meant to be used in conjunction with other specifications prepared by the WVSAMB. Addressing resources, including the *WVSAMB 9-1-1 Addressing Handbooks* (Version I – starting on Page 18) and the *West Virginia 9-1-1 Addressing Standards* (Appendix C of the Handbook) beginning on page 59, can be found at <http://www.addressingwv.org/resources.htm>. (Please Note – Version 2 of the Handbook is specific to the selected addressing vendor and is therefore not recommended as a resource for these purposes.)

*West Virginia 9-1-1 Addressing Standards* have also been included as Appendix B of this document.

## **2.6 COUNTY ID**

The County ID appears in many of the tables within this specification. The County ID is used by the WVSAMS system for User and Administrative Rights. It should therefore be a required field and populated for all records.

## **2.7 DATA MANAGEMENT NOTES**

Attribute fields to indicate if a record should be deleted (DELREC) has been added for all tables that may have additions/deletions. Please use this field appropriate to indicate data that is to be deleted. The STREET table also has field for flipping the Geometry and splitting a street segment. Use of these fields is encouraged as well to ensure the proper capture of information back into WVSAMS.

### 3.0 ELECTRONIC DATA DELIVERABLE SPECIFICATION

#### 3.1 STREET

##### 3.1.1 Definition

The Street line layer contains line segments representing street centerlines. The layer contains the attributes necessary to support geocoding and E9-1-1 dispatch functions.

##### 3.1.2 Dataset Name

| Data Element | Table  | Type       | Description                                     |
|--------------|--------|------------|---|
| Street       | STREET | Line Layer | This layer contains street centerline segments. |

##### 3.1.3 Attribute Definition

| Attribute  | Datatype        | Null | Definition  |
|------------|-----------------|------|---|
| STREET_ID  | Numeric (10, 0) | N    | Unique Record Number – Primary Key  |
| STREET_TYP | Numeric (2, 0)  | Y    | The STREET_TYP domain table can be found in Appendix A. Use the Code field.   |
| LABEL      | Character (100) | Y    | The default street name label   |
| LABEL_ID   | Numeric (10, 0) | N    | Link to Street_Name Table (Name_ID)   |
| ROUTE_NUMB | Character (8)   | Y    | If type is route, this is the Route number  |
| ROUTE_SUBN | Character (2)   | Y    | Route Sub-Number  |
| SURFACE_TY | Numeric (2, 0)  | Y    | The SURFACE_TYPE domain table can be found in Appendix A. Use the ID field.   |
| L_FROM_ADD | Numeric (10, 0) | Y    | Lowest addressable value for the left hand side of the street   |
| L_TO_ADD   | Numeric (10, 0) | Y    | Highest addressable value for the left hand side of the street  |
| L_POST_ID  | Numeric (10, 0) | Y    | Post_ID for the left hand side of the street  |
| L_CNTY_ID  | Numeric (10, 0) | Y    | County ID for the left hand side of the street – The COUNTY domain table can be found in Appendix A. Use the ID field |
| L_ZIP      | Character (5)   | Y    | 5 digit ZIP for the left hand side of the street  |
| L_STATE    | Character (2)   | Y    | State Abbreviation for the left hand side of the street   |
| L_ESN      | Numeric (10, 0) | Y    | ESN for the left hand side of the street - ESN Field from the Emergency Zone Table                                    |

| Attribute  | Datatype        | Null | Definition   |
|------------|-----------------|------|--|
| R_FROM_ADD | Numeric (10, 0) | Y    | Lowest addressable value for the right hand side of the street   |
| R_TO_ADD   | Numeric (10, 0) | Y    | Highest addressable value for the right hand side of the street  |
| R_POST_ID  | Numeric (10, 0) | Y    | Post_ID for the right hand side of the street  |
| R_CNTY_ID  | Numeric (10, 0) | Y    | County ID for the right hand side of the street – The COUNTY domain table can be found in Appendix A. Use the ID field |
| R_ZIP      | Character (5)   | Y    | 5 digit ZIP for the right hand side of the street  |
| R_STATE    | Character (2)   | Y    | State Abbreviation for the right hand side of the street   |
| R_ESN      | Numeric (10, 0) | Y    | ESN for the right hand side of the street - ESN Field from the Emergency Zone Table                                    |
| UPDATED    | Date            | Y    | Date of the most recent insert or update   |
| COMMENTS   | Character (255) | Y    |  |
| MSAG_LLC   | Numeric (10, 0) | Y    | Unincorporated or Local Name of the Area   |
| LEFT_IS_OD | Numeric (1, 0)  | Y    | Left is the odd side of the street - True(1) False(0)  |
| FLIP_FLAG  | Character (1)   | Y    | “F” indicates the Geometry should be flipped.  |
| DELREC     | Character (1)   | Y    | “D” indicates the record should be deleted   |
| SPLIT_FLAG | Character (1)   | Y    | “S” indicates the Geometry was split.  |
| CONFIRMED  | Numeric (1, 0)  | N    | “1” indicates the record has been confirmed (Checked)  |

### 3.1.4 Specific Requirements

Addressing resources, including the WVSAMB 9-1-1 Addressing Handbook, (PDF – Version 1 – starting on page 18) can be found at <http://www.addressingwv.org/resources.htm>. Specific requirements include, but are not limited to:

- **Road naming.** All roads should have a unique name. Eliminate duplicate or similar-sounding road names and multiple names on the same road. Numbered roads, such as a state route or a fire road should also be named

to avoid using numbers in both the property address and the road name. Please see the full list of road naming standards in Appendix C1 beginning on page 60. For standard road name suffixes, please see Appendix C4 of the Addressing Handbook (Version 1- pages 69 and 70).

- **Beginning point.** This designates the point, location, or direction from which numbers begin to ascend on a road. Please see the options for choosing a beginning point on Appendix C4 of the Addressing Handbook (Version 1 - page 63). Whichever option is chosen should be consistently applied throughout the county or community. Consider such factors as existing numbering directions (if any), the numbering pattern on roads shared with neighboring communities or counties, and the direction from which emergency services respond.
- **Odd and even sides.** This determines which side of the road will be assigned odd numbers and which will be assigned even numbers, as numbers ascend from the beginning point. The 9-1-1 Addressing Standards require that odd numbers should be assigned to structures on the left side of the road and even numbers to those on the right, ascending from the beginning point. If part of a county or community has been previously numbered in the opposite fashion, however, then consider maintaining that standard for consistency.
- **Numbering interval.** This is the standard interval in feet used to assign consecutive property numbers along a road, regardless of whether or not a structure is at every interval. The standard numbering interval in the 9-1-1 Addressing Standards is 10.56 feet, which provides 1000 numbers per mile (500 odd numbers and 500 even numbers). For example, the address 2346 Oakwood Road is approximately 2.3 miles down the road on the right.
- **Property numbering.** These standards establish how numbers are assigned for houses, apartments, businesses, circular streets, condominiums, cul-de-sacs, corner lots, duplexes, mobile home parks, shopping malls, and other special situations. Please see Appendix C4 of the Addressing Handbook

(Version 1- page 63) for a comprehensive list of property numbering standards and recommendations.

- **Road signage.** If a county chooses to erect its own road signs, it should, at a minimum, follow existing standards set by the WV Division of Highways. Their standards are incorporated into the West Virginia 9-1-1 Addressing Standards found in Appendix C4 of the Addressing Handbook (Version 1- page 71).
- Please use a negative number as the STREET\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

### 3.2 STREET\_NAME

#### 3.2.1 Definition

As a single street may be made up of multiple line segments and each street segment has a unique identification number, the Street Name Table is needed to relate the street names to the various segments. This also allows a single street to have multiple names.

#### 3.2.2 Dataset Name

| Data Element | Table       | Type  | Description                             |
|--------------|-------------|-------|---|
| Street_Name  | STREET_NAME | Table | This table contains the street name(s). |

#### 3.2.3 Attribute Definition

| Attribute  | Datatype        | Null | Definition   |
|------------|-----------------|------|--|
| NAME_ID    | Numeric (10, 0) | N    | Unique Record Number – Primary Key   |
| NAME_TYPE  | Numeric (10, 0) | Y    | {0, 1, 2, 3, 4, 5} indicating USPS, local, county, state, federal, or Interstate naming conventions. |
| PREFIX_DIR | Character (5)   | Y    | Prefix direction of the street name, e.g. N, S, W, E, NW, NE, SW, SE.                                |
| NAME       | Character (80)  | Y    | Base name of the street, e.g. 15th   |
| SUFFIX_TYP | Character (10)  | Y    | Type of the street, e.g. RD, ST, AV.   |
| SUFFIX_DIR | Character (5)   | Y    | Suffix direction of the street, e.g. N, S, W, E, NW, NE, SW, SE.                                     |
| UNPARSED   | Character (100) | Y    | Unparsed Name  |
| UPDATED    | Date            | Y    | Date of the most recent insert or update   |

### 3.2.4 Specific Requirements

- Street\_Names is a Domain Table for the Entire State. As such, the names that are currently in the table cannot be changed. However, new names can be added. Please use a negative number as the NAME\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition for the master list.
- When the dataset is uploaded, a validation will be run on the STREET\_NAME table. If a name is determined to be changed, the set will be rejected and the submitter will be asked to correct the error.

## 3.3 STREET\_NAME\_JOIN

### 3.3.1 Definition

The Street Name and the Street Tables are joined via a Join table called Street\_Name\_Join.

### 3.3.2 Dataset Name

| Data Element     | Table            | Type  | Description   |
|------------------|------------------|-------|---|
| Street_Name_Join | STREET_NAME_JOIN | Table | This table joins the Street_Name and Street tables. |

### 3.3.3 Attribute Definition

| Attribute  | Datatype        | Null | Definition   |
|------------|-----------------|------|--|
| NAME_ID    | Numeric (10, 0) | N    | NAME_ID from the STREET_NAME table.  |
| STREET_ID  | Numeric (10, 0) | N    | STREET_ID from the STREET table.   |
| HISTORIC   | Numeric (1, 0)  | Y    | Boolean value, if non-zero then the name may be used for finding the street but never labeling it. |
| SIDE       | Character (1)   | Y    | Side of the street the NAME_ID applies.<br>Example: L, R   |
| NAME_ORDER | Character (1)   | N    | {P, S} domain values which stand for Primary and Secondary.  |
| UPDATED    | Date            | Y    | Date of the most recent insert or update   |

### 3.3.4 Specific Requirements

None

## 3.4 SITES

### 3.4.1 Definition

The Site Points layer contains point (X, Y) locations for all structures, addressable and non-addressable. Each point represents a single structure

### 3.4.2 Dataset Name

| Data Element | Table | Type        | Description   |
|--------------|-------|-------------|---|
| Site         | SITE  | Point Layer | This layer contains unique point locations for structures, addressable and non-addressable. |

### 3.4.3 Attribute Definition

| Attribute   | Datatype        | Null | Definition   |
|-------------|-----------------|------|--|
| SITE_ID     | Numeric (10, 0) | N    | Unique Record Number – Primary Key   |
| SITE_TYPE   | Character (2)   | Y    | The SITE_TYPE domain table can be found in appendix A. Use the Code field. |
| STREET_ID   | Numeric (10, 0) | Y    | Street Id the Site is located on   |
| SIDE        | Character (1)   | Y    | Side of the street. Example: L, R  |
| ESN         | Numeric (10, 0) | Y    | ESN Field from the Emergency Zone Table                                    |
| ADDR_LABEL  | Character (40)  | Y    | Alphanumeric Address label: Example 5124 ½; A215                           |
| ADDRESS_NUM | Numeric (10, 0) | Y    | The address number. Example: 5124, 215                                     |
| POST_ID     | Numeric (10, 0) | Y    | POST_ID field from the Postal_LLC domain table                             |
| CNTY_ID     | Numeric (10, 0) | Y    | The COUNTY domain table can be found in Appendix A. Use the ID field       |
| STATE       | Character (2)   | Y    | State Abbreviation (WV)  |
| ZIP         | Character (5)   | Y    | 5 digit zip code. Example: 55432   |
| ZIPP4       | Character (4)   | Y    | Zip Plus 4. Example 1234   |
| PARCEL_NUM  | Character (20)  | Y    | Local Parcel Number  |



| Attribute  | Datatype        | Null | Definition  |
|------------|-----------------|------|---|
| UPDATED    | Date            | Y    | Date of the most recent insert or update                                |
| PHOTO      | Numeric (5, 0)  | Y    | Number of photos provided for the structure.                            |
| COMMENTS   | Character (255) | Y    |   |
| MSAG_LLC   | Numeric (10, 0) | Y    | Unincorporated or Local Name of the Area                                |
| DISTANCE_A | Numeric (10, 0) | Y    | Distance along the Street Measure from the Start of the Street Segment. |
| ADDRESSABL | Numeric (1, 0)  | N    | Is the Site addressable? - True (1)/False (0)                           |
| DELREC     | Character (1)   | Y    | "D" indicates the record should be deleted                              |
| CONFIRMED  | Numeric (1, 0)  | N    | "1" indicates the record has been confirmed (Checked)                   |

#### 3.4.4 Specific Requirements

- For addressable structures that do not have a driveway, such as storefronts, the address point should be located in line with the structures front door.
- Point features will include field verified addresses for > 95% of all addressable structures in the county. Existing data sources can be used in lieu of field verification if the data from that source had at one time been field verified and the accuracy of that information has been faithfully maintained.
- When more than two addressable lie along an unnamed road special attention is needed. The unnamed road should be named and the sites should be addressed off of the new road.
- Please use a negative number as the SITE\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

### 3.5 UNIT

#### 3.5.1 Definition

The Units Table contains additional information about a structure. For a single family home, this information is likely the same and will require a single record. For Apartment buildings or leased space, there may be multiple records.

#### 3.5.2 Dataset Name

| Data Element | Table | Type  | Description                |
|--------------|-------|-------|----------------------------|
| Unit         | UNIT  | Table | This table details a Site. |

#### 3.5.3 Attribute Definition

| Attribute | Datatype        | Null | Definition   |
|-----------|-----------------|------|--|
| UNIT_ID   | Numeric (10, 0) | N    | Unique Record Number – Primary Key                               |
| SITE_ID   | Numeric (10, 0) | Y    | Site the Unit is located at. The SITE_ID is from the SITE Table. |
| UNIT_NUM  | Character (40)  | Y    | Unit number or name  |
| COMMENTS  | Character (255) | Y    |  |
| LOC_INFO  | Character (255) | Y    | Information to assist in locating the unit                       |
| UPDATED   | Date            | Y    | Date of the most recent insert or update                         |
| DELREC    | Character (1)   | Y    | “D” indicates the record should be deleted                       |

#### 3.5.4 Specific Requirements

- Please use a negative number as the UNIT\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition None

### 3.6 OLD\_ADDRESS

#### 3.6.1 Definition

The OLD\_ADDRESS table captures the previous or historic address for a SITE and/or UNIT. This table is primarily used for readdressing purpose.

### 3.6.2 Dataset Name

| Data Element | Table       | Type  | Description  |
|--------------|-------------|-------|--|
| OLD_ADDRESS  | OLD_ADDRESS | Table | This table captures the old or historic address. It is linked to both the Site table as well as the Unit Table |

### 3.6.3 Attribute Definition

| Attribute  | Datatype        | Null | Definition  |
|------------|-----------------|------|---|
| OLDADD_ID  | Numeric (10, 0) | N    | Unique Record Number – Primary Key  |
| SITE_ID    | Numeric (10, 0) | N    | Site the old address is associated. The SITE_ID is from the SITE Table.     |
| UNIT_ID    | Numeric (10, 0) | Y    | Unit the old address may be associated. The UNIT_ID is from the UNIT Table. |
| RES_NAME   | Character (100) | Y    | Resident of the Site at the time the old address was collected              |
| BOX        | Character (20)  | Y    | The BOX number if used.<br>Example: 5124, A215                              |
| PO_BOX     | Character (20)  | Y    | The PO BOX number if used.<br>Example: 5124                                 |
| NUM        | Character (20)  | Y    | The address number if any.<br>Example: 105                                  |
| STREET     | Character (50)  | Y    | Street or Route Information   |
| UNPARSEDAD | Character (50)  | Y    | Unparsed old address – as gathered from data source.                        |
| CITY       | Character (25)  | Y    | City portion of the old address   |
| STATE      | Character (2)   | Y    | State Abbreviation (WV)   |
| ZIP        | Character (5)   | Y    | 5 digit zip code. Example: 55432  |
| ZIPP4      | Character (4)   | Y    | Zip Plus 4. Example 1234  |
| SOURCE     | Character (1)   | Y    | The SOURCE domain table can be found in Appendix A. Use the ID field        |
| PHONE_NUM  | Numeric (10, 0) | N    | 10-digit Phone Number   |
| COMMENTS   | Character (255) | Y    |   |
| UPDATED    | Date            | Y    | Date of the most recent insert or update                                    |
| DELREC     | Character (1)   | Y    | “D” indicates the record should be deleted                                  |

### 3.6.4 Specific Requirements

- Please use a negative number as the OLDADD\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

### 3.7 SITE PICTURE

#### 3.7.1 Definition

The Site Picture lists the photos that have been taken for each site. This table and associated photos are both required for submittal.

#### 3.7.2 Dataset Name

| Data Element | Table        | Type  | Description  |
|--------------|--------------|-------|--|
| Site_Picture | SITE_PICTURE | Table | Table provides link to associated photos of a Site |

#### 3.7.3 Attribute Definition

| Attribute   | Datatype        | Null | Definition   |
|-------------|-----------------|------|--|
| PICTURE_ID  | Numeric (10, 0) | N    | Unique Record Number – Primary Key   |
| SITE_ID     | Numeric (10, 0) | Y    | Site the Phone number is associated with.<br>SITE_ID is from the SITE Table. |
| FILE_NAME   | Character (128) | Y    | Picture File Name  |
| DESCRIPTION | Character (255) | Y    | Comment/Description Field  |
| UPDATED     | Date            | Y    | Date of the most recent insert or update                                     |

#### 3.7.4 Specific Requirements

- Complete File Name is required.
- JPG is preferred.
- Please use a negative number as the PICTURE\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

Deletion of Site Photos will not be conducted using this sheet. It has been provided purely for upload purposes. Deletions should be conducted through the WVSAMS Site

### 3.8 EMERGENCY ZONE

#### 3.8.1 Definition

As the primary purpose of the readdressing is to support 9-1-1 operations, Emergency Zone information has been incorporate into the model as a key attribute. This information includes the appropriate contact information for the relevant emergency responders.

#### 3.8.2 Dataset Name

| Data Element   | Table          | Type          | Description   |
|----------------|----------------|---------------|---|
| Emergency Zone | EMERGENCY_ZONE | Polygon Layer | This table contains the Emergency Zone Information. |

#### 3.8.3 Attribute Definition

| Attribute | Datatype        | Null | Definition   |
|-----------|-----------------|------|--|
| ESN       | Numeric (5, 0)  | Y    | Unique Record Number – Primary Key.                                  |
| ESA_FIRE  | Numeric (10, 0) | Y    | AGENCY_ID for Fire Dept Contact                                      |
| ESA_LAW   | Numeric (10, 0) | Y    | AGENCY_ID for Law Enforcement  |
| ESA_EMS   | Numeric (10, 0) | Y    | AGENCY_ID for EMS  |
| ESA_PSAP  | Numeric (10, 0) | Y    | AGENCY_ID for PSAP   |
| UPDATED   | Date            | Y    | Date of the most recent insert or update                             |
| CNTY_ID   | Numeric (10, 0) | Y    | The COUNTY domain table can be found in Appendix A. Use the ID field |
| COMMENTS  | Character (255) | Y    |  |

#### 3.8.4 Specific Requirements

- Due to the nature of the Emergency Zones, the Emergency Zone shapefile will be imported in slightly different manner then the rest of the shapefiles. If you wish to upload Emergency Zones, please notify the current administrator of WVSAMS and indicate your request. They will instruct you in what is necessary.

### 3.9 AGENCY

#### 3.9.1 Definition

Agency provides the list of Fire, Law Enforcement and Emergency Responders for the state. This list is used in conjunction with the Emergency Zones to define areas of coverage for call routing at the PSAP level.

#### 3.9.2 Dataset Name

| Data Element | Table  | Type  | Description                                     |
|--------------|--------|-------|---|
| Agency       | AGENCY | Table | Listing of Fire, Law Enforcement, EMS and PSAPs |

#### 3.9.3 Attribute Definition

| Attribute  | Datatype        | Null | Definition                                    |
|------------|-----------------|------|---|
| AGENCY_ID  | Numeric (10, 0) | N    | Unique Record Number – Primary Key.           |
| AGENCY_NAM | Character (100) | Y    | Official Name for the Agency                  |
| AGENCY_TYP | Numeric (1, 0)  | Y    | Type of Organization 1- Police; 2-Fire; 3-EMS |
| UPDATED    | Date            | Y    | Date of the most recent insert or update      |
| DELREC     | Character (1)   | Y    | “D” indicates the record should be deleted    |

#### 3.9.4 Specific Requirements

- Please use a negative number as the AGENCY\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

### 3.10 UNNAMED\_ROAD

#### 3.10.1 Definition

The Unnamed\_Road Feature Class was created to accommodate the miscellaneous trails, driveways, unnamed roads, paths, and other linear features that may or may not be legitimate Streets. It is included for two purposes. First – for completeness in case an unnamed road has been mislabeled or can be identified as a legitimate street; Second – for navigational considerations.

**3.10.2 Dataset Name**

| Data Element | Table        | Type | Description   |
|--------------|--------------|------|---|
| Unnamed_Road | UNNAMED_ROAD | Line | Catch all feature for trails, driveways, unidentified roads, etc. |

**3.10.3 Attribute Definition**

| Attribute  | Datatype        | Null | Definition   |
|------------|-----------------|------|--|
| UNROAD_ID  | Numeric (10, 0) | N    | Unique Record Number – Primary Key.                                  |
| UNROAD_TYP | Numeric (10, 0) | N    | Classification of the Unnamed Road – See Street_Type Table           |
| CNTY_ID    | Numeric (10, 0) | Y    | The COUNTY domain table can be found in Appendix A. Use the ID field |
| COMMENTS   | Character (255) | Y    |  |
| UPDATED    | Date            | Y    | Date of the most recent insert or update                             |
| DELREC     | Character (1)   | Y    | “D” indicates the record should be deleted                           |

**3.10.4 Specific Requirements**

- Please use a negative number as the UNROAD\_ID as this will allow you to have a unique Primary Key for new records and the loading program will recognize the entry as an addition.

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## APPENDIX A DOMAIN LISTS

### I. Street Type Domain List

#### STREET\_TYPE

| STREET_TYP | DESCRIPTIO                                  |
|------------|---|
| 11         | Side Roads and Streets (Municipal) or Other |
| 12         | WV Park and Forest Route                    |
| 13         | US Forest Services Road                     |
| 14         | Trail                                       |
| 15         | Private Roads                               |
| 16         | Driveway                                    |
| 17         | Public Roads                                |
| 18         | WV County Numbered Route                    |
| 19         | Ramp  |
| 20         | WV State Numbered Route                     |
| 21         | US Numbered Route                           |
| 22         | Interstate Route                            |
| 23         | Proposed                                    |
| 24         | Unknown                                     |
| 25         | Abandoned                                   |

### II. Surface Type Domain List

#### SURFACE\_TYPE

| ID | Type       |
|----|------------|
| 1  | Paved      |
| 2  | Gravel     |
| 3  | Dirt       |
| 5  | Unimproved |
| 6  | Impassable |
| 9  | Unknown    |

**III. Site Type Domain List****SITE\_TYPE**

| <b>Code</b> | <b>Description</b>   | <b>Code</b> | <b>Description</b> |
|-------------|----------------------|-------------|--------------------|
| 98          | Other                | G2          | gated w/ Building  |
| 99          | No Gate, Not Visible | H1          | Hanger             |
| A1          | Accessory Building   | I1          | Industrial         |
| A2          | Abandoned            | P0          | Cemetery           |
| A3          | Group Mailbox        | P1          | Government         |
| A9          | Access Point         | P2          | Health Care        |
| AD          | Addressed/Conflated  | P3          | Church             |
| B1          | Bridge               | P4          | Educational        |
| B2          | Airport              | P5          | Cultural           |
| B3          | Helipad              | P6          | Police             |
| B4          | Campground           | P7          | Fire               |
| B9          | Culvert              | P8          | Public Gathering   |
| C1          | Commercial           | P9          | Ambulance House    |
| C9          | Other Commercial     | PS          | PSAP               |
| CF          | Commercial Farm      | R1          | Single Family      |
| CL          | Lodging              | R2          | Multi Family       |
| DV          | Development Site     | R3          | Mobile Home        |
| ED          | Dry Hydrant          | R4          | Other Residential  |
| EH          | Hydrant              | R5          | Camp/Bungalow      |
| EP          | Fire Pond            | R6          | Seasonal Home      |
| ET          | Public Telephone     | TB          | Town Boundary Post |
| G1          | Gated w/o Building   | U1          | Utility            |

**IV. Source Domain List****SOURCE**

| <b>ID</b> | <b>Type</b>     |
|-----------|-----------------|
| A         | Card File       |
| B         | Electric Meter  |
| C         | Parcel Data     |
| D         | Field Value     |
| E         | USPS            |
| F         | Telephone       |
| G         | PONO Cards      |
| H         | TEAM            |
| I         | Client          |
| J         | Site Conflation |
| Z         | Other           |
| N         | None            |

**V. County Domain List****COUNTY**

| <b>ID</b> | <b>County Name</b> |
|-----------|--------------------|
| 54001     | Barbour            |
| 54003     | Berkeley           |
| 54005     | Boone              |
| 54007     | Braxton            |
| 54009     | Brooke             |
| 54011     | Cabell             |
| 54013     | Calhoun            |
| 54015     | Clay               |
| 54017     | Doddridge          |
| 54019     | Fayette            |
| 54021     | Gilmer             |
| 54023     | Grant              |
| 54025     | Greenbrier         |
| 54027     | Hampshire          |
| 54029     | Hancock            |
| 54031     | Hardy              |
| 54033     | Harrison           |
| 54035     | Jackson            |
| 54037     | Jefferson          |
| 54039     | Kanawha            |
| 54041     | Lewis              |
| 54043     | Lincoln            |
| 54045     | Logan              |
| 54047     | McDowell           |
| 54049     | Marion             |
| 54051     | Marshall           |
| 54053     | Mason              |
| 54055     | Mercer             |

| <b>ID</b> | <b>County Name</b> |
|-----------|--------------------|
| 54057     | Mineral            |
| 54059     | Mingo              |
| 54061     | Monongalia         |
| 54063     | Monroe             |
| 54065     | Morgan             |
| 54067     | Nicholas           |
| 54069     | Ohio               |
| 54071     | Pendleton          |
| 54073     | Pleasants          |
| 54075     | Pocahontas         |
| 54077     | Preston            |
| 54079     | Putnam             |
| 54081     | Raleigh            |
| 54083     | Randolph           |
| 54085     | Ritchie            |
| 54087     | Roane              |
| 54089     | Summers            |
| 54091     | Taylor             |
| 54093     | Tucker             |
| 54095     | Tyler              |
| 54097     | Upshur             |
| 54099     | Wayne              |
| 54101     | Webster            |
| 54103     | Wetzel             |
| 54105     | Wirt               |
| 54107     | Wood               |
| 54109     | Wyoming            |
| 54999     | Statewide          |

## **APPENDIX B**

### **WEST VIRGINIA 9-1-1 ADDRESSING STANDARDS**

The West Virginia Statewide Addressing and Mapping Board was created by the West Virginia Legislature in 2001 (Senate Bill 460, codified as W. Va. Code 24E-1-1 et seq.) to advance the infrastructure of West Virginia by overseeing two major tasks:

- 1) Providing new high quality digital mapping of the entire state;
- 2) Assigning a standard city-type address to every identifiable structure in the state.

To fulfill its mission, the West Virginia Statewide Addressing and Mapping Board has adopted the *West Virginia 9-1-1 Addressing Standards* to provide standards for counties and municipalities to use in establishing city-type addresses within their jurisdictions where no such addresses exist. In areas where city-type addresses do exist, these standards can be used to evaluate the quality and consistency of addresses and provide a basis for needed change. The standards cover the following issues:

- Road naming
- Property numbering
- Number posting
- Road name suffixes
- Road signage

The *West Virginia 9-1-1 Addressing Standards* are based on the following standards:

- *Addressing Guidelines for The State of West Virginia* (Adopted by the West Virginia Enhanced 9-1-1 Council and the US Postal Service District Office, Charleston, WV, July 1999.)
- National Emergency Number Association Addressing Systems (1995)
- US Postal Service Postal Addressing Standards (Pub 28, November 2000)
- US Postal Service Address Conventions (Filing Number DM-940-89-03, July 1989)
- West Virginia Division of Highways standards for road signing

Questions regarding these standards can be directed to the West Virginia Statewide Addressing and Mapping Board at 304-558-4218.

### **Road Naming Standards**

The following standards should be adhered to when naming or renaming roads:

1. Each road should have one correct name for emergency services purposes and postal delivery purposes.
2. Never assume a road does not have a name. Research should be conducted to find whether a road has a name or not.
3. Any road with two or more residences should be named. Additionally, any road or trail without structures that might need to be accessed by emergency responders should be considered for naming to better locate it in an emergency.
4. Avoid duplicate road names at a minimum in the same ZIP code, and emergency service zone wherever practical. Optimally, avoid duplications in the entire county.
5. Avoid duplicate road names with different suffixes, such as PINE RD and PINE LN, especially when naming new roads or existing roads without names, or renaming existing ones.
6. Avoid sound-alike names. For example: BEECH and BEACH, MAINE and MAIN, GREY AND GRAY.
7. Avoid family names or individual's names, especially living persons or politicians.
8. Rename a road when one current name sounds too much like another road name or if the road name is a duplicate. Once two or more roads have been identified with similar sounding or duplicating names, rename the road or roads that will impact the least number of residents and businesses.

9. When renaming roads, involve the property and business owners affected. Providing a choice of three to five options will usually eliminate most controversy. In developing names, use historical considerations.
10. Never rename a road unless absolutely necessary.
11. If a road is continuous, try not to change the road name. If the name must change, then do so at an intersection or prominent landmark, rather than at a curve or some other arbitrary point.
12. Avoid road names longer than 22 characters (excluding pre- and post-directional and suffix). Abbreviations of such names may produce inadvertent duplicates.
13. Avoid special characters in street names. For example: hyphens, apostrophes, periods, and ampersands (&).
14. Avoid assignment of a primary street name that is also used as a standard suffix or directional. For example: NORTH AVE, COURT ST, SOUTHEAST BLVD.
15. Avoid using numbers or numbered streets. For example: US HIGHWAY 290, 1ST ST, THIRD AVE.
16. All roads names should use a suffix. For a complete list of approved suffixes, see the enclosed standards for new and existing road names.
17. If a directional (pre or post) is used in a road name, it should be abbreviated to avoid potential confusion with the road name. Approved directional abbreviations are: N, S, E, W, NE, NW, SE, and SW.
18. Avoid the use of pre- or post-directionals or suffixes to distinguish separate non-continuous or continuous streets. For example: PALM CT, N PALM CT, PALM ST, PALM AVE.
19. Avoid the use of non-standard street name suffixes in residential areas that may be confused with commercial developments. For example: STONEWALL PLZ, SMITH CTR.

20. Avoid using double suffixes in new street names. For example: TWIN BRANCH LN, CARVER RUN RD.

21. When naming new roads, consider using a consistent suffix for the type of road, such as those suggested below:

Avenue = A thoroughfare running principally in a north-south direction (or could be east-west depending on how “street” is defined).

Circle = Short road that returns to itself; circular or semi-circular roads.

Lane = Fire road or private road.

Loop = Short drive that begins and ends on the same road.

Road = Most common designation for a secondary thoroughfare; generally indicates a heavily traveled route.

Street = Usually found in downtown or more congested areas; run principally in an east-west direction (or could be north-south depending on how “avenue” is defined).

22. Use the following format for road or street names: Pre-Directional – 2 characters (max.), Road Name – 22 characters (max.), Road Suffix – 4 characters (max.), and Post-Directional – 2 characters (max.).

Note: Instances may arise that do not conform to the guidelines set forth in this document. When such situations occur, the county’s 9-1-1 center, the US Postal Service District Address Management Systems Office, and the West Virginia Division of Highways should be consulted to reach a joint decision.

### **Property Numbering Standards**

The following standards should be adhered to when assigning property numbers:

1. **Frontage interval.** Numbers should be assigned every 10.56 feet or each 1/500 mile on each side of a road. This will yield 1000 numbers per mile, 500 odd on one side and 500 even on the other. The interval chosen gives meaning to an address. For example, 3746 Mountain Road is located approximately 3.7 miles from the beginning of Mountain Road.



2. **Odd/Even number location.** Even numbers should be assigned the right side of a road, from the point of its beginning. Assign odd numbers on the left side of a road, from the point of its beginning.
3. **Beginning point.** Numbering should begin in a consistent manner on each road throughout a county or municipality. Use one of the following options for establishing the beginning point for numbering roads.

Option One: Numbers should ascend as emergency responders enter a majority of roads. For example, if emergency responders were based at the center of the county, then this would establish the beginning point for road numbering. All roads whose ends are closest to this origination point would have their numbers begin from that end.

Option Two: Numbers should normally begin when a road proceeds away from the road that is deemed of higher importance. The defined road hierarchy for the determination of road directions will be arterial, collector, local, unpaved, seasonal and non-essential. In the event that the roads are at the same hierarchy and importance level, road direction should be based on Option One above.

Option Three: Consider a numbering origin at a West beginning point and proceed eastward, or begin at a South beginning point and proceed northward.

Regardless of the option chosen, the following considerations should apply.

- 1) If numbers ascend on a road that cross jurisdictional boundaries, care should be taken to insure that the numbers at the border are not in close proximity to those numbers near the border in the adjacent jurisdiction. If so, then discussions with that jurisdiction should insure that numbering continues in one direction or another.
- 2) The beginning point for all dead-end roads should be at the place of departure from the main road.
- 3) The above guidelines will apply unless continuing a city numbering scheme, as in leaving a city where other numbers are being used. The system in place will then dictate the beginning number.

- 4. Intersections.** Both 4-way and “T” type intersections should be numbered, just as houses. These addresses will be useful as references.
- 5. Bridges.** Bridges longer than 50 (fifty) feet should be numbered just as houses. In most cases measure the middle of the bridge and post the numbers at the ends of the bridge in both directions. You may prefer to use an odd and even number to post the bridge address, odd on the odd numbered side facing traffic and even on the even numbered side facing traffic. On bridges longer than ½ mile, number the ends of the bridge and post accordingly.
- 6. Circular streets.** Circular streets and roads begin where they meet the lowest numbered intersecting road. The outside of the circle is numbered first according to the frontage interval. The inside is then numbered to match and mix with the outside. This will result, in some cases, with fewer numbers on the inside of the circle, a smaller frontage interval, and spaces between numbers.
- 7. Cul-de-sacs.** Cul-de-sacs often require applying the rules for both dead-end and circular streets. The numbering begins from the intersection toward the cul-de-sac. Once in the cul-de-sac, the numbers proceed following the odd/even rules to the center point of the cul-de-sac (i.e. odd numbers proceed around one side of the circle and even around the other side). On rare occasions there may be structures inside the cul-de-sac. When this occurs, name the circular section of the cul-de-sac a separate road name from the access road. Number this street counter-clockwise according to the circular street numbering rule.
- 8. “T” roads.** Roads with no outlet at both ends and that are intersected by an entering road should be named and numbered as a separate road or roads. If using the same name, then numbering should begin at the left end of the road and run the length of the road, unless that end may be extended in the foreseeable future. If two names are used, then numbering should begin for each road where it leaves the intersecting road. In the case where the

intersecting road logically continues to the end of one of the road segments, then continue the name and numbering of the intersecting road to that end and separately name and number the spur road from where it departs the intersecting road.

- 9. Crossing county lines.** When crossing county lines, consideration should be given to an existing numbering system in that county. If no system exists, the numbering should stop at the county line. If a system does exist in that county, those numbers may continue, following the standards for distance and direction. Since many emergency-response zones cross county lines, try not to rename roads at the county line, unless there is a permanent landmark such as a river, in order to avoid confusion to responders. Instead, bring the road to a logical point, such as an intersection, before changing the road name.
- 10. Stacked addresses.** Houses or trailers behind other trailers facing the road sharing a common driveway should be numbered with consecutive odd or even numbers. If more than two structures share a driveway, consider naming the driveway as a separate road and number the structures accordingly.
- 11. Apartment and duplexes.** Apartments with individual outside entrances (such as duplexes or townhouses) should be assigned separate street addresses. Apartments and multi-tenant structures with one main entrance should be assigned one primary number with a secondary address as the assigned apartment number (ex. 123 MAIN ST APT 101). Apartment numbers should only be numeric. Do not use 0 for an apartment number. Apartments should be numbered consecutively with odd apartment numbers on the left and even on the right (from the point of access).

In multi-level apartment houses or complexes, if more than four apartments are on a floor, a three-digit apartment number should be used. The first digit of the apartment number represents the floor number. For example, apartment 304 represents the second apartment on the right on the third floor. If there are more than nine floors, the apartment numbers should follow the same rules, but for floors 10 and higher the apartment number will be four

digits. For example, apartment 1216 would be located on the 12th floor. Basement apartments should be numbered beginning with the number 1.

Offices in multi-unit buildings should be assigned a number following the same guidelines, but will be referred to as a suite (STE) instead of an apartment (APT). In a multiple building apartment complex, each building should be assigned its own street address and follow consistent apartment numbering from building to building.

- 12. Businesses.** Office buildings and business districts should be numbered following the apartment numbering rules. The secondary address will be referred to as suites instead of apartments. Strip malls and office parks, where each business has its own entrance, should be assigned separate street addresses for each business.
- 13. Trailer parks.** If possible, name roads accessing trailer parks and number pads or lots using the frontage system. An alternative is to number the trailers just like apartments. Assign one primary address to the park and then assign secondary addresses to the trailers using Lot # instead of Apt #. If it is not conducive to address in either manner, a joint decision on numbering should be made between the county's 9-1-1 center, the US Postal Service District Address Management Systems Office, and the West Virginia Division of Highways.
- 14. Highways.** Highways with no city numbering systems in place or where the city system is to be changed should be numbered from county line to county line following the number origination guidelines set by the county.
- 15. Number assignment location for structures.** When assigning numbers, the middle of a structure should determine the number. Structures should always be numbered according to the road they face, not where the driveway enters the road or where the mailbox is. An exception to this is when the house can be seen but not approached directly from the road. In this case, the driveway should be numbered on the road from which it departs.

- 16. Preplanning subdivisions.** Use maps provided by the developer to assign numbering to new subdivisions. Ensure either footage is marked on the maps or the map is drawn using an engineering scale. In addition, corner lots should be numbered in both directions so as to accommodate a house built facing either street.
- 17. Interfacing with existing systems.** When interfacing with an existing numbering system, care should be taken in locating the last assigned number of the existing system. All possible sources should be checked to determine the last number. Once the last number is determined, start the new numbering from the next available hundred block. For example, if the last number is 3846, begin numbering from 3900. Some roads leaving a city limit may not have any numbers within the city. These may be numbered from the in-city beginning point.
- 18. General numbering guidelines.** Primary numbers assigned to structures should be whole numbers. Use of the following types of numbers is not acceptable:
- Alphanumeric numbers, ex. 235A.
  - Numbers with hyphens or special characters, ex. 45-46 or 78/1.
  - Numbers with fractions, ex. 28 ½.
  - Numbers with more than six digits.

### **Number Posting Standards**

To insure that numbers will be visible, they should be posted as follows:

- 1. Number on the Structure.** Where the structure is within 50 (fifty) feet of the edge of the road right-of-way and can be clearly seen from the road, the assigned number should be displayed on the front of the structure in the vicinity of the front door or entry.
- 2. Number at the Road Line.** Where the structure is over 50 (fifty) feet from the edge of the road right-of-way, the assigned number should be displayed on

the structure as above and be displayed on a post, fence, wall, mailbox, or on some structure at the property line adjacent to the walk or access drive to the numbered structure. Any posted number at the road should be placed high enough to not be obscured by snow during an average winter.

3. **Size and Color of Number.** Numbers should be a minimum of four (4) inches high and be of a contrasting color to their background. Numbers made from block letters and reflective materials are recommended.
4. **Property owner responsibility.** Every person whose duty is to display the assigned number should remove any different number that might be mistaken for, or confused with, the number assigned to the property.
5. **Interior location.** All residents and other occupants should post their assigned number and road name adjacent to their telephone for emergency reference.

### **Road Name Suffixes for New Roads**

|            |      |
|------------|------|
| ALLEY      | ALY  |
| AVENUE     | AVE  |
| BOULEVARD  | BLVD |
| BYPASS     | BYP  |
| CIRCLE     | CIR  |
| DRIVE      | DR   |
| EXPRESSWAY | EXPY |
| EXTENSION  | EXT  |
| FREEWAY    | FWY  |
| HIGHWAY    | HWY  |
| LANE       | LN   |
| LOOP       | LOOP |
| PARKWAY    | PKWY |
| ROAD       | RD   |
| SPUR       | SPUR |
| STREET     | ST   |
| TERRACE    | TER  |
| TURNPIKE   | TPKE |
| WAY        | WAY  |

**Suffix Abbreviations for Existing Roads**

|            |        |             |        |           |        |
|------------|--------|-------------|--------|-----------|--------|
| ALLEY      | ALY    | FLAT(S)     | FLT(S) | PARKWAY   | PKWY   |
| ANNEX      | ANX    | FORD(S)     | FRD(S) | PASS      | PASS   |
| AVENUE     | AVE    | FOREST      | FRST   | PASSAGE   | PSGE   |
| BEACH      | BCH    | FORGE(S)    | FRG(S) | PATH      | PATH   |
| BEND       | BND    | FORK(S)     | FRK(S) | PIKE      | PKE    |
| BLUFF(S)   | BLF(S) | FORT        | FT     | PINE(S)   | PNE(S) |
| BOTTOM     | BTM    | FREEWAY     | FWY    | PLACE     | PL     |
| BOULEVARD  | BLVD   | GARDEN(S)   | GDNS   | PLAIN(ES) | PLN(S) |
| BRANCH     | BR     | GATEWAY     | GTWY   | PLAZA     | PLZ    |
| BRIDGE     | BRG    | GLEN(S)     | GLN(S) | POINT(S)  | PT(S)  |
| BROOK(S)   | BRK(S) | GREEN(S)    | GRN(S) | PRARIE    | PR     |
| BYPASS     | BYP    | GROVE(S)    | GRV(S) | REST      | RST    |
| CAMP       | CP     | HARBOR(S)   | HBR(S) | RIDGE(S)  | RDG(S) |
| CANYON     | CYN    | HAVEN       | HVN    | ROAD      | RD     |
| CAPE       | CPE    | HEIGHTS     | HTS    | ROW       | ROW    |
| CAUSEWAY   | CSWY   | HIGHWAY     | HWY    | RUN       | RUN    |
| CENTER(S)  | CTR(S) | HILL(S)     | HL(S)  | SHORE(S)  | SHR(S) |
| CIRCLE(S)  | CIR(S) | HOLLOW      | HOLW   | SPRING(S) | SPG(S) |
| CLIFF(S)   | CLF(S) | ISLAND(S)   | IS(S)  | SPUR      | SPUR   |
| CORNER(S)  | COR(S) | JUNCTION    | JCT    | SQUARE(S) | SQ(S)  |
| COURSE     | CRSE   | KNOLL(S)    | KNL(S) | STATION   | STA    |
| COURT(S)   | CT(S)  | LANDING     | LNDG   | STREAM    | STRM   |
| COVE(S)    | CV(S)  | LANE        | LN     | STREET    | ST     |
| CREEK      | CRK    | LOCK(S)     | LCK(S) | SUMMIT    | SMT    |
| CRESCENT   | CRES   | LODGE       | LDG    | TERRACE   | TER    |
| CREST      | CRST   | LOOP        | LOOP   | THRUWAY   | TRWY   |
| CROSSING   | XING   | MALL        | MALL   | TRACE     | TRCE   |
| DALE       | DL     | MANOR(S)    | MNR(S) | TRACK     | TRAK   |
| DAM        | DM     | MEADOW(S)   | MDW(S) | TRAIL     | TRL    |
| DIVIDE     | DV     | MILL(S)     | MLS(S) | TURNPIKE  | TPKE   |
| DRIVE      | DR     | MISSION     | MSN    | VALLEY(S) | VLY(S) |
| ESTATE(S)  | EST(S) | MOTORWAY    | MTWY   | VIEW(S)   | VW(S)  |
| EXPRESSWAY | EXPY   | MOUNTAIN(S) | MTN(S) | VILLAGE   | VLG    |
| EXTENSION  | EXT    | NECK        | NCK    | VILLE     | VL     |
| FALL       | FALL   | ORCHARD     | ORCH   | VISTA     | VIS    |
| FERRY      | FRY    | OVAL        | OVAL   | WALK      | WALK   |
| FIELD(S)   | FLD(S) | PARK(S)     | PARK   | WAY       | WAY    |

## **Road Signage**

Installing road signs is one of the final, and more important tasks in addressing. To assist both emergency service personnel and the general public, signs must be visible and maintained. A frequent complaint about road signs is that snow banks or vegetation often hide them. Annual trimming or minor maintenance can eliminate this problem.

- 1. Color.** Signs should be reflectorized. The letters and background should be of contrasting colors and should have white letters and border on a green background. **Letters should be at least 3" upper case.** It is important to insure that letters are tall enough and thick enough to be easily seen day or night.
- 2. Grade.** High Intensity Reflective Sheeting (250 candle power silver high intensity) is recommended when nighttime high visibility is necessary from long distances or at high accident intersections where quick identification of markings is important. High intensity sheeting is available in packaged letters or can be cut on a machine as with the engineer grade sheeting. High intensity sheeting meets the Federal Manual of Uniform Traffic Control Devices (MUTCD) specifications and carries a ten-year warranty.
- 3. Lettering.** Letters should conform to the standard alphabets for highway signs printed by the Federal Highway Administration. Suffix abbreviation should follow those listed in these standards, such as ALY, RD, LN, CIR, AVE, etc. Road names should not be abbreviated.
- 4. Materials.** The most commonly used material for blades is either extruded aluminum with a 0.25" inch flange thickness and a 0.090" inch web (min.) or flat sheet aluminum with a minimum thickness of 0.08 inches. 6061T6 aluminum alloy is a hard, strong alloy manufactured from flat sheet. This has been replaced, to some extent, by 5052H38 series alloy, which is softer and comes in a roll. 5052H38 is flattened on a press, but retains a memory and may warp slightly over time. Both alloys must be alodined or anodined or the sheeting may delaminate to the surface of the blank over a period of time. Thickness can range from .080" to 0.125", but 0.080" are recommended.



- 5. Posts.** Posts for elevated signs vary from round to "U" channel. Both types of post are made of aluminum or galvanized steel. The type of post chosen may depend on the environment, soil type, cost, or preference of the installing and maintaining agency. Sign mounting hardware is available for both types of post. When installing posts, it is recommended to install anchor posts, such as "Lok-Set" post anchors. These anchors will help keep the sign from leaning and will also keep vandals from twisting the sign around, a very popular pastime among juveniles. Any new obstacles have to be a break away device approved by the Federal Highway Administration.
- 6. Heights.** The height of the sign is very important. Posts come in lengths of 8 feet to 14 feet. In most cases, the taller the better. As a general rule, signs should be 7 feet or more off the ground when mounted on the post. This keeps the signs visible and can reduce some types of vandalism.
- 7. Placement.** Sign placement is generally prescribed by state and federal rules. As a general guide, signs are placed on two sides of each four-way intersection and on the right hand side of a "T" intersection. It is generally recommended that a four-way sign be used, one that displays the name of both roads using a sign-to-sign bracket. If not economically possible to place the four-way sign at every intersection, an attempt should be made to place one at every other intersection.
- 8. Installation.** Before installing any road signs, a municipality or county must call Miss Utility of West Virginia, Inc. at least 48 hours before digging. Miss Utility can be contacted 24 hours a day, seven days a week by calling toll-free **1-800-245-4848**. Routine 48-hour notifications can be made via fax or e-mail. Notification must not be made more than 10 business working days in advance of the beginning of any such work due to the possible deterioration of the locate markings. The time requirements are exclusive of Saturdays, Sundays, and legal holidays.

*For additional information on the design and installation of road name signing, please refer to the following standards of the West Virginia Division of Highways.*

### Standards for the Design and Installation of Road Name Signing

| Proposed Location of Sign<br>at Jct. Of:                      And: |                     | Posted<br>Speed | Letter<br>Height | Border | Arrow | County<br>Route No. | Bkgd.<br>Color | Legend<br>Color |
|--|---------------------|-----------------|------------------|--------|-------|---------------------|----------------|-----------------|
| US or WV Rte.  | Local Serv.<br>Rte. | All             | 3"               | Yes    | Yes   | Yes                 | Green          | White           |
| US or WV Rte.  | Private Drive       | All             | 3"               | Yes    | Yes   | No                  | Green          | White           |
| Local Serv. Rte.   | Local Serv.<br>Rte. | 35 and<br>Above | 3"               | Yes    | Yes   | Yes                 | Green          | White           |
| Local Serv. Rte.   | Local Serv.<br>Rte. | Less than<br>35 | 2" or 3"         | Yes    | Yes   | 2" No -<br>3" Yes   | Green          | White           |
| Local Serv. Rte.   | Private Drive       | 35 and<br>Above | 3"               | Yes    | Yes   | No                  | Green          | White           |
| Local Serv. Rte.   | Private Drive       | Less Than<br>35 | 2"               | Yes    | No    | No                  | Green          | White           |

In addition to the above noted design criteria, the following installation procedures should also be followed:

- 1) WV DOH approved supports to be used.
- 2) Supports to be standard depth in ground (normally 3').
- 3) Lateral clearance of 6' - 12' from edge of pavement should be strived for.
- 4) Vertical clearance of 7' from edge of pavement to bottom of sign should be maintained.
- 5) Existing supports for existing signs should not be used to mount road name signing except on stop and yield signs, with the positioning of these signs not affecting the purpose of the signs.

