



**Tennessee Information for Public Safety**

## **Maintenance Standards**

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## Version Changes

Type	Version	Description	Tables
Working Draft	1.0	Revising text, tables, definitions	3.4, 3.5
	2.02	Addition of Address Point attribution	3.6
	3.05	Addition of ESN polygonal layer	3.7
Public Release	1.0	Addition of Version Changes	
	1.2	Upper-case formatting for [DESCRIPTION] field in street centerline attribution	3.5
	1.3	Addition of Driveways centerline layer	3.6, 3.7, 3.8
	1.5	Addition of Trail centerline layer	3.7, 3.8, 3.9
	2.0	Addition of product name "TIPS"	
	2.1	Removed underscore (_) as non-uniform punctuation	Appendix C
	2.5	Changed [LAT], [LONG], [X_SP], [Y_SP] fields from Long Integer to Double to allow for decimal	3.8
	3.0	Removed [DELETE_] field from <i>Common Attribution</i> (merged requirements into [STATUS] field)	3.4
		Added [STATUS] field to common attribution	3.4
		Removed [STATUS] field treatment under <i>Address Point Attribution</i>	3.8
		Changed [STRUCTYPE] requirements	3.8
		Revised [STPRETYPE], [STTYPE] field requirements referencing Appendix A	3.8
	3.1	Changed [TLENGTH] to Double.	3.7
	3.2	Removed pseudo-ESN fields. Whether the zones are pseudo-ESNs or not, the values need to appear in the [ESN] fields.	3.5, 3.8, 3.9
	3.3	Changed [LAT], [LONG] fields to String type with a width of 10. Field values will be in Degrees, Decimal Minutes in the form "XX XX.XX". This is to accommodate incident location from an aircraft (e.g., Med-Evac).	3.8
3.5	Added pavement type [PTYPE] to the driveway centerline.	3.6	
	Changed [PARKTYPE] to Short Integer type with coded values.	3.7	
3.6	Changed [LAT], [LONG] fields to a width of 15 and waved the aforementioned format restriction to allow a more flexible field value (see documentation for examples). Coordinate values remain Degrees, Decimal Minutes and the field type remains String. The <b>Calculate Geometry...</b> option in ArcGIS allows for populating values containing the degree (°) and minute (′) symbols with cardinal direction or negative Longitude options.	3.8	

## Executive Summary

A statewide street centerline Geographic Information System (GIS) digital database is being developed by the State of Tennessee. In 2007, the Office for Information Resources, GIS Services section (OIR-GIS Services) completed the initial statewide GIS data production through the Tennessee Base Mapping Program (TNBMP). The TNBMP data products included not only street centerlines, but digital ortho imagery, a digital surface model, hydrography and drainage data, along with a comprehensive property (cadastral) ownership layer.

To sustain the long term use of these GIS data layers in a variety of State and local GIS applications, appropriate data maintenance roles and responsibilities must be established. Working with the Tennessee Emergency Communications Board (TECB), OIR-GIS Services is under contract to help facilitate the maintenance of the statewide centerline database. Working with local E9-1-1 districts, OIR-GIS Services will be consuming locally updated geometry and tabular information (street addresses, names, etc.) and integrating these local updates into a single consolidated and standardized centerline database. In turn, OIR-GIS Services will provide local E9-1-1 districts with the updated statewide centerline database at no cost to the districts. The ability for local E9-1-1 districts to share and exchange data with OIR-GIS Services will allow the districts to effectively manage their operations and improve public safety.

The ability for OIR-GIS Services to effectively maintain this street centerline database and provide quality information to the E9-1-1 districts is dependent upon the willingness of each local E9-1-1 district to share their data with OIR-GIS Services. Moreover, data quality is based on the ability of OIR-GIS Services to develop and adhere to specific data maintenance standards. The following document provides specific street centerline and addressing standards that OIR-GIS Services will use to maintain this statewide database.

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## 1.0 Introduction

The statewide street centerline database, referred to hereafter as the Tennessee Spatial Data Product (TNSDP) has been compiled for use in each Emergency Communications District (ECD) of Tennessee. The GIS Services section of the Office for Information Resources is currently working with the Tennessee Emergency Communications Board to formulate a comprehensive maintenance schedule for the distributed layers of the TNSDP. Utilizing the latest street address data standard document from the Federal Geographic Data Committee as a foundation, these guidelines and restrictions will govern the updating methodologies used by OIR-GIS Services and the various end-user agencies implementing these standards. These maintenance standards will apply until the next versioned release of this documentation. Please contact OIR-GIS Services if you are unsure as to the current version of the maintenance standards documentation (see below under *Feedback* for contact information).

## 2.0 Requirements

In 1992, the Tennessee State Information Systems Council adopted Environmental Systems Research Institute (ESRI) as the State of Tennessee standard GIS software platform. The statewide street centerline database will be maintained by OIR-GIS Services and distributed to local E9-1-1 districts in an ESRI data format. In addition to distributing the statewide data, OIR-GIS Services can provide county level centerline data to a E9-1-1 district. If a local E9-1-1 district decides to implement the county level street centerline data provided by OIR-GIS Services as the primary or production data set, the district will be required to apply any updates and/or edits to the data in the ESRI data format. This may not be an issue as most districts already have an existing county centerline database. However, for districts wanting to migrate or switch to the OIR-GIS Services centerline database, they will be required to maintain the centerline data in the ESRI format. If you are unsure that your current software platform supports and/or natively uses the ESRI file format, please contact OIR-GIS Services (see below under *Feedback* for contact information) or your software vendor.

While E9-1-1 districts are required to use the ESRI format for maintaining county level data provided by OIR-GIS Services, ESRI software is not a requirement for E9-1-1 districts to use the statewide centerline data provided by OIR-GIS Services. OIR-GIS Services is aware that several E9-1-1 districts are using other GIS software products. To accommodate these users, OIR-GIS Services is communicating with the computer aided dispatch (CAD) vendors and making them aware that certain preprocessing or data manipulation **may** be required for non-ESRI software products to consume the statewide centerline database. Please consult with your vendor to determine if any system modifications or enhancements are required to view the statewide centerline database.

### 2.1 Metadata

The term *metadata* is defined as “information that describes the content, quality, condition, origin, and other characteristics of data or other pieces of information. Metadata for spatial data may describe and document its subject matter; how, when, where, and by whom the data was collected; availability and distribution information; its projection, scale, resolution, and accuracy; and its reliability with regard to some standard. Metadata consists of properties and documentation. Properties are derived from the data

source (for example, the coordinate system and projection of the data), while documentation is entered by a person (for example, keywords used to describe the data).”<sup>1</sup>

Metadata is key to the lifecycle of any dataset. It effectively protects the investment of data compilation, re-use and updating. It provides the user with consistent terminology, key elements and describes the fitness for use. Moreover, it enables discovery when combined with other data in a clearinghouse or data catalog.<sup>2</sup>

Metadata maintained with the addressing layers will be FGDC-compliant. For more information on this topic, visit [www.fgdc.gov/metadata](http://www.fgdc.gov/metadata) . For the Content Standard for Digital Geospatial Metadata (CSDGM) open [www.fgdc.gov/standards/projects/FGDC-standards-projects/metadata/base-metadata/v2\\_0698.pdf](http://www.fgdc.gov/standards/projects/FGDC-standards-projects/metadata/base-metadata/v2_0698.pdf) . For the Metadata Quick Guide open [www.fgdc.gov/metadata/documents/MetadataQuickGuide.pdf](http://www.fgdc.gov/metadata/documents/MetadataQuickGuide.pdf) .

## 2.2 Standards

Standards for addressing that govern this document include the FGDC Street Address Data Standard ([www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address/](http://www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address/)), the United States Postal Service Publication 28 ([www.nena9-1-1.org/9-1-1TechStandards/Standards\\_PDF/USPSPub28.pdf](http://www.nena9-1-1.org/9-1-1TechStandards/Standards_PDF/USPSPub28.pdf)), and standards developed by OIR-GIS Services for inclusion in the State of Tennessee enterprise GIS solution. The USPS Publication 28 is recognized as an authoritative data standard by NENA<sup>3</sup>

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<sup>1</sup> ESRI. GIS Dictionary. October 31, 2006. Retrieved December 18, 2006 from <http://support.esri.com/index.cfm?fa=knowledgebase.gisDictionary.search&searchTerm=metadata>

<sup>2</sup> Wyoming Geographic Information Science Center. Metadata Education Project. Retrieved December 18, 2006 from <http://www.wygisc.uwyo.edu/metadata/why.html#benefit>

<sup>3</sup> NENA. November 9, 2004. NENA Data Standards for Local Exchange Carriers, ALI Service Providers & 9-1-1 Jurisdictions. pgs. 14, 19, 66.

NENA. February 25, 2006. NENA Standard Formats & Protocols for ALI Data Exchange, ALI Response & GIS Mapping. pgs. 18, 25, 33, 38, 55, 60.

## 3.0 Technical Specifications

### 3.1 General Conditions

This section provides technical specifications for the street centerline and address point data products, as well as guidelines for compilation of said data to support a variety of CAD or Map-ALI applications. Field values are archived in upper case unless otherwise specified and contain no punctuation. A complete list of non-uniform punctuation can be found in Appendix C. Subsequent updates to this product will not retain user-defined fields, so it is imperative that the local editor or end-user archive this information. OIR-GIS Services suggests that additional fields needed for individual applications be added to a join or linking table using [OIRID], however it will be left up to each editing authority to determine the best archive mechanism relative to their own situation.

### 3.2 Coordinate System and Projection

The following outlines the State of Tennessee standard for GIS data:

Coordinate System: State Plane  
 Zone: 4100 (Tennessee)  
 Projection: Lambert Conformal Conic  
 False Easting: 1968500.000000  
 False Northing: 0.000000  
 Central Meridian: -86.000000  
 First Standard Parallel 1: 35.250000  
 Second Standard Parallel: 36.416667  
 Latitude of Origin: 34.333333  
 Linear Unit: U.S. Foot (0.304801)  
 Geographic Coordinate System:  
 Name: Geographic Coordinate System (GCS)  
 Angular Unit: Degree (0.017453292519943295)  
 Prime Meridian: Greenwich (0.000000000000000000)  
 Datum: North American Datum of 1983  
 Spheroid: GRS 1980  
 Semi-major Axis: 6378137.000000000000000000  
 Semi-minor Axis: 6356752.314140356100000000  
 Inverse Flattening: 298.257222101000020000

### 3.3 Horizontal Accuracy

Horizontal accuracy will apply to address points and street centerline nodes and vertices. The requirement for acceptance shall be +/- 3 meters<sup>4</sup>.

### 3.4 Common Attribution

Table 3.4 outlines some attribute descriptions common to both the street centerline and address point layers. Brief explanations and expectations of the individual fields and their values follows.

Table 3.4

Field Name	Type	Width	Description	Standard
CFCC	String	3	Census Feature Class Code	Census
EDITOR	String	10	Acronym for editing authority	OIR
GEOMOD	String	75	Description of geometry modification	OIR
GEOSRCE	String	45	Source for spatial edit	OIR
GEODATE	Date		Date Stamp of spatial edit	OIR
ATTMOD	String	75	Description of attribute modification	OIR
ATTSRCE	String	45	Source for attribute edit	OIR
ATTDATE	Date		Date Stamp of attribute edit	OIR
STATUS	Short Integer	3	Lifecycle status Subtype field in geodatabase architecture 730 = ACTIVE 734 = PROPOSED 736 = POTENTIAL 799 = RETIRED "799" code replaces the [DELETE_] value	OIR
DELNOTES	String	75	Brief rationale for any geometry retirement ([STATUS] = 799) not mandatory	OIR

#### 3.4.1 Census Feature Class Code [CFCC]

These are standard alphanumeric, 3-character feature class codes maintained by the U.S. Bureau of the Census. For an extended list of these codes, refer to Appendix D.

#### 3.4.2 Editing Authority [EDITOR]

Name of the authorized entity for this edit. Multiple authorities may exist within a single ECD. This value should be a unique acronym.

<sup>4</sup> meets National Map Accuracy Standards of 1947 ("NMAAS") (<http://rockyweb.cr.usgs.gov/nmpstds/nmas.html>) and complies with the National Standard for Spatial Data Accuracy ("NSSDA") (<http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/chapter3>).

**3.4.3 Geometry Modifications****[GEOMOD]**

Brief description of the spatial modification for this edit. The field is 75 characters for expositions, but this value could be a single, descriptive word.

**3.4.4 Spatial Edit Source****[GEOSRCE]**

Authoritative source for the spatial modification for this edit. Examples of this might be “new plats from the Assessor’s Office” or “field verification with GPS”. This value is crucial for the retention of the edit in the TNSDP production dataset.

**3.4.5 Spatial Edit Date Stamp****[GEODATE]**

Date the spatial edit was made. This value is generic and does not include a time stamp. Several edits can be made and then a global calc on the selected set can be performed.

**3.4.6 Attribute Modification****[ATTMOD]**

Brief description of the attribute modification for this edit. The field is 75 characters for expositions, but this value could be a single, descriptive word.

**3.4.7 Attribute Edit Source****[ATTSRCE]**

Authoritative source for the attribute modification for this edit. This value is crucial for the retention of the edit in the TNSDP production dataset.

**3.4.8 Attribute Edit Date Stamp****[ATTDATE]**

Date the attribute edit was made. This value is generic and does not include a time stamp.

**3.4.9 Lifecycle Status****[STATUS]**

Current status of the geometry (centerline or point dataset). The values are as follows:

730 = ACTIVE. The geometry is in use and has valid attributes.

734 = PROPOSED. The geometry is pending. Attributes may or may not have been assigned.

736 = POTENTIAL. The geometry is being considered, but not approved.

799 = RETIRED. The geometry is obsolete. Attribution is discarded or transferred.

This field represents the default subtype in the geodatabase schema and helps maintain a temporal view of the dataset between archival operations.

**3.4.10 Delete Notation****[DELNOTES]**

This field is strictly a memo field for entering a brief rational for the retirement of specific geometry or any special instructions that were considered at the time of the edit. It is not mandatory.

### 3.5 Street Centerline Attribution

Table 3.5 outlines the attribute definitions for the street centerline product. For a listing of acceptable street suffix abbreviations, refer to Appendix A. Each centerline segment will have a unique identifier ([OIRID] value). Alternate street names in deliverable formats can be included as geometrical features and not provided as a linking table. Centerlines that share geometry (vertical alignment) will have the same [SEGID] value. In this section, “Left” and “Right” relate to the digitized direction of the centerline geometry (From and To Nodes), and not from the line orientation of the map display. Brief explanations and expectations of the individual fields and their values follows.

**Table 3.5**

Field Name	Type	Width	Description	Standard
SHAPE	S	9	Spatial information storage	
OIRID	String	20	Unique ID for each street segment	OIR
SEGID	String	20	Unique ID tying vertical alignments between segments together	OIR
L_F_ADDP	String	11	Potential Left From Address	USPS
L_T_ADDP	String	11	Potential Left To Address	USPS
R_F_ADDP	String	11	Potential Right From Address	USPS
R_T_ADDP	String	11	Potential Right To Address	USPS
L_F_ADDA	String	11	Actual Left From Address	MSAG
L_T_ADDA	String	11	Actual Left To Address	MSAG
R_F_ADDA	String	11	Actual Right From Address	MSAG
R_T_ADDA	String	11	Actual Right To Address	MSAG
PREDIR	String	2	Prefix Directional	USPS PUB 28
PRETYPE	String	4	Prefix Street Type (For appropriate abbreviations, please refer to Appendix A)	USPS PUB 28
NAME	String	40	Street Name	USPS PUB 28
TYPE	String	4	Suffix Street Type (For appropriate abbreviations, please refer to Appendix A)	USPS PUB 28
SUFDIR	String	2	Suffix Directional	USPS PUB 28
LABEL	String	50	Proper Case, Full Street Name for labeling/display purposes	OIR
DESCRIPTION	String	75	Descriptive term or phrase (e.g., “AIRPORT CARGO” or “UTILITY ACCESS”)	OIR
ZIP_L	String	5	USPS 5-digit ZIP code Left	USPS PUB 28
ZIP_R	String	5	USPS 5-digit ZIP code Right	USPS PUB 28

Field Name	Type	Width	Description	Standard
ESN_L	String	3	Emergency Service Number Left	E9-1-1
ESN_R	String	3	Emergency Service Number Right	E9-1-1
CITY_L	String	30	Administrative Area Left	FIPS
CITY_R	String	30	Administrative Area Right	FIPS
COUNTY_L	String	30	County Area Left	FIPS
COUNTY_R	String	30	County Area Right	FIPS
STATE_L	String	2	State Abbreviation Left	FIPS
STATE_R	String	2	State Abbreviation Right	FIPS
NAME_SRCE	String	30	TANA Internal	TANA
ADDR_SRCE	String	30	TANA Internal	TANA
GEOM_SRCE	String	30	TANA Internal	TANA
STATE00_L	String	2	State FIPS Left	FIPS
STATE00_R	String	2	State FIPS Right	FIPS
COUNTY00_L	String	3	County FIPS Left	FIPS
COUNTY00_R	String	3	County FIPS Right	FIPS
MCD00_L	String	5	MCD FIPS Left	FIPS
MCD00_R	String	5	MCD FIPS Right	FIPS
PLACE00_L	String	5	Place FIPS Left	FIPS
PLACE00_R	String	5	Place FIPS Right	FIPS
KEY	String	10	Concatenation of FIPS codes for State, County and Place. Relational field to Dynamap place boundary layer ( <i>plb</i> ).	FIPS
SPDLIMIT	Double	8	Speed Limit	
TFCOST	Double	8	Travel Cost (To-From)	
FTCOST	Double	8	Travel Cost (From-To)	
T_ELEV	Short Integer	2	Valid Turn Indicator	
F_ELEV	Short Integer	2	Valid Turn Indicator	
ONEWAY	String	10	Directional Travel Indicator	

Table 3.5

### 3.5.1 Potential Address Ranges

[L\_F\_ADDP], [L\_T\_ADDP], [R\_F\_ADDP], [R\_T\_ADDP]

These ranges are maintained in accordance with the USPS Address Information System (“AIS”). Generally, hundred-breaks are applied to the address ranges between intersections. For example, a street segment with an actual address range of 100-105 would have a potential address range of 100-199. This format is also reflected in the Dynamap®\Transportation street centerline dataset maintained by Tele Atlas N.A., Inc.

### 3.5.2 Actual Address Ranges

[L\_F\_ADDA], [L\_T\_ADDA], [R\_F\_ADDA], [R\_T\_ADDA]

Maintenance of these ranges is based solely on the Master Street Address Guide (“MSAG”) provided by each local ECD. The values reflect the known, minimum and maximum for each side of the street regardless of vacant land, potential build-out or structural disbursement.

**3.5.3 Full Street Name****[PREDIR], [PRETYPE], [NAME], [TYPE], [SUFDIR]**

These values should reflect the USPS [Publication 28](#) values for each field type respectively. For a treatise on usage, please reference the compendium [Geocoding Standards](#). Most of the valid field abbreviations can be found in the appendices of this document. Where the USPS values differ or hinder the functionality of the centerline in dispatch operations, the local ALI database or MSAG value should be used.

**3.5.4 Display and Map Labeling****[LABEL]**

This value is a concatenation of the values found in the preceding fields ([PREDIR], [PRETYPE], [NAME], [TYPE], [SUFDIR]) with appropriate spacing interposed. For aesthetics, proper case is employed (whereas all other field values are upper case). This field can be used to label the full street name with the GIS application or for map production.

**3.5.5 Description****[DESCRIPTION]**

This field should generally be populated for unnamed streets (i.e., those without values for fields outlined in 3.5.3 above). CFCC classification will typically be A00, A5 class, A60, A63-9, A73 and A75. Examples of valid field values are: "AIRPORT CARGO", "UTILITY ACCESS", "CEMETERY EGRESS", "PARKING LOT", "SCHOOL ENTRANCE".

**3.5.6 ZIP Code****[ZIP\_L], [ZIP\_R]**

These field values designate the 5-digit ZIP code(s) on the Left and Right sides (respectively) of the centerline. ZIP+4 values (or 9-digit ZIP codes) should not be entered.

**3.5.7 Emergency Service Number****[ESN\_L], [ESN\_R]**

These field values designate the Emergency Service Number on the Left and Right sides (respectively) of the centerline. The value should always reflect a 3-digit format (e.g., "002"). If present, pseudo-ESN values should be entered in these fields.

**3.5.8 City or Community****[CITY\_L], [CITY\_R]**

These field values designate the administrative areas on the Left and Right sides (respectively) of the centerline. The value should always reflect the designation found in the ALI database (or MSAG). Subdivisions and unincorporated areas should not be entered.

**3.5.9 County****[COUNTY\_L], [COUNTY\_R]**

These field values designate the county areas on the Left and Right sides (respectively) of the centerline. Since each County maintains their own boundaries, and there is no seamless boundary file maintained by the State, these values will be governed for this release by the Tele Atlas boundary file (*cyb*).

**3.5.10 State****[STATE\_L], [STATE\_R]**

These field values designate the state areas on the Left and Right sides (respectively) of the centerline. Predominantly "TN", although perimeter counties should be aware of centerlines that are in the extremities of their jurisdiction.

**3.5.11 Tele Atlas Fields****[NAME\_SRCE], [ADDR\_SRCE], [GEOM\_SRCE]**

User-defined fields. These values should not be changed. These fields will eventually be dropped from the attribute table of the statewide production dataset, but are crucial for the initial stages of local data integration.

**3.5.12 FIPS Codes****[STATE00\_L], [STATE00\_R], [COUNTY00\_L], [COUNTY00\_R], [MCD00\_L], [MCD00\_R], [PLACE00\_L], [PLACE00\_R]**

Federal Information Processing Standards codes, designating state, county, minor civil divisions and places (i.e., cities, towns). These fields may eventually be dropped from the attribute table of the statewide production dataset, but are important for the initial stages of production.

**3.5.13 Relational Fields (RDBMS)****[OIRID]**

Unique identifier for each individual street centerline segment. User-defined data maintained at the local level that has a relationship with segments of this dataset can be established via these field values.

NOTE: Subject to change. OIR-GIS Services will be producing a change log as segments are merged or split based on annexations or ESN boundary changes.

**[SEGID]**

Values establishing a vertical relationship between centerline segments. Alternate names are currently represented as distinct geometry, and therefore are coincident with certain other segments. This field will tie these segments together enabling a user to establish relationship through a tabular query.

**[KEY]**

Concatenation of the State, County and Place FIPS codes, creating a relational field to link the statewide data product to the place boundary layer in the Tele Atlas Dynamap® Transportation dataset (*plb*). These fields may eventually be dropped from the attribute table of the statewide production dataset.

**3.5.14 Routing Attributes****[SPDLIMIT], [TFCOST], [FTCOST], [T\_ELEV], [F\_ELEV], [ONEWAY]**

Attributes that enable routing applications. These fields are not populated by default. The State is currently looking for valid sources for entering/updating these values.

### 3.6 Driveway Centerline Attribution

Driveways are created from the existing Tennessee Base Mapping Program street centerline base. Current GIS datasets at the local level may comprise additional driveway centerlines. It is the intent of this maintenance program to absorb all appropriate driveway sources into the production version for enhanced call-taking ability at the PSAP. [Table 3.6](#) outlines the attribute definitions for the driveway centerline product.

**Table 3.6**

Field Name	Type	Width	Description	Standard
SHAPE	S	9	Spatial information storage	
OIRID	String	20	Unique ID for the primary street segment this driveway accesses	OIR
PTYPE	Short Integer	2	Pavement Type 3 – GRADED AND DRAINED 4 – SOIL 5 - GRAVEL OR STONE 6 – ASPHALT 15 – ASPHALT CONCRETE 18 – PORTLAND CEMENT CONC. 19 – BRICK OR BLOCK	TDOT

#### 3.6.1 Relational Fields

##### [OIRID]

The unique ID of the street segment that this driveway accesses. NOTE: In most cases the unique ID will reference the street from which the addressing is derived for the associated address point, but not always. Also, as [OIRID] values change on the street centerline, these will be updated in the driveway layer.

#### 3.6.2 Pavement Types

##### [PTYPE]

Coded values that represent pavement types. Useful in understanding the conditions of the driveway for responding agencies. The default value is 6.

### 3.7 Trail Centerline Attribution

Table 3.7 outlines the attribute definitions for the trail centerline product. Trails are created by the Tennessee Department of Environment and Conservation (TDEC). Currently, the trailways dataset is under construction. As new features are added and maintenance updates are available, it is the intent of this maintenance program to absorb all appropriate trailway sources into the production version for enhanced call-taking ability at the PSAP.

**Table 3.7**

Field Name	Type	Width	Description	Standard
SHAPE	S	9	Spatial information storage	
NAME	String	20	Trail name	TDEC
PARK	String	35	Name of the park or recreational area that the trail is within	TDEC
PARKTYPE	Short Integer	1	Type of park 0 - FEDERAL 1 - STATE 2 - CITY	TDEC
TLENGTH	Double	4	Length of the trail in miles	TDEC

#### 3.7.1 Lookup / Display and Map Labeling

##### [NAME]

Name or designation of the particular trail the segment is associated with.

##### [PARK]

Name of the park or recreational area that the trail is within.

#### 3.7.3 Park Types

##### [PARKTYPE]

Coded values that represent administrative jurisdiction. The default value is 1.

#### 3.7.4 Trail Length

##### [TLENGTH]

Length of the trail in miles. This value represents the length of the entire trail designation, and thus may be duplicated across several intersecting segments. Default fields (e.g., [Shape\_Length]) present as a part of the database will include the length of individual segments in ground units.

### 3.8 Address Point Attribution

Address points are created from the existing Tennessee Base Mapping Program parcel base, as well as the value-added building footprint product available for approximately 14 counties. Current GIS datasets at the local level may comprise address points with a high level of addressing accuracy. It is the intent of this maintenance program to absorb all relevant addressing sources into the production version. [Table 3.8](#) outlines the attribute definitions for the address point product.

For a listing of acceptable secondary unit abbreviations, refer to Appendix B.

**Table 3.8**

Field Name	Type	Width	Description	Standard
SHAPE	S	9	Spatial information storage	
OIRID	String	20	Unique ID for each address	OIR
GNISID	Short Integer	8	Geographic Names Information System ID	FGDC
GISLINK	String	15	Parcel association	
STNUM	String	10	SITUS street number	USPS PUB 28
STNUM_H	String	10	High-side street number of an address range	FGDC
STNUM_L	String	10	Low-side street number of an address range	FGDC
STNUMSUF	String	10	SITUS street number suffix	FGDC
FLOORS	String	10	Secondary address vertical	FGDC
STRUCTYPE	String	30	Description of structure (e.g., "OFC", "RED BRICK")	E9-1-1
STPREDIR	String	2	SITUS prefix directional	USPS PUB 28
STPRETYPE	String	4	SITUS prefix street type (For appropriate abbreviations, please refer to Appendix A)	USPS PUB 28
STNAME	String	35	SITUS street name	USPS PUB 28
STTYPE	String	4	SITUS suffix street type (For appropriate abbreviations, please refer to Appendix A)	USPS PUB 28
STSUFDIR	String	2	SITUS suffix directional	USPS PUB 28
ADDRESS	String	50	Full SITUS address ([STNUM] ++ [STPREFIX] ++ [STPRETYPE] ++ [STNAME] ++ [STTYPE] ++ [STSUFFIX])	USPS PUB 28
ADDR_ESN	String	50	Full SITUS address with ESN ([STNUM] ++ [STPREFIX] ++ [STPRETYPE] ++ [STNAME] ++ [STTYPE] ++ [STSUFFIX] ++ [ESN])	OIR
LABEL	String	50	Full street address (proper case) for labeling/display purposes	OIR

Field Name	Type	Width	Description	Standard
VANITY	String	50	Vanity name for address location (e.g., "Capitol" or "Public Library")	E9-1-1
ZIP	String	5	USPS 5-digit ZIP code	USPS PUB 28
ZIP4	String	4	USPS 4-digit ZIP+4 code	USPS PUB 28
USPSBOX	String	25	USPS postal box address PO BOX = Post Office Box PMB = Private Mail Box BOX = Other Mail Box	USPS PUB 28 / FGDC
MAPGRID	String	10	Map grid number	E9-1-1
ESN	String	3	Emergency Service Number	E9-1-1
CITY	String	30	Administrative area	FIPS
COUNTY	String	30	County area	FIPS
STATE	String	2	State abbreviation	FIPS
LAT	String	15	Degrees, Decimal Minutes of Latitude	FGDC
LONG	String	15	Degrees, Decimal Minutes of Longitude	FGDC
X_SP	Double		State Plane Coordinate <sup>5</sup> for X value	USGS
Y_SP	Double		State Plane Coordinate <sup>5</sup> for Y value	USGS
USNG	String	15	US National Grid Geo-address	USGS
Z_VAL	Long Integer		Height of structure (US Foot)	FGDC
GPSDATE	Date		Date the GPS point was collected	FGDC
ADDRAUTH	String	50	Addressing authority	FGDC

Table 3.8

### 3.8.1 Parcel Association

#### [GISLINK]

This value will reflect the [GISLINK] value derived either from the centroid of the parcel it was generated from, or assigned by a spatial relationship to the parcel base that the address point is 'completely within'. The latter will apply to consumed local data only. Structures that are between parcel lines will be given the [GISLINK] of the ownership parcel first (if such designation can be determined), otherwise the building footprint or structure reference on the ortho will determine which parcel assumes ownership (e.g.,  $\frac{3}{4}$  of the building footprint is in Parcel A ∴ Ownership = Parcel A).

### 3.8.2 Street Number

#### [STNUM]

The street or house number for this particular address. This is a numeric value only, and does not include the secondary address information (i.e., apartment or building designations). The field is a string type in the schema to accommodate various dispatch software.

<sup>5</sup> refer to subsection 3.2 *Coordinate System and Projection* above for specifics

### 3.8.3 Full Street Name

#### [STPREDIR], [STPRETYPE], [STNAME], [STTYPE], [STSUFDIR]

These values should reflect the USPS [Publication 28](#) values for each field type respectively. For a treatise on usage, please reference the compendium [Geocoding Standards](#). Most of the valid field abbreviations can be found in the appendices of this document. Where the USPS values differ or hinder the functionality of the address points in dispatch operations, the local ALI database or MSAG value should be used.

### 3.8.4 Secondary Address Information

#### [STNUMSUF]

This complex element is the full concatenation of the secondary address information and should reflect the USPS [Publication 28](#) values for the secondary unit abbreviations (cf. Appendix B). Examples of valid values would be "APT 27", "BLDG 5-A", "COMPLEX 1, UNIT 10", "PIER 4". This standard differs here from the FGDC and USPS in that the number sign (#) may not be used in the secondary address information fields (cf. Appendix C).

#### [FLOORS]

Number of floors in the structure. Remember, the number sign (#) may not be used in the secondary address information fields (cf. Appendix C).

#### [STRUCTYPE]

The address structure description. This field may be used as a general description field outside the governance of the abbreviations found in Appendix B as long as the entries are standardized (e.g., "BRICK WITH WHITE SHUTTERS")

### 3.8.5 Lookup

#### [ADDRESS]

This value is a concatenation of the values found in the preceding fields ([STPREDIR], [STPRETYPE], [STNAME], [STTYPE], [STSUFDIR]) with appropriate spacing interposed.

#### [ADDR\_ESN]

The field value for this field is the same for [ADDRESS] with the addition, at the end of the string, of a space and the value from the [ESN] field.

#### [MAPGRID]

User-defined value, for use with dispatch applications.

### 3.8.6 Display and Map Labeling

#### [LABEL]

This value is a concatenation of the values found in the preceding fields ([STPREDIR], [STPRETYPE], [STNAME], [STTYPE], [STSUFDIR]) with appropriate spacing interposed. For aesthetics, proper case is employed (whereas all other field values are upper case). This field can be used to label the full street address with the GIS application or for map production.

#### [VANITY]

A value that reflects the public or generally accepted name of the location or structure. Not typically associated as an address component. As with the [LABEL] field, proper case is employed for these values as well.. Examples of valid values would be "Capitol", "Public Library", "Park Ranger Station".

**3.8.7 USPS Information****[ZIP]**

This value should reflect the five-digit zone improvement plan number.

**[ZIP4]**

This value should reflect the last four digits of the ZIP+4 code.

**[USPSBOX]**

If the address has an alternate mail-receiving box, that value should be entered here. This is strictly a mailing component, and the value of this field does not reflect the physical location of the box. Capture of this information may allow for additional geocoding for datasets that do not have SITUS information. This value can also reflect the private mail box number. Punctuation should not be used. Examples of valid values would be "PO BOX 6943", "PO BOX G", "BOX AA", "PMB 596". Usage note: Use "PO" when the box is located in the post office lobby. Use "PMB" when the mailbox is rented from a commercial mail receiving agency (CMRA).

**3.8.8 Emergency Service Number****[ESN]**

Emergency Service Number zone values. If present, pseudo-ESN values should be entered in this field also.

**3.8.9 Coordinate Information****[LAT], [LONG]**

Coordinate information catalogued in Geographic coordinates in Degrees, Decimal Minutes (DDM). Formatting variations can include (DDD MM.mmm'[W|E]), ([W|E]DDD MM.mmm'), (+|-DDD MM.mmm'). DDM is accommodative of incident location from an aircraft (e.g., Med-Evac).

**[X\_SP], [Y\_SP]**

Coordinate information catalogued in State Plane coordinates that meet the specifications under subsection 3.2 of this document.

**[USNG]**

United States National Grid coordinate. For more information on this grid system, please visit the following websites:

*Introducing the United States National Grid*

<http://www.esri.com/news/arcuser/0705/usng1of2.html>

*FGDC Information*

<http://www.fgdc.gov/usng/index.html>

*USNG Coordinate Conversion*

<http://www.ngs.noaa.gov/TOOLS/usng.html>

**3.8.10 Date of GPS Collection****[GPSDATE]**

If the address point was field collected or field verified, the date of collection or verification should be entered here. Address points that have been established by other means (e.g., centroid generation, centerline geocode or digitized from orthophotography) should not have a GPS date.

**3.8.11 Addressing Authority****[ADDRAUTH]**

The authority for this particular address. This value can be an acronym or a full spelling of the authority name, as long as the data entry is standardized. As a general rule, this value should be the same for most, if not all address points.

### 3.9 ESN Polygonal Attribution

Emergency Service Number boundaries are often used as the unique identifier for each address within the ALI string of an incoming 9-1-1 call. Because of research conducted by commissions such as TACIR<sup>6</sup> and the necessity of PSAP redundancy, it is apparent that consolidation of GIS layers specific to individual districts is needed. In order to adequately cover another jurisdictions 9-1-1 calls, there is a need for comprehensive layers from said jurisdiction, to include a polygonal layer showing the ESN boundaries. It is the intent of this maintenance program to absorb all ESN resources into the statewide production dataset. Table 3.9 outlines the attribute definitions for the ESN polygonal product.

**Table 3.9**

Field Name	Type	Width	Description	Standard
OIRID	Long Integer	20	Unique ID for each geometry	OIR
ESN	String	3	Emergency Service Number	AT&T
WESN	String	3	Wireless Emergency Service Number	AT&T
VESN	String	3	VoIP Emergency Service Number	AT&T
ESZ	String	5	Emergency Service Zone	AT&T
ESQK	String	10	Emergency Service Query Code	AT&T
SRTE	String	25	Selective Router	AT&T
PSAPID	String	4	Primary PSAP number within the ESN	FCC
GEODATE	Date		Date Stamp of latest spatial edit	OIR

<sup>6</sup> cf., <http://www.state.tn.us/tacir/publications.htm>

## 4.0 Feedback

OIR-GIS Services welcomes any observations or constructive criticisms regarding the maintenance standards. Please remit any comments you have to:

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visit us on the web:  
<http://gis.state.tn.us>

## Appendix A

### USPS Standard Street Suffix Abbreviations

Primary Suffix Name	USPS Standard
ALLEY	ALY
ANNEX	ANX
ARCADE	ARC
AVENUE	AVE
BEACH	BCH
BURG	BG
BURGS	BGS
BLUFF	BLF
BOULEVARD	BLV
BEND	BND
BRANCH	BR
BRIDGE	BRG
BROOK	BRK
BOTTOM	BTM
BYPASS	BYP
BAYOO	BYU
CIRCLE	CIR
CLUB	CLB
CLIFF	CLF
COMMON	CMN
CORNER	COR
CAMP	CP
CAPE	CPE
CRESCENT	CRE
CREEK	CRK
COURSE	CRS
CAUSEWAY	CSW
COURT	CT
CENTER	CTR
COURTS	CTS
CURVE	CUR
COVE	CV
COVES	CVS
CANYON	CYN
DALE	DL
DAM	DM
DRIVE	DR
DRIVES	DRS
DIVIDE	DV
ESTATE	EST
EXPRESSWAY	EXP
EXTENSION	EXT
FALL	FAL
FIELD	FLD

Primary Suffix Name	USPS Standard
FALLS	FLS
FLAT	FLT
FORD	FRD
FORGE	FRG
FORK	FRK
FOREST	FRS
FERRY	FRY
FORT	FT
FREEWAY	FWY
GARDEN	GDN
GLEN	GLN
GREEN	GRN
GROVE	GRV
GATEWAY	GTW
HARBOR	HBR
HILL	HL
HILLS	HLS
HOLLOW	HOL
HEIGHTS	HTS
HAVEN	HVN
HIGHWAY	HWY
INLET	INL
ISLAND	IS
ISLE	ISL
ISLANDS	ISS
JUNCTION	JCT
KNOLL	KNL
KEY	KY
KEYS	KYS
LAND	LAN
LOCK	LCK
LODGE	LDG
LOAF	LF
LIGHT	LGT
LAKE	LK
LAKES	LKS
LANE	LN
LANDING	LND
LOOP	LOO
MALL	MAL
MEADOW	MDW
MEWS	MEW
MILL	ML
MILLS	MLS

## Appendix A

### USPS Standard Street Suffix Abbreviations

Primary Suffix Name	USPS Standard
MANOR	MNR
MISSION	MSN
MOUNT	MT
MOUNTAIN	MTN
MOTORWAY	MTW
NECK	NCK
OVERPASS	OPA
ORCHARD	ORC
OVAL	OVA
PARK	PAR
PASS	PAS
PATH	PAT
PIKE	PIK
PARKWAY	PKW
PLACE	PL
PLAIN	PLN
PLAZA	PLZ
PINE	PNE
PRAIRIE	PR
PORT	PRT
PASSAGE	PSG
POINT	PT
POINTS	PTS
RADIAL	RAD
RAMP	RAM
ROAD	RD
RIDGE	RDG
ROADS	RDS
RIVER	RIV
RANCH	RNC
ROW	ROW
RAPID	RPD
REST	RST
ROUTE	RTE
RUE	RUE
RUN	RUN
SHOAL	SHL
SHORE	SHR
SKYWAY	SKW
SUMMIT	SMT
SPRING	SPG
SPUR	SPU
SQUARE	SQ
SQUARES	SQS

Primary Suffix Name	USPS Standard
STREET	ST
STATION	STA
STRAVENUE	STR
STREETS	STS
TERRACE	TER
TURNPIKE	TPK
TRACK	TRA
TRACE	TRC
TRAFFICWAY	TRF
TRAIL	TRL
THROUGHWAY	TRW
TUNNEL	TUN
UNION	UN
UNIONS	UNS
UNDERPASS	UPA
VIADUCT	VIA
VISTA	VIS
VILLE	VL
VILLAGE	VLG
VALLEY	VLY
VIEW	VW
VIEWS	VWS
WALK	WAL
WAY	WAY
WELL	WL
WELLS	WLS
CROSSING	XIN
CROSSROAD	XRD

A more extensive list and other abbreviation standards can be found at:  
<http://www.usps.com/ncsc/lookups/abbrev.html>

cf. USPS Publication 28

## Appendix B

### USPS Standard Secondary Unit Abbreviations

Secondary Unit Designator	USPS Standard
APARTMENT	APT
BASEMENT	BSMT **
BUILDING	BLDG
DEPARTMENT	DEPT
FLOOR	FL
FRONT	FRNT **
HANGAR	HNGR
LOBBY	LBBY **
LOT	LOT
LOWER	LOWR **
OFFICE	OFC **
PENTHOUSE	PH **
PIER	PIER
REAR	REAR **
ROOM	RM
SIDE	SIDE **
SLIP	SLIP
SPACE	SPC
STOP	STOP
SUITE	STE
TRAILER	TRLR
UNIT	UNIT
UPPER	UPPR **

\*\* Does not require Secondary Range Number to follow.

This list and other abbreviation standards can be found at:

<http://www.usps.com/ncsc/lookups/abbrev.html>

cf. USPS Publication 28

## Appendix C

### Non-Uniform Punctuation in Address Field Values

These punctuation marks should not be used when editing address field values.

Description	Punctuation
Ampersand	&
Apostrophe	‘
Asterisk	*
At	@
Back Slash	\
Braces Open	{
Braces Close	}
Bracket Open	[
Bracket Close	]
Caret	^
Colon	:
Comma	,
Dollar Sign	\$
Double Quotes	“
Ellipsis	...
Equal Sign	=
Exclamation Mark	!
Greater Than	>
Less Than	<
Number Sign	#
Parenthesis Open	(
Parenthesis Close	)
Percent Sign	%
Period	.
Pipe	
Plus	+
Prime	`
Question Mark	?
Semi-Colon	;
Virgule	/
Tilde	~

## Appendix D

### Census Feature Class Codes (CFCC)

The U.S. Bureau of the Census feature class codes (CFCC) provide information on the classification of a feature. The census feature class codes (also called "FCC") are used in many geodatasets. The codes are made up of an uppercase letter and a two-digit number followed by their one or two-line definition.

#### ROAD FEATURE (A)

- A10 Road, major and minor categories unknown
- A11 Primary road with limited access or interstate highway, unseparated
- A12 Primary road with limited access or interstate highway, unseparated, in tunnel
- A13 Primary road with limited access or interstate highway, unseparated, underpassing
- A14 Primary road with limited access or interstate highway, unseparated, with rail line in center
- A15 Primary road with limited access or interstate highway, separated
- A16 Primary road with limited access or interstate highway, separated, in tunnel
- A17 Primary road with limited access or interstate highway, separated, underpassing
- A18 Primary road with limited access or interstate highway, separated, with rail line in center
- A19 Primary road with limited access or interstate highway, bridge
- A21 Primary road without limited access, U.S. and State highways, unseparated
- A22 Primary road without limited access, U.S. and State highways, unseparated, in tunnel
- A23 Primary road without limited access, U.S. and State highways, unseparated, underpassing
- A24 Primary road without limited access, U.S. and State highways, unseparated, with rail line in center
- A25 Primary road without limited access, U.S. and State highways, separated
- A26 Primary road without limited access, U.S. and State highways, separated, in tunnel
- A27 Primary road without limited access, U.S. and State highways, separated, underpassing
- A28 Primary road without limited access, U.S. and State highways, separated, with rail line in center
- A29 Primary road without limited access, US highways, bridge
- A31 Secondary and connecting road, State and county highways, unseparated
- A32 Secondary and connecting road, State and county highways, unseparated, in tunnel
- A33 Secondary and connecting road, State and county highways, unseparated, underpassing
- A34 Secondary and connecting road, State and county highways, unseparated, with rail line in center
- A35 Secondary and connecting road, State and county highways, separated
- A36 Secondary and connecting road, State and county highways, separated, in tunnel
- A37 Secondary and connecting road, State and county highways, separated, underpassing
- A38 Secondary and connecting road, State and county highway, separated, with rail line in center
- A39 Secondary and connecting road, state and county highways, bridge
- A41 Local, neighborhood, and rural road, city street, unseparated
- A42 Local, neighborhood, and rural road, city street, unseparated, in tunnel
- A43 Local, neighborhood, and rural road, city street, unseparated, underpassing
- A44 Local, neighborhood, and rural road, city street, unseparated, with rail line in center
- A45 Local, neighborhood, and rural road, city street, separated
- A46 Local, neighborhood, and rural road, city street, separated, in tunnel
- A47 Local, neighborhood, and rural road, city street, separated, underpassing
- A48 Local, neighborhood, and rural road, city street, separated, with rail line in center
- A49 Local, neighborhood, and rural road, city street, bridge
- A50 Vehicular trail, road passable only by four-wheel drive (4WD) vehicle, major category
- A51 Vehicular trail, road passable only by 4WD vehicle, unseparated
- A52 Vehicular trail, road passable only by 4WD vehicle, unseparated, in tunnel
- A53 Vehicular trail, road passable only by 4WD vehicle, unseparated, underpassing
- A60 Special road feature, major category used when the minor category could not be determined

## Appendix D

### Census Feature Class Codes (CFCC)

- A61 Cul-de-sac, the closed end of a road that forms a loop or turn around
- A62 Traffic circle, the portion of a road or intersection of roads that form a roundabout
- A63 Access ramp, the portion of a road that forms a cloverleaf or limited access interchange
- A64 Service drive, road that provides access to businesses, facilities, and rest areas along limited-access highway
- A65 Ferry crossing, the representation of a route over water that connects roads on opposite shores
- A66 Gated barrier to travel
- A67 Toll booth barrier to travel
- A70 Other thoroughfare, major category used when the minor category could not be determined
- A71 Walkway, nearly level road for pedestrians, usually unnamed
- A72 Stairway, stepped road for pedestrians, usually unnamed
- A73 Alley, road for service vehicles, usually unnamed, located at the rear of buildings and property
- A74 Driveway or service road, usually privately owned and unnamed, used as access to residences, etc., or as access to logging areas, etc.

#### **RAILROAD FEATURE (B)**

- B00 Railroad, major and minor categories unknown
- B11 Railroad main track, not in tunnel or underpassing
- B12 Railroad main track, in tunnel
- B13 Railroad main track, underpassing
- B21 Railroad spur track, not in tunnel or underpassing
- B22 Railroad spur track, in tunnel
- B23 Railroad spur track, underpassing
- B31 Railroad yard track, not in tunnel or underpassing
- B32 Railroad yard track, in tunnel
- B33 Railroad yard track, underpassing
- B40 Railroad ferry crossing, route over water used by ships carrying train cars to connecting railroads on opposite shores, major category
- B50 Other rail line; major category used alone when the minor category could not be determined
- B51 Carline, a track for street cars, trolleys, and other mass transit rail systems
- B52 Cog railroad, incline railway, or logging tram

#### **MISCELLANEOUS GROUND TRANSPORTATION (C)**

- C00 Miscellaneous ground transportation, not road or railroad; major and minor categories unknown
- C10 Pipeline, major category used alone
- C20 Power transmission line, major category used alone
- C30 Other ground transportation that is not a pipeline or a power transmission line, major category
- C31 Aerial tramway, monorail, or ski lift

#### **LANDMARK (D)**

- D00 Landmark, major and minor categories unknown
- D10 Military installation or reservation; major category used alone
- D20 Multihousehold or transient quarters; major category used alone when minor category not determined
- D21 Apartment building or complex
- D22 Rooming or boarding house
- D23 Trailer court or mobile home park
- D24 Marina
- D25 Crew-of-vessel area

## Appendix D

### Census Feature Class Codes (CFCC)

- D26** Housing facility for workers
- D27** Hotel, motel, resort, spa, hostel, YMCA, or YWCA
- D28** Campground
- D29** Shelter or mission
- D30** Custodial facility; major category used alone when the minor category could not be determined
- D31** Hospital
- D32** Halfway house
- D33** Nursing home, retirement home, or home for the aged
- D34** County home or poor farm
- D35** Orphanage
- D36** Jail or detention center
- D37** Federal penitentiary, State prison, or prison farm
- D40** Educational or religious institution, major category
- D41** Sorority or fraternity
- D42** Convent or monastery
- D43** Educational institution, including academy, school, college, and university
- D44** Religious institution, including church, synagogue, seminary, temple, and mosque
- D50** Transportation terminal; major category used alone when the minor category could not be determined
- D51** Airport or airfield
- D52** Train station
- D53** Bus terminal
- D54** Marine terminal
- D55** Seaplane anchorage
- D57** Airport Statistical Representation used as part of urban area delineation where major airports are contiguous with urban areas
- D60** Employment center; major category used alone when the minor category could not be determined
- D61** Shopping center or major retail center
- D62** Industrial building or industrial park
- D63** Office building or office park
- D64** Amusement center
- D65** Government center
- D66** Other employment center
- D70** Tower; major category used alone when minor category could not be determined
- D71** Lookout tower
- D80** Open space; major category used alone when the minor category could not be determined
- D81** Golf course
- D82** Cemetery
- D83** National Park Service land
- D84** National forest or other Federal land
- D85** State or local park or forest
- D90** Special purpose landmark; major category used alone when the minor category could not be determined  
In the TIPS database, it is used to represent "RESIDENTIAL" landmarks.
- D91** Post office box ZIP Code®
- D92** Urbanizacion, an identifiable community development in Puerto Rico

### **PHYSICAL FEATURE (E)**

- E00** Physical feature, tangible but not transportation or hydrographic; major and minor categories unknown

## Appendix D

### Census Feature Class Codes (CFCC)

- E10** Fence line locating a visible and permanent fence between separately identified property
- E20** Topographic feature; major category used when the minor category could not be determined
- E21** Ridge line, the line of highest elevation of a linear mountain
- E22** Mountain peak, the point of highest elevation of a mountain
- E23** Island, identified by name
- E24** Levee, an embankment, as of earth or concrete, used to prevent a river or other body of water from overflowing
- E25** Marsh/Swamp

#### NONVISIBLE FEATURES (F)

- F00** Nonvisible boundary, major and minor categories unknown
- F10** Nonvisible jurisdictional boundary of a legal or administrative entity, major category
- F11** Offset boundary of a legal or administrative entity
- F12** Corridor boundary of a legal or administrative entity
- F13** Nonvisible superseded 2000 governmental unit boundary
- F14** Superseded 1990 legal boundary
- F15** Superseded 1990 legal boundary, corrected through post census process
- F16** Superseded legal boundary, current at the time of the 1997 Economic Census
- F17** Nonvisible State Legislative District boundary
- F18** Nonvisible Congressional District boundary
- F19** Nonvisible corrected 2000 governmental unit boundary
- F20** Nonvisible feature for data base topology; major category used when the minor category could not be determined
- F21** Automated feature extension to lengthen existing physical feature
- F22** Irregular feature extension, determined manually, to lengthen existing physical feature
- F23** Closure extension to complete data base topological closure between extremely close features
- F24** Nonvisible separation line used with offset and corridor boundaries
- F25** Nonvisible centerline of area enclosed by corridor boundary
- F30** Point-to-point line, follows a line of sight and should not cross any visible feature
- F40** Property line, nonvisible boundary of either public or private lands, e.g., a park boundary
- F50** ZIP Code(R) tabulation boundary, used in delineating ZIP Code(R) Tabulation Areas
- F70** Statistical boundary; major category used when the minor category could not be determined
- F71** 1980 statistical boundary
- F72** 1990 statistical boundary, used to hold collection and tabulation census block boundaries not represented by existing physical features
- F73** 1990 statistical boundary and extent of land use, it is not classifiable as a physical feature
- F74** 1990 statistical boundary, used to hold a tabulation census block boundary not represented by an existing physical feature
- F80** Nonvisible other tabulation boundary, major category used when the minor category could not be determined
- F81** School district tabulation boundary
- F82** Special census tabulation boundary
- F83** Census 2000 collection block boundary; used to hold Census collection block boundaries not represented by existing physical features
- F84** Census 2000 statistical area boundary; used to hold Census statistical area boundaries not represented by existing physical features
- F85** Census 2000 tabulation block boundary; used to hold Census tabulation block boundaries not represented by existing physical features
- F86** Internal U.S. Census Bureau use
- F87** Oregon urban growth area boundary

## Appendix D

### Census Feature Class Codes (CFCC)

**F88** Current statistical area boundary

#### **HYDROGRAPHY (H)**

**H00** Water feature, classification unknown or not elsewhere classified

**H01** Shoreline of perennial water feature

**H02** Shoreline of intermittent water feature

**H10** Stream boundary, major category

**H11** Perennial stream or river

**H12** Intermittent stream, river, or wash

**H13** Braided stream or river

**H20** Canal, ditch, or aqueduct, major category

**H21** Perennial canal, ditch, or aqueduct

**H22** Intermittent canal, ditch, or aqueduct

**H30** Lake or pond; major category used when the minor category could not be determined

**H31** Perennial lake or pond

**H32** Intermittent lake or pond

**H40** Reservoir; major category used when the minor category could not be determined

**H41** Perennial reservoir

**H42** Intermittent reservoir

**H50** Bay, estuary, gulf, sound, sea, or ocean; major category used when the minor category could not be determined

**H51** Bay, estuary, gulf, or sound

**H53** Sea or ocean

**H60** Gravel pit or quarry filled with water

**H70** Nonvisible water area definition boundary; used to separate named water areas; major category

**H71** USGS closure line, used as maritime shoreline

**H72** Census water centerline, computed to use as median positional boundary

**H73** Census water boundary, international in waterways or at 12-mile limit, used as area measurement line

**H74** Census water boundary, separates inland from coastal or Great Lakes, used as area measurement line

**H75** Census water boundary, separates coastal from territorial sea at 3-mile limit, used as area measurement line

**H76** Artificial path through double line hydrography, from the U.S. Geological Survey feature in the National Hydrography Database (NHD)

**H77** Artificial path through double line hydrography, from any source other than the U.S. Geological Survey, National Hydrography Database

**H80** Special water feature, major category used when the minor category could not be determined

**H81** Glacier

#### **NOT YET CLASSIFIED (X)**

**X00** Feature not yet classified