	Document Number:	DWU-PRO-013-GIS	Revision Number:	2
	Approved By:	Casey Gardner	Effective Date:	2015-12-14
	Description of Last Change:	Change citation from House Bill to Texas Government Code		
Document Title:	City GIS Data Standards			

**PURPOSE:** This document outlines the data standards for all data delivered to City GIS Services.

**SCOPE:** This document covers all data sets provided to City GIS Services by internal or external agents for publication or use by City GIS Services.

**RESPONSIBILITY & AUTHORITY:** The management and staff of City GIS Services are responsible for reviewing all data sets to ensure conformance with published standards.

**SAFETY:** Follow all applicable City of Dallas safety guidelines associated with this work instruction.

**ENVIRONMENT:** Follow all applicable City of Dallas Environmental procedures associated with this work instruction.

**PROCEDURES:** All data delivered to the City of Dallas GIS Services division will be required to follow the following standards.

## CITY OF DALLAS GIS DATA STANDARDS


**All Geospatial data will be in the following Coordinate System:**

PROJECTION: State Plane  
 DATUM: North American Datum 1983 (NAD83)  
 UNITS: Feet  
 ZONE: North Central Texas. FIPS 4202  
 SPHEROID: GRS 80

If the projection is something other than what is listed above, associated projection files must be included; e.g., PRJ.

### **Coordinate Precision:**

Double precision is preferable where applicable.

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**All Geospatial data delivered will be in the one of the following formats:**

**Vector Data**

- Environmental System Research Institute (ESRI) Shapefile format
- ESRI Geodatabase (File Geodatabase or Personal Geodatabase)

**Raster (Image) Data**


- Ortho Rectified TIFF (.TIF) with accompanying World file (.TFW)
- Ortho Rectified JPEG (.JPG) accompanying World file (.JGW)

**All associated database tables will be delivered in the following format:**

- dBase (.DBF)
- Microsoft Access (.MDB)
- ASCII delimited
- Geodatabase tables may also be stored as part of File Geodatabase if applicable

**All data delivered to City of Dallas GIS Services Division will include completed metadata. In one of two formats:**

- ESRI Metadata updated using ArcCatalog, FGDC standards (XML preferred)
- Completed Geodatainputform.xls. Accompanying this document

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**All data will follow the following standards:**

### **City of Dallas GIS FGDC Metadata Standards**

Federal Geographic Data Committee (FGDC) compliant documentation is required for all data to be included in the City of Dallas GIS database.

The FGDC Content Standard for Digital Geospatial Metadata (CSDGM) has been adopted by the City of Dallas GIS Services Division as the documentation or "metadata" format for all data included in the City of Dallas GIS database. Participating parties are responsible for providing documentation in FGDC compliant metadata format for geospatial data products. The metadata must be stored and maintained by the owner department.

FGDC metadata is the required documentation of all geospatial data products produced through partnerships, vendors, grants or contracts. Departments collecting or producing geospatial data, either directly or indirectly (e.g. through grants, partnerships, vendors or contracts with other entities), are required to ensure, prior to obligating funds for such activities, that data will be collected in a manner that meets all relevant standards adopted through the FGDC process. (Executive Order 12906, published in the April 13, 1994, edition of the Federal Register, Volume 59, Number 71, pp. 17671-17674. COORDINATING GEOGRAPHIC DATA ACQUISITION AND ACCESS: THE NATIONAL SPATIAL DATA INFRASTRUCTURE)

### **Spatial Topology**


Digital data submitted for inclusion in the City of Dallas GIS database will be topologically clean and free of errors. All points, lines, and polygons will have a single unique user-id number (Long Integer).

Data will have:

- No overshoots
- No slivers
- No open polygons (e.g. undershoots)
- No label errors
- No unresolved node errors
- No unresolved line segment intersections

### **Edge Matching**

- Contiguous features should be edge matched or closed.
- Line segments (arcs) that intersect the boundaries of a coverage/layer must be accurately edge matched with the corresponding arcs in the adjacent coverages/layers.
- Map features should not to extend beyond prescribed dataset boundaries.
- Arcs must not extend beyond (overshoot) nor fall short of (undershoot) the dataset boundary.

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### Attribute Coding Accuracy

99.5 percent of all attributes will be coded correctly.


The most serious problem is miscoding a feature. Other errors in attribute coding include any occurrence of misspelling or omissions.

It is the responsibility of the producing agency or City of Dallas department that has entered into a contract with the producing agency to verify that the data has been encoded within the accuracy limits set by these standards. The City GIS Services division will not verify attribute accuracy of the delivered data. It is the responsibility of the department who owns the data to confirm the accuracy.

### Attribute Coding

- Data and codes should be consistent and the descriptions well documented in the metadata or data dictionary.
- Choose attribute coding schemes that are well defined and in common use.
- Names of new datasets should not be the names of existing datasets in the City of Dallas GIS database unless replacing that dataset.
- Begin all dataset names, item names, and attribute codes with a letter.
- Eliminate punctuation, including hyphens, pound signs, and periods, from dataset names, item names and attribute codes.
- Limit the length of dataset names and item names to 8 characters when possible.
- Define items according to intended use, i.e. numeric data types for statistical data or for data that will be used for calculation, characters data types where these functions are not anticipated.
- Limit the length of attribute codes to 12 characters or digits when possible.
- Eliminate the use of the Boolean values 0 and 1 as attribute codes.
- Wherever practicable utilize character attribute codes, i.e. previously defined acronyms or abbreviations in common use.
- Any physical property (street) address will be broken into its component fields as follows:
  - Street Address Number
  - Street Prefix direction
  - Street Name (make sure they are spelled correctly)
  - Street Type - US Postal Service (USPS) abbreviations required. Cf. USPS Publication 28, Section C.
  - Street Suffix direction
  - City
  - State
  - USPS ZIP Code

Naming conventions, item length, and punctuation recommendations are based on format conversion and compatibility requirements. For example, conversion to shapefile format changes some characters (# - .) to underscores; item names over 8 places are truncated; the Boolean values 0 and 1 impact the results of geographic analysis. An effort will be made over time to consider these limitations in item names and to eliminate the use of these characters in data included in the City of Dallas GIS database.

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**City of Dallas GIS Data Disclaimer of Liability**

The accuracy is not to be taken / used as data produced by a Registered Professional Land Surveyor for the State of Texas. For this level of detail, supervision and certification of the produced data by a Registered Land Surveyor for the State of Texas would be required. *‘This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.’ (Texas Government Code § 2051.102)*

The City of Dallas makes no representation of any kind, including, but not limited to, warranties of merchantability or fitness for a particular purpose or use, nor are any such warranties to be implied with respect to the information, data or services furnished herein.

In no event shall the City of Dallas, nor its employees, officers or agents become liable to users of the data, information or services provided herein, or to any other party, for any loss or damage, consequential or otherwise, including but not limited to time, money or goodwill, arising from the use, operation or modification of the data or information, or for the failure to transmit a copy of any particular document. In using the information or data, users assume the risk for relying on such data or information, and further agree to indemnify, defend, and hold harmless The City of Dallas, and its employees, officers and agents for any and all liability of any nature arising out of or resulting from the lack of accuracy or correctness of the information or data, or the use of the information or data.

Further, in using this information or data the user acknowledges that the user is responsible for assessing the accuracy and reliability of the data or information provided, and that it may be subject to error and omission, and is not guaranteed or represented to be true, complete or correct.

No person, entity or user shall use the information/data provided in a manner that is in violation of any federal, state or local law or regulation.

All City of Dallas GIS data electronic or otherwise, and any services which may be provided related thereto, are provided "as-is" without any warranty of any kind, and all warranties on merchantability and fitness for a particular purpose are hereby disclaimed.

**USE OF THESE MATERIALS/DATA CONSTITUTES ACCEPTANCE OF THIS DISCLAIMER OF LIABILITY.**

**REFERENCES:** Texas Government Code § 2051.102

**RECORDS:** None