

6. Part 6: Reference Standards and Specifications

Note: Each citation indicates whether the cited work is normative or informative within this standard. All references and URLs were current as of September 4, 2010.

6.1 Standards and Specifications Cited

1. EPSG - European Petroleum Survey Group (now defunct; superseded by Geodetic Subcommittee of the International Association of Oil and Gas Producers (OGP)) - see International Association of Oil and Gas Producers (OGP).
2. International Association of Oil and Gas Producers (OGP) Geodetic Subcommittee. "EPSG Geodetic Parameter Dataset." (currently at version 7.5), augmented by accompanying guidance notes, especially EPSG Guidance Note Number 7, part 1, "Using the EPSG Geodetic Parameter Dataset." Version 5.0, November 2009.
Posted at: <http://www.epsg.org> and at: <http://info.ogp.org.uk/geodesy/>
(Informative) Cited in: Content (Address Coordinate Reference System ID and Address Coordinate Reference System Authority).
3. International Standards Organization. "ISO 3166-1: Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes." As posted on the ISO webpage captioned "ISO 3166-1: English country names and code elements."
 - ISO Note: "This list states the country names (official short names in English) in alphabetical order as given in ISO 3166-1 and the corresponding ISO 3166-1-alpha-2 code elements. This list is updated whenever a change to the official code list in ISO 3166-1 is effected by the ISO 3166/MA. It lists 248 official short names and code elements."
 - Note: ISO 3166-1 is protected by ISO copyright. The ISO states, "The short country names from ISO 3166-1 and the alpha-2 codes are made available by ISO at no charge for internal use and non-commercial purposes."
The list of short names and two-letter abbreviations is posted at:
<http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html>
The complete lists can be downloaded free of charge in HTML, .txt, or XML format from: http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm
The three-letter abbreviations are available from ISO only by purchase. However, they are published in non-authoritative sources including Wikipedia (http://en.wikipedia.org/wiki/ISO_3166-1_alpha-3) and the United States Central Intelligence Agency's *The World Factbook* (Appendix D) (<https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-d.html>).
(Normative) Cited in: Content (Country Name).
4. International Standards Organization. "ISO 8601:2004 - Data elements and interchange formats — Information interchange — Representation of dates and times." Third edition 2004-12-01.

Not in the public domain. Available for sale from ISO.

Summary posted at:

http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40874

ISO has posted a useful FAQ and extended summary at:

http://www.iso.org/iso/support/faqs/faqs_widely_used_standards/widely_used_standards_other/date_and_time_format.htm

(Normative) Cited in: Content (Address Start Date and Address End Date).

5. International Standards Organization. "ISO 19106:2004 Geographic Information - Profiles."

Not in the public domain. Available for sale from ISO.

Summary posted at:

http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=26011

(Informative) Cited in: Postal Addressing Profile, FGDC-NENA Profile.

6. International Standards Organization. "ISO 19113:2002 Geographic information - Quality principles."

Not in the public domain. Available for sale from ISO.

Summary posted at:

http://www.iso.org/iso/catalogue_detail.htm?csnumber=26018

(Informative) Cited in: Data Quality (Introduction and Measuring Address Quality).

7. International Standards Organization. "ISO 19115:2003 Geographic information - Metadata."

Not in the public domain. Available for sale from ISO.

Summary posted at:

http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=26020

Also posted at: <http://www.opengeospatial.org/standards/as> .

(Informative) Cited in: Data Quality (Introduction and Measuring Address Quality).

8. International Telecommunications Union, Telecommunication Standardization Sector (ITU-T). "Information technology – Open Systems Interconnection – Procedures for the operation of OSI Registration Authorities: Generation and registration of Universally Unique Identifiers (UUIDs) and their use as ASN.1 object identifier components." ITU-T X.667 (08/2008). SERIES X: DATA NETWORKS, OPEN SYSTEM COMMUNICATIONS AND SECURITY. (Also published as ISO/IEC 9834-8:2008).

Posted at: <http://www.itu.int/rec/T-REC-X.667-200808-I/en>

(Informative) Cited in: Content (Address ID)

9. Internet Engineering Task Force, Network Working Group. "A Universally Unique Identifier (UUID) URN Namespace." Request for Comments 4122. P. Leach, M. Mealling, R. Salz, July 2005. (RFC 4122 is "...aligned, and ... fully technically compatible..." with ITU-T X.667:2004. (RFC 4122 Sec. 1)).

- Posted at: <http://www.ietf.org/rfc/rfc4122.txt>
(Informative) Cited in: Content (Address ID).
10. Internet Engineering Task Force, Network Working Group. "Revised Civic Location Format for Presence Information Data Format Location Object (PIDF-LO)." Request for Comment 5139. M. Thomson and J. Winterbottom, February 2008.
Posted at: <http://www.ietf.org/rfc/rfc5139.txt>
(Normative in FGDC_NENA Profile) Cited in: FGDC-NENA Profile
 11. Internet Engineering Task Force, Network Working Group. "Location Types Registry." Request for Comment 4589. H. Schulzrinne and H. Tschofenig, July 2006.
(Posted at: <http://www.ietf.org/rfc/rfc4589.txt>).
(Normative in FGDC_NENA Profile) Cited in: FGDC-NENA Profile
 12. Internet Engineering Task Force, Network Working Group. "A Presence-based GEOPRIV Location Object Format." Request for Comment 4119. J. Peterson, December 2005.
Posted at: <http://www.ietf.org/rfc/rfc4119.txt>
(Normative in FGDC_NENA Profile) Cited in: FGDC-NENA Profile
 13. National Emergency Number Association. "NENA Next Generation 9-1-1 (NG9-1-1) Civic Location Data Exchange Format (CLDXF) Standard." NENA Joint Data Technical/Next Generation Integration Committees, Next Generation Data Development Working Group (NGDD). Committee working draft, as of September 2010.
Posted at: [Draft. In NENA approval process. Not yet posted for public review.]
(Normative in FGDC-NENA Profile) Cited in: FGDC-NENA Profile
 14. National Emergency Number Association. "Data Standards For Local Exchange Carriers, ALI Service Providers & 9-1-1 Jurisdictions." NENA Standard number 02-011 v7. Revised September 17, 2009.
Posted at: <http://www.nena.org/standards/technical/data/911-Data-Management>
(Informative) Cited in: Data Quality (Introduction and Measuring Address Quality).
 15. NFIRS (National Fire Incident Reporting System)--see U.S. Fire Administration.
 16. OGP - See International Association of Oil and Gas Producers.
 17. Open Geospatial Consortium, Inc. "OpenGIS(R) Geography Markup Language (GML) Encoding Standard." Version: 3.2.1. Date: 2007-08-27. OpenGIS(R) document reference number: OGC 07-036. Category: OpenGIS(R) Standard. Status: Final. Editor: Clemens Portele.
Posted at: <http://www.opengeospatial.org/standards/gml>
(Normative) Cited in: Introduction, Content (Introduction)
 18. Open Geospatial Consortium, Inc. "OpenGIS(R) Simple Features Specification For SQL." Revision 1.1. OpenGIS Project Document 99-049. Release Date: May 5, 1999.
Posted at: http://portal.opengeospatial.org/files/?artifact_id=829
(Normative) Cited in: Data Quality
 19. U.S. Board on Geographic Names. "Domestic Names--Principles, Policies, and Procedures." By Donald J. Orth and Roger L. Payne. On-line edition (June, 2003), 52 pp.

Posted at: http://geonames.usgs.gov/docs/pro_pol_pro.pdf

(Informative) Cited in: Introduction, Content (GNISFeature ID, Landmark Name, and Place Name), and Classification (Landmark Classes).

20. U.S. Census Bureau. "2008 TIGER/Line® Shapefiles Technical Documentation" Nov. 2008. See especially:

---3.9 County-based Shapefiles: 3.9.1 All Lines Shapefile (pp. 3-71 thru 3-76).

---3.10 County-based Relationship Files:

-----3.10.1 Address Range-Feature Name Relationships (pp. 3-86 thru 3-87),

-----3.10.2 Address Ranges (pp. 3-87 thru 3-94),

-----3.10.3 Feature Names (pp. 3-94 through 3-95)

---Appendix C Feature Name Directionals

---Appendix D Feature Name Qualifiers

Posted at: <http://www.census.gov/geo/www/tiger/tgrshp2008/TGRSHP08.pdf>

(Normative for Four Number Address Range; otherwise Informative) Cited in: Content (Street Name Pre Modifier, Street Name Post Modifier), and Classification (Four Number Address Range).

Census TIGER terminology is noted in Content (various elements) under "Other common names for this element."

21. U.S. Census Bureau. "ANSI INCITS 38-2009, Codes for the Identification of the States, the District of Columbia, Puerto Rico, and the Insular Areas of the United States." Maintained by the U.S. Census Bureau. (Formerly FIPS Publication 5-2, May 28, 1987). "Last revised February 24, 2010." Also available for purchase from ANSI as "INCITS 38-2009: Information Technology - Codes for the Identification of the States and Equivalent Areas within the United States, Puerto Rico, and the Insular Areas.

Posted at: <http://www.census.gov/geo/www/ansi/statetables.html>

(Normative) Cited in: Content (State Name, ANSISState County Code)

22. U.S. Census Bureau. "INCITS 31:2009, Codes for the Identification of Counties and Equivalent Entities of the United States, its Possessions, and Insular Areas." Maintained by the U.S. Census Bureau. (Formerly FIPS Publication 6-4, August 31, 1990). "Last revised February 24, 2010." Also available for purchase from ANSI as "INCITS 31-2009: Information Technology - Codes for the Identification of Counties and Equivalent Areas of the United States, Puerto Rico, and the Insular Areas

Posted at: <http://www.census.gov/geo/www/ansi/download.html>

(Normative) Cited in: Content (ANSISState County Code)

23. U.S. Environmental Protection Agency (EPA). "Contact Information Data Standard." Standard No.: EX000019.2 (Section 3.0, Contact Information Data Standards Table, Part 2.0, Address). Revised January 6, 2006. "This standard has been produced through the Environmental Data Standards Council (EDSC)."

Posted at:

http://www.exchangenetwork.net/standards/Contact_Info_01_06_2006_Final.pdf

(Informative) Cited in: Content (Delivery Address Type).

24. U.S. Federal Geographic Data Committee. "Cadastral Data Content Standard for the National Spatial Data Infrastructure." Version 1.4 – Fourth Revision. (FGDC-STD-003). Subcommittee on Cadastral Data, Federal Geographic Data Committee. May 2008.
Posted at: <http://www.nationalcad.org/data/documents/CADSTAND.v.1.4.pdf>
(Normative) Cited in: Content (Address Parcel Identifier); Appendix J.2.2
25. U.S. Federal Geographic Data Committee. "Content Standard for Digital Geospatial Metadata" (CSDGM). Version 2.0, 1998. FGDC-STD-001-1998.
Posted at: http://www.fgdc.gov/standards/projects/FGDC-standards-projects/metadata/base-metadata/v2_0698.pdf
(Normative) Cited in: Introduction (Address Data Quality; Related Standards); Content (Data Set ID; Address Start Date; Address End Date); and Data Quality (Introduction; Measuring Address Quality).
For specifics on date format, see "Organization of Standard" (pp. viii - ix); for data set identification, see "Citation Information" (Sec. 8).
26. U.S. Federal Geographic Data Committee. "FGDC Standards Reference Model." March, 1996.
Posted at: <http://www.fgdc.gov/standards/process/FGDC-standards-reference-model>
(Normative) Cited in: Introduction.
27. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 0: Base document." May 2008. FGDC-STD-014.0-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Content (Introduction); Appendix J.2.1 and J.5.
28. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 1: Cadastral." May 2008. FGDC-STD-014.1-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
Cited in: (Normative) Content (Address Parcel Identifier Source, Address Parcel Identifier); Appendix J.2.2
29. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 2: Digital Orthoimagery." May 2008. FGDC-STD-014.2-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix J.2.5.
30. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 3: Elevation." May 2008. FGDC-STD-014.3-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix J.2.4.
31. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 4: Geodetic Control." May 2008. FGDC-STD-014.4-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix J.2.5.

32. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 5: Governmental Unit and Other Geographic Area Boundaries." May 2008. FGDC-STD-014.5-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Content (Place Name, State Name, Country Name) and Appendix J.2.6.
33. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 6: Hydrography." May 2008. FGDC-STD-014.6-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix J.2.7.
34. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 7: Transportation Base." May 2008. FGDC-STD-014.7-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Normative for Address Side Of Street; otherwise Informative) Cited in: Content (Address Side Of Street), Appendix C, Appendix J.2.8.
35. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 7b: Transportation - Rail." May 2008. FGDC-STD-014.7b-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix C, Appendix J.2.8.
36. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 7c: Transportation - Roads." May 2008. FGDC-STD-014.7c-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Cited in: Appendix C, Appendix J.2.8.
37. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 7d: Transportation - Transit." May 2008. FGDC-STD-014.7d-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix C, Appendix J.2.8.
38. U.S. Federal Geographic Data Committee. "Geographic Information Framework Data Content Standard Part 7e: Transportation – Inland Waterways." May 2008. FGDC-STD-014.7e-2008
Posted at: http://www.fgdc.gov/standards/standards_publications
(Informative) Cited in: Appendix C, Appendix J.2.8.
39. U.S. Federal Geographic Data Committee. "Spatial Data Transfer Standard." FGDC-STD-002.1. (Approved by ANSI as ANSI NCITS 320-1998, June 9, 1998.) (See especially Part 1, Section 3, "Spatial Data Quality").
Posted at: <http://mcmcweb.er.usgs.gov/sdts/standard.html>
(Informative) Cited in: Data Quality
40. U.S. Federal Geographic Data Committee. "United States National Grid." FGDC-STD-011-2001.

Posted at: http://www.fgdc.gov/standards/projects/FGDC-standards-projects/usng/fgdc_std_011_2001_usng.pdf
(Normative) Cited in: Content (USNational Grid Coordinate).

41. U.S. Fire Administration National Fire Data Center, 2009. "National Fire Incident Reporting System." Version 5.0 Design Documentation, Specification Release 2009.1, January 2009, pp. 160-163 ("Basic Module Data Dictionary"). (Note: The U.S. Fire Administration is a division of the Federal Emergency Management Agency, which is managed by the U.S. Department of Homeland Security.)
Posted at: <http://www.nfirs.fema.gov/documentation/design/> ("NFIRS 5.0 Design Documentation")
(Informative) Cited in: Content (Street Name Pre Directional, Street Name Pre Type, Street Name Post Type, Street Name Post Directional).
42. U.S. Geological Survey, 19810501. "U.S. Geographic Names Information System (GNIS)." U.S. Geological Survey, Reston, VA.
Accessed at: <http://geonames.usgs.gov/domestic/index.html>
(Normative for GNISFeature ID; otherwise Informative) Cited in: Content (GNISFeature ID, Landmark Name, and Place Name).
43. U.S. Geological Survey, 19810501. "U.S. Geographic Names Information System (GNIS): Feature Class Values and Definitions." Geographic Names Project, USGS.
Accessed at: <http://geonames.usgs.gov/pls/gnispublic/f?p=gnispq:8>
Cited in: Content (Informative) (Landmark Name).
44. U.S. Postal Service (USPS). "Postal Addressing Standards." Publication 28, April 2010.
Posted at: <http://pe.USPS.gov/cpim/ftp/pubs/Pub28/Pub28.pdf>
(Normative for State Name abbreviations and Postal Addressing Profile; otherwise Informative) Cited in the Introduction, throughout Content and Classification, in Data Quality (Introduction), and in the Postal Addressing Profile.
USPS terminology is noted in Content (various elements) under "Other common names for this element."
USPS Publication 28 is a foundational work for the Content and Classification Parts. The Postal Addressing Profile reconciles USPS Publication 28 with the FGDC address standard.
45. U.S. Postal Service (USPS). "Postal Addressing Standards for Puerto Rico and the US Virgin Islands". March 2007.
Posted at:
http://www.ribbs.USPS.gov/files/Addressing/PR_AND_USVI_ADDRESSING_-_ENGLISH.PDF
(Informative) Cited in: Numbered Thoroughfare Address and Community Address.
46. U.S. Postal Service (USPS). "Quick Service Guide 800: Glossary of Postal Terms and Abbreviations in the DMM." September 8, 2009
Posted at: <http://pe.USPS.com/text/qsg300/Q800.htm>
(Informative) Cited in: Content (Zip Code, Zip Plus 4)

47. Universal Postal Union (UPU). "International postal address components and templates – Part A: Conceptual hierarchy and template languages" and "International postal address components and templates – Part B: Element mapping conventions, template design considerations, address templates and rendition instructions". UPU Data definition and encoding standards Draft S-42a-6 and Draft S-42b-6 (POC C4 SB 2008.4-Doc.4d-Annex 1 and Annex 2). See especially Part A, section 5.5.32 (definition of "thoroughfare"). Part B, Section 22, contains the United States profile of the UPU standard.
Draft S-42a-6 posted at: http://www.upu.int/document/2008/an/cep_c_4_gn-4/src/d004d_ad00_an01_p00_r00.pdf
Draft S-42b-6 posted at: http://www.upu.int/document/2008/an/cep_c_4_gn-4/src/d004d_ad00_an02_p00_r00.pdf
(Informative) Cited in: Introduction, Classification (Thoroughfare Classes).
48. W3C XML Core Working Group. "Extensible Markup Language (XML) 1.0." (Third Edition), W3C Recommendation 4 February 2004. Tim Bray, Jean Paoli, C. M. Sperberg-McQueen, Eve Maler, François Yergeau, eds.
Posted at: <http://www.w3.org/TR/2004/REC-xml-20040204>
(Normative) Cited in: Introduction, Content (introduction), Classification (Introduction), Exchange.
49. Wisconsin State Cartographers Office. "Wisconsin Coordinate Reference Systems." 2nd edition, 2009.
Posted at: http://www.sco.wisc.edu/pubs/2009/WisCoordRefSys_April2009.pdf
50. (Informative) Cited in: Content (Address Coordinate Reference System ID, Address Coordinate Reference System Authority)

6.2 Other Works Consulted

1. Australia and New Zealand. "AS/NZS 4819:2003 : Geographic information - Rural and urban addressing." (Amendment 1: 26 October 2006.)
2. (Informative) Available for purchase from:
<http://www.saiglobal.com/shop/script/Details.asp?docn=AS216071868339>
3. Abstract: "Specifies requirements for a comprehensive urban and rural addressing system for allocation, transfer and management of property addresses. Takes into account data dictionary for transfer of street address systems and interchange of client information and includes geocoding. Guidelines for the use of the addressing system and examples of addressing are included."
4. British Standards Institution. "BS7666: 2006 - Spatial Datasets for Geographical Referencing."
5. (Informative) Not in the public domain. Available for purchase from the British Standards Institute. The standard has four parts:
 - Part 0:2006 General model for gazetteers and spatial referencing - "Scope: ...defines the essential components of a gazetteer of geographic locations and provides a general model of spatial references based upon named spatial units

- in the United Kingdom." Listed for sale at: <http://www.bsi-global.com/Shop/Publication-Detail/?pid=00000000030127201>
- Part 1:2006 Specification for a street gazetteer - "Scope: ...specifies the data to be maintained in a gazetteer of streets, consistent with Part 0 of this standard. [A]lso specifies the means of representing the geometry of the street in terms of coordinates." Listed for sale at: <http://www.bsi-global.com/en/Shop/Publication-Detail/?pid=00000000030127194>
 - Part 2:2006 Specification for a land and property gazetteer - "Scope: ...specifies the logical data structure for a gazetteer of land and property." Listed for sale at: <http://www.bsi-global.com/en/Shop/Publication-Detail/?pid=00000000030127196>
 - Part 5:2006 Specification for a delivery point gazetteer - "Scope: ...specifies the logical data structure and data content for a gazetteer of delivery points, for purposes of identification, access and validation of service requests... It provides a method of referencing delivery points by means of unique references and descriptive delivery addresses." Listed for sale at: <http://shop.bsigroup.com/en/ProductDetail/?pid=00000000030127198>
6. Canada Post Corporation. "Canada Postal Guide: Addressing Guidelines." ("Last updated: 2009-06-22").
 7. (Informative) Posted at: <http://www.canadapost.ca/tools/pg/manual/PGaddress-e.asp>
 8. Purpose: Provides recommended formats for Canadian mailing addresses. "The guidelines in this chapter promote the most technologically efficient formats for addressing. It does not limit mailers to any one format. In some cases, because of individual preference or other considerations, mailers may not be able to follow these formats.
 9. Organization for the Advancement of Structured Information Standards (OASIS) Customer Information Quality (CIQ) Technical Committee. "OASIS CIQ xPRL V3.0 (extensible Party Relationships Language) has been approved by the TC as a Committee Specification. " "OASIS CIQ specification that provides a standard format to represent an address/location is "extensible Address Language (xAL)"."
 10. (Informative) Posted 10 November 2009 at: http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=ciq
 11. Purpose: "The objective of the OASIS CIQ TC (formed in 2000) is to deliver a set of XML Specifications for defining, representing, interoperating and managing "PARTY (Person or Organization) INFORMATION" that are truly open, vendor neutral, industry and application independent, and importantly "Global"...The CIQ family of specifications are designed to represent party data (e.g. name and address) independent of any culture, geographical location, application or industry..."
 12. South African Bureau of Standards. "Geographic information - Addresses Part 1: Data format of addresses." SANS 1883-1:2009. Approved 2009-10-02.
 13. (Informative) Available for purchase from the South African Bureau of Standards, <https://www.sabs.co.za/index.php?page=standardspurchase> (Search on Standard = 1883)

14. Abstract: "Specifies and defines the data elements, as well as the address types that can be constructed from the data elements for South African addresses. Defines terms and definitions related to addresses in South Africa. Applies to addresses covering the whole of South Africa. Describes the physical location of a point of service delivery, and addresses that could be geo-referenced. Includes definitions for address types that are assigned by the official address issuing body (such as the street address type), as well as address types that are commonly in use (such as the farm and informal address types)."