

METRIC

MIL-PRF-0089049/9 (NGA)

24 May 2004

**PERFORMANCE SPECIFICATION SHEET
VECTOR VERTICAL OBSTRUCTION DATA**

This specification is approved for interim use by the National Geospatial-Intelligence Agency (NGA). Other activities in the Department of Defense may use this interim specification sheet.

1. SCOPE

1.1 Scope. This specification defines the content and format for the U.S. National Geospatial-Intelligence Agency (NGA) Vector Vertical Obstruction Data (VVOD) product. References to the VVOD specifications in this document assume use of both the general specification and this specification sheet.

1.2 Purpose. The VVOD is a vector-based digital product that portrays vertical obstruction data. The VVOD also functions as a mission specific data set designed to support Geographic Information System (GIS) applications. The VVOD database contains data concerning known vertical obstructions worldwide. The vertical obstruction data stored in the database includes all of the manmade and natural vertical obstructions known by NGA projecting above the Earth's surface which are sufficiently tall so as to pose a hazard to powered flight, both manned and unmanned. The specification provides a description of the content, accuracy, data format, and design of the VVOD database.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3,4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3,4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

Comments, suggestions or questions on this document should be addressed to The National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or emailed to ncgis-mail@nga.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at www.dodssp.daps.mil.

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INTERNATIONAL STANDARDIZATION AGREEMENTS

STANAG 2211	Geodetic Datums, Spheroids, Grids, and Cell References
STANAG 7074	Digital Geographic Information Exchange Standard (DIGEST)

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-2407	Vector Product Format, 28 June 1996
MIL-STD-2414	Bar Coding for Geospatial Products

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-0089049	General Performance Specification Vector Product Format (VPF) Products
MIL-DTL-89045	Geospatial Symbology for Digital Display (GeoSym)

DEPARTMENT OF DEFENSE HANDBOOKS

MIL-HDBK-9660	DOD Produced CD-ROM Products
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(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or www.dodssp.daps.mil, or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D Philadelphia, PA 19111-5094.

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation or contract.

DMA Technical Manual

(DMA TM) 8358.1	Datums, Ellipsoids, Grids, and Grid Reference Systems
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(Copies of the aforementioned publication are available from the National Geospatial-Intelligence Agency, Geospatial Sciences Division at <http://earth-info.nima.mil/GandG/pubs.html>)

DMA Technical Manual (DMA TM) 8321.1	DMA Vertical Obstruction File (DVOF)
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(Copies of the aforementioned publication are available from the National Geospatial-Intelligence Agency, Targeting and Navigation Division at <http://www.nga.mil>.)

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Digital Geographic Information Exchange Standard (DIGEST), Part 4, Features and Attribute Coding Catalogue (FACC), Edition 2.1, September 2000.

(Copies of the aforementioned publication are available <http://www.digest.org>.)

(DRAFT) NGA Profile of the Digital Geographic Information Exchange Standard (DIGEST), Part 4, Features and Attribute Coding Catalogue (FACC)

(Copies of the above publications are available from the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or request can be e-mailed to ncgis-mail@nga.mil.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents are those cited in the solicitation or contract.

ISO 9660 1988 (E). International Organization for Standardization Information Processing - Volume and File Structure of CD-ROM for Information Interchange.

(Copies of this publication are available from ISO at <http://www.iso.org/iso/en/prods-services/ISOstore/store.html>.)

(Non-government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other information services.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with Section 4.2 (MIL-PRF-89049).

3.2 Accuracy. Vertical obstruction data is derived in conjunction with, or as a by-product of, routine production programs. Each program has its own minimum height requirement and accuracy requirements for obstructions. Regardless of the accuracy, any obstruction meeting the minimum height requirement of its parent program shall be entered in the DMA Vertical Obstruction File (DVOF).

When new obstruction data are derived by NGA or by external, non-mapping, contributing organizations, then accuracies within the limits stated below should be sought. This will permit the obstruction data to meet the accuracy standards for portrayal on Class-2 1:250,000 or smaller-scale aeronautical charts. Production programs that use the resultant obstruction record but require a higher degree of accuracy are responsible for improving the obstruction data to the extent necessary. Those programs are in turn

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responsible for supplying the improved obstruction data to the DVOF Manager.

When these objectives cannot be met because of inadequate source materials, lack of datum transformation formula, or other deficiencies, the best information possible is derived and entered into the file. Quality of this data will be evident from the associated accuracy figures and deficiency code.

3.2.1 Absolute horizontal accuracy. The absolute horizontal accuracy of each obstruction is expressed in meters of circular error (CE) at 90 percent

3.2.2 Absolute vertical accuracy. The Absolute vertical accuracy of each obstruction is expressed in meters at 90 percent probability (.9p) linear error (LE) as a proportion of the contour interval or photo derived Digital Terrain Elevation Data (DTED).

3.2.3 Relative accuracy. NGA does not have a formal relative accuracy defined for this product.

3.3 Datum.

3.3.1 Horizontal datum. The horizontal datum shall be referenced to WGS84. If the source map/chart sheets are not referenced to WGS84, then they will be converted from their original horizontal datum to WGS84.

3.3.2 Vertical datum. Vertical measurements are referenced to the WGS84 Geoid adjusted using the EGM96. Height data is entered in both Above Ground Level (AGL) and Above Mean Sea Level (AMSL).

3.4 Coordinate system. VVOD data libraries shall implement a decimal degree geographic coordinate system as per MIL-PRF-89049, section 3.11. The horizontal coordinate resolution for geographic coordinates shall be 0.01 arc-seconds or 0.000002 decimal degree.

3.5 Security.

3.5.1 Security classification. The security classification of the products generated by the use of these specifications will be the lowest category practicable. When it is necessary to assign a security classification to the product, it shall be in accordance with established national security procedures.

3.5.2 Security classification of product. VVOD data sets vary in classification depending on the geographic location covered by the data. Data set output classification can range from Secret Collateral to Unclassified, depending on the data information and accuracy of the data required. The data sets will carry the classification of the most restrictive classification of any tile or library of the VVOD databases.

3.5.3 Security classification of specification. This performance specification is UNCLASSIFIED.

3.6 Continuity. All VVOD data are subject to the portrayal criteria specified in Appendix C.

a. The VVOD product and database shall be organized into multiple VPF libraries such that a seamless product is produced where data are

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present. Data gaps between VVOD libraries may exist due to an absence of data. No data overlap shall exist in the libraries of the VVOD database.

3.7 Thematic layer organization. The VVOD is organized into thematic layers. Each thematic layer is stored as a single coverage. Each VVOD data library may contain as many as four thematic layers (see TABLE 2). VVOD does not contain the Reference library defined in MIL-PRF-89049, Section 3.8.

3.8 Dimensions. The minimum size of features collected from source materials shall be in conformance with the portrayal criteria and attribute values provided in the VVOD data dictionary, Appendix B. Features may be captured as points, nodes, or lines

3.8.1. Units of measure. The unit of measure for VVOD are meters.

3.9 Feature and attribute coding scheme. VVOD implements the NGA Profile of Digital Geographic Information Exchange Standard (DIGEST), Feature and Attribute Coding Catalogue (FACC) (short version: NGA Profile of DIGEST FACC) to define features, attributes, and values. See Appendix D of this Specification for a listing of the FACC feature codes allowable for VVOD thematic files.

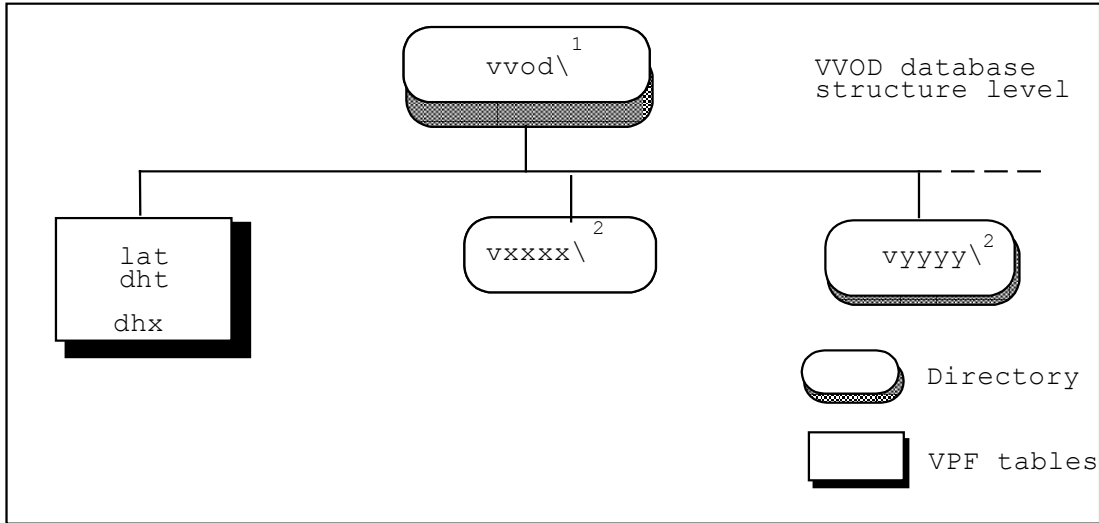
3.10. VVOD directory organization.

3.10.1. VVOD database. VVOD consists of a single database. Each data set shall contain a single database directory and one or more data library directories. The database header and library attribute tables shall be duplicated for each data set. Each data library contains a mix of reference coverages and thematic coverages. This thematically layered, relationally structured set of data supports Geographic Information System (GIS) applications, mission planning systems, flight management systems, and cockpit avionics systems.

3.11 VPF structure levels, tables and files. The following sections identify VPF structure information specific to VVOD. General database, library, and coverage level tables are defined in MIL-PRF-89049. The VVOD specific content information for the database and library level metadata tables is described in Appendix B of this specification. The record layout and content of the VVOD coverage tables and files are described in Appendix C of this specification.

3.11.1 Databasedirectory files.

a. VVOD consists of a single worldwide database. Each CD-ROM shall contain a single database directory and one or more library directories. The database header table and library attribute tables shall be duplicated for each CD-ROM within the database. Each data library contains a mix of reference coverages and thematic coverages. The tables and files contained in the VVOD database directory are described below. A representation of the tables and files appearing in the VVOD database level are depicted in FIGURE 1.



¹This is the directory name for the VVOD database.

²These are representative directory names for VVOD libraries.

FIGURE 1. VVOD database directory.

b. As described in MIL-PRF-89049, section 3.16.1, and Appendix B therein, the database directory contains three required metadata tables. The required tables include the Library Attribute Table (lat), Database Header Table (dht), and Database Header Table variable length index (dhx), see Table 1. VVOD does not implement the optional disclaim.doc file that can be associated with the dht.

c. The default record contents of the dht for VVOD are defined in Appendix B of this associated specification.

TABLE 1. VVOD database table and file names and description.

Table or File Description	Table or File Name
VVOD database directory	vvod ¹
Library Attribute Table	lat
Database Header Table	dht
Database Header Table variable length index	dhx
VVOD library directories	vxxxx ²

¹This is the directory name for the VVOD database.

²This is a representative directory name for a VVOD library.

3.11.2 Database and library naming conventions.

a. The VVOD product will contain one worldwide database. The database name shall be vvod.

b. The VVOD library names are up to eight characters in length with the first character being 'v'. The remaining characters will be used to adequately represent the specific VVOD library.

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3.11.3 Library directory files. The contents of each VVOD data library are stored in a directory, whose name shall be no more than eight lower case alphanumeric characters in length. The entire contents of one or more VVOD libraries shall be contained in a data set. The size of the data set shall not exceed the maximum size limit allowable for the exchange medium (i.e., CD-ROM). A representation of the tables and files present in a VVOD library is provided in MIL-PRF-89049, Figures 4 and 5.

3.11.3.1 Library metadata. The library metadata tables and their content are described in MIL-PRF-89049, section 3.16.2.1. Product specific record content information for VVOD is provided in Appendix B of this specification.

3.11.3.2 Library reference coverages. Each tiled VVOD data library shall contain the Tile Reference Coverage (tileref) and Library Reference Coverage (libref) as defined by MIL-PRF-89049, Appendix D. The optional text feature class table in the tileref coverage shall not be implemented in VVOD.

3.11.4 Coverage directory files.

3.11.4.1 Coverage metadata. The coverage metadata tables and their content are described in MIL-PRF-89049, section 3.16.3.1. Product specific information for VVOD is provided in Appendix C of this specification.

3.11.4.2 Data coverages. In addition to the library reference coverages (see 3.11.3.2) there are up to two possible thematic data coverage directories present in any VVOD data library. Within a library, coverage directories shall not be included if data does not exist for that coverage within the library's geographic area. The contents of each VVOD data coverage are stored in a directory whose name shall be represented in lower case letters, with a three character name representative of the thematic layer name (i.e., obs for Obstructions coverage), as shown in Table 2.

3.11.4.3 Coverage topology. The topology level of each coverage is specified in the coverage attribute table (cat) within each library, see MIL-PRF-89049, section 3.16.2.1 and Appendix D. Topology is not supported between coverages. The cat for each library is tailored based on the coverages actually in the VVOD product. Table 2 depicts the VVOD cat containing all possible VVOD coverages.

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TABLE 2. VVOD coverage attribute table (cat)

{Header length}L;			
Coverage Attribute Table;--;			
id=I,1,U,Row Identifier,-,-,-,;			
coverage name ¹ =T,8,P,Coverage name,-,-,-,;			
description=T,24,N,Coverage description,-,-,-,;			
Level ² =I,1,N,Topology level,-,-,-,;:			
1	libref	Library Reference	2
2	tileref	Tile Reference	3
3	dq	Data Quality	3
4	obs	Obstructions	2

NOTES:

1. This table depicts all coverages, which may be present in a VVOD library. Presence of these coverages will vary with data availability. If a library does not contain any data for a particular coverage, then the record describing the coverage will not be present.

2. The number in the level column represents the topology of each coverage.

3.11.5 Feature class structure level. VVOD feature classes for thematic coverages are shown in Table 3. Only those feature classes containing data shall be present in the coverage. Description of feature classes, with the exception of those located in the Data Quality (dq) coverage, are found in Appendix C of this specification. For feature class descriptions of dq features, see MIL-PRF-89049, Appendix E.

TABLE 3. VVOD thematic coverages and feature classes.

Coverage Name	Feature Classes				
	Point	Node	Line	Area	Text
dq			dqline	dqarea dqvoida	dqtxt
obs	aerop hydrop indp iwap popp transp utilp	aeroc hydroc indc iwac popc transc utilc	aerol indl iwal popl transl utill		

3.11.5.1 Feature table structure and contents. Feature tables will be implemented per MIL-PRF-89049, 3.16.4.2. In addition to implementing the required feature-to-primitive links using join tables for all line and area feature classes, VVOD will also implement the feature-to-primitive links using join tables for all point feature classes.

3.11.5.2 Related attribute tables.

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- 3.11.5.2.1 Notes related attribute table. The notes related attribute table (notes.rat) shall be implemented for all feature tables, when appropriate, in accordance with MIL-PRF-89049, section 3.16.4.3.1.
- 3.11.5.2.2 Symbol related attribute table. The optional symbol related attribute table (symbol.rat) in the dq and libref coverages shall not be implemented in VVOD.

3.11.6 Primitive tables and associated files. VPF uses the primitive tables defined in MIL-STD-2407 to model a feature's location, geometry, and topology. See MIL-PRF-89049, section 3.16.5 for the format to be used for VPF primitive tables in VVOD. The data coverage in VVOD data libraries shall implement 2-dimensional (2D) geometry for the coordinates in the end, cnd, and edg primitive tables. . The dq coverage as well as the tileref and libref coverages are 2-dimensional (2D), as per MIL-PRF-89049. See Table 4 in this specification for a definition of the field types to be used for the coordinate data in the primitive tables contained in the VVOD data libraries.

TABLE 4. VVOD coordinate data types in primitives.

<u>Library</u>	<u>Coverage</u>	<u>Primitive Type</u>	<u>Field Type</u>
Data			
	<u>tileref</u>	<u>cnd, edg, txt</u>	<u>C</u>
	<u>libref</u>	<u>cnd, edg, txt</u>	<u>C</u>
	<u>dq</u>	<u>cnd, edg, txt</u>	<u>C</u>
	data coverage	end, cnd, edg	B

3.12 VVOD tiling schemes. VVOD data libraries shall be partitioned in a systematic tile structure based primarily on data density, see MIL-PRF-89049, section 3.17. The tileref coverage defines the tiling scheme for each VVOD library. The tiling schemes for VVOD libraries will differ in their spatial extent and number of tiles per library.

3.12.1 VVOD tiling scheme. The VVOD database will contain data in variable sized tiles based on the GEOREF reference system as defined in the tileref of each library. The tiling scheme will change by library when data density indicates that smaller or larger tiles are desirable. The lower left (southwestern most) corner of each tile is identified using the GEOREF naming conventions described in MIL-PRF-89049, section 3.17.2. This GEOREF identifier is used as the name for the directory containing the primitives contained in that tile.

3.12.2 Cross-tile topology. Cross-tile topology ensures that topology is retained between the primitive tables across the tile boundaries. Topology across the tiles is maintained through the use of a reference tile ID in the edge and connected node primitive tables that establishes a "cross-tile" link over the tile partitions. This enables the database to function as a seamless unit for analysis purposes.

3.13 Distribution medium. All VPF based products, including VVOD shall be distributed electronically, on CD-ROM disc, or other media as required for customer support in accordance with MIL-PRF-89049, sections 3.18 and 3.19.

- 3.14 CD-ROM labeling and packaging. General CD-ROM labeling, labeling

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on the cardboard sleeve, or jewel case liner/information booklet, as applicable, shall be as described in MIL-PRF-89049. Items specific to VVOD are shown below.

3.14.1 CD labeling. Labeling of the VVOD CDs shall be in accordance with contract instructions.

3.14.1.1 Specific VVOD labeling items.

- a. Product Logo: VVOD CDs shall show the VPF logo.
- b. Product Description: Vector Vertical Obstruction Data (VVOD).
- c. Series: VVOD.
- d. Item: The NGA item name/number.
- e. Edition: Three digit edition number with left filled zeroes.
- f. National Stock Number: Assigned as per MIL-STD-2414.

3.14.2 Information booklet. Information booklets shall be provided for VVOD CDs. Labeling of the VVOD information booklet covers shall be in accordance with contract instructions. When used in conjunction with the jewel case, the front cover of the information booklet also serves as the front cover of the case.

3.14.2.1 Information booklet VVOD specific items. All information booklet VVOD specific items are the same as those shown on the CD, see 3.6.3.13.2.

3.14.2.2 Information booklet text. The interior pages of the information book shall contain the following statements (note that type should be such that all fit within the two inner surfaces of the booklet):

Vector Vertical Obstruction Data (VVOD)

1. Introduction: VVOD is a vector-based digital product that portrays a selected minimum set of vertical obstruction features of aeronautical, topographic, and hydrographic military significance to meet planning and initial operational needs. The features, attributes, and attribute values presented herein are a subset of those allowed in National Geospatial-Intelligence Agency (NGA) Profile of Digital Geographic Information Exchange Standard, Part 4, Feature and Attribute Coding Catalogue (FACC).

2. Purpose: VVOD is designed to function as a mission specific data set in support of Geographic Information System (GIS) applications. The database shall contain data concerning known vertical obstructions worldwide. The vertical obstruction data stored in the database includes all of the manmade and natural vertical obstructions known by NGA projecting above the Earth's surface which are sufficiently tall so as to pose a hazard to powered flight, both manned and unmanned.

3. Specifications and Standards: This VVOD Compact Disc - Read Only Memory (CD-ROM) was produced under DoD Specification MIL-PRF-89049/9, Performance Specification Vector Vertical Obstruction Data (VVOD), (date TBD). It is formatted as specified in DoD Standard, MIL-STD-2407, Vector

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Product Format (VPF) and coded as per the NGA Profile of Digital Geographic Information Exchange Standard (DIGEST), Feature and Attribute Coding Catalogue (FACC).

4. Datum and Projection:

Horizontal datum: World Geodetic System 1984 (WGS 84).

Vertical datum: Mean Sea Level (MSL)

5. VVOD Content: All VVOD features, attributes, and values are individually organized into a data library of single subject thematic layers/coverages. These consist of Point Vertical Obstructions and Line Vertical obstructions, along with data supporting coverages of Library Reference, Tile Reference, and Data Quality.

6. Comments and Questions: For questions concerning this or other NGA products or services, please telephone the NGA Operational Help Desk: 1-800-455-0899, Commercial 314-263-4864, or DSN 693-4864, or write: Director, National Geospatial-Intelligence Agency, ATTN: ES, Mail Stop L-88, 4600 Sangamore Road, Bethesda, MD 20816-5003.

3.14.3 Jewel case liner (back cover of case). Labeling of the VVOD jewel case liner shall be in accordance with contract instructions.

3.14.4 Cardboard sleeve mailer. If a cardboard mailing sleeve is specified in the contract, it shall be labeled in accordance with contract instructions.

4. VERIFICATION

Verification shall be in accordance with MIL-PRF-89049, section 4.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materials is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The VVOD database is intended to support a variety of basic military Geographic Information System (GIS) applications at a tactical or strategic level. It is intended for use as a general purpose vertical obstructions database which can support various aeronautical applications such as mission planning, route navigation, etc used by military services.

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6.1.1 Sources. The feature content as defined in this specification is primarily based on a combination of selected minimum sets of aeronautical, topographic, and hydrographic features. Sources used to support the photogrammetric collection of features, attributes, and attribute values during the compilation of this product may include information derived from (but not limited to) aerial photography, aeronautical/hydrographic charts, multi-spectral imagery, topographic maps and host country Aeronautical Information Publications (AIP). Information also may have been derived from hardcopy thematic maps and charts at a variety of scales or conversion from digital data in other formats and coding schemas.

6.2 Acquisition requirements. Acquisition documents are defined in MIL-PRF-89049, section 6.2.

6.3 Supersession. These specifications supersede PS/1GK/100, April 1987 and Draft VVOD MIL-PRF-89049/9, 4 Dec 1997.

6.4 Definitions. Refer to MIL-PRF-89049 and the NGA Profile of DIGEST FACC for definitions of terms and acronyms used in this specification that are not defined herein.

6.4.1 Abbreviations and acronyms.

CD-ROM	Compact Disc-Read Only Memory
CE	Circular Error
DESCR	Feature Class Description
DIGEST	Digital Geographic Information Exchange Standard
DMA	Defense Mapping Agency
DoD	Department of Defense
DODISS	Department of Defense Index of Specifications and Standards
DOS	Disk Operating System
DQ	Data Quality (coverage name)
DVOF	DMA/Digital Vertical Obstruction File
FACC	Feature Attribute Coding Catalogue
GEOREF	Geographic Reference System
GGI&S	Global Geospatial Information and Services
GIS	Geographic Information System
ID	Identifier
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organization for Standards
LE	Linear Error
LOB	Line Vertical Obstructions (coverage name)
MC&G	Mapping, Charting, and Geodesy
MCGT	Mapping, Charting and Geodesy Technology
MSL	Mean Sea Level
NGA	National Geospatial-Intelligence Agency (formerly National Imagery and Mapping Agency, or Defense Mapping Agency)
NOS	National Ocean Service
NOTAM	Notice to Airmen
POB	Point Vertical Obstructions (coverage name)
QA	Quality Assurance
QC	Quality Control
QSTAGs	Quadripartite Standardization Agreements
STANAG	NATO Standardization Agreement
USIGS	United States Imagery and Geospatial Information System

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VDT	Value Description Table
VOF	Vertical Obstruction File (formerly DMA/Digital Vertical Obstruction File)
VPF	Vector Product Format
VVOD	Vector Vertical Obstruction Data
WGS	World Geodetic System

6.4.2 Actual definitions. For actual definitions of VPF terms used in this specification refer to MIL-STD-2507, section 3. For actual definitions of the aeronautical, topographic and hydrographic features, attributes, and values used herein refer to the NGA Profile of DIGEST FACC and Appendixes E and F.

6.5 Subject term (keyword) listing. This paragraph contains an alphabetical listing of subject terms (key words) that allow for identification of the document during retrieval searches. Note subject terms do not repeat words from title of this document:

Data Quality (dq)
 Digital Geographic Information Exchange Standard (DIGEST)
 Feature and Attribute Coding Catalogue (FACC)
 Geographic Information System (GIS)
 Geographic Reference System (GEOREF)
 Geospatial Information
 Obstructions (obs)
 Thematic Layers
 Topographic Data
 Vector Product Format
 Vertical Obstruction File
 Vector Vertical Obstruction Data (VVOD)
 World Geodetic System

6.6 International standardization agreements. This specification implements NATO STANAG 2211, Geodetic Datums, Spheroids, Grids and Cell References, and NATO STANAG 7074, Digital Geographic Information Exchange Standard (DIGEST). When amendment, revision, or cancellation of this specification is proposed, the preparing activity must coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at www.dodssp.daps.mil.

6.7 Changes from previous issue.

This section is not applicable to this specification.

6.8 Classification and special handling.

a. The classification of the final VVOD dataset will be determined by the appropriate security section responsible for the final classification. The lowest possible classification of the final product is desired.

b. Even though the thematic files might be unclassified, a handling caveat could be required. Some NATO and other countries have mapping and other agreements that dictate the handling of materials produced over their country. Security elements should check for caveat requirements at the beginning of each project.

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6.9 NGA customer help desk. For questions concerning this or other NGA products, services, or specifications, please telephone the NGA Operational Help Desk: 1-800-455-0899, Commercial 314-263-4864, or DSN 693-4864, or write: Director, National Geospatial-Intelligence Agency, ATTN: ES, Mail Stop L-88, 4600 Sangamore Road, Bethesda, MD 20816-5003.

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APPENDIX A

VECTOR VERTICAL OBSTRUCTION DATA (VVOD) DICTIONARY

A.1. SCOPE

A.1.1 This appendix provides information about the data dictionary organization for the Vector Vertical Obstruction Data product. It is a mandatory part of the specification. The information contained herein is intended for compliance.

A.2. APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

A.3 VVOD DATA DICTIONARY ORGANIZATION

A.3.1 Data dictionary organization. The data provided in this appendix are organized according to VPF structure levels. The VVOD database and library metadata table record content appears first and is described in Appendix B. Their format and structure are defined in MIL-PRF-89049. The information provided in the database tables applies to the entire VVOD database. The library tables apply to each specific library. Appendix C contains the data coverages (spatial and attribute data) for the data libraries (containing the geographic data) that make up the VVOD. Appendix D identifies the coverage and feature type for each FACC feature shown in VVOD. Appendix E provides the FACC definition for each feature included in VVOD. Appendix F provides the FACC attribute definition for each attribute used in VVOD.

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APPENDIX B

VVOD DATABASE AND LIBRARY VPF TABLE CONTENTS

B.1 SCOPE

This appendix describes the record content of the database and library level metadata tables that require product-specific information. It is a mandatory part of this Specification. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

B.3 VVOD DATABASE AND LIBRARY VPF TABLE CONTENTS

B.3.1 Database-level record layout. The VVOD consists of a single worldwide database. Three required VPF tables and files are implemented at the database level. These are the database header table (dht) and corresponding variable-length index (dhx) and the library attribute table (lat). The following sections describe these files and their default record content for the VVOD database.

B.3.1.1 Database header table. This table contains information about the contents of the database and security information. The format of the dht is defined in MIL-PRF-89049, Appendix B. Table B-1 herein defines the default record contents for the dht in the VVOD database.

TABLE B-1. Record Contents for database header table (dht).

Column Name	Record Entry
id	1
vpf_version	9606
database_name	VVOD
database_desc	Vector Vertical Obstruction database supporting GIS applications.
media_standard	ISO 9660
originator	NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
addressee	ATTN: NGA/P, Mail Stop D-134, 4600 Sangamore Road, Bethesda, MD 20816-5003
media_volumes	1
seq_numbers	1
num_data_sets	1
security_class	U

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APPENDIX BTABLE B-1. Record Contents for database header table (dht) (continued)

downgrading	NO
downgrade date	0000000000000000.
releasability	UNRESTRICTED
transmittal_id	1
edition number	1
edition date	20030825000000.

B.3.1.2 Library attribute table. This table contains a row for each VVOD library that describes the library's name and the minimum bounding rectangle that defines the geographic extent of that library. The format of the lat is defined in MIL-PRF-89049, Appendix B. There is no VVOD-specific default record content for the lat.

B.3.2 Library-level record layout. Each VVOD data library shall contain the four required metadata tables and associated narrative tables and indices. These include the library header table (lht), geographic reference table (grt), coverage attribute table (cat), data quality table (dqt), a lineage narrative table (lineage.doc) and variable-length indices (grx, dqx, lineage.dox, lhx). The following sections describe these files and their default record content for VVOD data libraries.

B.3.2.1 VVOD library header table. The library header table identifies the data set, sources and security information in the data library. The format of the lht is defined in MIL-PRF-89049, Appendix D. Table B-2 herein defines the default record contents for the lht in a VVOD data library.

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TABLE B-2. Record Contents for VVOD library header table (lht)

Column Name	Record Entry
id	1
product type	VVOD
library name	vxxxx
description	Digital aeronautical data collected over North America from multiple sources.
data struct code	8
scale	[Null]
source series	TBD
source id	TBD
source edition	TBD
source name	Multiple sources used.
source date	XX/XX/XX
security class	U
downgrading	NO
downgrading date	[Null]
releasability	RESTRICTED
edition number	1
edition date	20030825000000.

B.3.2.2 Geographic reference table. This table contains the geographic parameters, and projection information about a VVOD library. The format of the grt is defined in MIL-PRF-89049, Appendix D. Table B-3 herein defines the default record contents for the grt in a VVOD data library.

TABLE B-3. Record contents for a VVOD library geographic reference table (grt)

Column Name	Record Entry
id	1
data type	GEO
units	DEG
ellipsoid name	WGS 84
ellipsoid code	WGE
ellipsoid detail	A=6378137,B=6356752
vert datum name	MEAN SEA LEVEL
vert datum code	MSL
vert units	M
sound datum name	N/A
sound datum code	N/A
sound units	N/A
geo datum name	WGS 84
geo datum code	WGE
projection name	DECIMAL DEGREES UNPROJECTED

B.3.2.3 Coverage attribute table. The cat defines the topology level for each coverage in a VVOD data library. The format and record content of the cat for VVOD is defined herein in section 3.11.4.2, Table 2.

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B.3.4.2 Data Quality Table The dqt provides information about the quality and accuracy of the data contained in the VVOD data library. The format of the dqt and the associated lineage.doc is defined in MIL-PRF-89049, Appendix D. Table B-4 herein defines the default record contents for the dqt in a VVOD data library..No default contents are specified for the lineage.doc.

TABLE B-4. Record contents for a VVOD library data quality table (dqt)

Column Name	Record Entry
id	1
vpf_level	LIBRARY
vpf_level_name	vxxxxx
feature_complete	All features in this library are captured from the source materials in accordance with this specification
attrib_complete	All features in this library have valid attribute codes assigned to them in accordance with this specification
logical_consist	All data are topologically correct. No duplicate features are present within a coverage. All data were consistently captured using the rules described in the documentation table associated with this table.
edition_num	1
creation_date	20030920000000.
revision_date	00000000000000.
spec_name	MIL-PRF-89049/9
spec_date	20030825000000.
earliest_source	19700101000000.
latest_source	00000000000000.
collection_spec	PS/1GK/100
abs_horiz_acc	128
abs_horiz_units	METERS
abs_vert_acc	30
abs_vert_units	METERS
rel_horiz_acc	N/A
rel_horiz_units	N/A
rel_vert_acc	N/A
rel_vert_units	N/A
comments	Additional descriptions of data lineage are available in the documentation table associated with this data quality table (lineage.doc)

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APPENDIX C

VVOD DATABASE THEMATIC COVERAGES VPF TABLES AND CONTENTS

C.1. SCOPE

C.1.1 Scope. This appendix provides information on the data dictionary organization for the VOF Vector Vertical Obstruction Data (VVOD) Output. It is a mandatory part of the specification for VPF data. The information contained herein is intended for compliance.

C.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

C.3 VVOD THEMATIC COVERAGE DIRECTORY RECORD LAYOUT

C.3.1 General. Appendix C contains the data coverages for VVOD. For each coverage there is a series of tables that describe the data in that coverage. Listed for each coverage are an index of FACC codes, features types, and respective attributes, followed by the character value description table, integer value description table, feature table, feature class attribute table, and feature class schema table. As shown in Table C-1, this appendix details the Obstructions coverage contained in the VVOD product; the Data Quality coverage is described in MIL-PRF-89049, Appendix E.

Table C-1. VVOD data coverages.

Data Quality Coverage	(dq)
Obstructions	(obs)

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APPENDIX CC.3.2 Obstructions Coverage.TABLE C-2 Obstructions Character Value Description Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Obstructions Character Value Description Table
 Table Name: char.vdt

{Header length}L; Obstructions Character Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,; table=T,12,N,Name of the Feature Table,-,-,-,; attribute=T,6,N,Column Name,-,-,-,; value=T,5,N,Unique Value of Attribute,-,-,-,; description=T,*,N,Description of Value,-,-,-,;;				
1	aerop.pft	f_code	GA035	NAVAIDS (Aeronautical)
2	aerop.pft	f_code	GB040	Launch Pad
3	aerop.pft	f_code	GB220	Air Obstruction
4	aerop.pft	f_code	GB221	Miscellaneous Air Obstruction
5	aerop.pft	cdv	UNK	Unknown
6	aerop.pft	qle	UNK	Unknown
7	aerop.pft	txt	UNK	Unknown
8	aerop.pft	voi	UNK	Unknown
9	hydrop.pft	f_code	BC040	Light
10	hydrop.pft	f_code	BC050	Lighthouse
11	hydrop.pft	f_code	BC070	Light Vessel/Lightship
12	hydrop.pft	f_code	BD110	Platform
13	hydrop.pft	cdv	UNK	Unknown
14	hydrop.pft	qle	UNK	Unknown
15	hydrop.pft	txt	UNK	Unknown
16	hydrop.pft	voi	UNK	Unknown
17	indp.pft	f_code	AA040	Rig/Superstructure
18	indp.pft	f_code	AB000	US-Disposal Site/Waste Pile UK-Refuse Tip/Slag Heap
19	indp.pft	f_code	AC000	Processing Plant/Treatment Plant
20	indp.pft	f_code	AC010	Blast Furnace
21	indp.pft	f_code	AC020	Catalytic Cracker
22	indp.pft	f_code	AD010	US-Power Plant UK-Power Station
23	indp.pft	f_code	AF010	Chimney/Smokestack
24	indp.pft	f_code	AF020	Conveyor
25	indp.pft	f_code	AF030	Cooling Tower
26	indp.pft	f_code	AF040	Crane
27	indp.pft	f_code	AF050	US- Dredge/Powershovel/Dragline UK- Dredger/Powershovel/Dragline
28	indp.pft	f_code	AF070	Flare Pipe
29	indp.pft	f_code	AF080	Hopper

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TABLE C-2 Obstructions Character Value Description Table (continued)

30	indp.pft	f_code	AJ050	Windmill
31	indp.pft	f_code	AJ051	Windmotor
32	indp.pft	f_code	AM010	Depot (Storage)
33	indp.pft	f_code	AM020	Grain Bin/Silo
34	indp.pft	f_code	AM030	Grain Elevator
35	indp.pft	f_code	AM070	Tank
36	indp.pft	f_code	AM080	Water Tower
37	indp.pft	cdv	UNK	Unknown
38	indp.pft	qle	UNK	Unknown
39	indp.pft	txt	UNK	Unknown
40	indp.pft	voi	UNK	Unknown
41	iwap.pft	f_code	BH010	Aqueduct
42	iwap.pft	f_code	BI020	Dam/Weir
43	iwap.pft	f_code	BI050	Water Intake Tower
44	iwap.pft	cdv	UNK	Unknown
45	iwap.pft	qle	UNK	Unknown
46	iwap.pft	txt	UNK	Unknown
47	iwap.pft	voi	UNK	Unknown
48	popp.pft	f_code	AH050	Fortification
49	popp.pft	f_code	AK020	Amusement Park Attraction
50	popp.pft	f_code	AK150	Ski Jump
51	popp.pft	f_code	AK160	US-Stadium/Amphitheater UK-Stadium/Amphitheatre
52	popp.pft	f_code	AL015	Building
53	popp.pft	f_code	AL018	Building Superstructure Addition
54	popp.pft	f_code	AL050	US-Display Sign UK-Display Sign/Notice Board
55	popp.pft	f_code	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post
56	popp.pft	f_code	AL130	US-Monument UK-Monument/Folly
57	popp.pft	f_code	AL240	Tower (Non-Communication)
58	popp.pft	f_code	AQ020	Aerial Cableway Pylon/Ski Pylon
59	popp.pft	f_code	AQ055	Bridge Tower/Bridge Pylon
60	popp.pft	cdv	UNK	Unknown
61	popp.pft	qle	UNK	Unknown
62	popp.pft	txt	UNK	Unknown
63	popp.pft	voi	UNK	Unknown
64	transp.pft	f_code	AQ040	Bridge/Overpass/Viaduct
65	transp.pft	f_code	AQ050	Bridge Superstructure
66	transp.pft	f_code	AQ060	Control Tower
67	transp.pft	f_code	AQ110	Mooring Mast
68	transp.pft	cdv	UNK	Unknown
69	transp.pft	qle	UNK	Unknown
70	transp.pft	txt	UNK	Unknown
71	transp.pft	voi	UNK	Unknown
72	utilp.pft	f_code	AD030	Substation/Transformer Yard
73	utilp.pft	f_code	AT006	Overhead Cable

TABLE C-2 Obstructions Character Value Description Table (continued)

74	utilp.pft	f_code	AT010	US-Disk/Dish UK-Disk Aerial/Dish Aerial
75	utilp.pft	f_code	AT040	US-Power Transmission Pylon UK-Power Transmission Pylon/Pole
76	utilp.pft	f_code	AT050	Communication Building
77	utilp.pft	f_code	AT070	Telephone-Telegraph Pylon/Pole
78	utilp.pft	f_code	AT080	Communication Tower
79	utilp.pft	cdv	UNK	Unknown
80	utilp.pft	qle	UNK	Unknown
81	utilp.pft	txt	UNK	Unknown
82	utilp.pft	voi	UNK	Unknown
83	aeroc.pft	f_code	GA035	NAVAIDS (Aeronautical)
84	aeroc.pft	f_code	GB040	Launch Pad
85	aeroc.pft	f_code	GB220	Air Obstruction
86	aeroc.pft	f_code	GB221	Miscellaneous Air Obstruction
87	aeroc.pft	cdv	UNK	Unknown
88	aeroc.pft	qle	UNK	Unknown
89	aeroc.pft	txt	UNK	Unknown
90	aeroc.pft	voi	UNK	Unknown
91	hydroc.pft	f_code	BC040	Light
92	hydroc.pft	f_code	BC050	Lighthouse
93	hydroc.pft	f_code	BC070	Light Vessel/Lightship
94	hydroc.pft	f_code	BD110	Platform
95	hydroc.pft	cdv	UNK	Unknown
96	hydroc.pft	qle	UNK	Unknown
97	hydroc.pft	txt	UNK	Unknown
98	hydroc.pft	voi	UNK	Unknown
99	indc.pft	f_code	AA040	Rig/Superstructure
100	indc.pft	f_code	AB000	US-Disposal Site/Waste Pile UK-Refuse Tip/Slag Heap
101	indc.pft	f_code	AC000	Processing Plant/Treatment Plant
102	indc.pft	f_code	AC010	Blast Furnace
103	indc.pft	f_code	AC020	Catalytic Cracker
104	indc.pft	f_code	AD010	US-Power Plant UK-Power Station
105	indc.pft	f_code	AF010	Chimney/Smokestack
106	indc.pft	f_code	AF020	Conveyor
107	indc.pft	f_code	AF030	Cooling Tower
108	indc.pft	f_code	AF040	Crane
109	indc.pft	f_code	AF050	US- Dredge/Powershovel/Dragline UK- Dredger/Powershovel/Dragline
110	indc.pft	f_code	AF070	Flare Pipe
111	indc.pft	f_code	AF080	Hopper
112	indc.pft	f_code	AJ050	Windmill
113	indc.pft	f_code	AJ051	Windmotor
114	indc.pft	f_code	AM010	Depot (Storage)
115	indc.pft	f_code	AM020	Grain Bin/Silo

TABLE C-2 Obstructions Character Value Description Table (continued)

116	indc.pft	f_code	AM030	Grain Elevator
117	indc.pft	f_code	AM070	Tank
118	indc.pft	f_code	AM080	Water Tower
119	indc.pft	cdv	UNK	Unknown
120	indc.pft	qle	UNK	Unknown
121	indc.pft	txt	UNK	Unknown
122	indc.pft	voi	UNK	Unknown
123	iwac.pft	f_code	BH010	Aqueduct
124	iwac.pft	f_code	BI020	Dam/Weir
125	iwac.pft	f_code	BI050	Water Intake Tower
126	iwac.pft	cdv	UNK	Unknown
127	iwac.pft	qle	UNK	Unknown
128	iwac.pft	txt	UNK	Unknown
129	iwac.pft	voi	UNK	Unknown
130	popc.pft	f_code	AH050	Fortification
131	popc.pft	f_code	AK020	Amusement Park Attraction
132	popc.pft	f_code	AK150	Ski Jump
133	popc.pft	f_code	AK160	US-Stadium/Amphitheater UK-Stadium/Amphitheatre
134	popc.pft	f_code	AL015	Building
135	popc.pft	f_code	AL018	Building Superstructure Addition
136	popc.pft	f_code	AL050	US-Display Sign UK-Display Sign/Notice Board
137	popc.pft	f_code	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post
138	popc.pft	f_code	AL130	US-Monument UK-Monument/Folly
139	popc.pft	f_code	AL240	Tower (Non-Communication)
140	popc.pft	f_code	AQ020	Aerial Cableway Pylon/Ski Pylon
141	popp.pft	f_code	AQ055	Bridge Tower/Bridge Pylon
142	popc.pft	cdv	UNK	Unknown
143	popc.pft	qle	UNK	Unknown
144	popc.pft	txt	UNK	Unknown
145	popc.pft	voi	UNK	Unknown
146	transc.pft	f_code	AQ040	Bridge/Overpass/Viaduct
147	transc.pft	f_code	AQ050	Bridge Superstructure
148	transc.pft	f_code	AQ060	Control Tower
149	transc.pft	f_code	AQ110	Mooring Mast
150	transc.pft	cdv	UNK	Unknown
151	transc.pft	qle	UNK	Unknown
152	transc.pft	txt	UNK	Unknown
153	transc.pft	voi	UNK	Unknown
154	utilc.pft	f_code	AD030	Substation/Transformer Yard
155	utilc.pft	f_code	AT006	Overhead Cable
156	utilc.pft	f_code	AT010	US-Disk/Dish UK-Disk Aerial/Dish Aerial
157	utilc.pft	f_code	AT040	US-Power Transmission Pylon UK-Power Transmission Pylon/Pole

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TABLE C-2 Obstructions Character Value Description Table (continued)

158	utilc.pft	f_code	AT050	Communication Building
159	utilc.pft	f_code	AT070	Telephone-Telegraph Pylon/Pole
160	utilc.pft	f_code	AT080	Communication Tower
161	utilc.pft	cdv	UNK	Unknown
162	utilc.pft	qle	UNK	Unknown
163	utilc.pft	txt	UNK	Unknown
164	utilc.pft	voi	UNK	Unknown
165	aerol.lft	f_code	GA035	NAVAIDS (Aeronautical)
166	aerol.lft	f_code	GB220	Air Obstruction
167	aerol.lft	f_code	GB221	Miscellaneous Air Obstruction
168	aerol.lft	cdv	UNK	Unknown
169	aerol.lft	qle	UNK	Unknown
170	aerol.lft	txt	UNK	Unknown
171	aerol.lft	voi	UNK	Unknown
172	indl.lft	f_code	AD010	US-Power Plant UK-Power Station
173	indl.lft	f_code	AF010	Chimney/Smokestack
174	indl.lft	f_code	AF020	Conveyor
175	indl.lft	f_code	AJ051	Windmotor
176	indl.lft	f_code	AM070	Tank
177	indl.lft	cdv	UNK	Unknown
178	indl.lft	qle	UNK	Unknown
179	indl.lft	txt	UNK	Unknown
180	indl.lft	voi	UNK	Unknown
181	ival.lft	f_code	BH010	Aqueduct
182	ival.lft	f_code	BI020	Dam/Weir
183	ival.lft	cdv	UNK	Unknown
184	ival.lft	qle	UNK	Unknown
185	ival.lft	txt	UNK	Unknown
186	ival.lft	voi	UNK	Unknown
187	popl.lft	f_code	AH050	Fortification
188	popl.lft	f_code	AK160	US-Stadium/Amphitheater UK- Stadium/Amphitheatre
189	popl.lft	f_code	AL015	Building
190	popl.lft	f_code	AL018	Building Superstructure Addition
191	popl.lft	f_code	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post
192	popl.lft	f_code	AL130	US-Monument UK- Monument/Folly
193	popl.lft	f_code	AL240	Tower (Non-Communication)
194	popl.lft	f_code	AQ010	US-Aerial Cableway Lines/Ski Lift Lines UK-Aerial Cableway Lines/Ski Lift Cables
195	popl.lft	cdv	UNK	Unknown
196	popl.lft	qle	UNK	Unknown
197	popl.lft	txt	UNK	Unknown
198	popl.lft	voi	UNK	Unknown

TABLE C-2 Obstructions Character Value Description Table (continued)

199	transl.lft	f_code	AQ040	Bridge/Overpass/Viaduct
200	transl.lft	f_code	AQ050	Bridge Superstructure
201	transl.lft	cdv	UNK	Unknown
202	transl.lft	qle	UNK	Unknown
203	transl.lft	txt	UNK	Unknown
204	transl.lft	voi	UNK	Unknown
205	utill.lft	f_code	AQ113	Pipeline/Pipe
206	utill.lft	f_code	AT030	Power Transmission Line
207	utill.lft	f_code	AT050	Communication Building
208	utill.lft	f_code	AT060	Telephone Line/Telegraph Line
209	utill.lft	f_code	AT080	Communication Tower
210	utill.lft	cdv	UNK	Unknown
211	utill.lft	qle	UNK	Unknown
212	utill.lft	txt	UNK	Unknown
213	utill.lft	voi	UNK	Unknown
214	fca	type	P	Point/Node Feature
215	fca	type	L	Line Feature

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APPENDIX CTABLE C-3 Obstructions Integer Value Description Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Obstructions Integer Value Description Table
 Table Name: int.vdt

{Header length}L; Obstructions Integer Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,; table=T,12,N,Name of the Feature Table,-,-,-,; attribute=T,3,N,Column Name,-,-,-,; value=S,1,N,Unique Value of Attribute,-,-,-,; description=T,*,N,Description of Value,-,-,-,;				
1	aerop.pft	atn	0	Unknown
2	aerop.pft	atn	3	Lit
3	aerop.pft	atn	4	Unlit
4	aerop.pft	cdp	0	Unknown
5	aerop.pft	cdp	18	Receipt
6	aerop.pft	cdp	19	Source
7	aerop.pft	cdp	24	Up-to-dateness/revision
8	aerop.pft	dir	0	Unknown
9	aerop.pft	dir	1	Uni
10	aerop.pft	dir	2	Bi
11	aerop.pft	dir	3	Omni
12	aerop.pft	dmf	-32767	Unknown
13	aerop.pft	exs	0	Unknown
14	aerop.pft	exs	5	Under Construction
15	aerop.pft	exs	7	Destroyed
16	aerop.pft	exs	8	Dismantled
17	aerop.pft	exs	999	Other
18	aerop.pft	gug	0	Unknown
19	aerop.pft	gug	1	Guyed
20	aerop.pft	gug	2	Unguyed
21	aerop.pft	hgt	-32767	Unknown
22	aerop.pft	hzd	0	Unknown
23	aerop.pft	hzd	300	World Geodetic System 1984
24	aerop.pft	hzd	999	Other
25	aerop.pft	len	-32767	Unknown
26	aerop.pft	mcc	0	Unknown
27	aerop.pft	mcc	20	Composition
28	aerop.pft	mcc	21	Concrete
29	aerop.pft	mcc	30	Earthen
30	aerop.pft	mcc	62	Masonry (Brick/Stone)
31	aerop.pft	mcc	64	Metal
32	aerop.pft	mcc	72	Part Metal
33	aerop.pft	mcc	107	Steel
34	aerop.pft	mcc	117	Wood
35	aerop.pft	mcc	999	Other

TABLE C-3 Obstructions Integer Value Description Table (continued).

36	aerop.pft	Nst	0	Unknown
37	aerop.pft	nst	7	Long Range Air Navigation System (LORAN)
38	aerop.pft	nst	10	Radar Responder Beacon (RACON)
39	aerop.pft	nst	11	Radar
40	aerop.pft	nst	20	VHF Omni Directional Radio Range (VOR)
41	aerop.pft	nst	21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)
42	aerop.pft	nst	22	VHF Omni Directional Radio Range and TACAN (VORTAC)
43	aerop.pft	nst	23	Tactical Air Navigation Equipment (TACAN)
44	aerop.pft	nst	26	Localizer (LOC)
45	aerop.pft	nst	27	Localizer/Distance Measuring Equipment (LOC/DME)
46	aerop.pft	nst	35	Radar Antenna
47	aerop.pft	nst	37	Precision Approach Radar (PAR)
48	aerop.pft	nst	40	Radio Beacon
49	aerop.pft	nst	45	Radar Station
50	aerop.pft	nst	55	Radar reflector
51	aerop.pft	nst	999	Other
52	aerop.pft	prm	1	Permanent
53	aerop.pft	prm	2	Temporary
54	aerop.pft	sec	0	Unknown
55	aerop.pft	sec	1	Top Secret
56	aerop.pft	sec	2	Secret
57	aerop.pft	sec	3	Confidential
58	aerop.pft	sec	4	Restricted
59	aerop.pft	sec	5	Unclassified
60	aerop.pft	sec	999	Other
61	aerop.pft	ssc	0	Unknown
62	aerop.pft	ssc	4	Bullet
63	aerop.pft	ssc	10	Pillar/Spindle
64	aerop.pft	ssc	12	Pyramid
65	aerop.pft	ssc	17	Spherical (Hemispherical)
66	aerop.pft	ssc	21	Artificial Mountain
67	aerop.pft	ssc	52	'A' Frame
68	aerop.pft	ssc	53	'H' Frame
69	aerop.pft	ssc	54	'I' Frame
70	aerop.pft	ssc	56	'Y' Frame
71	aerop.pft	ssc	60	Mast
72	aerop.pft	ssc	74	'T' Frame
73	aerop.pft	ssc	77	Arch
74	aerop.pft	ssc	79	Round
75	aerop.pft	ssc	80	Rectangular
76	aerop.pft	ssc	83	Square
77	aerop.pft	ssc	84	Irregular
78	aerop.pft	ssc	87	Dome

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TABLE C-3 Obstructions Integer Value Description Table (continued).

79	aerop.pft	ssc	109	Obelisk
80	aerop.pft	ssc	999	Other
81	aerop.pft	stc	1	Survey Source
82	aerop.pft	stc	2	Stereo Imagery Exploitation
83	aerop.pft	stc	3	Mono Imagery Exploitation
84	aerop.pft	stc	4	Cartographic Source
85	aerop.pft	stc	5	Reported Information
86	aerop.pft	stc	6	Multispectral
87	aerop.pft	stc	7	Hyperspectral
88	aerop.pft	stc	8	Synthetic Aperture Radar (SAR)
89	aerop.pft	stc	999	Other
90	aerop.pft	vdc	0	Unknown
91	aerop.pft	vdc	15	Mean Sea Level
92	aerop.pft	vdc	999	Other
93	aerop.pft	wid	-32767	Unknown
94	aerop.pft	zv2	-32767	Unknown
95	hydrop.pft	afa	0	Unknown
96	hydrop.pft	afa	19	Helipad
97	hydrop.pft	afa	995	None
98	hydrop.pft	afa	999	Other
99	hydrop.pft	atn	0	Unknown
100	hydrop.pft	atn	3	Lit
101	hydrop.pft	atn	4	Unlit
102	hydrop.pft	cdp	0	Unknown
103	hydrop.pft	cdp	18	Receipt
104	hydrop.pft	cdp	19	Source
105	hydrop.pft	cdp	24	Up-to-dateness/revision
106	hydrop.pft	dir	0	Unknown
107	hydrop.pft	dir	3	Omni
108	hydrop.pft	dmf	-32767	Unknown
109	hydrop.pft	exs	0	Unknown
110	hydrop.pft	exs	5	Under Construction
111	hydrop.pft	exs	7	Destroyed
112	hydrop.pft	exs	8	Dismantled
113	hydrop.pft	exs	999	Other
114	hydrop.pft	gug	0	Unknown
115	hydrop.pft	gug	1	Guyed
116	hydrop.pft	gug	2	Unguyed
117	hydrop.pft	hgt	-32767	Unknown
118	hydrop.pft	hzd	0	Unknown
119	hydrop.pft	hzd	300	World Geodetic System 1984
120	hydrop.pft	hzd	999	Other
121	hydrop.pft	mcc	0	Unknown
122	hydrop.pft	mcc	21	Concrete
123	hydrop.pft	mcc	64	Metal
124	hydrop.pft	mcc	72	Part Metal
125	hydrop.pft	mcc	107	Steel
126	hydrop.pft	mcc	117	Wood
127	hydrop.pft	mcc	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

128	hydrop.pft	opc	10	Navigation Aid Support
129	hydrop.pft	prm	1	Permanent
130	hydrop.pft	prm	2	Temporary
131	hydrop.pft	sec	0	Unknown
132	hydrop.pft	sec	1	Top Secret
133	hydrop.pft	sec	2	Secret
134	hydrop.pft	sec	3	Confidential
135	hydrop.pft	sec	4	Restricted
136	hydrop.pft	sec	5	Unclassified
137	hydrop.pft	sec	999	Other
138	hydrop.pft	stc	1	Survey Source
139	hydrop.pft	stc	2	Stereo Imagery Exploitation
140	hydrop.pft	stc	3	Mono Imagery Exploitation
141	hydrop.pft	stc	4	Cartographic Source
142	hydrop.pft	stc	5	Reported Information
143	hydrop.pft	stc	6	Multispectral
144	hydrop.pft	stc	7	Hyperspectral
145	hydrop.pft	stc	8	Synthetic Aperture Radar (SAR)
146	hydrop.pft	stc	999	Other
147	hydrop.pft	vdc	0	Unknown
148	hydrop.pft	vdc	15	Mean Sea Level
149	hydrop.pft	vdc	999	Other
150	hydrop.pft	zv2	-32767	Unknown
151	indp.pft	afa	0	Unknown
152	indp.pft	afa	19	Helipad
153	indp.pft	afa	995	None
154	indp.pft	afa	999	Other
155	indp.pft	atn	0	Unknown
156	indp.pft	atn	3	Lit
157	indp.pft	atn	4	Unlit
158	indp.pft	bss	0	Unknown
159	indp.pft	bss	1	Monitor
160	indp.pft	bss	4	Turret
161	indp.pft	bss	5	Tower
162	indp.pft	bss	998	Not Applicable
163	indp.pft	bss	999	Other
164	indp.pft	cdp	0	Unknown
165	indp.pft	cdp	18	Receipt
166	indp.pft	cdp	19	Source
167	indp.pft	cdp	24	Up-to-dateness/revision
168	indp.pft	cra	0	Unknown
169	indp.pft	cra	2	Bridge/Gantry
170	indp.pft	cra	3	Rotating
171	indp.pft	cra	998	Not Applicable
172	indp.pft	cra	999	Other
173	indp.pft	crm	0	Unknown
174	indp.pft	crm	1	Fixed
175	indp.pft	crm	2	Traveling
176	indp.pft	crm	3	Floating

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TABLE C-3 Obstructions Integer Value Description Table (continued).

177	indp.pft	crm	999	Other
178	indp.pft	dir	0	Unknown
179	indp.pft	dir	2	Bi
180	indp.pft	dir	3	Omni
181	indp.pft	dmf	-32767	Unknown
182	indp.pft	exs	0	Unknown
183	indp.pft	exs	5	Under Construction
184	indp.pft	exs	7	Destroyed
185	indp.pft	exs	8	Dismantled
186	indp.pft	exs	999	Other
187	indp.pft	gug	0	Unknown
188	indp.pft	gug	1	Guyed
189	indp.pft	gug	2	Unguyed
190	indp.pft	hgt	-32767	Unknown
191	indp.pft	hzd	0	Unknown
192	indp.pft	hzd	300	World Geodetic System 1984
193	indp.pft	hzd	999	Other
194	indp.pft	loc	0	Unknown
195	indp.pft	loc	8	On Ground Surface
196	indp.pft	loc	22	Off Shore
197	indp.pft	loc	999	Other
198	indp.pft	mcc	0	Unknown
199	indp.pft	mcc	20	Composition
200	indp.pft	mcc	21	Concrete
201	indp.pft	mcc	62	Masonry (Brick/Stone)
202	indp.pft	mcc	64	Metal
203	indp.pft	mcc	72	Part Metal
204	indp.pft	mcc	107	Steel
205	indp.pft	mcc	117	Wood
206	indp.pft	mcc	999	Other
207	indp.pft	ppc	0	Unknown
208	indp.pft	ppc	1	Hydro-electric
209	indp.pft	ppc	2	Nuclear
210	indp.pft	ppc	3	Solar
211	indp.pft	ppc	4	Thermal
212	indp.pft	ppc	5	Wind
213	indp.pft	ppc	6	Tidal
214	indp.pft	ppc	7	Internal Combustion
215	indp.pft	ppc	998	Not Applicable
216	indp.pft	ppc	999	Other
217	indp.pft	prm	1	Permanent
218	indp.pft	prm	2	Temporary
219	indp.pft	pro	0	Unknown
220	indp.pft	pro	13	Chemical
221	indp.pft	pro	17	Coal
222	indp.pft	pro	19	Coke
223	indp.pft	pro	38	Gas
224	indp.pft	pro	64	Metal
225	indp.pft	pro	67	Oil

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TABLE C-3 Obstructions Integer Value Description Table (continued).

226	indp.pft	pro	999	Other
227	indp.pft	sec	0	Unknown
228	indp.pft	sec	1	Top Secret
229	indp.pft	sec	2	Secret
230	indp.pft	sec	3	Confidential
231	indp.pft	sec	4	Restricted
232	indp.pft	sec	5	Unclassified
233	indp.pft	sec	999	Other
234	indp.pft	ssc	0	Unknown
235	indp.pft	ssc	4	Bullet
236	indp.pft	ssc	7	Cylindrical (Upright)/CAN
237	indp.pft	ssc	12	Pyramid
238	indp.pft	ssc	17	Spherical (Hemispherical)
239	indp.pft	ssc	52	'A' Frame
240	indp.pft	ssc	54	'I' Frame
241	indp.pft	ssc	59	Telescoping Gasholder (Gasometer)
242	indp.pft	ssc	60	Mast
243	indp.pft	ssc	65	Cylindrical with flat top
244	indp.pft	ssc	66	Cylindrical with domed top
245	indp.pft	ssc	71	Cylindrical/Peaked
246	indp.pft	ssc	76	Funnel
247	indp.pft	ssc	79	Round
248	indp.pft	ssc	80	Rectangular
249	indp.pft	ssc	83	Square
250	indp.pft	ssc	84	Irregular
251	indp.pft	ssc	109	Obelisk
252	indp.pft	ssc	999	Other
253	indp.pft	ssr	0	Unknown
254	indp.pft	ssr	6	Conical/Peaked/NUN
255	indp.pft	ssr	38	Curved/Round (Quonset)
256	indp.pft	ssr	40	Dome
257	indp.pft	ssr	41	Flat
258	indp.pft	ssr	42	Gable (Pitched)
259	indp.pft	ssr	47	Sawtooth
260	indp.pft	ssr	999	Other
261	indp.pft	stc	1	Survey Source
262	indp.pft	stc	2	Stereo Imagery Exploitation
263	indp.pft	stc	3	Mono Imagery Exploitation
264	indp.pft	stc	4	Cartographic Source
265	indp.pft	stc	5	Reported Information
266	indp.pft	stc	6	Multispectral
267	indp.pft	stc	7	Hyperspectral
268	indp.pft	stc	8	Synthetic Aperture Radar (SAR)
269	indp.pft	stc	999	Other
270	indp.pft	vdc	0	Unknown
271	indp.pft	vdc	15	Mean Sea Level
272	indp.pft	vdc	999	Other
273	indp.pft	zv2	-32767	Unknown
274	iwap.pft	atn	0	Unknown

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TABLE C-3 Obstructions Integer Value Description Table (continued).

275	iwap.pft	atn	3	Lit
276	iwap.pft	atn	4	Unlit
277	iwap.pft	cdp	0	Unknown
278	iwap.pft	cdp	18	Receipt
279	iwap.pft	cdp	19	Source
280	iwap.pft	cdp	24	Up-to-dateness/revision
281	iwap.pft	dir	0	Unknown
282	iwap.pft	dir	1	Uni
283	iwap.pft	dir	2	Bi
284	iwap.pft	dir	3	Omni
285	iwap.pft	dmf	-32767	Unknown
286	iwap.pft	exs	0	Unknown
287	iwap.pft	exs	5	Under Construction
288	iwap.pft	exs	7	Destroyed
289	iwap.pft	exs	8	Dismantled
290	iwap.pft	exs	999	Other
291	iwap.pft	hgt	-32767	Unknown
292	iwap.pft	hzd	0	Unknown
293	iwap.pft	hzd	300	World Geodetic System 1984
294	iwap.pft	hzd	999	Other
295	iwap.pft	len	-32767	Unknown
296	iwap.pft	mcc	0	Unknown
297	iwap.pft	mcc	20	Composition
298	iwap.pft	mcc	21	Concrete
299	iwap.pft	mcc	30	Earthen
300	iwap.pft	mcc	62	Masonry (Brick/Stone)
301	iwap.pft	mcc	64	Metal
302	iwap.pft	mcc	72	Part Metal
303	iwap.pft	mcc	107	Steel
304	iwap.pft	mcc	108	Stone
305	iwap.pft	mcc	999	Other
306	iwap.pft	prm	1	Permanent
307	iwap.pft	prm	2	Temporary
308	iwap.pft	sec	0	Unknown
309	iwap.pft	sec	1	Top Secret
310	iwap.pft	sec	2	Secret
311	iwap.pft	sec	3	Confidential
312	iwap.pft	sec	4	Restricted
313	iwap.pft	sec	5	Unclassified
314	iwap.pft	sec	999	Other
315	iwap.pft	stc	1	Survey Source
316	iwap.pft	stc	2	Stereo Imagery Exploitation
317	iwap.pft	stc	3	Mono Imagery Exploitation
318	iwap.pft	stc	4	Cartographic Source
319	iwap.pft	stc	5	Reported Information
320	iwap.pft	stc	6	Multispectral
321	iwap.pft	stc	7	Hyperspectral
322	iwap.pft	stc	8	Synthetic Aperture Radar (SAR)
323	iwap.pft	stc	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

324	iwap.pft	vdc	0	Unknown
325	iwap.pft	vdc	15	Mean Sea Level
326	iwap.pft	vdc	999	Other
327	iwap.pft	wid	-32767	Unknown
328	iwap.pft	zv2	-32767	Unknown
329	popp.pft	afa	0	Unknown
330	popp.pft	afa	19	Helipad
331	popp.pft	afa	995	None
332	popp.pft	afa	999	Other
333	popp.pft	atn	0	Unknown
334	popp.pft	atn	3	Lit
335	popp.pft	atn	4	Unlit
336	popp.pft	bfc	0	Unknown
337	popp.pft	bfc	2	Government Building
338	popp.pft	bfc	3	Capitol Building
339	popp.pft	bfc	4	Castle
340	popp.pft	bfc	6	Hospital
341	popp.pft	bfc	7	House of Worship
342	popp.pft	bfc	10	Observatory
343	popp.pft	bfc	11	Palace
344	popp.pft	bfc	13	Prison
345	popp.pft	bfc	15	School
346	popp.pft	bfc	16	House
347	popp.pft	bfc	17	Multi Unit Dwelling
348	popp.pft	bfc	28	Administration Building
349	popp.pft	bfc	29	Aircraft Maintenance Shop
350	popp.pft	bfc	30	Hangar
351	popp.pft	bfc	53	Bank
352	popp.pft	bfc	58	Observation
353	popp.pft	bfc	99	Battery
354	popp.pft	bfc	105	Reformatory
355	popp.pft	bfc	106	Sanitarium
356	popp.pft	bfc	111	Sportsplex
357	popp.pft	bfc	122	Shopping Center
358	popp.pft	bfc	129	Airport Terminal
359	popp.pft	bfc	999	Other
360	popp.pft	bss	0	Unknown
361	popp.pft	bss	1	Monitor
362	popp.pft	bss	2	Steeple
363	popp.pft	bss	3	Cupola
364	popp.pft	bss	4	Turret
365	popp.pft	bss	5	Tower
366	popp.pft	bss	6	Minaret
367	popp.pft	bss	998	Not Applicable
368	popp.pft	bss	999	Other
369	popp.pft	cdp	0	Unknown
370	popp.pft	cdp	18	Receipt
371	popp.pft	cdp	19	Source
372	popp.pft	cdp	24	Up-to-dateness/revision

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TABLE C-3 Obstructions Integer Value Description Table (continued).

373	popp.pft	dir	0	Unknown
374	popp.pft	dir	1	Uni
375	popp.pft	dir	2	Bi
376	popp.pft	dir	3	Omni
377	popp.pft	dmf	-32767	Unknown
378	popp.pft	exs	0	Unknown
379	popp.pft	exs	5	Under Construction
380	popp.pft	exs	7	Destroyed
381	popp.pft	exs	8	Dismantled
382	popp.pft	exs	999	Other
383	popp.pft	gug	0	Unknown
384	popp.pft	gug	1	Guyed
385	popp.pft	gug	2	Unguyed
386	popp.pft	hgt	-32767	Unknown
387	popp.pft	hzd	0	Unknown
388	popp.pft	hzd	300	World Geodetic System 1984
389	popp.pft	hzd	999	Other
390	popp.pft	len	-32767	Unknown
391	popp.pft	mcc	0	Unknown
392	popp.pft	mcc	20	Composition
393	popp.pft	mcc	21	Concrete
394	popp.pft	mcc	62	Masonry (Brick/Stone)
395	popp.pft	mcc	64	Metal
396	popp.pft	mcc	72	Part Metal
397	popp.pft	mcc	107	Steel
398	popp.pft	mcc	117	Wood
399	popp.pft	mcc	999	Other
400	popp.pft	prm	1	Permanent
401	popp.pft	prm	2	Temporary
402	popp.pft	sec	0	Unknown
403	popp.pft	sec	1	Top Secret
404	popp.pft	sec	2	Secret
405	popp.pft	sec	3	Confidential
406	popp.pft	sec	4	Restricted
407	popp.pft	sec	5	Unclassified
408	popp.pft	sec	999	Other
409	popp.pft	ssc	0	Unknown
410	popp.pft	ssc	10	Pillar/Spindle
411	popp.pft	ssc	12	Pyramid
412	popp.pft	ssc	17	Spherical (Hemispherical)
413	popp.pft	ssc	21	Artificial Mountain
414	popp.pft	ssc	23	Ferris Wheel
415	popp.pft	ssc	24	Enclosed
416	popp.pft	ssc	25	Roller Coaster
417	popp.pft	ssc	46	Open
418	popp.pft	ssc	52	'A' Frame
419	popp.pft	ssc	53	'H' Frame
420	popp.pft	ssc	54	'I' Frame
421	popp.pft	ssc	56	'Y' Frame

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TABLE C-3 Obstructions Integer Value Description Table (continued).

422	popp.pft	ssc	60	Mast
423	popp.pft	ssc	65	Cylindrical with flat top
424	popp.pft	ssc	66	Cylindrical with domed top
425	popp.pft	ssc	71	Cylindrical/Peaked
426	popp.pft	ssc	74	'T' Frame
427	popp.pft	ssc	77	Arch
428	popp.pft	ssc	79	Round
429	popp.pft	ssc	80	Rectangular
430	popp.pft	ssc	83	Square
431	popp.pft	ssc	84	Irregular
432	popp.pft	ssc	109	Obelisk
433	popp.pft	ssc	999	Other
434	popp.pft	ssr	0	Unknown
435	popp.pft	ssr	6	Conical/Peaked/NUN
436	popp.pft	ssr	38	Curved/Round (Quonset)
437	popp.pft	ssr	40	Dome
438	popp.pft	ssr	41	Flat
439	popp.pft	ssr	42	Gable (Pitched)
440	popp.pft	ssr	47	Sawtooth
441	popp.pft	ssr	998	Not Applicable
442	popp.pft	ssr	999	Other
443	popp.pft	stc	1	Survey Source
444	popp.pft	stc	2	Stereo Imagery Exploitation
445	popp.pft	stc	3	Mono Imagery Exploitation
446	popp.pft	stc	4	Cartographic Source
447	popp.pft	stc	5	Reported Information
448	popp.pft	stc	6	Multispectral
449	popp.pft	stc	7	Hyperspectral
450	popp.pft	stc	8	Synthetic Aperture Radar (SAR)
451	popp.pft	stc	999	Other
452	popp.pft	ttc	0	Unknown
453	popp.pft	ttc	2	Observation/Lookout
454	popp.pft	ttc	12	Fire
455	popp.pft	ttc	999	Other
456	popp.pft	vdc	0	Unknown
457	popp.pft	vdc	15	Mean Sea Level
458	popp.pft	vdc	999	Other
459	popp.pft	wid	-32767	Unknown
460	popp.pft	zv2	-32767	Unknown
461	transp.pft	atn	0	Unknown
462	transp.pft	atn	3	Lit
463	transp.pft	atn	4	Unlit
464	transp.pft	bot	0	Unknown
465	transp.pft	bot	4	Draw/Bascule
466	transp.pft	bot	10	Swing
467	transp.pft	bot	11	Lift
468	transp.pft	bot	13	Not Applicable
469	transp.pft	bot	999	Other
470	transp.pft	bsc	0	Unknown

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TABLE C-3 Obstructions Integer Value Description Table (continued).

471	transp.pft	bsc	1	Arch (assume open spandrel)
472	transp.pft	bsc	2	Cantilever
473	transp.pft	bsc	3	Deck
474	transp.pft	bsc	6	Girder
475	transp.pft	bsc	7	Tower Suspension
476	transp.pft	bsc	8	Truss
477	transp.pft	bsc	9	Suspension
478	transp.pft	bsc	12	Transporter
479	transp.pft	bsc	15	Slab
480	transp.pft	bsc	16	Stringer (beam)
481	transp.pft	bsc	17	Arch Suspension
482	transp.pft	bsc	26	Arch (closed spandrel)
483	transp.pft	bsc	27	Cable Stayed
484	transp.pft	bsc	999	Other
485	transp.pft	cdp	0	Unknown
486	transp.pft	cdp	18	Receipt
487	transp.pft	cdp	19	Source
488	transp.pft	cdp	24	Up-to-dateness/revision
489	transp.pft	dir	0	Unknown
490	transp.pft	dir	2	Bi
491	transp.pft	dir	3	Omni
492	transp.pft	dmf	-32767	Unknown
493	transp.pft	exs	0	Unknown
494	transp.pft	exs	5	Under Construction
495	transp.pft	exs	7	Destroyed
496	transp.pft	exs	8	Dismantled
497	transp.pft	exs	999	Other
498	transp.pft	gug	0	Unknown
499	transp.pft	gug	1	Guyed
500	transp.pft	gug	2	Unguyed
501	transp.pft	hgt	-32767	Unknown
502	transp.pft	hzd	0	Unknown
503	transp.pft	hzd	300	World Geodetic System 1984
504	transp.pft	hzd	999	Other
505	transp.pft	len	-32767	Unknown
506	transp.pft	mcc	0	Unknown
507	transp.pft	mcc	20	Composition
508	transp.pft	mcc	21	Concrete
509	transp.pft	mcc	62	Masonry (Brick/Stone)
510	transp.pft	mcc	64	Metal
511	transp.pft	mcc	72	Part Metal
512	transp.pft	mcc	107	Steel
513	transp.pft	mcc	117	Wood
514	transp.pft	mcc	999	Other
515	transp.pft	prm	1	Permanent
516	transp.pft	prm	2	Temporary
517	transp.pft	sec	0	Unknown
518	transp.pft	sec	1	Top Secret
519	transp.pft	sec	2	Secret

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TABLE C-3 Obstructions Integer Value Description Table (continued).

520	transp.pft	sec	3	Confidential
521	transp.pft	sec	4	Restricted
522	transp.pft	sec	5	Unclassified
523	transp.pft	sec	999	Other
524	transp.pft	ssc	0	Unknown
525	transp.pft	ssc	52	'A' Frame
526	transp.pft	ssc	54	'I' Frame
527	transp.pft	ssc	60	Mast
528	transp.pft	ssc	999	Other
529	transp.pft	ssr	0	Unknown
530	transp.pft	ssr	6	Conical/Peaked/NUN
531	transp.pft	ssr	38	Curved/Round (Quonset)
532	transp.pft	ssr	40	Dome
533	transp.pft	ssr	41	Flat
534	transp.pft	ssr	42	Gable (Pitched)
535	transp.pft	ssr	999	Other
536	transp.pft	stc	1	Survey Source
537	transp.pft	stc	2	Stereo Imagery Exploitation
538	transp.pft	stc	3	Mono Imagery Exploitation
539	transp.pft	stc	4	Cartographic Source
540	transp.pft	stc	5	Reported Information
541	transp.pft	stc	6	Multispectral
542	transp.pft	stc	7	Hyperspectral
543	transp.pft	stc	8	Synthetic Aperture Radar (SAR)
544	transp.pft	stc	999	Other
545	transp.pft	vdc	0	Unknown
546	transp.pft	vdc	15	Mean Sea Level
547	transp.pft	vdc	999	Other
548	transp.pft	wid	-32767	Unknown
549	transp.pft	zv2	-32767	Unknown
550	utilp.pft	atn	0	Unknown
551	utilp.pft	atn	3	Lit
552	utilp.pft	atn	4	Unlit
553	utilp.pft	bfc	0	Unknown
554	utilp.pft	bfc	40	Telephone Switching Station
555	utilp.pft	bfc	86	Telephone Exchange (Main)
556	utilp.pft	bss	0	Unknown
557	utilp.pft	bss	5	Tower
558	utilp.pft	bss	998	Not Applicable
559	utilp.pft	bss	999	Other
560	utilp.pft	cdp	0	Unknown
561	utilp.pft	cdp	18	Receipt
562	utilp.pft	cdp	19	Source
563	utilp.pft	cdp	24	Up-to-dateness/revision
564	utilp.pft	dir	0	Unknown
565	utilp.pft	dir	2	Bi
566	utilp.pft	dir	3	Omni
567	utilp.pft	dmf	-32767	Unknown
568	utilp.pft	exs	0	Unknown

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TABLE C-3 Obstructions Integer Value Description Table (continued).

569	utilp.pft	exs	5	Under Construction
570	utilp.pft	exs	7	Destroyed
571	utilp.pft	exs	8	Dismantled
572	utilp.pft	exs	999	Other
573	utilp.pft	gug	0	Unknown
574	utilp.pft	gug	1	Guyed
575	utilp.pft	gug	2	Unguyed
576	utilp.pft	hgt	-32767	Unknown
577	utilp.pft	hzd	0	Unknown
578	utilp.pft	hzd	300	World Geodetic System 1984
579	utilp.pft	hzd	999	Other
580	utilp.pft	len	-32767	Unknown
581	utilp.pft	mcc	0	Unknown
582	utilp.pft	mcc	20	Composition
583	utilp.pft	mcc	21	Concrete
584	utilp.pft	mcc	62	Masonry (Brick/Stone)
585	utilp.pft	mcc	64	Metal
586	utilp.pft	mcc	72	Part Metal
587	utilp.pft	mcc	107	Steel
588	utilp.pft	mcc	117	Wood
589	utilp.pft	mcc	999	Other
590	utilp.pft	nst	0	Unknown
591	utilp.pft	nst	12	Radio
592	utilp.pft	nst	15	TV
593	utilp.pft	nst	16	Microwave
594	utilp.pft	nst	998	Not Applicable
595	utilp.pft	nst	999	Other
596	utilp.pft	prm	1	Permanent
597	utilp.pft	prm	2	Temporary
598	utilp.pft	sec	0	Unknown
599	utilp.pft	sec	1	Top Secret
600	utilp.pft	sec	2	Secret
601	utilp.pft	sec	3	Confidential
602	utilp.pft	sec	4	Restricted
603	utilp.pft	sec	5	Unclassified
604	utilp.pft	sec	999	Other
605	utilp.pft	ssc	0	Unknown
606	utilp.pft	ssc	12	Pyramid
607	utilp.pft	ssc	52	'A' Frame
608	utilp.pft	ssc	53	'H' Frame
609	utilp.pft	ssc	54	'I' Frame
610	utilp.pft	ssc	56	'Y' Frame
611	utilp.pft	ssc	60	Mast
612	utilp.pft	ssc	74	'T' Frame
613	utilp.pft	ssc	79	Round
614	utilp.pft	ssc	80	Rectangular
615	utilp.pft	ssc	83	Square
616	utilp.pft	ssc	84	Irregular
617	utilp.pft	ssc	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

618	utilp.pft	ssr	0	Unknown
619	utilp.pft	ssr	40	Dome
620	utilp.pft	ssr	41	Flat
621	utilp.pft	ssr	42	Gable (Pitched)
622	utilp.pft	ssr	999	Other
623	utilp.pft	stc	1	Survey Source
624	utilp.pft	stc	2	Stereo Imagery Exploitation
625	utilp.pft	stc	3	Mono Imagery Exploitation
626	utilp.pft	stc	4	Cartographic Source
627	utilp.pft	stc	5	Reported Information
628	utilp.pft	stc	6	Multispectral
629	utilp.pft	stc	7	Hyperspectral
630	utilp.pft	stc	8	Synthetic Aperture Radar (SAR)
631	utilp.pft	stc	999	Other
632	utilp.pft	tst	0	Unknown
633	utilp.pft	tst	1	Normal Suspension
634	utilp.pft	tst	2	Catenary (Over Mountains)
635	utilp.pft	tst	3	Catenary (Over Water)
636	utilp.pft	tst	998	Not Applicable
637	utilp.pft	tst	999	Other
638	utilp.pft	vdc	0	Unknown
639	utilp.pft	vdc	15	Mean Sea Level
640	utilp.pft	vdc	999	Other
641	utilp.pft	zv2	-32767	Unknown
642	aeroc.pft	atn	0	Unknown
643	aeroc.pft	atn	3	Lit
644	aeroc.pft	atn	4	Unlit
645	aeroc.pft	cdp	0	Unknown
646	aeroc.pft	cdp	18	Receipt
647	aeroc.pft	cdp	19	Source
648	aeroc.pft	cdp	24	Up-to-dateness/revision
649	aeroc.pft	dir	0	Unknown
650	aeroc.pft	dir	1	Uni
651	aeroc.pft	dir	2	Bi
652	aeroc.pft	dir	3	Omni
653	aeroc.pft	dmf	-32767	Unknown
654	aeroc.pft	exs	0	Unknown
655	aeroc.pft	exs	5	Under Construction
656	aeroc.pft	exs	7	Destroyed
657	aeroc.pft	exs	8	Dismantled
658	aeroc.pft	exs	999	Other
659	aeroc.pft	gug	0	Unknown
660	aeroc.pft	gug	1	Guyed
661	aeroc.pft	gug	2	Unguyed
662	aeroc.pft	hgt	-32767	Unknown
663	aeroc.pft	hzd	0	Unknown
664	aeroc.pft	hzd	300	World Geodetic System 1984
665	aeroc.pft	hzd	999	Other
666	aeroc.pft	len	-32767	Unknown

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TABLE C-3 Obstructions Integer Value Description Table (continued).

667	aeroc.pft	mcc	0	Unknown
668	aeroc.pft	mcc	20	Composition
669	aeroc.pft	mcc	21	Concrete
670	aeroc.pft	mcc	30	Earthen
671	aeroc.pft	mcc	62	Masonry (Brick/Stone)
672	aeroc.pft	mcc	64	Metal
673	aeroc.pft	mcc	72	Part Metal
674	aeroc.pft	mcc	107	Steel
675	aeroc.pft	mcc	117	Wood
676	aeroc.pft	mcc	999	Other
677	aeroc.pft	nst	0	Unknown
678	aeroc.pft	nst	7	Long Range Air Navigation System (LORAN)
679	aeroc.pft	nst	10	Radar Responder Beacon (RACON)
680	aeroc.pft	nst	11	Radar
681	aeroc.pft	nst	20	VHF Omni Directional Radio Range (VOR)
682	aeroc.pft	nst	21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)
683	aeroc.pft	nst	22	VHF Omni Directional Radio Range and TACAN (VORTAC)
684	aeroc.pft	nst	23	Tactical Air Navigation Equipment (TACAN)
685	aeroc.pft	nst	26	Localizer (LOC)
686	aeroc.pft	nst	27	Localizer/Distance Measuring Equipment (LOC/DME)
687	aeroc.pft	nst	35	Radar Antenna
688	aeroc.pft	nst	37	Precision Approach Radar (PAR)
689	aeroc.pft	nst	40	Radio Beacon
690	aeroc.pft	nst	45	Radar Station
691	aeroc.pft	nst	55	Radar reflector
692	aeroc.pft	nst	999	Other
693	aeroc.pft	prm	1	Permanent
694	aeroc.pft	prm	2	Temporary
695	aeroc.pft	sec	0	Unknown
696	aeroc.pft	sec	1	Top Secret
697	aeroc.pft	sec	2	Secret
698	aeroc.pft	sec	3	Confidential
699	aeroc.pft	sec	4	Restricted
700	aeroc.pft	sec	5	Unclassified
701	aeroc.pft	sec	999	Other
702	aeroc.pft	ssc	0	Unknown
703	aeroc.pft	ssc	4	Bullet
704	aeroc.pft	ssc	10	Pillar/Spindle
705	aeroc.pft	ssc	12	Pyramid
706	aeroc.pft	ssc	17	Spherical (Hemispherical)
707	aeroc.pft	ssc	21	Artificial Mountain
708	aeroc.pft	ssc	52	'A' Frame
709	aeroc.pft	ssc	53	'H' Frame
710	aeroc.pft	ssc	54	'I' Frame

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TABLE C-3 Obstructions Integer Value Description Table (continued).

711	aeroc.pft	ssc	56	'Y' Frame
712	aeroc.pft	ssc	60	Mast
713	aeroc.pft	ssc	74	'T' Frame
714	aeroc.pft	ssc	77	Arch
715	aeroc.pft	ssc	79	Round
716	aeroc.pft	ssc	80	Rectangular
717	aeroc.pft	ssc	83	Square
718	aeroc.pft	ssc	84	Irregular
719	aeroc.pft	ssc	87	Dome
720	aeroc.pft	ssc	109	Obelisk
721	aeroc.pft	ssc	999	Other
722	aeroc.pft	stc	1	Survey Source
723	aeroc.pft	stc	2	Stereo Imagery Exploitation
724	aeroc.pft	stc	3	Mono Imagery Exploitation
725	aeroc.pft	stc	4	Cartographic Source
726	aeroc.pft	stc	5	Reported Information
727	aeroc.pft	stc	6	Multispectral
728	aeroc.pft	stc	7	Hyperspectral
729	aeroc.pft	stc	8	Synthetic Aperture Radar (SAR)
730	aeroc.pft	stc	999	Other
731	aeroc.pft	vdc	0	Unknown
732	aeroc.pft	vdc	15	Mean Sea Level
733	aeroc.pft	vdc	999	Other
734	aeroc.pft	wid	-32767	Unknown
735	aeroc.pft	zv2	-32767	Unknown
736	hydroc.pft	afa	0	Unknown
737	hydroc.pft	afa	19	Helipad
738	hydroc.pft	afa	995	None
739	hydroc.pft	afa	999	Other
740	hydroc.pft	atn	0	Unknown
741	hydroc.pft	atn	3	Lit
742	hydroc.pft	atn	4	Unlit
743	hydroc.pft	cdp	0	Unknown
744	hydroc.pft	cdp	18	Receipt
745	hydroc.pft	cdp	19	Source
746	hydroc.pft	cdp	24	Up-to-dateness/revision
747	hydroc.pft	dir	0	Unknown
748	hydroc.pft	dir	3	Omni
749	hydroc.pft	dmf	-32767	Unknown
750	hydroc.pft	exs	0	Unknown
751	hydroc.pft	exs	5	Under Construction
752	hydroc.pft	exs	7	Destroyed
753	hydroc.pft	exs	8	Dismantled
754	hydroc.pft	exs	999	Other
755	hydroc.pft	gug	0	Unknown
756	hydroc.pft	gug	1	Guyed
757	hydroc.pft	gug	2	Unguyed
758	hydroc.pft	hgt	-32767	Unknown
759	hydroc.pft	hzd	0	Unknown

TABLE C-3 Obstructions Integer Value Description Table (continued).

760	hydroc.pft	hzd	300	World Geodetic System 1984
761	hydroc.pft	hzd	999	Other
762	hydroc.pft	mcc	0	Unknown
763	hydroc.pft	mcc	21	Concrete
764	hydroc.pft	mcc	64	Metal
765	hydroc.pft	mcc	72	Part Metal
766	hydroc.pft	mcc	107	Steel
767	hydroc.pft	mcc	117	Wood
768	hydroc.pft	mcc	999	Other
769	hydroc.pft	opc	10	Navigation Aid Support
770	hydroc.pft	prm	1	Permanent
771	hydroc.pft	prm	2	Temporary
772	hydroc.pft	sec	0	Unknown
773	hydroc.pft	sec	1	Top Secret
774	hydroc.pft	sec	2	Secret
775	hydroc.pft	sec	3	Confidential
776	hydroc.pft	sec	4	Restricted
777	hydroc.pft	sec	5	Unclassified
778	hydroc.pft	sec	999	Other
779	hydroc.pft	stc	1	Survey Source
780	hydroc.pft	stc	2	Stereo Imagery Exploitation
781	hydroc.pft	stc	3	Mono Imagery Exploitation
782	hydroc.pft	stc	4	Cartographic Source
783	hydroc.pft	stc	5	Reported Information
784	hydroc.pft	stc	6	Multispectral
785	hydroc.pft	stc	7	Hyperspectral
786	hydroc.pft	stc	8	Synthetic Aperture Radar (SAR)
787	hydroc.pft	stc	999	Other
788	hydroc.pft	vdc	0	Unknown
789	hydroc.pft	vdc	15	Mean Sea Level
790	hydroc.pft	vdc	999	Other
791	hydroc.pft	zv2	-32767	Unknown
792	indc.pft	afa	0	Unknown
793	indc.pft	afa	19	Helipad
794	indc.pft	afa	995	None
795	indc.pft	afa	999	Other
796	indc.pft	atn	0	Unknown
797	indc.pft	atn	3	Lit
798	indc.pft	atn	4	Unlit
799	indc.pft	bss	0	Unknown
800	indc.pft	bss	1	Monitor
801	indc.pft	bss	4	Turret
802	indc.pft	bss	5	Tower
803	indc.pft	bss	998	Not Applicable
804	indc.pft	bss	999	Other
805	indc.pft	cdp	0	Unknown
806	indc.pft	cdp	18	Receipt
807	indc.pft	cdp	19	Source
808	indc.pft	cdp	24	Up-to-dateness/revision

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TABLE C-3 Obstructions Integer Value Description Table (continued).

809	indc.pft	cra	0	Unknown
810	indc.pft	cra	2	Bridge/Gantry
811	indc.pft	cra	3	Rotating
812	indc.pft	cra	998	Not Applicable
813	indc.pft	cra	999	Other
814	indc.pft	crm	0	Unknown
815	indc.pft	crm	1	Fixed
816	indc.pft	crm	2	Traveling
817	indc.pft	crm	3	Floating
818	indc.pft	crm	999	Other
819	indc.pft	dir	0	Unknown
820	indc.pft	dir	2	Bi
821	indc.pft	dir	3	Omni
822	indc.pft	dmf	-32767	Unknown
823	indc.pft	exs	0	Unknown
824	indc.pft	exs	5	Under Construction
825	indc.pft	exs	7	Destroyed
826	indc.pft	exs	8	Dismantled
827	indc.pft	exs	999	Other
828	indc.pft	gug	0	Unknown
829	indc.pft	gug	1	Guyed
830	indc.pft	gug	2	Unguyed
831	indc.pft	hgt	-32767	Unknown
832	indc.pft	hzd	0	Unknown
833	indc.pft	hzd	300	World Geodetic System 1984
834	indc.pft	hzd	999	Other
835	indc.pft	loc	0	Unknown
836	indc.pft	loc	8	On Ground Surface
837	indc.pft	loc	22	Off Shore
838	indc.pft	loc	999	Other
839	indc.pft	mcc	0	Unknown
840	indc.pft	mcc	20	Composition
841	indc.pft	mcc	21	Concrete
842	indc.pft	mcc	62	Masonry (Brick/Stone)
843	indc.pft	mcc	64	Metal
844	indc.pft	mcc	72	Part Metal
845	indc.pft	mcc	107	Steel
846	indc.pft	mcc	117	Wood
847	indc.pft	mcc	999	Other
848	indc.pft	ppc	0	Unknown
849	indc.pft	ppc	1	Hydro-electric
850	indc.pft	ppc	2	Nuclear
851	indc.pft	ppc	3	Solar
852	indc.pft	ppc	4	Thermal
853	indc.pft	ppc	5	Wind
854	indc.pft	ppc	6	Tidal
855	indc.pft	ppc	7	Internal Combustion
856	indc.pft	ppc	998	Not Applicable
857	indc.pft	ppc	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

858	indc.pft	prm	1	Permanent
859	indc.pft	prm	2	Temporary
860	indc.pft	pro	0	Unknown
861	indc.pft	pro	13	Chemical
862	indc.pft	pro	17	Coal
863	indc.pft	pro	19	Coke
864	indc.pft	pro	38	Gas
865	indc.pft	pro	64	Metal
866	indc.pft	pro	67	Oil
867	indc.pft	pro	999	Other
868	indc.pft	sec	0	Unknown
869	indc.pft	sec	1	Top Secret
870	indc.pft	sec	2	Secret
871	indc.pft	sec	3	Confidential
872	indc.pft	sec	4	Restricted
873	indc.pft	sec	5	Unclassified
874	indc.pft	sec	999	Other
875	indc.pft	ssc	0	Unknown
876	indc.pft	ssc	4	Bullet
877	indc.pft	ssc	7	Cylindrical (Upright)/CAN
878	indc.pft	ssc	12	Pyramid
879	indc.pft	ssc	17	Spherical (Hemispherical)
880	indc.pft	ssc	52	'A' Frame
881	indc.pft	ssc	54	'I' Frame
882	indc.pft	ssc	59	Telescoping Gasholder (Gasometer)
883	indc.pft	ssc	60	Mast
884	indc.pft	ssc	65	Cylindrical with flat top
885	indc.pft	ssc	66	Cylindrical with domed top
886	indc.pft	ssc	71	Cylindrical/Peaked
887	indc.pft	ssc	76	Funnel
888	indc.pft	ssc	79	Round
889	indc.pft	ssc	80	Rectangular
890	indc.pft	ssc	83	Square
891	indc.pft	ssc	84	Irregular
892	indc.pft	ssc	109	Obelisk
893	indc.pft	ssc	999	Other
894	indc.pft	ssr	0	Unknown
895	indc.pft	ssr	6	Conical/Peaked/NUN
896	indc.pft	ssr	38	Curved/Round (Quonset)
897	indc.pft	ssr	40	Dome
898	indc.pft	ssr	41	Flat
899	indc.pft	ssr	42	Gable (Pitched)
900	indc.pft	ssr	47	Sawtooth
901	indc.pft	ssr	999	Other
902	indc.pft	stc	1	Survey Source
903	indc.pft	stc	2	Stereo Imagery Exploitation
904	indc.pft	stc	3	Mono Imagery Exploitation
905	indc.pft	stc	4	Cartographic Source
906	indc.pft	stc	5	Reported Information

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TABLE C-3 Obstructions Integer Value Description Table (continued).

907	indc.pft	stc	6	Multispectral
908	indc.pft	stc	7	Hyperspectral
909	indc.pft	stc	8	Synthetic Aperture Radar (SAR)
910	indc.pft	stc	999	Other
911	indc.pft	vdc	0	Unknown
912	indc.pft	vdc	15	Mean Sea Level
913	indc.pft	vdc	999	Other
914	indc.pft	zv2	-32767	Unknown
915	iwac.pft	atn	0	Unknown
916	iwac.pft	atn	3	Lit
917	iwac.pft	atn	4	Unlit
918	iwac.pft	cdp	0	Unknown
919	iwac.pft	cdp	18	Receipt
920	iwac.pft	cdp	19	Source
921	iwac.pft	cdp	24	Up-to-dateness/revision
922	iwac.pft	dir	0	Unknown
923	iwac.pft	dir	1	Uni
924	iwac.pft	dir	2	Bi
925	iwac.pft	dir	3	Omni
926	iwac.pft	dmf	-32767	Unknown
927	iwac.pft	exs	0	Unknown
928	iwac.pft	exs	5	Under Construction
929	iwac.pft	exs	7	Destroyed
930	iwac.pft	exs	8	Dismantled
931	iwac.pft	exs	999	Other
932	iwac.pft	hgt	-32767	Unknown
933	iwac.pft	hzd	0	Unknown
934	iwac.pft	hzd	300	World Geodetic System 1984
935	iwac.pft	hzd	999	Other
936	iwac.pft	len	-32767	Unknown
937	iwac.pft	mcc	0	Unknown
938	iwac.pft	mcc	20	Composition
939	iwac.pft	mcc	21	Concrete
940	iwac.pft	mcc	30	Earthen
941	iwac.pft	mcc	62	Masonry (Brick/Stone)
942	iwac.pft	mcc	64	Metal
943	iwac.pft	mcc	72	Part Metal
944	iwac.pft	mcc	107	Steel
945	iwac.pft	mcc	108	Stone
946	iwac.pft	mcc	999	Other
947	iwac.pft	prm	1	Permanent
948	iwac.pft	prm	2	Temporary
949	iwac.pft	sec	0	Unknown
950	iwac.pft	sec	1	Top Secret
951	iwac.pft	sec	2	Secret
952	iwac.pft	sec	3	Confidential
953	iwac.pft	sec	4	Restricted
954	iwac.pft	sec	5	Unclassified
955	iwac.pft	sec	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

956	iwac.pft	stc	1	Survey Source
957	iwac.pft	stc	2	Stereo Imagery Exploitation
958	iwac.pft	stc	3	Mono Imagery Exploitation
959	iwac.pft	stc	4	Cartographic Source
960	iwac.pft	stc	5	Reported Information
961	iwac.pft	stc	6	Multispectral
962	iwac.pft	stc	7	Hyperspectral
963	iwac.pft	stc	8	Synthetic Aperture Radar (SAR)
964	iwac.pft	stc	999	Other
965	iwac.pft	vdc	0	Unknown
966	iwac.pft	vdc	15	Mean Sea Level
967	iwac.pft	vdc	999	Other
968	iwac.pft	wid	-32767	Unknown
969	iwac.pft	zv2	-32767	Unknown
970	popc.pft	afa	0	Unknown
971	popc.pft	afa	19	Helipad
972	popc.pft	afa	995	None
973	popc.pft	afa	999	Other
974	popc.pft	atn	0	Unknown
975	popc.pft	atn	3	Lit
976	popc.pft	atn	4	Unlit
977	popc.pft	bfc	0	Unknown
978	popc.pft	bfc	2	Government Building
979	popc.pft	bfc	3	Capitol Building
980	popc.pft	bfc	4	Castle
981	popc.pft	bfc	6	Hospital
982	popc.pft	bfc	7	House of Worship
983	popc.pft	bfc	10	Observatory
984	popc.pft	bfc	11	Palace
985	popc.pft	bfc	13	Prison
986	popc.pft	bfc	15	School
987	popc.pft	bfc	16	House
988	popc.pft	bfc	17	Multi Unit Dwelling
989	popc.pft	bfc	28	Administration Building
990	popc.pft	bfc	29	Aircraft Maintenance Shop
991	popc.pft	bfc	30	Hangar
992	popc.pft	bfc	53	Bank
993	popc.pft	bfc	58	Observation
994	popc.pft	bfc	99	Battery
995	popc.pft	bfc	105	Reformatory
996	popc.pft	bfc	106	Sanitarium
997	popc.pft	bfc	111	Sportsplex
998	popc.pft	bfc	122	Shopping Center
999	popc.pft	bfc	129	Airport Terminal
1000	popc.pft	bfc	999	Other
1001	popc.pft	bss	0	Unknown
1002	popc.pft	bss	1	Monitor
1003	popc.pft	bss	2	Steeple
1004	popc.pft	bss	3	Cupola

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1005	popc.pft	bss	4	Turret
1006	popc.pft	bss	5	Tower
1007	popc.pft	bss	6	Minaret
1008	popc.pft	bss	998	Not Applicable
1009	popc.pft	bss	999	Other
1010	popc.pft	cdp	0	Unknown
1011	popc.pft	cdp	18	Receipt
1012	popc.pft	cdp	19	Source
1013	popc.pft	cdp	24	Up-to-dateness/revision
1014	popc.pft	dir	0	Unknown
1015	popc.pft	dir	1	Uni
1016	popc.pft	dir	2	Bi
1017	popc.pft	dir	3	Omni
1018	popc.pft	dmf	-32767	Unknown
1019	popc.pft	exs	0	Unknown
1020	popc.pft	exs	5	Under Construction
1021	popc.pft	exs	7	Destroyed
1022	popc.pft	exs	8	Dismantled
1023	popc.pft	exs	999	Other
1024	popc.pft	gug	0	Unknown
1025	popc.pft	gug	1	Guyed
1026	popc.pft	gug	2	Unguyed
1027	popc.pft	hgt	-32767	Unknown
1028	popc.pft	hzd	0	Unknown
1029	popc.pft	hzd	300	World Geodetic System 1984
1030	popc.pft	hzd	999	Other
1031	popc.pft	len	-32767	Unknown
1032	popc.pft	mcc	0	Unknown
1033	popc.pft	mcc	20	Composition
1034	popc.pft	mcc	21	Concrete
1035	popc.pft	mcc	62	Masonry (Brick/Stone)
1036	popc.pft	mcc	64	Metal
1037	popc.pft	mcc	72	Part Metal
1038	popc.pft	mcc	107	Steel
1039	popc.pft	mcc	117	Wood
1040	popc.pft	mcc	999	Other
1041	popc.pft	prm	1	Permanent
1042	popc.pft	prm	2	Temporary
1043	popc.pft	sec	0	Unknown
1044	popc.pft	sec	1	Top Secret
1045	popc.pft	sec	2	Secret
1046	popc.pft	sec	3	Confidential
1047	popc.pft	sec	4	Restricted
1048	popc.pft	sec	5	Unclassified
1049	popc.pft	sec	999	Other
1050	popc.pft	ssc	0	Unknown
1051	popc.pft	ssc	10	Pillar/Spindle
1052	popc.pft	ssc	12	Pyramid
1053	popc.pft	ssc	17	Spherical (Hemispherical)

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1054	popc.pft	ssc	21	Artificial Mountain
1055	popc.pft	ssc	23	Ferris Wheel
1056	popc.pft	ssc	24	Enclosed
1057	popc.pft	ssc	25	Roller Coaster
1058	popc.pft	ssc	46	Open
1059	popc.pft	ssc	52	'A' Frame
1060	popc.pft	ssc	53	'H' Frame
1061	popc.pft	ssc	54	'I' Frame
1062	popc.pft	ssc	56	'Y' Frame
1063	popc.pft	ssc	60	Mast
1064	popc.pft	ssc	65	Cylindrical with flat top
1065	popc.pft	ssc	66	Cylindrical with domed top
1066	popc.pft	ssc	71	Cylindrical/Peaked
1067	popc.pft	ssc	74	'T' Frame
1068	popc.pft	ssc	77	Arch
1069	popc.pft	ssc	79	Round
1070	popc.pft	ssc	80	Rectangular
1071	popc.pft	ssc	83	Square
1072	popc.pft	ssc	84	Irregular
1073	popc.pft	ssc	109	Obelisk
1074	popc.pft	ssc	999	Other
1075	popc.pft	ssr	0	Unknown
1076	popc.pft	ssr	6	Conical/Peaked/NUN
1077	popc.pft	ssr	38	Curved/Round (Quonset)
1078	popc.pft	ssr	40	Dome
1079	popc.pft	ssr	41	Flat
1080	popc.pft	ssr	42	Gable (Pitched)
1081	popc.pft	ssr	47	Sawtooth
1082	popc.pft	ssr	998	Not Applicable
1083	popc.pft	ssr	999	Other
1084	popc.pft	stc	1	Survey Source
1085	popc.pft	stc	2	Stereo Imagery Exploitation
1086	popc.pft	stc	3	Mono Imagery Exploitation
1087	popc.pft	stc	4	Cartographic Source
1088	popc.pft	stc	5	Reported Information
1089	popc.pft	stc	6	Multispectral
1090	popc.pft	stc	7	Hyperspectral
1091	popc.pft	stc	8	Synthetic Aperture Radar (SAR)
1092	popc.pft	stc	999	Other
1093	popc.pft	ttc	0	Unknown
1094	popc.pft	ttc	2	Observation/Lookout
1095	popc.pft	ttc	12	Fire
1096	popc.pft	ttc	999	Other
1097	popc.pft	vdc	0	Unknown
1098	popc.pft	vdc	15	Mean Sea Level
1099	popc.pft	vdc	999	Other
1100	popc.pft	wid	-32767	Unknown
1101	popc.pft	zv2	-32767	Unknown
1102	transc.pft	atn	0	Unknown

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1103	transc.pft	atn	3	Lit
1104	transc.pft	atn	4	Unlit
1105	transc.pft	bot	0	Unknown
1106	transc.pft	bot	4	Draw/Bascule
1107	transc.pft	bot	10	Swing
1108	transc.pft	bot	11	Lift
1109	transc.pft	bot	13	Not Applicable
1110	transc.pft	bot	999	Other
1111	transc.pft	bsc	0	Unknown
1112	transc.pft	bsc	1	Arch (assume open spandrel)
1113	transc.pft	bsc	2	Cantilever
1114	transc.pft	bsc	3	Deck
1115	transc.pft	bsc	6	Girder
1116	transc.pft	bsc	7	Tower Suspension
1117	transc.pft	bsc	8	Truss
1118	transc.pft	bsc	9	Suspension
1119	transc.pft	bsc	12	Transporter
1120	transc.pft	bsc	15	Slab
1121	transc.pft	bsc	16	Stringer (beam)
1122	transc.pft	bsc	17	Arch Suspension
1123	transc.pft	bsc	26	Arch (closed spandrel)
1124	transc.pft	bsc	27	Cable Stayed
1125	transc.pft	bsc	999	Other
1126	transc.pft	cdp	0	Unknown
1127	transc.pft	cdp	18	Receipt
1128	transc.pft	cdp	19	Source
1129	transc.pft	cdp	24	Up-to-dateness/revision
1130	transc.pft	dir	0	Unknown
1131	transc.pft	dir	2	Bi
1132	transc.pft	dir	3	Omni
1133	transc.pft	dmf	-32767	Unknown
1134	transc.pft	exs	0	Unknown
1135	transc.pft	exs	5	Under Construction
1136	transc.pft	exs	7	Destroyed
1137	transc.pft	exs	8	Dismantled
1138	transc.pft	exs	999	Other
1139	transc.pft	gug	0	Unknown
1140	transc.pft	gug	1	Guyed
1141	transc.pft	gug	2	Unguyed
1142	transc.pft	hgt	-32767	Unknown
1143	transc.pft	hzd	0	Unknown
1144	transc.pft	hzd	300	World Geodetic System 1984
1145	transc.pft	hzd	999	Other
1146	transc.pft	len	-32767	Unknown
1147	transc.pft	mcc	0	Unknown
1148	transc.pft	mcc	20	Composition
1149	transc.pft	mcc	21	Concrete
1150	transc.pft	mcc	62	Masonry (Brick/Stone)
1151	transc.pft	mcc	64	Metal

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1152	transc.pft	mcc	72	Part Metal
1153	transc.pft	mcc	107	Steel
1154	transc.pft	mcc	117	Wood
1155	transc.pft	mcc	999	Other
1156	transc.pft	prm	1	Permanent
1157	transc.pft	prm	2	Temporary
1158	transc.pft	sec	0	Unknown
1159	transc.pft	sec	1	Top Secret
1160	transc.pft	sec	2	Secret
1161	transc.pft	sec	3	Confidential
1162	transc.pft	sec	4	Restricted
1163	transc.pft	sec	5	Unclassified
1164	transc.pft	sec	999	Other
1165	transc.pft	ssc	0	Unknown
1166	transc.pft	ssc	52	'A' Frame
1167	transc.pft	ssc	54	'I' Frame
1168	transc.pft	ssc	60	Mast
1169	transc.pft	ssc	999	Other
1170	transc.pft	ssr	0	Unknown
1171	transc.pft	ssr	6	Conical/Peaked/NUN
1172	transc.pft	ssr	38	Curved/Round (Quonset)
1173	transc.pft	ssr	40	Dome
1174	transc.pft	ssr	41	Flat
1175	transc.pft	ssr	42	Gable (Pitched)
1176	transc.pft	ssr	999	Other
1177	transc.pft	stc	1	Survey Source
1178	transc.pft	stc	2	Stereo Imagery Exploitation
1179	transc.pft	stc	3	Mono Imagery Exploitation
1180	transc.pft	stc	4	Cartographic Source
1181	transc.pft	stc	5	Reported Information
1182	transc.pft	stc	6	Multispectral
1183	transc.pft	stc	7	Hyperspectral
1184	transc.pft	stc	8	Synthetic Aperture Radar (SAR)
1185	transc.pft	stc	999	Other
1186	transc.pft	vdc	0	Unknown
1187	transc.pft	vdc	15	Mean Sea Level
1188	transc.pft	vdc	999	Other
1189	transc.pft	wid	-32767	Unknown
1190	transc.pft	zv2	-32767	Unknown
1191	utilc.pft	atn	0	Unknown
1192	utilc.pft	atn	3	Lit
1193	utilc.pft	atn	4	Unlit
1194	utilc.pft	bfc	0	Unknown
1195	utilc.pft	bfc	40	Telephone Switching Station
1196	utilc.pft	bfc	86	Telephone Exchange (Main)
1197	utilc.pft	bss	0	Unknown
1198	utilc.pft	bss	5	Tower
1199	utilc.pft	bss	998	Not Applicable
1200	utilc.pft	bss	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1201	utilc.pft	cdp	0	Unknown
1202	utilc.pft	cdp	18	Receipt
1203	utilc.pft	cdp	19	Source
1204	utilc.pft	cdp	24	Up-to-dateness/revision
1205	utilc.pft	dir	0	Unknown
1206	utilc.pft	dir	2	Bi
1207	utilc.pft	dir	3	Omni
1208	utilc.pft	dmf	-32767	Unknown
1209	utilc.pft	exs	0	Unknown
1210	utilc.pft	exs	5	Under Construction
1211	utilc.pft	exs	7	Destroyed
1212	utilc.pft	exs	8	Dismantled
1213	utilc.pft	exs	999	Other
1214	utilc.pft	gug	0	Unknown
1215	utilc.pft	gug	1	Guyed
1216	utilc.pft	gug	2	Unguyed
1217	utilc.pft	hgt	-32767	Unknown
1218	utilc.pft	hzd	0	Unknown
1219	utilc.pft	hzd	300	World Geodetic System 1984
1220	utilc.pft	hzd	999	Other
1221	utilc.pft	len	-32767	Unknown
1222	utilc.pft	mcc	0	Unknown
1223	utilc.pft	mcc	20	Composition
1224	utilc.pft	mcc	21	Concrete
1225	utilc.pft	mcc	62	Masonry (Brick/Stone)
1226	utilc.pft	mcc	64	Metal
1227	utilc.pft	mcc	72	Part Metal
1228	utilc.pft	mcc	107	Steel
1229	utilc.pft	mcc	117	Wood
1230	utilc.pft	mcc	999	Other
1231	utilc.pft	nst	0	Unknown
1232	utilc.pft	nst	12	Radio
1233	utilc.pft	nst	15	TV
1234	utilc.pft	nst	16	Microwave
1235	utilc.pft	nst	998	Not Applicable
1236	utilc.pft	nst	999	Other
1237	utilc.pft	prm	1	Permanent
1238	utilc.pft	prm	2	Temporary
1239	utilc.pft	sec	0	Unknown
1240	utilc.pft	sec	1	Top Secret
1241	utilc.pft	sec	2	Secret
1242	utilc.pft	sec	3	Confidential
1243	utilc.pft	sec	4	Restricted
1244	utilc.pft	sec	5	Unclassified
1245	utilc.pft	sec	999	Other
1246	utilc.pft	ssc	0	Unknown
1247	utilc.pft	ssc	12	Pyramid
1248	utilc.pft	ssc	52	'A' Frame
1249	utilc.pft	ssc	53	'H' Frame

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1250	utilc.pft	ssc	54	'I' Frame
1251	utilc.pft	ssc	56	'Y' Frame
1252	utilc.pft	ssc	60	Mast
1253	utilc.pft	ssc	74	'T' Frame
1254	utilc.pft	ssc	79	Round
1255	utilc.pft	ssc	80	Rectangular
1256	utilc.pft	ssc	83	Square
1257	utilc.pft	ssc	84	Irregular
1258	utilc.pft	ssc	999	Other
1259	utilc.pft	ssr	0	Unknown
1260	utilc.pft	ssr	40	Dome
1261	utilc.pft	ssr	41	Flat
1262	utilc.pft	ssr	42	Gable (Pitched)
1263	utilc.pft	ssr	999	Other
1264	utilc.pft	stc	1	Survey Source
1265	utilc.pft	stc	2	Stereo Imagery Exploitation
1266	utilc.pft	stc	3	Mono Imagery Exploitation
1267	utilc.pft	stc	4	Cartographic Source
1268	utilc.pft	stc	5	Reported Information
1269	utilc.pft	stc	6	Multispectral
1270	utilc.pft	stc	7	Hyperspectral
1271	utilc.pft	stc	8	Synthetic Aperture Radar (SAR)
1272	utilc.pft	stc	999	Other
1273	utilc.pft	tst	0	Unknown
1274	utilc.pft	tst	1	Normal Suspension
1275	utilc.pft	tst	2	Catenary (Over Mountains)
1276	utilc.pft	tst	3	Catenary (Over Water)
1277	utilc.pft	tst	998	Not Applicable
1278	utilc.pft	tst	999	Other
1279	utilc.pft	vdc	0	Unknown
1280	utilc.pft	vdc	15	Mean Sea Level
1281	utilc.pft	vdc	999	Other
1282	utilc.pft	zv2	-32767	Unknown
1283	aerol.lft	atn	0	Unknown
1284	aerol.lft	atn	3	Lit
1285	aerol.lft	atn	4	Unlit
1286	aerol.lft	cdp	0	Unknown
1287	aerol.lft	cdp	18	Receipt
1288	aerol.lft	cdp	19	Source
1289	aerol.lft	cdp	24	Up-to-dateness/revision
1290	aerol.lft	dir	0	Unknown
1291	aerol.lft	dir	1	Uni
1292	aerol.lft	dir	2	Bi
1293	aerol.lft	dir	3	Omni
1294	aerol.lft	dmf	-32767	Unknown
1295	aerol.lft	exs	0	Unknown
1296	aerol.lft	exs	5	Under Construction
1297	aerol.lft	exs	7	Destroyed
1298	aerol.lft	exs	8	Dismantled

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1299	aerol.lft	exs	999	Other
1300	aerol.lft	gug	0	Unknown
1301	aerol.lft	gug	1	Guyed
1302	aerol.lft	gug	2	Unguyed
1303	aerol.lft	hgt	-32767	Unknown
1304	aerol.lft	hzd	0	Unknown
1305	aerol.lft	hzd	300	World Geodetic System 1984
1306	aerol.lft	hzd	999	Other
1307	aerol.lft	len	-32767	Unknown
1308	aerol.lft	mcc	0	Unknown
1309	aerol.lft	mcc	20	Composition
1310	aerol.lft	mcc	21	Concrete
1311	aerol.lft	mcc	30	Earthen
1312	aerol.lft	mcc	62	Masonry (Brick/Stone)
1313	aerol.lft	mcc	64	Metal
1314	aerol.lft	mcc	72	Part Metal
1315	aerol.lft	mcc	107	Steel
1316	aerol.lft	mcc	117	Wood
1317	aerol.lft	mcc	999	Other
1318	aerol.lft	nst	0	Unknown
1319	aerol.lft	nst	7	Long Range Air Navigation System (LORAN)
1320	aerol.lft	nst	10	Radar Responder Beacon (RACON)
1321	aerol.lft	nst	11	Radar
1322	aerol.lft	nst	20	VHF Omni Directional Radio Range (VOR)
1323	aerol.lft	nst	21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)
1324	aerol.lft	nst	22	VHF Omni Directional Radio Range and TACAN (VORTAC)
1325	aerol.lft	nst	23	Tactical Air Navigation Equipment (TACAN)
1326	aerol.lft	nst	26	Localizer (LOC)
1327	aerol.lft	nst	27	Localizer/Distance Measuring Equipment (LOC/DME)
1328	aerol.lft	nst	35	Radar Antenna
1329	aerol.lft	nst	37	Precision Approach Radar (PAR)
1330	aerol.lft	nst	40	Radio Beacon
1331	aerol.lft	nst	45	Radar Station
1332	aerol.lft	nst	55	Radar reflector
1333	aerol.lft	nst	999	Other
1334	aerol.lft	prm	1	Permanent
1335	aerol.lft	prm	2	Temporary
1336	aerol.lft	sec	0	Unknown
1337	aerol.lft	sec	1	Top Secret
1338	aerol.lft	sec	2	Secret
1339	aerol.lft	sec	3	Confidential
1340	aerol.lft	sec	4	Restricted
1341	aerol.lft	sec	5	Unclassified
1342	aerol.lft	sec	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1343	aerol.lft	ssc	0	Unknown
1344	aerol.lft	ssc	4	Bullet
1345	aerol.lft	ssc	10	Pillar/Spindle
1346	aerol.lft	ssc	12	Pyramid
1347	aerol.lft	ssc	17	Spherical (Hemispherical)
1348	aerol.lft	ssc	21	Artificial Mountain
1349	aerol.lft	ssc	52	'A' Frame
1350	aerol.lft	ssc	53	'H' Frame
1351	aerol.lft	ssc	54	'I' Frame
1352	aerol.lft	ssc	56	'Y' Frame
1353	aerol.lft	ssc	60	Mast
1354	aerol.lft	ssc	74	'T' Frame
1355	aerol.lft	ssc	77	Arch
1356	aerol.lft	ssc	79	Round
1357	aerol.lft	ssc	80	Rectangular
1358	aerol.lft	ssc	83	Square
1359	aerol.lft	ssc	84	Irregular
1360	aerol.lft	ssc	87	Dome
1361	aerol.lft	ssc	109	Obelisk
1362	aerol.lft	ssc	999	Other
1363	aerol.lft	stc	1	Survey Source
1364	aerol.lft	stc	2	Stereo Imagery Exploitation
1365	aerol.lft	stc	3	Mono Imagery Exploitation
1366	aerol.lft	stc	4	Cartographic Source
1367	aerol.lft	stc	5	Reported Information
1368	aerol.lft	stc	6	Multispectral
1369	aerol.lft	stc	7	Hyperspectral
1370	aerol.lft	stc	8	Synthetic Aperture Radar (SAR)
1371	aerol.lft	stc	999	Other
1372	aerol.lft	vdc	0	Unknown
1373	aerol.lft	vdc	15	Mean Sea Level
1374	aerol.lft	vdc	999	Other
1375	aerol.lft	wid	-32767	Unknown
1376	aerol.lft	zv2	-32767	Unknown
1377	indl.lft	atn	0	Unknown
1378	indl.lft	atn	3	Lit
1379	indl.lft	atn	4	Unlit
1380	indl.lft	bss	0	Unknown
1381	indl.lft	bss	1	Monitor
1382	indl.lft	bss	4	Turret
1383	indl.lft	bss	5	Tower
1384	indl.lft	bss	998	Not Applicable
1385	indl.lft	bss	999	Other
1386	indl.lft	cdp	0	Unknown
1387	indl.lft	cdp	18	Receipt
1388	indl.lft	cdp	19	Source
1389	indl.lft	cdp	24	Up-to-dateness/revision
1390	indl.lft	dir	0	Unknown
1391	indl.lft	dir	2	Bi

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1392	indl.lft	dir	3	Omni
1393	indl.lft	dmf	-32767	Unknown
1394	indl.lft	exs	0	Unknown
1395	indl.lft	exs	5	Under Construction
1396	indl.lft	exs	7	Destroyed
1397	indl.lft	exs	8	Dismantled
1398	indl.lft	exs	999	Other
1399	indl.lft	gug	0	Unknown
1400	indl.lft	gug	1	Guyed
1401	indl.lft	gug	2	Unguyed
1402	indl.lft	hgt	-32767	Unknown
1403	indl.lft	hzd	0	Unknown
1404	indl.lft	hzd	300	World Geodetic System 1984
1405	indl.lft	hzd	999	Other
1406	indl.lft	loc	0	Unknown
1407	indl.lft	loc	8	On Ground Surface
1408	indl.lft	loc	22	Off Shore
1409	indl.lft	loc	999	Other
1410	indl.lft	mcc	0	Unknown
1411	indl.lft	mcc	20	Composition
1412	indl.lft	mcc	21	Concrete
1413	indl.lft	mcc	62	Masonry (Brick/Stone)
1414	indl.lft	mcc	64	Metal
1415	indl.lft	mcc	72	Part Metal
1416	indl.lft	mcc	107	Steel
1417	indl.lft	mcc	999	Other
1418	indl.lft	ppc	0	Unknown
1419	indl.lft	ppc	1	Hydro-electric
1420	indl.lft	ppc	2	Nuclear
1421	indl.lft	ppc	3	Solar
1422	indl.lft	ppc	4	Thermal
1423	indl.lft	ppc	5	Wind
1424	indl.lft	ppc	6	Tidal
1425	indl.lft	ppc	7	Internal Combustion
1426	indl.lft	ppc	998	Not Applicable
1427	indl.lft	ppc	999	Other
1428	indl.lft	prm	1	Permanent
1429	indl.lft	prm	2	Temporary
1430	indl.lft	sec	0	Unknown
1431	indl.lft	sec	1	Top Secret
1432	indl.lft	sec	2	Secret
1433	indl.lft	sec	3	Confidential
1434	indl.lft	sec	4	Restricted
1435	indl.lft	sec	5	Unclassified
1436	indl.lft	sec	999	Other
1437	indl.lft	ssc	0	Unknown
1438	indl.lft	ssc	4	Bullet
1439	indl.lft	ssc	12	Pyramid
1440	indl.lft	ssc	17	Spherical (Hemispherical)

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1441	indl.lft	ssc	59	Telescoping Gasholder (Gasometer)
1442	indl.lft	ssc	60	Mast
1443	indl.lft	ssc	79	Round
1444	indl.lft	ssc	80	Rectangular
1445	indl.lft	ssc	83	Square
1446	indl.lft	ssc	84	Irregular
1447	indl.lft	ssc	109	Obelisk
1448	indl.lft	ssc	999	Other
1449	indl.lft	ssr	0	Unknown
1450	indl.lft	ssr	6	Conical/Peaked/NUN
1451	indl.lft	ssr	38	Curved/Round (Quonset)
1452	indl.lft	ssr	40	Dome
1453	indl.lft	ssr	41	Flat
1454	indl.lft	ssr	42	Gable (Pitched)
1455	indl.lft	ssr	47	Sawtooth
1456	indl.lft	ssr	999	Other
1457	indl.lft	stc	1	Survey Source
1458	indl.lft	stc	2	Stereo Imagery Exploitation
1459	indl.lft	stc	3	Mono Imagery Exploitation
1460	indl.lft	stc	4	Cartographic Source
1461	indl.lft	stc	5	Reported Information
1462	indl.lft	stc	6	Multispectral
1463	indl.lft	stc	7	Hyperspectral
1464	indl.lft	stc	8	Synthetic Aperture Radar (SAR)
1465	indl.lft	stc	999	Other
1466	indl.lft	vdc	0	Unknown
1467	indl.lft	vdc	15	Mean Sea Level
1468	indl.lft	vdc	999	Other
1469	indl.lft	zv2	-32767	Unknown
1470	iwal.lft	atn	0	Unknown
1471	iwal.lft	atn	3	Lit
1472	iwal.lft	atn	4	Unlit
1473	iwal.lft	cdp	0	Unknown
1474	iwal.lft	cdp	18	Receipt
1475	iwal.lft	cdp	19	Source
1476	iwal.lft	cdp	24	Up-to-dateness/revision
1477	iwal.lft	dir	0	Unknown
1478	iwal.lft	dir	1	Uni
1479	iwal.lft	dir	2	Bi
1480	iwal.lft	dir	3	Omni
1481	iwal.lft	dmf	-32767	Unknown
1482	iwal.lft	exs	0	Unknown
1483	iwal.lft	exs	5	Under Construction
1484	iwal.lft	exs	7	Destroyed
1485	iwal.lft	exs	8	Dismantled
1486	iwal.lft	exs	999	Other
1487	iwal.lft	hgt	-32767	Unknown
1488	iwal.lft	hzd	0	Unknown
1489	iwal.lft	hzd	300	World Geodetic System 1984

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1490	iwal.lft	hzd	999	Other
1491	iwal.lft	len	-32767	Unknown
1492	iwal.lft	mcc	0	Unknown
1493	iwal.lft	mcc	20	Composition
1494	iwal.lft	mcc	21	Concrete
1495	iwal.lft	mcc	30	Earthen
1496	iwal.lft	mcc	64	Metal
1497	iwal.lft	mcc	72	Part Metal
1498	iwal.lft	mcc	107	Steel
1499	iwal.lft	mcc	108	Stone
1500	iwal.lft	mcc	999	Other
1501	iwal.lft	prm	1	Permanent
1502	iwal.lft	prm	2	Temporary
1503	iwal.lft	sec	0	Unknown
1504	iwal.lft	sec	1	Top Secret
1505	iwal.lft	sec	2	Secret
1506	iwal.lft	sec	3	Confidential
1507	iwal.lft	sec	4	Restricted
1508	iwal.lft	sec	5	Unclassified
1509	iwal.lft	sec	999	Other
1510	iwal.lft	stc	1	Survey Source
1511	iwal.lft	stc	2	Stereo Imagery Exploitation
1512	iwal.lft	stc	3	Mono Imagery Exploitation
1513	iwal.lft	stc	4	Cartographic Source
1514	iwal.lft	stc	5	Reported Information
1515	iwal.lft	stc	6	Multispectral
1516	iwal.lft	stc	7	Hyperspectral
1517	iwal.lft	stc	8	Synthetic Aperture Radar (SAR)
1518	iwal.lft	stc	999	Other
1519	iwal.lft	vdc	0	Unknown
1520	iwal.lft	vdc	15	Mean Sea Level
1521	iwal.lft	vdc	999	Other
1522	iwal.lft	wid	-32767	Unknown
1523	iwal.lft	zv2	-32767	Unknown
1524	popl.lft	afa	0	Unknown
1525	popl.lft	afa	19	Helipad
1526	popl.lft	afa	995	None
1527	popl.lft	afa	999	Other
1528	popl.lft	atn	0	Unknown
1529	popl.lft	atn	3	Lit
1530	popl.lft	atn	4	Unlit
1531	popl.lft	bfc	0	Unknown
1532	popl.lft	bfc	2	Government Building
1533	popl.lft	bfc	3	Capitol Building
1534	popl.lft	bfc	4	Castle
1535	popl.lft	bfc	6	Hospital
1536	popl.lft	bfc	7	House of Worship
1537	popl.lft	bfc	10	Observatory
1538	popl.lft	bfc	11	Palace

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1539	popl.lft	bfc	13	Prison
1540	popl.lft	bfc	15	School
1541	popl.lft	bfc	16	House
1542	popl.lft	bfc	17	Multi Unit Dwelling
1543	popl.lft	bfc	28	Administration Building
1544	popl.lft	bfc	29	Aircraft Maintenance Shop
1545	popl.lft	bfc	30	Hangar
1546	popl.lft	bfc	53	Bank
1547	popl.lft	bfc	58	Observation
1548	popl.lft	bfc	99	Battery
1549	popl.lft	bfc	105	Reformatory
1550	popl.lft	bfc	106	Sanitarium
1551	popl.lft	bfc	111	Sportsplex
1552	popl.lft	bfc	122	Shopping Center
1553	popl.lft	bfc	129	Airport Terminal
1554	popl.lft	bfc	999	Other
1555	popl.lft	bss	0	Unknown
1556	popl.lft	bss	1	Monitor
1557	popl.lft	bss	2	Steeple
1558	popl.lft	bss	3	Cupola
1559	popl.lft	bss	4	Turret
1560	popl.lft	bss	5	Tower
1561	popl.lft	bss	6	Minaret
1562	popl.lft	bss	998	Not Applicable
1563	popl.lft	bss	999	Other
1564	popl.lft	cdp	0	Unknown
1565	popl.lft	cdp	18	Receipt
1566	popl.lft	cdp	19	Source
1567	popl.lft	cdp	24	Up-to-dateness/revision
1568	popl.lft	dir	0	Unknown
1569	popl.lft	dir	1	Uni
1570	popl.lft	dir	2	Bi
1571	popl.lft	dir	3	Omni
1572	popl.lft	dmf	-32767	Unknown
1573	popl.lft	exs	0	Unknown
1574	popl.lft	exs	5	Under Construction
1575	popl.lft	exs	7	Destroyed
1576	popl.lft	exs	8	Dismantled
1577	popl.lft	exs	999	Other
1578	popl.lft	gug	0	Unknown
1579	popl.lft	gug	1	Guyed
1580	popl.lft	gug	2	Unguyed
1581	popl.lft	hgt	-32767	Unknown
1582	popl.lft	hzd	0	Unknown
1583	popl.lft	hzd	300	World Geodetic System 1984
1584	popl.lft	hzd	999	Other
1585	popl.lft	len	-32767	Unknown
1586	popl.lft	mcc	0	Unknown
1587	popl.lft	mcc	20	Composition

TABLE C-3 Obstructions Integer Value Description Table (continued).

1588	popl.lft	mcc	21	Concrete
1589	popl.lft	mcc	62	Masonry (Brick/Stone)
1590	popl.lft	mcc	64	Metal
1591	popl.lft	mcc	72	Part Metal
1592	popl.lft	mcc	107	Steel
1593	popl.lft	mcc	117	Wood
1594	popl.lft	mcc	999	Other
1595	popl.lft	prm	1	Permanent
1596	popl.lft	prm	2	Temporary
1597	popl.lft	sec	0	Unknown
1598	popl.lft	sec	1	Top Secret
1599	popl.lft	sec	2	Secret
1600	popl.lft	sec	3	Confidential
1601	popl.lft	sec	4	Restricted
1602	popl.lft	sec	5	Unclassified
1603	popl.lft	sec	999	Other
1604	popl.lft	ssc	0	Unknown
1605	popl.lft	ssc	12	Pyramid
1606	popl.lft	ssc	17	Spherical (Hemispherical)
1607	popl.lft	ssc	52	'A' Frame
1608	popl.lft	ssc	53	'H' Frame
1609	popl.lft	ssc	54	'I' Frame
1610	popl.lft	ssc	56	'Y' Frame
1611	popl.lft	ssc	60	Mast
1612	popl.lft	ssc	65	Cylindrical with flat top
1613	popl.lft	ssc	66	Cylindrical with domed top
1614	popl.lft	ssc	71	Cylindrical/Peaked
1615	popl.lft	ssc	77	Arch
1616	popl.lft	ssc	79	Round
1617	popl.lft	ssc	80	Rectangular
1618	popl.lft	ssc	83	Square
1619	popl.lft	ssc	84	Irregular
1620	popl.lft	ssc	109	Obelisk
1621	popl.lft	ssc	999	Other
1622	popl.lft	ssr	0	Unknown
1623	popl.lft	ssr	6	Conical/Peaked/NUN
1624	popl.lft	ssr	38	Curved/Round (Quonset)
1625	popl.lft	ssr	40	Dome
1626	popl.lft	ssr	41	Flat
1627	popl.lft	ssr	42	Gable (Pitched)
1628	popl.lft	ssr	47	Sawtooth
1629	f popl.lft	ssr	998	Not Applicable
1630	popl.lft	ssr	999	Other
1631	popl.lft	stc	1	Survey Source
1632	popl.lft	stc	2	Stereo Imagery Exploitation
1633	popl.lft	stc	3	Mono Imagery Exploitation
1634	popl.lft	stc	4	Cartographic Source
1635	popl.lft	stc	5	Reported Information
1636	popl.lft	stc	6	Multispectral

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1637	popl.lft	stc	7	Hyperspectral
1638	popl.lft	stc	8	Synthetic Aperture Radar (SAR)
1639	popl.lft	stc	999	Other
1640	popl.lft	ttc	0	Unknown
1641	popl.lft	ttc	2	Observation/Lookout
1642	popl.lft	ttc	12	Fire
1643	popl.lft	ttc	999	Other
1644	popl.lft	vdc	0	Unknown
1645	popl.lft	vdc	15	Mean Sea Level
1646	popl.lft	vdc	999	Other
1647	popl.lft	wid	-32767	Unknown
1648	popl.lft	zv2	-32767	Unknown
1649	transl.lft	atn	0	Unknown
1650	transl.lft	atn	3	Lit
1651	transl.lft	atn	4	Unlit
1652	transl.lft	bot	0	Unknown
1653	transl.lft	bot	4	Draw/Bascule
1654	transl.lft	bot	10	Swing
1655	transl.lft	bot	11	Lift
1656	transl.lft	bot	13	Not Applicable
1657	transl.lft	bot	999	Other
1658	transl.lft	bsc	0	Unknown
1659	transl.lft	bsc	1	Arch (assume open spandrel)
1660	transl.lft	bsc	2	Cantilever
1661	transl.lft	bsc	3	Deck
1662	transl.lft	bsc	6	Girder
1663	transl.lft	bsc	7	Tower Suspension
1664	transl.lft	bsc	8	Truss
1665	transl.lft	bsc	9	Suspension
1666	transl.lft	bsc	12	Transporter
1667	transl.lft	bsc	15	Slab
1668	transl.lft	bsc	16	Stringer (beam)
1669	transl.lft	bsc	17	Arch Suspension
1670	transl.lft	bsc	26	Arch (closed spandrel)
1671	transl.lft	bsc	27	Cable Stayed
1672	transl.lft	bsc	999	Other
1673	transl.lft	cdp	0	Unknown
1674	transl.lft	cdp	18	Receipt
1675	transl.lft	cdp	19	Source
1676	transl.lft	cdp	24	Up-to-dateness/revision
1677	transl.lft	dir	0	Unknown
1678	transl.lft	dir	2	Bi
1679	transl.lft	dir	3	Omni
1680	transl.lft	dmf	-32767	Unknown
1681	transl.lft	exs	0	Unknown
1682	transl.lft	exs	5	Under Construction
1683	transl.lft	exs	7	Destroyed
1684	transl.lft	exs	8	Dismantled
1685	transl.lft	exs	999	Other

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1686	transl.lft	hgt	-32767	Unknown
1687	transl.lft	hzd	0	Unknown
1688	transl.lft	hzd	300	World Geodetic System 1984
1689	transl.lft	hzd	999	Other
1690	transl.lft	len	-32767	Unknown
1691	transl.lft	mcc	0	Unknown
1692	transl.lft	mcc	20	Composition
1693	transl.lft	mcc	21	Concrete
1694	transl.lft	mcc	62	Masonry (Brick/Stone)
1695	transl.lft	mcc	64	Metal
1696	transl.lft	mcc	72	Part Metal
1697	transl.lft	mcc	107	Steel
1698	transl.lft	mcc	117	Wood
1699	transl.lft	mcc	999	Other
1700	transl.lft	prm	1	Permanent
1701	transl.lft	prm	2	Temporary
1702	transl.lft	sec	0	Unknown
1703	transl.lft	sec	1	Top Secret
1704	transl.lft	sec	2	Secret
1705	transl.lft	sec	3	Confidential
1706	transl.lft	sec	4	Restricted
1707	transl.lft	sec	5	Unclassified
1708	transl.lft	sec	999	Other
1709	transl.lft	stc	1	Survey Source
1710	transl.lft	stc	2	Stereo Imagery Exploitation
1711	transl.lft	stc	3	Mono Imagery Exploitation
1712	transl.lft	stc	4	Cartographic Source
1713	transl.lft	stc	5	Reported Information
1714	transl.lft	stc	6	Multispectral
1715	transl.lft	stc	7	Hyperspectral
1716	transl.lft	stc	8	Synthetic Aperture Radar (SAR)
1717	transl.lft	stc	999	Other
1718	transl.lft	vdc	0	Unknown
1719	transl.lft	vdc	15	Mean Sea Level
1720	transl.lft	vdc	999	Other
1721	transl.lft	wid	-32767	Unknown
1722	transl.lft	zv2	-32767	Unknown
1723	utill.lft	atn	0	Unknown
1724	utill.lft	atn	3	Lit
1725	utill.lft	atn	4	Unlit
1726	utill.lft	bfc	0	Unknown
1727	utill.lft	bfc	40	Telephone Switching Station
1728	utill.lft	bfc	86	Telephone Exchange (Main)
1729	utill.lft	bss	0	Unknown
1730	utill.lft	bss	5	Tower
1731	utill.lft	bss	998	Not Applicable
1732	utill.lft	bss	999	Other
1733	utill.lft	cdp	0	Unknown
1734	utill.lft	cdp	18	Receipt

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TABLE C-3 Obstructions Integer Value Description Table (continued).

1735	utill.lft	cdp	19	Source
1736	utill.lft	cdp	24	Up-to-dateness/revision
1737	utill.lft	dir	0	Unknown
1738	utill.lft	dir	2	Bi
1739	utill.lft	dir	3	Omni
1740	utill.lft	dmf	-32767	Unknown
1741	utill.lft	exs	0	Unknown
1742	utill.lft	exs	5	Under Construction
1743	utill.lft	exs	7	Destroyed
1744	utill.lft	exs	8	Dismantled
1745	utill.lft	exs	999	Other
1746	utill.lft	gug	0	Unknown
1747	utill.lft	gug	1	Guyed
1748	utill.lft	gug	2	Unguyed
1749	utill.lft	hgt	-32767	Unknown
1750	utill.lft	hzd	0	Unknown
1751	utill.lft	hzd	300	World Geodetic System 1984
1752	utill.lft	hzd	999	Other
1753	utill.lft	kva	-32767	Unknown
1754	utill.lft	len	-32767	Unknown
1755	utill.lft	mcc	0	Unknown
1756	utill.lft	mcc	20	Composition
1757	utill.lft	mcc	21	Concrete
1758	utill.lft	mcc	62	Masonry (Brick/Stone)
1759	utill.lft	mcc	64	Metal
1760	utill.lft	mcc	72	Part Metal
1761	utill.lft	mcc	74	Plastic
1762	utill.lft	mcc	107	Steel
1763	utill.lft	mcc	117	Wood
1764	utill.lft	mcc	999	Other
1765	utill.lft	nst	0	Unknown
1766	utill.lft	nst	12	Radio
1767	utill.lft	nst	15	TV
1768	utill.lft	nst	16	Microwave
1769	utill.lft	nst	998	Not Applicable
1770	utill.lft	nst	999	Other
1771	utill.lft	prm	1	Permanent
1772	utill.lft	prm	2	Temporary
1773	utill.lft	sec	0	Unknown
1774	utill.lft	sec	1	Top Secret
1775	utill.lft	sec	2	Secret
1776	utill.lft	sec	3	Confidential
1777	utill.lft	sec	4	Restricted
1778	utill.lft	sec	5	Unclassified
1779	utill.lft	sec	999	Other
1780	utill.lft	ssc	0	Unknown
1781	utill.lft	ssc	52	'A' Frame
1782	utill.lft	ssc	53	'H' Frame
1783	utill.lft	ssc	54	'I' Frame

TABLE C-3 Obstructions Integer Value Description Table (continued).

1784	Utill.lft	ssc	56	'Y' Frame
1785	utill.lft	ssc	60	Mast
1786	utill.lft	ssc	79	Round
1787	utill.lft	ssc	80	Rectangular
1788	utill.lft	ssc	83	Square
1789	utill.lft	ssc	84	Irregular
1790	utill.lft	ssc	999	Other
1791	utill.lft	ssr	0	Unknown
1792	utill.lft	ssr	40	Dome
1793	utill.lft	ssr	41	Flat
1794	utill.lft	ssr	42	Gable (Pitched)
1795	utill.lft	ssr	999	Other
1796	utill.lft	stc	1	Survey Source
1797	utill.lft	stc	2	Stereo Imagery Exploitation
1798	utill.lft	stc	3	Mono Imagery Exploitation
1799	utill.lft	stc	4	Cartographic Source
1800	utill.lft	stc	5	Reported Information
1801	utill.lft	stc	6	Multispectral
1802	utill.lft	stc	7	Hyperspectral
1803	utill.lft	stc	8	Synthetic Aperture Radar (SAR)
1804	utill.lft	stc	999	Other
1805	utill.lft	tst	0	Unknown
1806	utill.lft	tst	1	Normal Suspension
1807	utill.lft	tst	2	Catenary (Over Mountains)
1808	utill.lft	tst	3	Catenary (Over Water)
1809	utill.lft	tst	998	Not Applicable
1810	utill.lft	tst	999	Other
1811	utill.lft	vdc	0	Unknown
1812	utill.lft	vdc	15	Mean Sea Level
1813	utill.lft	vdc	999	Other
1814	utill.lft	zv2	-32767	Unknown

TABLE C-4 Aeronautical Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Aeronautical Obstacle Point Feature Table
 Table Name: aerop.pft
 Thematic Index ID Number: 1

```
{Header length}L;
Aeronautical Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_codel.pti,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	GA035 NAVAIDS (Aeronautical) GB040 Launch Pad GB220 Air Obstruction GB221 Miscellaneous Air Obstruction	
aha	Absolute Horizontal Accuracy in Meters		

		-32767.0	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
aho	Accuracy of Obstruction Height Above Ground Level [meters]			
		-32767.0	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
atn	Aids to Navigation			
		0	Unknown	GA035, GB040, GB220, GB221
		3	Lit	GA035, GB040, GB220, GB221
		4	Unlit	GA035, GB040, GB220, GB221
ava	Absolute Vertical Accuracy in Meters			
				GA035, GB040, GB220, GB221
		-32767.0	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
cdp	Calendar Date Type			
		0	Unknown	GA035, GB040, GB220, GB221
		18	Receipt	GA035, GB040, GB220, GB221
		19	Source	GA035, GB040, GB220, GB221
		24	Up-to- dateness/revision	GA035, GB040, GB220, GB221
cdv	Calendar Date Value			
		UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
dir	Directivity			
		0	Unknown	GA035, GB040, GB220, GB221
		1	Uni	GB040, GB220, GB221
		2	Bi	GB040, GB220, GB221
		3	Omni	GA035, GB040, GB220, GB221
dmf	Density Measure (Feature Count)			
		-32767	Unknown	GA035, GB040, GB220, GB221
		>0		GA035, GB040, GB220, GB221
exs	Existence Category			

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		0	Unknown	GA035, GB040, GB220, GB221
		5	Under Construction	GA035, GB040, GB220, GB221
		7	Destroyed	GA035, GB040, GB220, GB221
		8	Dismantled	GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
gug	Guyed or Unguyed Category			
		-32768	Null	GA035, GB040, GB220
		0	Unknown	GB221
		1	Guyed	GB221
		2	Unguyed	GB221
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	GA035, GB040, GB220, GB221
		>0		GA035, GB040, GB220, GB221
hzd	Horizontal Datum			
		0	Unknown	GA035, GB040, GB220, GB221
		300	World Geodetic System 1984	GA035, GB040, GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
len	Length/Diameter [meters]			
		-32768	Null	GB040
		-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
mcc	Material Composition Category			
		0	Unknown	GA035, GB040, GB220, GB221
		20	Composition	GB040, GB221
		21	Concrete	GA035, GB040, GB221
		30	Earthen	GB221
		62	Masonry (Brick/Stone)	GB221
		64	Metal	GB040, GB221
		72	Part Metal	GA035, GB040, GB221
		107	Steel	GB040, GB221
		117	Wood	GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
nst	Navigation System Types			
		-32768	Null	GB040, GB220, GB221
		0	Unknown	GA035
		7	Long Range Air Navigation System (LORAN)	GA035

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		10	Radar Responder Beacon (RACON)	GA035
		11	Radar	GA035
		20	VHF Omni Directional Radio Range (VOR)	GA035
		21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	GA035
		22	VHF Omni Directional Radio Range and TACAN (VORTAC)	GA035
		23	Tactical Air Navigation Equipment (TACAN)	GA035
		26	Localizer (LOC)	GA035
		27	Localizer/Distance Measuring Equipment (LOC/DME)	GA035
		35	Radar Antenna	GA035
		37	Precision Approach Radar (PAR)	GA035
		40	Radio Beacon	GA035
		45	Radar Station	GA035
		55	Radar reflector	GA035
		999	Other	GA035
prfg	Predominant Feature Height With greater than 1 meter resolution			
			NaN Null	GA035,GB040
			-32767.0 Unknown	GB220,GB221
			>0.0	GB220,GB221
prm	Permanency			
		1	Permanent	GA035,GB040,GB220, GB221
		2	Temporary	GA035,GB040,GB220, GB221
qle	Releasability			
		UNK	Unknown	GA035,GB040,GB220, GB221
		Character	Text String	GA035,GB040,GB220, GB221
sec	Security Classification			
		0	Unknown	GA035,GB040,GB220, GB221
		1	Top Secret	GA035,GB040,GB220, GB221
		2	Secret	GA035,GB040,GB220, GB221

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	3	Confidential	GA035, GB040, GB220, GB221
	4	Restricted	GA035, GB040, GB220, GB221
	5	Unclassified	GA035, GB040, GB220, GB221
	999	Other	GA035, GB040, GB220, GB221
ssc	Structure Shape Category		
	-32768	Null	GB040, GB220
	0	Unknown	GA035, GB221
	4	Bullet	GB221
	10	Pillar/Spindle	GB221
	12	Pyramid	GB221
	17	Spherical (Hemispherical)	GB221
	21	Artificial Mountain	GB221
	52	'A' Frame	GB221
	53	'H' Frame	GB221
	54	'I' Frame	GB221
	56	'Y' Frame	GB221
	60	Mast	GB221
	74	'T' Frame	GB221
	77	Arch	GB221
	79	Round	GB221
	80	Rectangular	GB221
	83	Square	GB221
	84	Irregular	GB221
	87	Dome	GA035
	109	Obelisk	GB221
	999	Other	GA035, GB221
stc	Source Type Code		
	1	Survey Source	GA035, GB040, GB220, GB221
	2	Stereo Imagery Exploitation	GA035, GB040, GB220, GB221
	3	Mono Imagery Exploitation	GA035, GB040, GB220, GB221
	4	Cartographic Source	GA035, GB040, GB220, GB221
	5	Reported Information	GA035, GB040, GB220, GB221
	6	Multispectral	GA035, GB040, GB220, GB221
	7	Hyperspectral	GA035, GB040, GB220, GB221
	8	Synthetic Aperture Radar (SAR)	GA035, GB040, GB220, GB221
	999	Other	GA035, GB040, GB220, GB221
txt	Text Attribute		

		UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	GA035, GB040, GB220, GB221
		15	Mean Sea Level	GA035, GB040, GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
voi	Vertical Obstruction Identifier			
		UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
wid	Width [meters]			
		-32768	Null	GB040
		-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
zv2	Highest Z-Value [meters]			
		-32767	Unknown	GA035, GB040, GB220, GB221
	>=-400 and <=30000			GA035, GB040, GB220, GB221

TABLE C-5 Hydrographic Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Hydrographic Obstacle Point Feature Table
 Table Name: hydro.pft
 Thematic Index ID Number: 2

```
{Header length}L;
Hydrographic Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code2.pti,-,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
opc=S,1,N,Offshore Platform Classification,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	BC040 Light BC050 Lighthouse BC070 Light Vessel/Lightship BD110 Platform	
afa	Available Facilities	-32768 Null 0 Unknown 19 Helipad 995 None 999 Other	BC040,BC050 BC070,BD110 BC070,BD110 BD110 BC070,BD110

aha	Absolute Horizontal Accuracy in Meters	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
atn	Aids to Navigation	-32768	Null	BC050,BC070
		0	Unknown	BC040,BD110
		3	Lit	BC040,BD110
		4	Unlit	BC040,BD110
ava	Absolute Vertical Accuracy in Meters	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
cdp	Calendar Date Type	0	Unknown	BC040,BC050,BC070, BD110
		18	Receipt	BC040,BC050,BC070, BD110
		19	Source	BC040,BC050,BC070, BD110
		24	Up-to-dateness/revision	BC040,BC050,BC070, BD110
cdv	Calendar Date Value	UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
dir	Directivity	0	Unknown	BC040,BC050,BC070, BD110
		3	Omni	BC040,BC050,BC070, BD110
dmf	Density Measure (Feature Count)	-32768	Null	BC070
		-32767	Unknown	BC040,BC050,BD110
		>0		BC040,BC050,BD110
exs	Existence Category	0	Unknown	BC040,BC050,BC070, BD110
		5	Under Construction	BC040,BC050,BD110
		7	Destroyed	BC040,BC050,BD110

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		8	Dismantled	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
gug	Guyed or Unguyed Category			
		-32768	Null	BC050,BC070,BD110
		0	Unknown	BC040
		1	Guyed	BC040
		2	Unguyed	BC040
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	BC040,BC050,BC070, BD110
		>0		BC040,BC050,BC070, BD110
hzd	Horizontal Datum			
		0	Unknown	BC040,BC050,BC070, BD110
		300	World Geodetic System 1984	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
mcc	Material Composition Category			
		0	Unknown	BC040,BC050,BC070, BD110
		21	Concrete	BC050,BD110
		64	Metal	BC070,BD110
		72	Part Metal	BC040,BC050,BD110
		107	Steel	BC070,BD110
		117	Wood	BD110
		999	Other	BC040,BC050,BC070, BD110
opc	Offshore Platform Classification			
		-32768	Null	BC040,BC050,BC070
		10	Navigation Aid Support	BD110
prm	Permanency			
		1	Permanent	BC040,BC050,BC070, BD110
		2	Temporary	BC040,BC050,BC070, BD110
qle	Releasability			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
sec	Security Classification			
		0	Unknown	BC040,BC050,BC070, BD110

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		1	Top Secret	BC040,BC050,BC070, BD110
		2	Secret	BC040,BC050,BC070, BD110
		3	Confidential	BC040,BC050,BC070, BD110
		4	Restricted	BC040,BC050,BC070, BD110
		5	Unclassified	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
stc	Source Type Code			
		1	Survey Source	BC040,BC050,BC070, BD110
		2	Stereo Imagery Exploitation	BC040,BC050,BC070, BD110
		3	Mono Imagery Exploitation	BC040,BC050,BC070, BD110
		4	Cartographic Source	BC040,BC050,BC070, BD110
		5	Reported Information	BC040,BC050,BC070, BD110
		6	Multispectral	BC040,BC050,BC070, BD110
		7	Hyperspectral	BC040,BC050,BC070, BD110
		8	Synthetic Aperture Radar (SAR)	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
txt	Text Attribute			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	BC040,BC050,BC070, BD110
		15	Mean Sea Level	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
voi	Vertical Obstruction Identifier			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
zv2	Highest Z-Value [meters]			
		-32767	Unknown	BC040,BC050,BC070, BD110

≥ -400 and ≤ 30000

BC040, BC050, BC070,
BD110

TABLE C-6 Industry Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Industry Obstacle Point Feature Table
 Table Name: indp.pft
 Thematic Index ID Number: 3

```
{Header length}L;
Industry Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code3.pti,-,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
cra=S,1,N,Crane Type Category,int.vdt,-,-,:
crm=S,1,N,Crane Mobility Type,int.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
loc=S,1,N,Location Category,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
ppc=S,1,N,Power Plant Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
pro=S,1,N,Product Category,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	AA040 Rig/Superstructure AB000 US-Disposal Site/Waste Pile UK-Refuse Tip/Slag Heap	

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AC000 Processing
Plant/Treatment
Plant
AC010 Blast Furnace
AC020 Catalytic Cracker
AD010 US-Power Plant
UK-Power Station
AF010 Chimney/Smokestack
AF020 Conveyor
AF030 Cooling Tower
AF040 Crane
AF050 US-
Dredge/Powershovel
/Dragline UK-
Dredger/Powershove
l/Dragline
AF070 Flare Pipe
AF080 Hopper
AJ050 Windmill
AJ051 Windmotor
AM010 Depot (Storage)
AM020 Grain Bin/Silo
AM030 Grain Elevator
AM070 Tank
AM080 Water Tower

afa Available Facilities
-32768 Null AB000, AC000, AC010,
AC020, AD010, AF010,
AF020, AF030, AF040,
AF050, AF070, AF080,
AJ050, AJ051, AM010,
AM020, AM030, AM070,
AM080
0 Unknown AA040
19 Helipad AA040
995 None AA040
999 Other AA040

aha Absolute Horizontal Accuracy in Meters
-32767.0 Unknown AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080
>0.0 AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080

aho Accuracy of Obstruction Height Above Ground Level [meters]

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		-32767.0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		>0.0		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
atn	Aids to Navigation			
		-32768	Null	AM010
		0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
		3	Lit	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
		4	Unlit	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
ava	Absolute Vertical Accuracy in Meters			
		-32767.0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		>0.0		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
bss	Building Superstructure Shape			

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	-32768	Null	AA040, AB000, AC010, AC020, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	0	Unknown	AC000, AD010
	1	Monitor	AC000, AD010
	4	Turret	AC000, AD010
	5	Tower	AC000, AD010
	998	Not Applicable	AC000, AD010
	999	Other	AC000, AD010
cdp	Calendar Date Type		
	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	18	Receipt	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	19	Source	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	24	Up-to- dateness/revision	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
cdv	Calendar Date Value		
	UNK	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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Character	Text String	
		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
cra	Crane Type Category	
	-32768 Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	0 Unknown	AF040
	2 Bridge/Gantry	AF040
	3 Rotating	AF040
	998 Not Applicable	AF040
	999 Other	AF040
crm	Crane Mobility Type	
	-32768 Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	0 Unknown	AF040
	1 Fixed	AF040
	2 Traveling	AF040
	3 Floating	AF040
	999 Other	AF040
dir	Directivity	
	0 Unknown	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AJ050, AJ051, AM020, AM030, AM070, AM080
	2 Bi	AC000, AF020, AF040, AF050, AF080, AM010
	3 Omni	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
dmf	Density Measure (Feature Count)	

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	-32767	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	>0		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
exs	Existence Category		
	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	5	Under Construction	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	7	Destroyed	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	8	Dismantled	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
gug	Guyed or Unguyed Category		

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		-32768 Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF080, AM010, AM020, AM030, AM070, AM080
		0 Unknown	AF040, AF070, AJ050, AJ051
		1 Guyed	AF040, AF070, AJ050, AJ051
		2 Unguyed	AF040, AF070, AJ050, AJ051
hgt	Height Above Surface Level [meters]		
		-32767 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		>0	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
hzd	Horizontal Datum		
		0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		300 World Geodetic System 1984	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		999 Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
loc	Location Category		

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-32768	Null	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF080, AJ050, AM010, AM020, AM030, AM070, AM080
0	Unknown	AA040, AF070, AJ051
8	On Ground Surface	AA040, AF070, AJ051
22	Off Shore	AA040, AF070, AJ051
999	Other	AA040, AF070, AJ051
mcc	Material Composition Category	
0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
20	Composition	AC000, AC020, AD010, AF030, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
21	Concrete	AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
62	Masonry (Brick/Stone)	AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
64	Metal	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
72	Part Metal	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
107	Steel	AA040, AC000, AC010, AC020, AD010, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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	117	Wood		AC000, AC020, AD010, AF030, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	999	Other		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
pfq	Predominant Feature Height With greater than 1 meter resolution			
		NaN	Null	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM080
		-32767.0	Unknown	AC000, AM010, AM070
		>0.0		AC000, AM010, AM070
ppc	Power Plant Category			
		-32768	Null	AA040, AB000, AC000, AC010, AC020, AF020, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AD010, AF010, AF030
		1	Hydro-electric	AD010
		2	Nuclear	AD010, AF010, AF030
		3	Solar	AD010
		4	Thermal	AD010, AF010, AF030
		5	Wind	AD010
		6	Tidal	AD010
		7	Internal Combustion	AD010, AF010, AF030
		998	Not Applicable	AF010, AF030
		999	Other	AD010, AF010, AF030
prm	Permanency			
		1	Permanent	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		2	Temporary	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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pro	Product Category	-32768	Null	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AC000
		13	Chemical	AC000
		17	Coal	AC000
		19	Coke	AC000
		38	Gas	AC000
		64	Metal	AC000
		67	Oil	AC000
		999	Other	AC000
		qle	Releasability	UNK
Character	Text String			AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
sec	Security Classification	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		1	Top Secret	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		2	Secret	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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	3	Confidential	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	4	Restricted	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	5	Unclassified	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
SSC		Structure Shape Category	
	-32768	Null	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF040, AF070, AM010
	0	Unknown	AA040, AF030, AF050, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
	4	Bullet	AM070
	7	Cylindrical (Upright)/CAN	AM080
	12	Pyramid	AM020, AM030, AM070, AM080
	17	Spherical (Hemispherical)	AM020, AM030, AM070, AM080
	52	'A' Frame	AA040, AF050,
	54	'I' Frame	AA040, AF050,
	59	Telescoping Gasholder (Gasometer)	AM070
	60	Mast	AJ050, AJ051
	65	Cylindrical with flat top	AM080
	66	Cylindrical with domed top	AM080
	71	Cylindrical/Peaked	AM080
	76	Funnel	AF080

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	79	Round	AF030, AF080, AM020, AM030, AM070, AM080
	80	Rectangular	AF030, AF080, AM020, AM030, AM070, AM080
	83	Square	AF030, AF080, AM020, AM030, AM070, AM080
	84	Irregular	AF030, AF080, AM020, AM030, AM070, AM080
	109	Obelisk	AM020, AM030, AM070
	999	Other	AA040, AF030, AF050, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
ssr	Structure Shape of Roof		
	-32768	Null	AA040, AB000, AC010, AC020, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM080
	0	Unknown	AC000, AD010, AM020, AM030, AM070
	6	Conical/Peaked/NUN	AC000, AD010, AM020, AM030, AM070
	38	Curved/Round (Quonset)	AC000, AD010, AM020, AM030, AM070
	40	Dome	AC000, AD010, AM020, AM030, AM070
	41	Flat	AC000, AD010, AM020, AM030, AM070
	42	Gable (Pitched)	AC000, AD010, AM020, AM030, AM070
	47	Sawtooth	AC000, AD010
	999	Other	AC000, AD010, AM020, AM030, AM070
stc	Source Type Code		
	1	Survey Source	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	2	Stereo Imagery Exploitation	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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3	Mono Imagery Exploitation	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
4	Cartographic Source	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
5	Reported Information	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
6	Multispectral	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
7	Hyperspectral	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
8	Synthetic Aperture Radar (SAR)	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

txt Text Attribute

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	UNK	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	Character	Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
vdc	Vertical (Sounding) Datum Category		
	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	15	Mean Sea Level	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
voi	Vertical Obstruction Identifier		
	UNK	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	Character	Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
zv2	Highest Z-Value [meters]		

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-32767 Unknown

AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080

>=-400 and <=30000

AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080

TABLE C-7 Inland Water Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Inland Water Obstacle Point Feature Table
 Table Name: iwap.pft
 Thematic Index ID Number: 4

```
{Header length}L;
Inland Water Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code4.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		BH010	Aqueduct	
		BI020	Dam/Weir	
		BI050	Water Intake Tower	
aha	Absolute Horizontal Accuracy in Meters			
		-32767.0	Unknown	BH010, BI020, BI050
		>0.0		BH010, BI020, BI050
aho	Accuracy of Obstruction Height Above Ground Level [meters]			
		-32767.0	Unknown	BH010, BI020, BI050
		>0.0		BH010, BI020, BI050
atn	Aids to Navigation			
		0	Unknown	BH010, BI020, BI050

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		3 Lit	BH010,BI020,BI050
		4 Unlit	BH010,BI020,BI050
ava	Absolute Vertical Accuracy in Meters		
		-32767.0 Unknown	BH010,BI020,BI050
		>0.0	BH010,BI020,BI050
cdp	Calendar Date Type		
		0 Unknown	BH010,BI020,BI050
		18 Receipt	BH010,BI020,BI050
		19 Source	BH010,BI020,BI050
		24 Up-to-dateness/revision	BH010,BI020,BI050
cdv	Calendar Date Value		
		UNK Unknown	BH010,BI020,BI050
		Character Text String	BH010,BI020,BI050
dir	Directivity		
		0 Unknown	BH010,BI020,BI050
		1 Uni	BH010,BI020
		2 Bi	BH010,BI020
		3 Omni	BH010,BI020,BI050
dmf	Density Measure (Feature Count)		
		-32767 Unknown	BH010,BI020,BI050
		>0	BH010,BI020,BI050
exs	Existence Category		
		0 Unknown	BH010,BI020,BI050
		5 Under Construction	BH010,BI020,BI050
		7 Destroyed	BH010,BI020,BI050
		8 Dismantled	BH010,BI020,BI050
		999 Other	BH010,BI020,BI050
hgt	Height Above Surface Level [meters]		
		-32767 Unknown	BH010,BI020,BI050
		>0	BH010,BI020,BI050
hzd	Horizontal Datum		
		0 Unknown	BH010,BI020,BI050
		300 World Geodetic System 1984	BH010,BI020,BI050
		999 Other	BH010,BI020,BI050
len	Length/Diameter [meters]		
		-32767 Unknown	BH010,BI020,BI050
		>0	BH010,BI020,BI050
mcc	Material Composition Category		
		0 Unknown	BH010,BI020,BI050
		20 Composition	BI020,BI050
		21 Concrete	BH010,BI020,BI050
		30 Earthen	BI020
		62 Masonry (Brick/Stone)	BI050
		64 Metal	BH010,BI050
		72 Part Metal	BH010,BI050
		107 Steel	BH010

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		108	Stone	BH010
		999	Other	BH010, BI020, BI050
prm	Permanency			
		1	Permanent	BH010, BI020, BI050
		2	Temporary	BH010, BI020, BI050
qle	Releasability			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
sec	Security Classification			
		0	Unknown	BH010, BI020, BI050
		1	Top Secret	BH010, BI020, BI050
		2	Secret	BH010, BI020, BI050
		3	Confidential	BH010, BI020, BI050
		4	Restricted	BH010, BI020, BI050
		5	Unclassified	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
stc	Source Type Code			
		1	Survey Source	BH010, BI020, BI050
		2	Stereo Imagery Exploitation	BH010, BI020, BI050
		3	Mono Imagery Exploitation	BH010, BI020, BI050
		4	Cartographic Source	BH010, BI020, BI050
		5	Reported Information	BH010, BI020, BI050
		6	Multispectral	BH010, BI020, BI050
		7	Hyperspectral	BH010, BI020, BI050
		8	Synthetic Aperture Radar (SAR)	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
txt	Text Attribute			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	BH010, BI020, BI050
		15	Mean Sea Level	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
voi	Vertical Obstruction Identifier			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
wid	Width [meters]			
		-32767	Unknown	BH010, BI020, BI050
		>0		BH010, BI020, BI050
zv2	Highest Z-Value [meters]			
		-32767	Unknown	BH010, BI020, BI050
	>=-400 and <=30000			BH010, BI020, BI050

TABLE C-8 Population Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Population Obstacle Point Feature Table
 Table Name: popp.pft
 Thematic Index ID Number: 5

```
{Header length}L;
Population Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code5.pti,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
ttc=S,1,N,Tower Type Category,int.vdt,-,-,:
txt=T,*N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code		
	AH050	Fortification	
	AK020	Amusement Park	
		Attraction	
	AK150	Ski Jump	
	AK160	US-Stadium/Amphitheater	
		UK-Stadium/Amphitheatre	
	AL015	Building	

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	AL018	Building Superstructure Addition	
	AL050	US-Display Sign UK-Display Sign/Notice Board	
	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post	
	AL130	US-Monument UK-Monument/Folly	
	AL240	Tower (Non-Communication)	
	AQ020	Aerial Cableway Pylon/Ski Pylon	
	AQ055	Bridge Tower/Bridge Pylon	
afa	Available Facilities		
	-32768	Null	AH050, AK020, AK150, AK160, AL050, AL110, AL130, AL240, AQ020, AQ055
	0	Unknown	AL015, AL018
	19	Helipad	AL015, AL018
	995	None	AL018
	999	Other	AL015, AL018
aha	Absolute Horizontal Accuracy in Meters		
	-32767.0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
	-32767.0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
atn	Aids to Navigation		
	0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	3	Lit	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

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	4 Unlit	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
ava	Absolute Vertical Accuracy in Meters	
	-32767.0 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
bfc	Building Function Category	
	-32768 Null	AK020, AK150, AK160, AL050, AL110, AL130, AL240, AQ020, AQ055
	0 Unknown	AH050, AL015, AL018
	2 Government Building	AL015, AL018
	3 Capitol Building	AL015, AL018
	4 Castle	AH050
	6 Hospital	AL015, AL018
	7 House of Worship	AL015, AL018
	10 Observatory	AL015, AL018
	11 Palace	AL015, AL018
	13 Prison	AH050, AL015, AL018
	15 School	AL015, AL018
	16 House	AL015, AL018
	17 Multi Unit Dwelling	AL015, AL018
	28 Administration Building	AL015, AL018
	29 Aircraft Maintenance Shop	AL015
	30 Hangar	AL015
	53 Bank	AL015, AL018
	58 Observation	AL015, AL018
	99 Battery	AH050
	105 Reformatory	AL015, AL018
	106 Sanitarium	AL015, AL018
	111 Sportsplex	AL015, AL018
	122 Shopping Center	AL015, AL018
	129 Airport Terminal	AL015
	999 Other	AH050, AL015, AL018
bss	Building Superstructure Shape	
	-32768 Null	AK020, AK150, AK160, AL050, AL110, AQ020, AQ055
	0 Unknown	AH050, AL015, AL018, AL130, AL240
	1 Monitor	AH050, AL015, AL018, AL130
	2 Steeple	AH050, AL015, AL018, AL130, AL240
	3 Cupola	AL015, AL018, AL130, AL240

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		4	Turret	AH050,AL015,AL018, AL130
		5	Tower	AH050,AL015,AL018, AL130
		6	Minaret	AL015,AL018,AL130, AL240
		998	Not Applicable	AH050,AL015,AL018, AL130,AL240
		999	Other	AH050,AL015,AL018, AL130,AL240
cdp	Calendar Date Type			
		0	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
		18	Receipt	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
		19	Source	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
		24	Up-to-dateness/revision	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
cdv	Calendar Date Value			
		UNK	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	Character		Text String	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
dir	Directivity			
		0	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
		1	Uni	AH050,AK020,AK160, AL015,AL018,AL050, AL130,AQ020
		2	Bi	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL130
		3	Omni	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
dmf	Density Measure (Feature Count)			

		-32767 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		>0	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
exs	Existence Category		
		0 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		5 Under Construction	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		7 Destroyed	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		8 Dismantled	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		999 Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
gug	Guyed or Unguyed Category		
		-32768 Null	AH050, AK150, AK160, AL015, AL018, AL050, AL130, AQ055
		0 Unknown	AK020, AL110, AL240, AQ020
		1 Guyed	AK020, AL110, AL240, AQ020
		2 Unguyed	AK020, AL110, AL240, AQ020
hgt	Height Above Surface Level [meters]		
		-32767 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		>0	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
hzd	Horizontal Datum		
		0 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

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	300	World Geodetic System 1984	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
len		Length/Diameter [meters]	
	-32767	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
mcc		Material Composition Category	
	0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	20	Composition	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	21	Concrete	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	62	Masonry (Brick/Stone)	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	64	Metal	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	72	Part Metal	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	107	Steel	AK150, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	117	Wood	AH050, AK150, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
prm		Permanency	

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		1	Permanent	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		2	Temporary	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
qle	Releasability			
		UNK	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	Character		Text String	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
sec	Security Classification			
		0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		1	Top Secret	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		2	Secret	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		3	Confidential	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		4	Restricted	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		5	Unclassified	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
ssc	Structure Shape Category			
		-32768	Null	AH050, AK150, AL018, AL050
		0	Unknown	AK020, AK160, AL015, AL110, AL130, AL240, AQ020, AQ055
		10	Pillar/Spindle	AQ020
		12	Pyramid	AL015, AL130, AQ020

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17	Spherical (Hemispherical)	AK020,AL015,AL130
21	Artificial Mountain	AK020
23	Ferris Wheel	AK020
24	Enclosed	AK160
25	Roller Coaster	AK020
46	Open	AK160
52	'A' Frame	AL110,AL130,AL240, AQ020,AQ055
53	'H' Frame	AL110,AL130,AL240, AQ020,AQ055
54	'I' Frame	AL110,AL130,AL240, AQ020,AQ055
56	'Y' Frame	AL110,AL130,AL240, AQ020
60	Mast	AL110,AL130,AL240, AQ055
65	Cylindrical with flat top	AL130
66	Cylindrical with domed top	AL130
71	Cylindrical/Peaked	AL130
74	'T' Frame	AQ020
77	Arch	AL130
79	Round	AL015,AL130,AL240, AQ055
80	Rectangular	AL015,AL130,AL240, AQ055
83	Square	AL015,AL130,AL240, AQ055
84	Irregular	AL015,AL130,AL240, AQ055
109	Obelisk	AL015,AL130,AL240, AQ055
999	Other	AK020,AK160,AL015, AL110,AL130,AL240, AQ020,AQ055
ssr	Structure Shape of Roof	
-32768	Null	AK020,AK150,AL050, AL110,AQ020,AQ055
0	Unknown	AH050,AK160,AL015, AL018,AL130,AL240
6	Conical/Peaked/NUN	AL015,AL018,AL130, AL240
38	Curved/Round (Quonset)	AL015,AL018,AL130, AL240
40	Dome	AK160,AL015,AL018, AL130,AL240
41	Flat	AH050,AL015,AL018, AL130,AL240
42	Gable (Pitched)	AH050,AL015,AL018, AL130,AL240
47	Sawtooth	AL015,AL018,AL130
998	Not Applicable	AL130
999	Other	AH050,AK160,AL015, AL018,AL130,AL240

stc	Source Type Code		
	1	Survey Source	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	2	Stereo Imagery Exploitation	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	3	Mono Imagery Exploitation	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	4	Cartographic Source	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	5	Reported Information	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	6	Multispectral	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	7	Hyperspectral	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	8	Synthetic Aperture Radar (SAR)	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
ttc	Tower Type Category		
	-32768	Null	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AQ020, AQ055
	0	Unknown	AL240
	2	Observation/Lookout	AL240
	12	Fire	AL240
	999	Other	AL240
txt	Text Attribute		
	UNK	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

	Character	Text String	
			AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
vdc	Vertical (Sounding) Datum Category		
	0	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	15	Mean Sea Level	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	999	Other	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
voi	Vertical Obstruction Identifier		
	UNK	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	Character	Text String	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
wid	Width [meters]		
	-32767	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	>0		AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
zv2	Highest Z-Value [meters]		
	-32767	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	>=-400 and <=30000		AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055

TABLE C-9 Transportation Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Transportation Obstacle Point Feature Table
 Table Name: transp.pft
 Thematic Index ID Number: 6

```
{Header length}L;
Transportation Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code6.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bot=S,1,N,Bridge Opening Type,int.vdt,-,-,:
bsc=S,1,N,Bridge/Bridge Superstructure Category,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	AQ040	Bridge/Overpass/Viaduct	
		AQ050	Bridge Superstructure	
		AQ060	Control Tower	
		AQ110	Mooring Mast	
aha	Absolute Horizontal Accuracy in Meters	-32767.0	Unknown	AQ040,AQ050,AQ060, AQ110

		>0.0	AQ040,AQ050,AQ060, AQ110
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
		-32767.0 Unknown	AQ040,AQ050,AQ060, AQ110
		>0.0	AQ040,AQ050,AQ060, AQ110
atn	Aids to Navigation		
		0 Unknown	AQ040,AQ050,AQ060, AQ110
		3 Lit	AQ040,AQ050,AQ060, AQ110
		4 Unlit	AQ040,AQ050,AQ060, AQ110
ava	Absolute Vertical Accuracy in Meters		
		-32767.0 Unknown	AQ040,AQ050,AQ060, AQ110
		>0.0	AQ040,AQ050,AQ060, AQ110
bot	Bridge Opening Type		
		-32768 Null	AQ050,AQ060,AQ110
		0 Unknown	AQ040
		4 Draw/Bascule	AQ040
		10 Swing	AQ040
		11 Lift	AQ040
		13 Not Applicable	AQ040
		999 Other	AQ040
bsc	Bridge/Bridge Superstructure Category		
		-32768 Null	AQ060,AQ110
		0 Unknown	AQ040,AQ050
		1 Arch (assume open spandrel)	AQ040,AQ050
		2 Cantilever	AQ040,AQ050
		3 Deck	AQ040,AQ050
		6 Girder	AQ040,AQ050
		7 Tower Suspension	AQ040,AQ050
		8 Truss	AQ040,AQ050
		9 Suspension	AQ040,AQ050
		12 Transporter	AQ040,AQ050
		15 Slab	AQ040,AQ050
		16 Stringer (beam)	AQ040,AQ050
		17 Arch Suspension	AQ040,AQ050
		26 Arch (closed spandrel)	AQ040,AQ050
		27 Cable Stayed	AQ040,AQ050
		999 Other	AQ040,AQ050
cdp	Calendar Date Type		
		0 Unknown	AQ040,AQ050,AQ060, AQ110
		18 Receipt	AQ040,AQ050,AQ060, AQ110

	19	Source	AQ040, AQ050, AQ060, AQ110
	24	Up-to-dateness/revision	AQ040, AQ050, AQ060, AQ110
cdv		Calendar Date Value	
	UNK	Unknown	AQ040, AQ050, AQ060, AQ110
		Character Text String	AQ040, AQ050, AQ060, AQ110
dir		Directivity	
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	2	Bi	AQ040, AQ050, AQ060
	3	Omni	AQ040, AQ050, AQ060, AQ110
dmf		Density Measure (Feature Count)	
	-32767	Unknown	AQ040, AQ050, AQ060, AQ110
	>0		AQ040, AQ050, AQ060, AQ110
exs		Existence Category	
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	5	Under Construction	AQ040, AQ050, AQ060, AQ110
	7	Destroyed	AQ040, AQ050, AQ060, AQ110
	8	Dismantled	AQ040, AQ050, AQ060, AQ110
	999	Other	AQ040, AQ050, AQ060, AQ110
gug		Guyed or Unguyed Category	
	-32768	Null	AQ040, AQ050
	0	Unknown	AQ060, AQ110
	1	Guyed	AQ060, AQ110
	2	Unguyed	AQ060, AQ110
hgt		Height Above Surface Level [meters]	
	-32767	Unknown	AQ040, AQ050, AQ060, AQ110
	>0		AQ040, AQ050, AQ060, AQ110
hzd		Horizontal Datum	
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	300	World Geodetic System 1984	AQ040, AQ050, AQ060, AQ110
	999	Other	AQ040, AQ050, AQ060, AQ110
len		Length/Diameter [meters]	

		-32767	Unknown	AQ040, AQ050, AQ060, AQ110
		>0		AQ040, AQ050, AQ060, AQ110
mcc	Material Composition Category			
		0	Unknown	AQ040, AQ050, AQ060, AQ110
		20	Composition	AQ040, AQ050, AQ060, AQ110
		21	Concrete	AQ040, AQ050, AQ060, AQ110
		62	Masonry (Brick/Stone)	AQ040, AQ050, AQ060, AQ110
		64	Metal	AQ040, AQ050, AQ060, AQ110
		72	Part Metal	AQ040, AQ050, AQ060, AQ110
		107	Steel	AQ040, AQ050, AQ060, AQ110
		117	Wood	AQ040, AQ050, AQ060, AQ110
		999	Other	AQ040, AQ050, AQ060, AQ110
prm	Permanency			
		1	Permanent	AQ040, AQ050, AQ060, AQ110
		2	Temporary	AQ040, AQ050, AQ060, AQ110
qle	Releasability			
		UNK	Unknown	AQ040, AQ050, AQ060, AQ110
	Character		Text String	AQ040, AQ050, AQ060, AQ110
sec	Security Classification			
		0	Unknown	AQ040, AQ050, AQ060, AQ110
		1	Top Secret	AQ040, AQ050, AQ060, AQ110
		2	Secret	AQ040, AQ050, AQ060, AQ110
		3	Confidential	AQ040, AQ050, AQ060, AQ110
		4	Restricted	AQ040, AQ050, AQ060, AQ110
		5	Unclassified	AQ040, AQ050, AQ060, AQ110
		999	Other	AQ040, AQ050, AQ060, AQ110
ssc	Structure Shape Category			
		-32768	Null	AQ040, AQ050, AQ060
		0	Unknown	AQ110
		52	'A' Frame	AQ110

		54 'I' Frame	AQ110
		60 Mast	AQ110
		999 Other	AQ110
ssr	Structure Shape of Roof		
		-32768 Null	AQ040, AQ050, AQ110
		0 Unknown	AQ060
		6 Conical/Peaked/NUN	AQ060
		38 Curved/Round (Quonset)	AQ060
		40 Dome	AQ060
		41 Flat	AQ060
		42 Gable (Pitched)	AQ060
		999 Other	AQ060
stc	Source Type Code		
		1 Survey Source	AQ040, AQ050, AQ060, AQ110
		2 Stereo Imagery Exploitation	AQ040, AQ050, AQ060, AQ110
		3 Mono Imagery Exploitation	AQ040, AQ050, AQ060, AQ110
		4 Cartographic Source	AQ040, AQ050, AQ060, AQ110
		5 Reported Information	AQ040, AQ050, AQ060, AQ110
		6 Multispectral	AQ040, AQ050, AQ060, AQ110
		7 Hyperspectral	AQ040, AQ050, AQ060, AQ110
		8 Synthetic Aperture Radar (SAR)	AQ040, AQ050, AQ060, AQ110
		999 Other	AQ040, AQ050, AQ060, AQ110
txt	Text Attribute		
		UNK Unknown	AQ040, AQ050, AQ060, AQ110
		Character Text String	AQ040, AQ050, AQ060, AQ110
vdc	Vertical (Sounding) Datum Category		
		0 Unknown	AQ040, AQ050, AQ060, AQ110
		15 Mean Sea Level	AQ040, AQ050, AQ060, AQ110
		999 Other	AQ040, AQ050, AQ060, AQ110
voi	Vertical Obstruction Identifier		
		UNK Unknown	AQ040, AQ050, AQ060, AQ110
		Character Text String	AQ040, AQ050, AQ060, AQ110
wid	Width [meters]		
		-32767 Unknown	AQ040, AQ050, AQ060, AQ110

	>0	AQ040, AQ050, AQ060, AQ110
zv2	Highest Z-Value [meters]	
	-32767 Unknown	AQ040, AQ050, AQ060, AQ110
	>=-400 and <=30000	AQ040, AQ050, AQ060, AQ110

TABLE C-10 Utility Obstacle Point Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Utility Obstacle Point Feature Table
 Table Name: utilp.pft
 Thematic Index ID Number: 7

```
{Header length}L;
Utility Obstacle Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code7.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
tst=S,1,N,Transmission Line Suspension,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		AD030	Substation/Transformer Yard	
		AT006	Overhead Cable	
		AT010	US-Disk/Dish UK-Disk Aerial/Dish Aerial	

	AT040	US-Power Transmission Pylon UK-Power Transmission Pylon/Pole	
	AT050	Communication Building	
	AT070	Telephone-Telegraph Pylon/Pole	
	AT080	Communication Tower	
aha		Absolute Horizontal Accuracy in Meters	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
aho		Accuracy of Obstruction Height Above Ground Level [meters]	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
atn		Aids to Navigation	
	-32768	Null	AT006
	0	Unknown	AD030, AT010, AT040, AT050, AT070, AT080
	3	Lit	AD030, AT010, AT040, AT050, AT070, AT080
	4	Unlit	AD030, AT010, AT040, AT050, AT070, AT080
ava		Absolute Vertical Accuracy in Meters	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
bfc		Building Function Category	
	-32768	Null	AD030, AT006, AT010, AT040, AT070, AT080
	0	Unknown	AT050
	40	Telephone Switching Station	AT050
	86	Telephone Exchange (Main)	AT050
bss		Building Superstructure Shape	
	-32768	Null	AD030, AT006, AT010, AT040, AT070, AT080
	0	Unknown	AT050
	5	Tower	AT050
	998	Not Applicable	AT050
	999	Other	AT050

cdp	Calendar Date Type		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	18	Receipt	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	19	Source	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	24	Up-to-dateness/revision	AD030, AT006, AT010, AT040, AT050, AT070, AT080
cdv	Calendar Date Value		
	UNK	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character	Text String	AD030, AT006, AT010, AT040, AT050, AT070, AT080
dir	Directivity		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	2	Bi	AT006, AT050
	3	Omni	AD030, AT010, AT040, AT050, AT070, AT080
dmf	Density Measure (Feature Count)		
	-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
exs	Existence Category		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	5	Under Construction	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	7	Destroyed	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	8	Dismantled	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
gug	Guyed or Unguyed Category		

		-32768	Null	AD030, AT006, AT010, AT050
		0	Unknown	AT040, AT070, AT080
		1	Guyed	AT040, AT070, AT080
		2	Unguyed	AT040, AT070, AT080
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
hzd	Horizontal Datum			
		0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		300	World Geodetic System 1984	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
len	Length/Diameter [meters]			
		-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
mcc	Material Composition Category			
		0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		20	Composition	AT040, AT050, AT070, AT080
		21	Concrete	AD030, AT040, AT050, AT070, AT080
		62	Masonry (Brick/Stone)	AD030, AT040, AT050, AT070, AT080
		64	Metal	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		72	Part Metal	AT010, AT040, AT050, AT070, AT080
		107	Steel	AD030, AT040, AT050, AT070, AT080
		117	Wood	AD030, AT040, AT050, AT070, AT080
		999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
nst	Navigation System Types			

		-32768	Null	AD030, AT006, AT010, AT040, AT050, AT070
		0	Unknown	AT080
		12	Radio	AT080
		15	TV	AT080
		16	Microwave	AT080
		998	Not Applicable	AT080
		999	Other	AT080
pfg	Predominant Feature Height With greater than 1 meter resolution			
	NaN	Null		AD030, AT006, AT010, AT040, AT050, AT070
		-32767.0	Unknown	AT080
		>0.0		AT080
prm	Permanency			
		1	Permanent	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		2	Temporary	AD030, AT006, AT010, AT040, AT050, AT070, AT080
qle	Releasability			
		UNK	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character	Text	String	AD030, AT006, AT010, AT040, AT050, AT070, AT080
sec	Security Classification			
		0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		1	Top Secret	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		2	Secret	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		3	Confidential	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		4	Restricted	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		5	Unclassified	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
ssc	Structure Shape Category			
		-32768	Null	AT006, AT010

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	0	Unknown	AD030,AT040,AT050, AT070,AT080
	12	Pyramid	AT040,AT070
	52	'A' Frame	AD030,AT040,AT070, AT080
	53	'H' Frame	AD030,AT040,AT070, AT080
	54	'I' Frame	AD030,AT040,AT070, AT080
	56	'Y' Frame	AD030,AT040,AT070, AT080
	60	Mast	AT040,AT070,AT080
	74	'T' Frame	AD030,AT040,AT070
	79	Round	AT050
	80	Rectangular	AT050
	83	Square	AT050
	84	Irregular	AT050
	999	Other	AD030,AT040,AT050, AT070,AT080
ssr		Structure Shape of Roof	
	-32768	Null	AD030,AT006,AT010, AT040,AT070,AT080
	0	Unknown	AT050
	40	Dome	AT050
	41	Flat	AT050
	42	Gable (Pitched)	AT050
	999	Other	AT050
stc		Source Type Code	
	1	Survey Source	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	2	Stereo Imagery Exploitation	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	3	Mono Imagery Exploitation	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	4	Cartographic Source	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	5	Reported Information	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	6	Multispectral	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	7	Hyperspectral	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	8	Synthetic Aperture Radar (SAR)	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	999	Other	AD030,AT006,AT010, AT040,AT050,AT070, AT080

tst	Transmission line Suspension			
	-32768	Null		AD030, AT010, AT040, AT050, AT070, AT080
	0	Unknown		AT006
	1	Normal Suspension		AT006
	2	Catenary (Over Mountains)		AT006
	3	Catenary (Over Water)		AT006
	998	Not Applicable		AT006
999	Other		AT006	
txt	Text Attribute			
		UNK	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character		Text String	AD030, AT006, AT010, AT040, AT050, AT070, AT080
vdc	Vertical (Sounding) Datum Category			
	0	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	15	Mean Sea Level		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	999	Other		AD030, AT006, AT010, AT040, AT050, AT070, AT080
voi	Vertical Obstruction Identifier			
		UNK	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character		Text String	AD030, AT006, AT010, AT040, AT050, AT070, AT080
zv2	Highest Z-Value [meters]			
	-32767	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>=-400 and <=30000			AD030, AT006, AT010, AT040, AT050, AT070, AT080

TABLE C-11 Aeronautical Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Aeronautical Obstacle Connected Node Feature Table
 Table Name: aeroc.pft
 Thematic Index ID Number: 8

```
{Header length}L;
Aeronautical Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code8.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code		
		GA035	NAVAIDS (Aeronautical)
		GB040	Launch Pad
		GB220	Air Obstruction
		GB221	Miscellaneous Air Obstruction

aha	Absolute Horizontal Accuracy in Meters (meters)	-32767	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
atn	Aids to Navigation	0	Unknown	GA035, GB040, GB220, GB221
		3	Lit	GA035, GB040, GB220, GB221
		4	Unlit	GA035, GB040, GB220, GB221
ava	Absolute Vertical Accuracy in Meters	-32767	Unknown	GA035, GB040, GB220, GB221
		>0.0		GA035, GB040, GB220, GB221
cdp	Calendar Date Type	0	Unknown	GA035, GB040, GB220, GB221
		18	Receipt	GA035, GB040, GB220, GB221
		19	Source	GA035, GB040, GB220, GB221
		24	Up-to- dateness/revision	GA035, GB040, GB220, GB221
cdv	Calendar Date Value	UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
dir	Directivity	0	Unknown	GA035, GB040, GB220, GB221
		1	Uni	GB040, GB220, GB221
		2	Bi	GB040, GB220, GB221
		3	Omni	GA035, GB040, GB220, GB221
dmf	Density Measure (Feature Count)	-32767	Unknown	GA035, GB040, GB220, GB221
		>0		GA035, GB040, GB220, GB221
exs	Existence Category			

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		0	Unknown	GA035, GB040, GB220, GB221
		5	Under Construction	GA035, GB040, GB220, GB221
		7	Destroyed	GA035, GB040, GB220, GB221
		8	Dismantled	GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
gug	Guyed or Unguyed Category			
		-32768	Null	GA035, GB040, GB220
		0	Unknown	GB221
		1	Guyed	GB221
		2	Unguyed	GB221
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	GA035, GB040, GB220, GB221
		>0		GA035, GB040, GB220, GB221
hzd	Horizontal Datum			
		0	Unknown	GA035, GB040, GB220, GB221
		300	World Geodetic System 1984	GA035, GB040, GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
len	Length/Diameter [meters]			
		-32768	Null	GB040
		-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
mcc	Material Composition Category			
		0	Unknown	GA035, GB040, GB220, GB221
		20	Composition	GB040, GB221
		21	Concrete	GA035, GB040, GB221
		30	Earthen	GB221
		62	Masonry (Brick/Stone)	GB221
		64	Metal	GB040, GB221
		72	Part Metal	GA035, GB040, GB221
		107	Steel	GB040, GB221
		117	Wood	GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
nst	Navigation System Types			
		-32768	Null	GB040, GB220, GB221
		0	Unknown	GA035
		7	Long Range Air Navigation System (LORAN)	GA035

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		10	Radar Responder Beacon (RACON)	GA035
		11	Radar	GA035
		20	VHF Omni Directional Radio Range (VOR)	GA035
		21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	GA035
		22	VHF Omni Directional Radio Range and TACAN (VORTAC)	GA035
		23	Tactical Air Navigation Equipment (TACAN)	GA035
		26	Localizer (LOC)	GA035
		27	Localizer/Distance Measuring Equipment (LOC/DME)	GA035
		35	Radar Antenna	GA035
		37	Precision Approach Radar (PAR)	GA035
		40	Radio Beacon	GA035
		45	Radar Station	GA035
		55	Radar reflector	GA035
		999	Other	GA035
pfh	Predominant Feature Height	With greater than 1 meter resolution		
		NaN	Null	GA035,GB040
		-32767.0	Unknown	GB220,GB221
		>0.0		GB220,GB221
prm	Permanency			
		1	Permanent	GA035,GB040,GB220, GB221
		2	Temporary	GA035,GB040,GB220, GB221
qle	Releasability			
		UNK	Unknown	GA035,GB040,GB220, GB221
		Character	Text String	GA035,GB040,GB220, GB221
sec	Security Classification			
		0	Unknown	GA035,GB040,GB220, GB221
		1	Top Secret	GA035,GB040,GB220, GB221

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	2	Secret	GA035, GB040, GB220, GB221
	3	Confidential	GA035, GB040, GB220, GB221
	4	Restricted	GA035, GB040, GB220, GB221
	5	Unclassified	GA035, GB040, GB220, GB221
	999	Other	GA035, GB040, GB220, GB221
ssc	Structure Shape Category		
	-32768	Null	GB040, GB220
	0	Unknown	GA035, GB221
	4	Bullet	GB221
	10	Pillar/Spindle	GB221
	12	Pyramid	GB221
	17	Spherical (Hemispherical)	GB221
	21	Artificial Mountain	GB221
	52	'A' Frame	GB221
	53	'H' Frame	GB221
	54	'I' Frame	GB221
	56	'Y' Frame	GB221
	60	Mast	GB221
	74	'T' Frame	GB221
	77	Arch	GB221
	79	Round	GB221
	80	Rectangular	GB221
	83	Square	GB221
	84	Irregular	GB221
	87	Dome	GA035
	109	Obelisk	GB221
	999	Other	GA035, GB221
stc	Source Type Code		
	1	Survey Source	GA035, GB040, GB220, GB221
	2	Stereo Imagery Exploitation	GA035, GB040, GB220, GB221
	3	Mono Imagery Exploitation	GA035, GB040, GB220, GB221
	4	Cartographic Source	GA035, GB040, GB220, GB221
	5	Reported Information	GA035, GB040, GB220, GB221
	6	Multispectral	GA035, GB040, GB220, GB221
	7	Hyperspectral	GA035, GB040, GB220, GB221
	8	Synthetic Aperture Radar (SAR)	GA035, GB040, GB220, GB221
	999	Other	GA035, GB040, GB220, GB221

txt	Text Attribute	UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
vdc	Vertical (Sounding) Datum Category	0	Unknown	GA035, GB040, GB220, GB221
		15	Mean Sea Level	GA035, GB040, GB220, GB221
		999	Other	GA035, GB040, GB220, GB221
voi	Vertical Obstruction Identifier	UNK	Unknown	GA035, GB040, GB220, GB221
		Character	Text String	GA035, GB040, GB220, GB221
wid	Width [meters]	-32768	Null	GB040
		-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
zv2	Highest Z-Value [meters]	-32767	Unknown	GA035, GB040, GB220, GB221
		>=-400 and <=30000	GB040, GB221	GA035, GB040, GB220, GB221

TABLE C-12 Hydrographic Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Hydrographic Obstacle Connected Node Feature Table
 Table Name: hydroc.pft
 Thematic Index ID Number: 9

```
{Header length}L;
Hydrographic Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code9.pti,-,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
opc=S,1,N,Offshore Platform Classification,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	BC040 Light BC050 Lighthouse BC070 Light Vessel/Lightship BD110 Platform	
afa	Available Facilities	-32768 Null 0 Unknown 19 Helipad 995 None 999 Other	BC040,BC050 BC070,BD110 BC070,BD110 BD110 BC070,BD110

aha	Absolute Horizontal Accuracy in Meters	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
atn	Aids to Navigation	-32768	Null	BC050,BC070
		0	Unknown	BC040,BD110
		3	Lit	BC040,BD110
		4	Unlit	BC040,BD110
ava	Absolute Vertical Accuracy in Meters	-32767.0	Unknown	BC040,BC050,BC070, BD110
		>0.0		BC040,BC050,BC070, BD110
cdp	Calendar Date Type	0	Unknown	BC040,BC050,BC070, BD110
		18	Receipt	BC040,BC050,BC070, BD110
		19	Source	BC040,BC050,BC070, BD110
		24	Up-to- dateness/revision	BC040,BC050,BC070, BD110
cdv	Calendar Date Value	UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
dir	Directivity	0	Unknown	BC040,BC050,BC070, BD110
		3	Omni	BC040,BC050,BC070, BD110
dmf	Density Measure (Feature Count)	-32768	Null	BC070
		-32767	Unknown	BC040,BC050,BD110
		>0		BC040,BC050,BD110
exs	Existence Category	0	Unknown	BC040,BC050,BC070, BD110
		5	Under Construction	BC040,BC050,BD110

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		7	Destroyed	BC040,BC050,BD110
		8	Dismantled	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
gug	Guyed or Unguyed Category			
		-32768	Null	BC050,BC070,BD110
		0	Unknown	BC040
		1	Guyed	BC040
		2	Unguyed	BC040
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	BC040,BC050,BC070, BD110
		>0		BC040,BC050,BC070, BD110
hzd	Horizontal Datum			
		0	Unknown	BC040,BC050,BC070, BD110
		300	World Geodetic System 1984	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
mcc	Material Composition Category			
		0	Unknown	BC040,BC050,BC070, BD110
		21	Concrete	BC050,BD110
		64	Metal	BC070,BD110
		72	Part Metal	BC040,BC050,BD110
		107	Steel	BC070,BD110
		117	Wood	BD110
		999	Other	BC040,BC050,BC070, BD110
opc	Offshore Platform Classification			
		-32768	Null	BC040,BC050,BC070
		10	Navigation Aid Support	BD110
prm	Permanency			
		1	Permanent	BC040,BC050,BC070, BD110
		2	Temporary	BC040,BC050,BC070, BD110
qle	Releasability			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
sec	Security Classification			
		0	Unknown	BC040,BC050,BC070, BD110

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		1	Top Secret	BC040,BC050,BC070, BD110
		2	Secret	BC040,BC050,BC070, BD110
		3	Confidential	BC040,BC050,BC070, BD110
		4	Restricted	BC040,BC050,BC070, BD110
		5	Unclassified	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
stc	Source Type Code			
		1	Survey Source	BC040,BC050,BC070, BD110
		2	Stereo Imagery Exploitation	BC040,BC050,BC070, BD110
		3	Mono Imagery Exploitation	BC040,BC050,BC070, BD110
		4	Cartographic Source	BC040,BC050,BC070, BD110
		5	Reported Information	BC040,BC050,BC070, BD110
		6	Multispectral	BC040,BC050,BC070, BD110
		7	Hyperspectral	BC040,BC050,BC070, BD110
		8	Synthetic Aperture Radar (SAR)	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
txt	Text Attribute			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	BC040,BC050,BC070, BD110
		15	Mean Sea Level	BC040,BC050,BC070, BD110
		999	Other	BC040,BC050,BC070, BD110
voi	Vertical Obstruction Identifier			
		UNK	Unknown	BC040,BC050,BC070, BD110
		Character	Text String	BC040,BC050,BC070, BD110
zv2	Highest Z-Value [meters]			
		-32767	Unknown	BC040,BC050,BC070, BD110

≥ -400 and ≤ 30000

BC040, BC050, BC070,
BD110

TABLE C-13 Industry Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Industry Obstacle Connected Node Feature Table
 Table Name: indc.pft
 Thematic Index ID Number: 10

```
{Header length}L;
Industry Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code10.pti,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
cra=S,1,N,Crane Type Category,int.vdt,-,-,:
crm=S,1,N,Crane Mobility Type,int.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
loc=S,1,N,Location Category,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:

pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
ppc=S,1,N,Power Plant Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
pro=S,1,N,Product Category,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	AA040 Rig/Superstructure	

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AB000 US-Disposal
 Site/Waste Pile
 UK-Refuse Tip/Slag
 Heap
 AC000 Processing
 Plant/Treatment
 Plant
 AC010 Blast Furnace
 AC020 Catalytic Cracker
 AD010 US-Power Plant
 UK-Power Station
 AF010 Chimney/Smokestack
 AF020 Conveyor
 AF030 Cooling Tower
 AF040 Crane
 AF050 US-
 Dredge/Powershovel
 /Dragline UK-
 Dredger/Powershove
 l/Dragline
 AF070 Flare Pipe
 AF080 Hopper
 AJ050 Windmill
 AJ051 Windmotor
 AM010 Depot (Storage)
 AM020 Grain Bin/Silo
 AM030 Grain Elevator
 AM070 Tank
 AM080 Water Tower

afa Available Facilities

-32768	Null	AB000,AC000,AC010, AC020,AD010,AF010, AF020,AF030,AF040, AF050,AF070,AF080, AJ050,AJ051,AM010, AM020,AM030,AM070, AM080
0	Unknown	AA040
19	Helipad	AA040
995	None	AA040
999	Other	AA040

aha Absolute Horizontal Accuracy in Meters

-32767.0	Unknown	AA040,AB000,AC000, AC010,AC020,AD010, AF010,AF020,AF030, AF040,AF050,AF070, AF080,AJ050,AJ051, AM010,AM020,AM030, AM070,AM080
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		>0.0	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
		-32767.0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		>0.0	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
atn	Aids to Navigation		
		-32768 Null	AM010
		0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
		3 Lit	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
		4 Unlit	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
ava	Absolute Vertical Accuracy in Meters		
		-32767.0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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	>0.0		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
bss	Building Superstructure Shape		
	-32768	Null	AA040, AB000, AC010, AC020, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	0	Unknown	AC000, AD010
	1	Monitor	AC000, AD010
	4	Turret	AC000, AD010
	5	Tower	AC000, AD010
	998	Not Applicable	AC000, AD010
	999	Other	AC000, AD010
cdp	Calendar Date Type		
	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	18	Receipt	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	19	Source	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	24	Up-to- dateness/revision	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
cdv	Calendar Date Value		

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		UNK	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	Character		Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
cra	Crane Type Category			
		-32768	Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AF040
		2	Bridge/Gantry	AF040
		3	Rotating	AF040
		998	Not Applicable	AF040
		999	Other	AF040
crm	Crane Mobility Type			
		-32768	Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AF040
		1	Fixed	AF040
		2	Traveling	AF040
		3	Floating	AF040
		999	Other	AF040
dir	Directivity			
		0	Unknown	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AJ050, AJ051, AM020, AM030, AM070, AM080
		2	Bi	AC000, AF020, AF040, AF050, AF080, AM080

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		3 Omni	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
dmf	Density Measure (Feature Count)	-32767 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		>0	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
exs	Existence Category	0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		5 Under Construction	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		7 Destroyed	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		8 Dismantled	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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	999 Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
gug	Guyed or Unguyed Category	
	-32768 Null	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF080, AM010, AM020, AM030, AM070, AM080
	0 Unknown	AF040, AF070, AJ050, AJ051
	1 Guyed	AF040, AF070, AJ050, AJ051
	2 Unguyed	AF040, AF070, AJ050, AJ051
hgt	Height Above Surface Level [meters]	
	-32767 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	>0	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
hzd	Horizontal Datum	
	0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	300 World Geodetic System 1984	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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		999 Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
loc	Location Category		
		-32768 Null	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF080, AJ050, AM010, AM020, AM030, AM070, AM080
		0 Unknown	AA040, AF070, AJ051
		8 On Ground Surface	AA040, AF070, AJ051
		22 Off Shore	AA040AF070, AJ051
		999 Other	AA040, AF070, AJ051
mcc	Material Composition Category		
		0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		20 Composition	AC000, AC020, AD010, AF030, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		21 Concrete	AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		62 Masonry (Brick/Stone)	AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		64 Metal	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		72 Part Metal	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF050, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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	107	Steel		AA040, AC000, AC010, AC020, AD010, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	117	Wood		AC000, AC020, AD010, AF030, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	999	Other		AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
pfh	Predominant Feature Height	With greater than 1 meter resolution		
		NaN	Null	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM020, AM030, AM080
		-32767.0	Unknown	AC000, AM010, AM070
		>0.0		AC000, AM010, AM070
ppc	Power Plant Category			
		-32768	Null	AA040, AB000, AC000, AC010, AC020, AF020, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AD010, AF010, AF030
		1	Hydro-electric	AD010
		2	Nuclear	AD010, AF010, AF030
		3	Solar	AD010
		4	Thermal	AD010, AF010, AF030
		5	Wind	AD010
		6	Tidal	AD010
		7	Internal Combustion	AD010, AF010, AF030
		998	Not Applicable	AF010, AF030
		999	Other	AD010, AF010, AF030
prm	Permanency			
		1	Permanent	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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		2	Temporary	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
pro	Product Category	-32768	Null	AA040, AB000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		0	Unknown	AC000
		13	Chemical	AC000
		17	Coal	AC000
		19	Coke	AC000
		38	Gas	AC000
		64	Metal	AC000
		67	Oil	AC000
		999	Other	AC000
qle	Releasability	UNK	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
	Character		Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
sec	Security Classification	0	Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		1	Top Secret	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

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2	Secret	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
3	Confidential	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
4	Restricted	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
5	Unclassified	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
SSC	Structure Shape Category	
-32768	Null	AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF040, AF070, AM010
0	Unknown	AA040, AF030, AF050, AF080, AJ050, AJ051, AM020, AM030, AM070, AM080
4	Bullet	AM070
7	Cylindrical (Upright)/CAN	AM080
12	Pyramid	AM020, AM030, AM070, AM080
17	Spherical (Hemispherical)	AM020, AM030, AM070, AM080
52	'A' Frame	AA040, AF050
54	'I' Frame	AA040, AF050
59	Telescoping Gasholder (Gasometer)	AM070

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	60	Mast	AJ050,AJ051
	65	Cylindrical with flat top	AM080
	66	Cylindrical with domed top	AM080
	71	Cylindrical/Peaked	AM080
	76	Funnel	AF080
	79	Round	AF030,AF080,AM020,AM030,AM070,AM080
	80	Rectangular	AF030,AF080,AM020,AM030,AM070,AM080
	83	Square	AF030,AF080,AM020,AM030,AM070,AM080
	84	Irregular	AF030,AF080,AM020,AM030,AM070,AM080
	109	Obelisk	AM020,AM030,AM070
	999	Other	AA040,AF030,AF050,AF080,AJ050,AJ051,AM020,AM030,AM070,AM080
ssr	Structure Shape of Roof		
	-32768	Null	AA040,AB000,AC010,AC020,AF010,AF020,AF030,AF040,AF050,AF070,AF080,AJ050,AJ051,AM010,AM080
	0	Unknown	AC000,AD010,AM020,AM030,AM070
	6	Conical/Peaked/NUN	AC000,AD010,AM020,AM030,AM070
	38	Curved/Round (Quonset)	AC000,AD010,AM020,AM030,AM070
	40	Dome	AC000,AD010,AM020,AM030,AM070
	41	Flat	AC000,AD010,AM020,AM030,AM070
	42	Gable (Pitched)	AC000,AD010,AM020,AM030,AM070
	47	Sawtooth	AC000,AD010
	999	Other	AC000,AD010,AM020,AM030,AM070
stc	Source Type Code		
	1	Survey Source	AA040,AB000,AC000,AC010,AC020,AD010,AF010,AF020,AF030,AF040,AF050,AF070,AF080,AJ050,AJ051,AM010,AM020,AM030,AM070,AM080

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2	Stereo Imagery Exploitation	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
3	Mono Imagery Exploitation	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
4	Cartographic Source	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
5	Reported Information	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
6	Multispectral	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
7	Hyperspectral	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
8	Synthetic Aperture Radar (SAR)	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
999	Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080

txt	Text Attribute	UNK Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		Character Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
vdc	Vertical (Sounding) Datum Category	0 Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		15 Mean Sea Level	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		999 Other	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
voi	Vertical Obstruction Identifier	UNK Unknown	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
		Character Text String	AA040, AB000, AC000, AC010, AC020, AD010, AF010, AF020, AF030, AF040, AF050, AF070, AF080, AJ050, AJ051, AM010, AM020, AM030, AM070, AM080
zv2	Highest Z-Value [meters]		

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-32767 Unknown

AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080

>=-400 and <=30000

AA040, AB000, AC000,
AC010, AC020, AD010,
AF010, AF020, AF030,
AF040, AF050, AF070,
AF080, AJ050, AJ051,
AM010, AM020, AM030,
AM070, AM080

TABLE C-14 Inland Water Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Inland Water Obstacle Connected Node Feature Table
 Table Name: iwac.pft
 Thematic Index ID Number: 11

```
{Header length}L;
Inland Water Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_codell.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:

prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code		
	BH010	Aqueduct	
	BI020	Dam/Weir	
	BI050	Water Intake Tower	
aha	Absolute Horizontal Accuracy in Meters		
	-32767.0	Unknown	BH010,BI020,BI050
	>0.0		BH010,BI020,BI050
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
	-32767.0	Unknown	BH010,BI020,BI050
	>0.0		BH010,BI020,BI050

atn	Aids to Navigation	0	Unknown	BH010, BI020, BI050
		3	Lit	BH010, BI020, BI050
		4	Unlit	BH010, BI020, BI050
ava	Absolute Vertical Accuracy in Meters	-32767.0	Unknown	BH010, BI020, BI050
		>0.0		BH010, BI020, BI050
cdp	Calendar Date Type	0	Unknown	BH010, BI020, BI050
		18	Receipt	BH010, BI020, BI050
		19	Source	BH010, BI020, BI050
		24	Up-to-dateness/revision	BH010, BI020, BI050
cdv	Calendar Date Value	UNK	Unknown	BH010, BI020, BI050
		Character	Text String	BH010, BI020, BI050
dir	Directivity	0	Unknown	BH010, BI020, BI050
		1	Uni	BH010, BI020
		2	Bi	BH010, BI020
		3	Omni	BH010, BI020, BI050
dmf	Density Measure (Feature Count)	-32767	Unknown	BH010, BI020, BI050
		>0		BH010, BI020, BI050
exs	Existence Category	0	Unknown	BH010, BI020, BI050
		5	Under Construction	BH010, BI020, BI050
		7	Destroyed	BH010, BI020, BI050
		8	Dismantled	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
hgt	Height Above Surface Level [meters]	-32767	Unknown	BH010, BI020, BI050
		>0		BH010, BI020, BI050
hzd	Horizontal Datum	0	Unknown	BH010, BI020, BI050
		300	World Geodetic System 1984	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
len	Length/Diameter [meters]	-32767	Unknown	BH010, BI020, BI050
		>0		BH010, BI020, BI050
mcc	Material Composition Category	0	Unknown	BH010, BI020, BI050
		20	Composition	BI020, BI050
		21	Concrete	BH010, BI020, BI050
		30	Earthen	BI020
		62	Masonry (Brick/Stone)	BI050
		64	Metal	BH010, BI050

		72	Part Metal	BH010, BI050
		107	Steel	BH010
		108	Stone	BH010
		999	Other	BH010, BI020, BI050
prm	Permanency			
		1	Permanent	BH010, BI020, BI050
		2	Temporary	BH010, BI020, BI050
qle	Releasability			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
sec	Security Classification			
		0	Unknown	BH010, BI020, BI050
		1	Top Secret	BH010, BI020, BI050
		2	Secret	BH010, BI020, BI050
		3	Confidential	BH010, BI020, BI050
		4	Restricted	BH010, BI020, BI050
		5	Unclassified	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
stc	Source Type Code			
		1	Survey Source	BH010, BI020, BI050
		2	Stereo Imagery Exploitation	BH010, BI020, BI050
		3	Mono Imagery Exploitation	BH010, BI020, BI050
		4	Cartographic Source	BH010, BI020, BI050
		5	Reported Information	BH010, BI020, BI050
		6	Multispectral	BH010, BI020, BI050
		7	Hyperspectral	BH010, BI020, BI050
		8	Synthetic Aperture Radar (SAR)	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
txt	Text Attribute			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	BH010, BI020, BI050
		15	Mean Sea Level	BH010, BI020, BI050
		999	Other	BH010, BI020, BI050
voi	Vertical Obstruction Identifier			
		UNK	Unknown	BH010, BI020, BI050
	Character		Text String	BH010, BI020, BI050
wid	Width [meters]			
		-32767	Unknown	BH010, BI020, BI050
		>0		BH010, BI020, BI050
zv2	Highest Z-Value [meters]			
		-32767	Unknown	BH010, BI020, BI050
		>=-400 and <=30000		BH010, BI020, BI050

TABLE C-15 Population Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Population Obstacle Connected Node Feature Table
 Table Name: popc.pft
 Thematic Index ID Number: 12

```
{Header length}L;
Population Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code12.pti,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:cdp=S,1,N,Calendar
Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
ttc=S,1,N,Tower Type Category,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	AH050	Fortification	
		AK020	Amusement Park	
			Attraction	
		AK150	Ski Jump	
		AK160	US-Stadium/Amphitheater	
			UK-Stadium/Amphitheatre	

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	AL015	Building		
	AL018	Building Superstructure Addition		
	AL050	US-Display Sign UK-Display Sign/Notice Board		
	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post		
	AL130	US-Monument UK-Monument/Folly		
	AL240	Tower (Non-Communication)		
	AQ020	Aerial Cableway Pylon/Ski Pylon		
	AQ055	Bridge Tower/Bridge Pylon		
afa	Available Facilities			
	-32768	Null		AH050, AK020, AK150, AK160, AL050, AL110, AL130, AL240, AQ020, AQ055
	0	Unknown		AL015, AL018
	19	Helipad		AL015, AL018
	995	None		AL018
	999	Other		AL015, AL018
aha	Absolute Horizontal Accuracy in Meters			
	-32767.0	Unknown		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0			AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
aho	Accuracy of Obstruction Height Above Ground Level [meters]			
	-32767.0	Unknown		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0			AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
atn	Aids to Navigation			
	0	Unknown		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

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	3	Lit	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	4	Unlit	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
ava	Absolute Vertical Accuracy in Meters		
	-32767.0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0.0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
bfc	Building Function Category		
	-32768	Null	AK020, AK150, AK160, AL050, AL110, AL130, AL240, AQ020, AQ055
	0	Unknown	AH050, AL015, AL018
	2	Government Building	AL015, AL018
	3	Capitol Building	AL015, AL018
	4	Castle	AH050
	6	Hospital	AL015, AL018
	7	House of Worship	AL015, AL018
	10	Observatory	AL015, AL018
	11	Palace	AL015, AL018
	13	Prison	AH050, AL015, AL018
	15	School	AL015, AL018
	16	House	AL015, AL018
	17	Multi Unit Dwelling	AL015, AL018
	28	Administration Building	AL015, AL018
	29	Aircraft Maintenance Shop	AL015
	30	Hangar	AL015
	53	Bank	AL015, AL018
	58	Observation	AL015, AL018
	99	Battery	AH050
	105	Reformatory	AL015, AL018
	106	Sanitarium	AL015, AL018
	111	Sportsplex	AL015, AL018
	122	Shopping Center	AL015, AL018
	129	Airport Terminal	AL015
	999	Other	AH050, AL015, AL018
bss	Building Superstructure Shape		
	-32768	Null	AK020, AK150, AK160, AL050, AL110, AQ020, AQ055
	0	Unknown	AH050, AL015, AL018, AL130, AL240
	1	Monitor	AH050, AL015, AL018, AL130

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	2	Steeple	AH050,AL015,AL018, AL130,AL240
	3	Cupola	AL015,AL018,AL130, AL240
	4	Turret	AH050,AL015,AL018, AL130
	5	Tower	AH050,AL015,AL018, AL130
	6	Minaret	AL015,AL018,AL130, AL240
	998	Not Applicable	AH050,AL015,AL018, AL130,AL240
	999	Other	AH050,AL015,AL018, AL130,AL240
cdp	Calendar Date Type		
	0	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	18	Receipt	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	19	Source	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	24	Up-to-dateness/revision	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
cdv	Calendar Date Value		
	UNK	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	Character	Text String	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
dir	Directivity		
	0	Unknown	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	1	Uni	AH050,AK020,AK160, AL015,AL018,AL050, AL130,AQ020
	2	Bi	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL130

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	3	Omni	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
dmf		Density Measure (Feature Count) -32767 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
exs		Existence Category	
	0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	5	Under Construction	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	7	Destroyed	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	8	Dismantled	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
gug		Guyed or Unguyed Category -32768 Null	AH050, AK150, AK160, AL015, AL018, AL050, AL130, AQ055
	0	Unknown	AK020, AL110, AL240, AQ020
	1	Guyed	AK020, AL110, AL240, AQ020
	2	Unguyed	AK020, AL110, AL240, AQ020
hgt		Height Above Surface Level [meters] -32767 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	>0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

hzd	Horizontal Datum	0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		300	World Geodetic System 1984	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
len	Length/Diameter [meters]	-32767	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		>0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
mcc	Material Composition Category	0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		20	Composition	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		21	Concrete	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		62	Masonry (Brick/Stone)	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		64	Metal	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		72	Part Metal	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		107	Steel	AK150, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		117	Wood	AH050, AK150, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

		999 Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
prm	Permanency		
		1 Permanent	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		2 Temporary	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
qle	Releasability		
		UNK Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	Character	Text String	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
sec	Security Classification		
		0 Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		1 Top Secret	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		2 Secret	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		3 Confidential	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		4 Restricted	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		5 Unclassified	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		999 Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
ssc	Structure Shape Category		

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-32768	Null	AH050, AK150, AL018, AL050
0	Unknown	AK020, AK160, AL015, AL110, AL130, AL240, AQ020, AQ055
10	Pillar/Spindle	AQ020
12	Pyramid	AL015, AL130, AQ020
17	Spherical (Hemispherical)	AK020, AL015, AL130
21	Artificial Mountain	AK020
23	Ferris Wheel	AK020
24	Enclosed	AK160
25	Roller Coaster	AK020
46	Open	AK160
52	'A' Frame	AL110, AL130, AL240, AQ020, AQ055
53	'H' Frame	AL110, AL130, AL240, AQ020, AQ055
54	'I' Frame	AL110, AL130, AL240, AQ020, AQ055
56	'Y' Frame	AL110, AL130, AL240, AQ020
60	Mast	AL110, AL130, AL240, AQ055
65	Cylindrical with flat top	AL130
66	Cylindrical with domed top	AL130
71	Cylindrical/Peaked	AL130
74	'T' Frame	AQ020
77	Arch	AL130
79	Round	AL015, AL130, AL240, AQ055
80	Rectangular	AL015, AL130, AL240, AQ055
83	Square	AL015, AL130, AL240, AQ055
84	Irregular	AL015, AL130, AL240, AQ055
109	Obelisk	AL015, AL130, AL240, AQ055
999	Other	AK020, AK160, AL015, AL110, AL130, AL240, AQ020, AQ055
ssr	Structure Shape of Roof	
-32768	Null	AK020, AK150, AL050, AL110, AQ020, AQ055
0	Unknown	AH050, AK160, AL015, AL018, AL130, AL240
6	Conical/Peaked/NUN	AL015, AL018, AL130, AL240
38	Curved/Round (Quonset)	AL015, AL018, AL130, AL240
40	Dome	AK160, AL015, AL018, AL130, AL240

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41	Flat	AH050,AL015,AL018, AL130,AL240
42	Gable (Pitched)	AH050,AL015,AL018, AL130,AL240
47	Sawtooth	AL015,AL018,AL130
998	Not Applicable	AL130
999	Other	AH050,AK160,AL015, AL018,AL130,AL240

stc	Source Type Code		
	1	Survey Source	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	2	Stereo Imagery Exploitation	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	3	Mono Imagery Exploitation	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	4	Cartographic Source	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	5	Reported Information	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	6	Multispectral	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	7	Hyperspectral	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	8	Synthetic Aperture Radar (SAR)	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055
	999	Other	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AL240,AQ020,AQ055

ttc	Tower Type Category		
	-32768	Null	AH050,AK020,AK150, AK160,AL015,AL018, AL050,AL110,AL130, AQ020,AQ055
	0	Unknown	AL240
	2	Observation/Lookout	AL240
	12	Fire	AL240
	999	Other	AL240

txt	Text Attribute			
		UNK	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	Character	Text	String	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		15	Mean Sea Level	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		999	Other	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
voi	Vertical Obstruction Identifier			
		UNK	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
	Character	Text	String	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
wid	Width [meters]			
		-32767	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		>0		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
zv2	Highest Z-Value [meters]			
		-32767	Unknown	AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055
		>=-400 and <=30000		AH050, AK020, AK150, AK160, AL015, AL018, AL050, AL110, AL130, AL240, AQ020, AQ055

TABLE C-16 Transportation Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Transportation Obstacle Connected Node Feature Table
 Table Name: transc.pft
 Thematic Index ID Number: 13

```
{Header length}L;
Transportation Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code13.pti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bot=S,1,N,Bridge Opening Type,int.vdt,-,-,:
bsc=S,1,N,Bridge/Bridge Superstructure Category,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	AQ040	Bridge/Overpass/Viaduct	
		AQ050	Bridge Superstructure	
		AQ060	Control Tower	
		AQ110	Mooring Mast	
aha	Absolute Horizontal Accuracy in Meters	-32767.0	Unknown	AQ040,AQ050,AQ060, AQ110

		>0.0	AQ040,AQ050,AQ060, AQ110
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
		-32767.0 Unknown	AQ040,AQ050,AQ060, AQ110
		>0.0	AQ040,AQ050,AQ060, AQ110
atn	Aids to Navigation		
		0 Unknown	AQ040,AQ050,AQ060, AQ110
		3 Lit	AQ040,AQ050,AQ060, AQ110
		4 Unlit	AQ040,AQ050,AQ060, AQ110
ava	Absolute Vertical Accuracy in Meters		
		-32767.0 Unknown	AQ040,AQ050,AQ060, AQ110
		>0.0	AQ040,AQ050,AQ060, AQ110
bot	Bridge Opening Type		
		-32768 Null	AQ050,AQ060,AQ110
		0 Unknown	AQ040
		4 Draw/Bascule	AQ040
		10 Swing	AQ040
		11 Lift	AQ040
		13 Not Applicable	AQ040
		999 Other	AQ040
bsc	Bridge/Bridge Superstructure Category		
		-32768 Null	AQ060,AQ110
		0 Unknown	AQ040,AQ050
		1 Arch (assume open spandrel)	AQ040,AQ050
		2 Cantilever	AQ040,AQ050
		3 Deck	AQ040,AQ050
		6 Girder	AQ040,AQ050
		7 Tower Suspension	AQ040,AQ050
		8 Truss	AQ040,AQ050
		9 Suspension	AQ040,AQ050
		12 Transporter	AQ040,AQ050
		15 Slab	AQ040,AQ050
		16 Stringer (beam)	AQ040,AQ050
		17 Arch Suspension	AQ040,AQ050
		26 Arch (closed spandrel)	AQ040,AQ050
		27 Cable Stayed	AQ040,AQ050
		999 Other	AQ040,AQ050
cdp	Calendar Date Type		
		0 Unknown	AQ040,AQ050,AQ060, AQ110
		18 Receipt	AQ040,AQ050,AQ060, AQ110

	19	Source	AQ040, AQ050, AQ060, AQ110
	24	Up-to-dateness/revision	AQ040, AQ050, AQ060, AQ110
cdv	Calendar Date Value		
	UNK	Unknown	AQ040, AQ050, AQ060, AQ110
	Character	Text String	AQ040, AQ050, AQ060, AQ110
dir	Directivity		
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	2	Bi	AQ040, AQ050, AQ060
	3	Omni	AQ040, AQ050, AQ060, AQ110
dmf	Density Measure (Feature Count)		
	-32767	Unknown	AQ040, AQ050, AQ060, AQ110
	>0		AQ040, AQ050, AQ060, AQ110
exs	Existence Category		
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	5	Under Construction	AQ040, AQ050, AQ060, AQ110
	7	Destroyed	AQ040, AQ050, AQ060, AQ110
	8	Dismantled	AQ040, AQ050, AQ060, AQ110
	999	Other	AQ040, AQ050, AQ060, AQ110
gug	Guyed or Unguyed Category		
	-32768	Null	AQ040, AQ050
	0	Unknown	AQ060, AQ110
	1	Guyed	AQ060, AQ110
	2	Unguyed	AQ060, AQ110
hgt	Height Above Surface Level [meters]		
	-32767	Unknown	AQ040, AQ050, AQ060, AQ110
	>0		AQ040, AQ050, AQ060, AQ110
hzd	Horizontal Datum		
	0	Unknown	AQ040, AQ050, AQ060, AQ110
	300	World Geodetic System 1984	AQ040, AQ050, AQ060, AQ110
	999	Other	AQ040, AQ050, AQ060, AQ110
len	Length/Diameter [meters]		

		-32767	Unknown	AQ040, AQ050, AQ060, AQ110
		>0		AQ040, AQ050, AQ060, AQ110
mcc	Material Composition Category			
		0	Unknown	AQ040, AQ050, AQ060, AQ110
		20	Composition	AQ040, AQ050, AQ060, AQ110
		21	Concrete	AQ040, AQ050, AQ060, AQ110
		62	Masonry (Brick/Stone)	AQ040, AQ050, AQ060, AQ110
		64	Metal	AQ040, AQ050, AQ060, AQ110
		72	Part Metal	AQ040, AQ050, AQ060, AQ110
		107	Steel	AQ040, AQ050, AQ060, AQ110
		117	Wood	AQ040, AQ050, AQ060, AQ110
		999	Other	AQ040, AQ050, AQ060, AQ110
prm	Permanency			
		1	Permanent	AQ040, AQ050, AQ060, AQ110
		2	Temporary	AQ040, AQ050, AQ060, AQ110
qle	Releasability			
		UNK	Unknown	AQ040, AQ050, AQ060, AQ110
	Character		Text String	AQ040, AQ050, AQ060, AQ110
sec	Security Classification			
		0	Unknown	AQ040, AQ050, AQ060, AQ110
		1	Top Secret	AQ040, AQ050, AQ060, AQ110
		2	Secret	AQ040, AQ050, AQ060, AQ110
		3	Confidential	AQ040, AQ050, AQ060, AQ110
		4	Restricted	AQ040, AQ050, AQ060, AQ110
		5	Unclassified	AQ040, AQ050, AQ060, AQ110
		999	Other	AQ040, AQ050, AQ060, AQ110
ssc	Structure Shape Category			
		-32768	Null	AQ040, AQ050, AQ060
		0	Unknown	AQ110
		52	'A' Frame	AQ110

		54 'I' Frame	AQ110
		60 Mast	AQ110
		999 Other	AQ110
ssr	Structure Shape of Roof		
		-32768 Null	AQ040, AQ050, AQ110
		0 Unknown	AQ060
		6 Conical/Peaked/NUN	AQ060
		38 Curved/Round (Quonset)	AQ060
		40 Dome	AQ060
		41 Flat	AQ060
		42 Gable (Pitched)	AQ060
		999 Other	AQ060
stc	Source Type Code		
		1 Survey Source	AQ040, AQ050, AQ060, AQ110
		2 Stereo Imagery Exploitation	AQ040, AQ050, AQ060, AQ110
		3 Mono Imagery Exploitation	AQ040, AQ050, AQ060, AQ110
		4 Cartographic Source	AQ040, AQ050, AQ060, AQ110
		5 Reported Information	AQ040, AQ050, AQ060, AQ110
		6 Multispectral	AQ040, AQ050, AQ060, AQ110
		7 Hyperspectral	AQ040, AQ050, AQ060, AQ110
		8 Synthetic Aperture Radar (SAR)	AQ040, AQ050, AQ060, AQ110
		999 Other	AQ040, AQ050, AQ060, AQ110
txt	Text Attribute		
		UNK Unknown	AQ040, AQ050, AQ060, AQ110
		Character Text String	AQ040, AQ050, AQ060, AQ110
vdc	Vertical (Sounding) Datum Category		
		0 Unknown	AQ040, AQ050, AQ060, AQ110
		15 Mean Sea Level	AQ040, AQ050, AQ060, AQ110
		999 Other	AQ040, AQ050, AQ060, AQ110
voi	Vertical Obstruction Identifier		
		UNK Unknown	AQ040, AQ050, AQ060, AQ110
		Character Text String	AQ040, AQ050, AQ060, AQ110
wid	Width [meters]		
		-32767 Unknown	AQ040, AQ050, AQ060, AQ110

	>0	AQ040, AQ050, AQ060, AQ110
zv2	Highest Z-Value [meters]	
	-32767 Unknown	AQ040, AQ050, AQ060, AQ110
	>=-400 and <=30000	AQ040, AQ050, AQ060, AQ110

TABLE C-17 Utility Obstacle Connected Node Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Utility Obstacle Connected Node Feature Table
 Table Name: utilc.pft
 Thematic Index ID Number: 14

```
{Header length}L;
Utility Obstacle Connected Node Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code14.pti,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
tst=S,1,N,Transmission Line Suspension,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		AD030	Substation/Transformer Yard	
		AT006	Overhead Cable	
		AT010	US-Disk/Dish UK-Disk Aerial/Dish Aerial	

	AT040	US-Power Transmission Pylon UK-Power Transmission Pylon/Pole	
	AT050	Communication Building	
	AT070	Telephone-Telegraph Pylon/Pole	
	AT080	Communication Tower	
aha		Absolute Horizontal Accuracy in Meters	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
aho		Accuracy of Obstruction Height Above Ground Level [meters]	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
atn		Aids to Navigation	
	-32768	Null	AT006
	0	Unknown	AD030, AT010, AT040, AT050, AT070, AT080
	3	Lit	AD030, AT010, AT040, AT050, AT070, AT080
	4	Unlit	AD030, AT010, AT040, AT050, AT070, AT080
ava		Absolute Vertical Accuracy in Meters	
	-32767.0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0.0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
bfc		Building Function Category	
	-32768	Null	AD030, AT006, AT010, AT040, AT070, AT080
	0	Unknown	AT050
	40	Telephone Switching Station	AT050
	86	Telephone Exchange (Main)	AT050
bss		Building Superstructure Shape	
	-32768	Null	AD030, AT006, AT010, AT040, AT070, AT080
	0	Unknown	AT050
	5	Tower	AT050
	998	Not Applicable	AT050
	999	Other	AT050

cdp	Calendar Date Type		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	18	Receipt	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	19	Source	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	24	Up-to-dateness/revision	AD030, AT006, AT010, AT040, AT050, AT070, AT080
cdv	Calendar Date Value		
	UNK	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character	Text String	AD030, AT006, AT010, AT040, AT050, AT070, AT080
dir	Directivity		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	2	Bi	AT006, AT050
	3	Omni	AD030, AT010, AT040, AT050, AT070, AT080
dmf	Density Measure (Feature Count)		
	-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
exs	Existence Category		
	0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	5	Under Construction	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	7	Destroyed	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	8	Dismantled	AD030, AT006, AT010, AT040, AT050, AT070, AT080
	999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
gug	Guyed or Unguyed Category		

		-32768	Null	AD030, AT006, AT010, AT050
		0	Unknown	AT040, AT070, AT080
		1	Guyed	AT040, AT070, AT080
		2	Unguyed	AT040, AT070, AT080
hgt	Height Above Surface Level [meters]			
		-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
hzd	Horizontal Datum			
		0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		300	World Geodetic System 1984	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
len	Length/Diameter [meters]			
		-32767	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		>0		AD030, AT006, AT010, AT040, AT050, AT070, AT080
mcc	Material Composition Category			
		0	Unknown	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		20	Composition	AT040, AT050, AT070, AT080
		21	Concrete	AD030, AT040, AT050, AT070, AT080
		62	Masonry (Brick/Stone)	AD030, AT040, AT050, AT070, AT080
		64	Metal	AD030, AT006, AT010, AT040, AT050, AT070, AT080
		72	Part Metal	AT010, AT040, AT050, AT070, AT080
		107	Steel	AD030, AT040, AT050, AT070, AT080
		117	Wood	AD030, AT040, AT050, AT070, AT080
		999	Other	AD030, AT006, AT010, AT040, AT050, AT070, AT080
nst	Navigation System Types			

		-32768	Null	AD030,AT006,AT010, AT040,AT050,AT070
		0	Unknown	AT080
		12	Radio	AT080
		15	TV	AT080
		16	Microwave	AT080
		998	Not Applicable	AT080
		999	Other	AT080
pfg	Predominant Feature Height With greater than 1 meter resolution			
	NaN	Null		AD030,AT006,AT010, AT040,AT050,AT070
		-32767.0	Unknown	AT080
		>0.0		AT080
prm	Permanency			
		1	Permanent	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		2	Temporary	AD030,AT006,AT010, AT040,AT050,AT070, AT080
qle	Releasability			
		UNK	Unknown	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	Character	Text	String	AD030,AT006,AT010, AT040,AT050,AT070, AT080
sec	Security Classification			
		0	Unknown	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		1	Top Secret	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		2	Secret	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		3	Confidential	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		4	Restricted	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		5	Unclassified	AD030,AT006,AT010, AT040,AT050,AT070, AT080
		999	Other	AD030,AT006,AT010, AT040,AT050,AT070, AT080
ssc	Structure Shape Category			
		-32768	Null	AT006,AT010

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	0	Unknown	AD030,AT040,AT050, AT070,AT080
	12	Pyramid	AT040,AT070
	52	'A' Frame	AD030,AT040,AT070, AT080
	53	'H' Frame	AD030,AT040,AT070, AT080
	54	'I' Frame	AD030,AT040,AT070, AT080
	56	'Y' Frame	AD030,AT040,AT070, AT080
	60	Mast	AT040,AT070,AT080
	74	'T' Frame	AD030,AT040,AT070
	79	Round	AT050
	80	Rectangular	AT050
	83	Square	AT050
	84	Irregular	AT050
	999	Other	AD030,AT040,AT050, AT070,AT080
ssr		Structure Shape of Roof	
	-32768	Null	AD030,AT006,AT010, AT040,AT070,AT080
	0	Unknown	AT050
	40	Dome	AT050
	41	Flat	AT050
	42	Gable (Pitched)	AT050
	999	Other	AT050
stc		Source Type Code	
	1	Survey Source	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	2	Stereo Imagery Exploitation	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	3	Mono Imagery Exploitation	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	4	Cartographic Source	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	5	Reported Information	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	6	Multispectral	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	7	Hyperspectral	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	8	Synthetic Aperture Radar (SAR)	AD030,AT006,AT010, AT040,AT050,AT070, AT080
	999	Other	AD030,AT006,AT010, AT040,AT050,AT070, AT080

tst	Transmission line Suspension			
	-32768	Null		AD030, AT010, AT040, AT050, AT070, AT080
	0	Unknown		AT006
	1	Normal Suspension		AT006
	2	Catenary (Over Mountains)		AT006
	3	Catenary (Over Water)		AT006
	998	Not Applicable		AT006
999	Other		AT006	
txt	Text Attribute			
	UNK	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character	Text String		AD030, AT006, AT010, AT040, AT050, AT070, AT080
vdc	Vertical (Sounding) Datum Category			
	0	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	15	Mean Sea Level		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	999	Other		AD030, AT006, AT010, AT040, AT050, AT070, AT080
voi	Vertical Obstruction Identifier			
	UNK	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	Character	Text String		AD030, AT006, AT010, AT040, AT050, AT070, AT080
zv2	Highest Z-Value [meters]			
	-32767	Unknown		AD030, AT006, AT010, AT040, AT050, AT070, AT080
	>=-400 and <=30000			AD030, AT006, AT010, AT040, AT050, AT070, AT080

TABLE C-18 Aeronautical Obstacle Line Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Aeronautical Obstacle Line Feature Table
 Table Name: aerol.lft
 Thematic Index ID Number: 15

```
{Header length}L;
Aeronautical Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code15.lti,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	GA035 NAVAIDS (Aeronautical) GB220 Air Obstruction GB221 Miscellaneous Air Obstruction	
aha	Absolute Horizontal Accuracy in Meters	-32767.0 Unknown >0.0	GA035,GB220,GB221 GA035,GB220,GB221

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aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767.0	Unknown	GA035, GB220, GB221
		>0.0		GA035, GB220, GB221
atn	Aids to Navigation	0	Unknown	GA035, GB220, GB221
		3	Lit	GA035, GB220, GB221
		4	Unlit	GA035, GB220, GB221
ava	Absolute Vertical Accuracy in Meters	-32767.0	Unknown	GA035, GB220, GB221
		>0.0		GA035, GB220, GB221
cdp	Calendar Date Type	0	Unknown	GA035, GB220, GB221
		18	Receipt	GA035, GB220, GB221
		19	Source	GA035, GB220, GB221
		24	Up-to-	GA035, GB220, GB221
			dateness/revision	
cdv	Calendar Date Value	UNK	Unknown	GA035, GB220, GB221
		Character	Text String	GA035, GB220, GB221
dir	Directivity	0	Unknown	GA035, GB220, GB221
		1	Uni	GB220, GB221
		2	Bi	GB220, GB221
		3	Omni	GA035, GB220, GB221
dmf	Density Measure (Feature Count)	-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
exs	Existence Category	0	Unknown	GA035, GB220, GB221
		5	Under	GA035, GB220, GB221
			Construction	
		7	Destroyed	GA035, GB220, GB221
		8	Dismantled	GB220, GB221
		999	Other	GA035, GB220, GB221
gug	Guyed or Unguyed Category	-32768	Null	GA035, GB220
		0	Unknown	GB221
		1	Guyed	GB221
		2	Unguyed	GB221
hgt	Height Above Surface Level [meters]	-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
hzd	Horizontal Datum	0	Unknown	GA035, GB220, GB221
		300	World Geodetic	GA035, GB220, GB221
			System 1984	

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	999 Other	GA035, GB220, GB221
len	Length/Diameter [meters]	
	-32768 Null	GA035
	-32767 Unknown	GB220, GB221
	>0	GB220, GB221
mcc	Material Composition Category	
	0 Unknown	GA035, GB220, GB221
	20 Composition	GB221
	21 Concrete	GA035, GB221
	30 Earthen	GB221
	62 Masonry (Brick/Stone)	GB221
	64 Metal	GB221
	72 Part Metal	GA035, GB221
	107 Steel	GB221
	117 Wood	GB220, GB221
	999 Other	GA035, GB220, GB221
nst	Navigation System Types	
	-32768 Null	GB220, GB221
	0 Unknown	GA035
	7 Long Range Air Navigation System (LORAN)	GA035
	10 Radar Responder Beacon (RACON)	GA035
	11 Radar	GA035
	20 VHF Omni Directional Radio Range (VOR)	GA035
	21 VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	GA035
	22 VHF Omni Directional Radio Range and TACAN (VORTAC)	GA035
	23 Tactical Air Navigation Equipment (TACAN)	GA035
	26 Localizer (LOC)	GA035
	27 Localizer/Distance Measuring Equipment (LOC/DME)	GA035
	35 Radar Antenna	GA035
	37 Precision Approach Radar (PAR)	GA035
	40 Radio Beacon	GA035
	45 Radar Station	GA035

		55 Radar reflector	GA035
		999 Other	GA035
pfg	Predominant Feature Height With greater than 1 meter resolution		
		NaN Null	GA035
		-32767.0 Unknown	GB220,GB221
		>0.0	GB220,GB221
prm	Permanency		
		1 Permanent	GA035,GB220,GB221
		2 Temporary	GA035,GB220,GB221
qle	Releasability		
		UNK Unknown	GA035,GB220,GB221
		Character Text String	GA035,GB220,GB221
sec	Security Classification		
		0 Unknown	GA035,GB220,GB221
		1 Top Secret	GA035,GB220,GB221
		2 Secret	GA035,GB220,GB221
		3 Confidential	GA035,GB220,GB221
		4 Restricted	GA035,GB220,GB221
		5 Unclassified	GA035,GB220,GB221
		999 Other	GA035,GB220,GB221
ssc	Structure Shape Category		
		-32768 Null	GB220
		0 Unknown	GA035,GB221
		4 Bullet	GB221
		10 Pillar/Spindle	GB221
		12 Pyramid	GB221
		17 Spherical (Hemispherical)	GB221
		21 Artificial Mountain	GB221
		52 'A' Frame	GB221
		53 'H' Frame	GB221
		54 'I' Frame	GB221
		56 'Y' Frame	GB221
		60 Mast	GB221
		74 'T' Frame	GB221
		77 Arch	GB221
		79 Round	GB221
		80 Rectangular	GB221
		83 Square	GB221
		84 Irregular	GB221
		87 Dome	GA035
		109 Obelisk	GB221
		999 Other	GA035,GB221
stc	Source Type Code		
		1 Survey Source	GA035,GB220,GB221
		2 Stereo Imagery Exploitation	GA035,GB220,GB221
		3 Mono Imagery Exploitation	GA035,GB220,GB221

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		4	Cartographic Source	GA035, GB220, GB221
		5	Reported Information	GA035, GB220, GB221
		6	Multispectral	GA035, GB220, GB221
		7	Hyperspectral	GA035, GB220, GB221
		8	Synthetic Aperture Radar (SAR)	GA035, GB220, GB221
		999	Other	GA035, GB220, GB221
txt	Text Attribute			
		UNK	Unknown	GA035, GB220, GB221
	Character		Text String	GA035, GB220, GB221
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	GA035, GB220, GB221
		15	Mean Sea Level	GA035, GB220, GB221
		999	Other	GA035, GB220, GB221
voi	Vertical Obstruction Identifier			
		UNK	Unknown	GA035, GB220, GB221
	Character		Text String	GA035, GB220, GB221
wid	Width [meters]			
		-32767	Unknown	GA035, GB220, GB221
		>0		GA035, GB220, GB221
zv2	Highest Z-Value [meters]			
		-32767	Unknown	GA035, GB220, GB221
	>=-400 and <=30000			GA035, GB220, GB221

TABLE C-19 Industry Obstacle Line Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Industry Obstacle Line Feature Table
 Table Name: indl.lft
 Thematic Index ID Number: 16

```
{Header length}L;
Industry Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code16.lti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
loc=S,1,M,Location Category,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
ppc=S,1,N,Power Plant Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
f_code	FACC Feature Code	AD010 US-Power Plant UK-Power Station AF010 Chimney/Smokestack AF020 Conveyor AJ051 Windmotor AM070 Tank	
aha	Absolute Horizontal Accuracy in Meters		

		-32767.0	Unknown	AD010,AF010,AF020, AJ051,AM070
		>0.0		AD010,AF010,AF020, AJ051,AM070
aho	Accuracy of Obstruction Height Above Ground Level [meters]			
		-32767.0	Unknown	AD010,AF010,AF020, AJ051,AM070
		>0.0		AD010,AF010,AF020, AJ051,AM070
atn	Aids to Navigation			
		0	Unknown	AD010,AF010,AF020, AJ051,AM070
		3	Lit	AD010,AF010,AF020, AJ051,AM070
		4	Unlit	AD010,AF010,AF020, AJ051,AM070
ava	Absolute Vertical Accuracy in Meters			
		-32767.0	Unknown	AD010,AF010,AF020, AJ051,AM070
		>0.0		AD010,AF010,AF020, AJ051,AM070
bss	Building Superstructure Shape			
		-32768	Null	AF010,AF020,AJ051, AM070
		0	Unknown	AD010
		1	Monitor	AD010
		4	Turret	AD010
		5	Tower	AD010
		998	Not Applicable	AD010
		999	Other	AD010
cdp	Calendar Date Type			
		0	Unknown	AD010,AF010,AF020, AJ051,AM070
		18	Receipt	AD010,AF010,AF020, AJ051,AM070
		19	Source	AD010,AF010,AF020, AJ051,AM070
		24	Up-to- dateness/revision	AD010,AF010,AF020, AJ051,AM070
cdv	Calendar Date Value			
		UNK	Unknown	AD010,AF010,AF020, AJ051,AM070
	Character		Text String	AD010,AF010,AF020, AJ051,AM070
dir	Directivity			
		0	Unknown	AD010,AF010,AF020, AJ051,AM070
		2	Bi	AF020
		3	Omni	AD010,AF010,AF020, AJ051,AM070

dmf	Density Measure (Feature Count)	-32767	Unknown	AD010, AF010, AF020, AJ051, AM070
		>0		AD010, AF010, AF020, AJ051, AM070
exs	Existence Category	0	Unknown	AD010, AF010, AF020, AJ051, AM070
		5	Under Construction	AD010, AF010, AF020, AJ051, AM070
		7	Destroyed	AD010, AF010, AF020, AJ051, AM070
		8	Dismantled	AD010, AF010, AF020, AJ051, AM070
		999	Other	AD010, AF010, AF020, AJ051, AM070
gug	Guyed or Unguyed Category	-32768	Null	AD010, AF010, AF020, AM070
		0	Unknown	AJ051
		1	Guyed	AJ051
		2	Unguyed	AJ051
hgt	Height Above Surface Level [meters]	-32767	Unknown	AD010, AF010, AF020, AJ051, AM070
		>0		AD010, AF010, AF020, AJ051, AM070
hzd	Horizontal Datum	0	Unknown	AD010, AF010, AF020, AJ051, AM070
		300	World Geodetic System 1984	AD010, AF010, AF020, AJ051, AM070
		999	Other	AD010, AF010, AF020, AJ051, AM070
loc	Location Category	-32768	Null	AD010, AF010, AF020, AM070
		0	Unknown	AJ051
		8	On Ground Surface	AJ051
		22	Off Shore	AJ051
		999	Other	AJ051
mcc	Material Composition Category	0	Unknown	AD010, AF010, AF020, AJ051, AM070
		20	Composition	AD010, AJ051, AM070
		21	Concrete	AD010, AF010, AF020, AJ051, AM070
		62	Masonry (Brick/Stone)	AD010, AF010, AF020, AJ051, AM070

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		64	Metal	AD010, AF010, AF020, AJ051, AM070
		72	Part Metal	AD010, AF010, AF020, AJ051, AM070
		107	Steel	AD010, AJ051, AM070
		999	Other	AD010, AF010, AF020, AJ051, AM070
pfq	Predominant Feature Height	With greater than 1	meter resolution	
		NaN	Null	AD010, AF010, AF020, AJ051
		-32767.0	Unknown	AM070
		>0.0		AM070
ppc	Power Plant Category			
		-32768	Null	AJ051, AM070
		0	Unknown	AD010, AF010, AF020
		1	Hydro-electric	AD010
		2	Nuclear	AD010, AF010
		3	Solar	AD010
		4	Thermal	AD010, AF010
		5	Wind	AD010
		6	Tidal	AD010
		7	Internal Combustion	AD010, AF010
		998	Not Applicable	AF010
		999	Other	AD010, AF010, AF020
prm	Permanency			
		1	Permanent	AD010, AF010, AF020, AJ051, AM070
		2	Temporary	AD010, AF010, AF020, AJ051, AM070
qle	Releasability			
		UNK	Unknown	AD010, AF010, AF020, AJ051, AM070
		Character	Text String	AD010, AF010, AF020, AJ051, AM070
sec	Security Classification			
		0	Unknown	AD010, AF010, AF020, AJ051, AM070
		1	Top Secret	AD010, AF010, AF020, AJ051, AM070
		2	Secret	AD010, AF010, AF020, AJ051, AM070
		3	Confidential	AD010, AF010, AF020, AJ051, AM070
		4	Restricted	AD010, AF010, AF020, AJ051, AM070
		5	Unclassified	AD010, AF010, AF020, AJ051, AM070
		999	Other	AD010, AF010, AF020, AJ051, AM070
ssc	Structure Shape Category			

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	-32768	Null	AD010, AF010, AF020,
	0	Unknown	AJ051, AM070
	4	Bullet	AM070
	12	Pyramid	AM070
	17	Spherical (Hemispherical)	AM070
	59	Telescoping Gasholder (Gasometer)	AM070
	60	Mast	AJ051
	79	Round	AM070
	80	Rectangular	AM070
	83	Square	AM070
	84	Irregular	AM070
	109	Obelisk	AM070
	999	Other	AJ051, AM070
ssr	Structure Shape of Roof		
	-32768	Null	AF010, AF020, AJ051
	0	Unknown	AD010, AM070
	6	Conical/Peaked/NUN	AD010, AM070
	38	Curved/Round (Quonset)	AD010, AM070
	40	Dome	AD010, AM070
	41	Flat	AD010, AM070
	42	Gable (Pitched)	AD010, AM070
	47	Sawtooth	AD010
	999	Other	AD010, AM070
stc	Source Type Code		
	1	Survey Source	AD010, AF010, AF020, AJ051, AM070
	2	Stereo Imagery Exploitation	AD010, AF010, AF020, AJ051, AM070
	3	Mono Imagery Exploitation	AD010, AF010, AF020, AJ051, AM070
	4	Cartographic Source	AD010, AF010, AF020, AJ051, AM070
	5	Reported Information	AD010, AF010, AF020, AJ051, AM070
	6	Multispectral	AD010, AF010, AF020, AJ051, AM070
	7	Hyperspectral	AD010, AF010, AF020, AJ051, AM070
	8	Synthetic Aperture Radar (SAR)	AD010, AF010, AF020, AJ051, AM070
	999	Other	AD010, AF010, AF020, AJ051, AM070
txt	Text Attribute		
	UNK	Unknown	AD010, AF010, AF020, AJ051, AM070
	Character	Text String	AD010, AF010, AF020, AJ051, AM070
vdc	Vertical (Sounding) Datum Category		

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	0	Unknown	AD010, AF010, AF020, AJ051, AM070
	15	Mean Sea Level	AD010, AF010, AF020, AJ051, AM070
	999	Other	AD010, AF010, AF020, AJ051, AM070
voi	Vertical Obstruction Identifier		
	UNK	Unknown	AD010, AF010, AF020, AJ051, AM070
	Character	Text String	AD010, AF010, AF020, AJ051, AM070
zv2	Highest Z-Value [meters]		
	-32767	Unknown	AD010, AF010, AF020, AJ051, AM070
	>=-400 and <=30000		AD010, AF010, AF020, AJ051, AM070

TABLE C-20 Inland Water Obstacle Line Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Inland Water Obstacle Line Feature Table
 Table Name: iwal.lft
 Thematic Index ID Number: 17

```
{Header length}L;
Inland Water Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code17.lti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,-,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:

prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	BH010 BI020	Aqueduct Dam/Weir	
aha	Absolute Horizontal Accuracy in Meters	-32767.0 >0.0	Unknown	BH010, BI020 BH010, BI020
aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767.0 >0.0	Unknown	BH010, BI020 BH010, BI020
atn	Aids to Navigation	0	Unknown	BH010, BI020

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		3 Lit	BH010, BI020
		4 Unlit	BH010, BI020
ava	Absolute Vertical Accuracy in Meters		
		-32767.0 Unknown	BH010, BI020
		>0.0	BH010, BI020
cdp	Calendar Date Type		
		0 Unknown	BH010, BI020
		18 Receipt	BH010, BI020
		19 Source	BH010, BI020
		24 Up-to-dateness/revision	BH010, BI020
cdv	Calendar Date Value		
		UNK Unknown	BH010, BI020
		Character Text String	BH010, BI020
dir	Directivity		
		0 Unknown	BH010, BI020
		1 Uni	BH010, BI020
		2 Bi	BH010, BI020
		3 Omni	BH010, BI020
dmf	Density Measure (Feature Count)		
		-32767 Unknown	BH010, BI020
		>0	BH010, BI020
exs	Existence Category		
		0 Unknown	BH010, BI020
		5 Under Construction	BH010, BI020
		7 Destroyed	BH010, BI020
		8 Dismantled	BH010, BI020
		999 Other	BH010, BI020
hgt	Height Above Surface Level [meters]		
		-32767 Unknown	BH010, BI020
		>0	BH010, BI020
hzd	Horizontal Datum		
		0 Unknown	BH010, BI020
		300 World Geodetic System 1984	BH010, BI020
		999 Other	BH010, BI020
len	Length/Diameter [meters]		
		-32767 Unknown	BH010, BI020
		>0	BH010, BI020
mcc	Material Composition Category		
		0 Unknown	BH010, BI020
		20 Composition	BI020
		21 Concrete	BH010, BI020
		30 Earthen	BI020
		64 Metal	BH010
		72 Part Metal	BH010
		107 Steel	BH010
		108 Stone	BH010

		999	Other	BH010, BI020
prm	Permanency			
		1	Permanent	BH010, BI020
		2	Temporary	BH010, BI020
qle	Releasability			
		UNK	Unknown	BH010, BI020
	Character		Text String	BH010, BI020
sec	Security Classification			
		0	Unknown	BH010, BI020
		1	Top Secret	BH010, BI020
		2	Secret	BH010, BI020
		3	Confidential	BH010, BI020
		4	Restricted	BH010, BI020
		5	Unclassified	BH010, BI020
		999	Other	BH010, BI020
stc	Source Type Code			
		1	Survey Source	BH010, BI020
		2	Stereo Imagery Exploitation	BH010, BI020
		3	Mono Imagery Exploitation	BH010, BI020
		4	Cartographic Source	BH010, BI020
		5	Reported Information	BH010, BI020
		6	Multispectral	BH010, BI020
		7	Hyperspectral	BH010, BI020
		8	Synthetic Aperture Radar (SAR)	BH010, BI020
		999	Other	BH010, BI020
txt	Text Attribute			
		UNK	Unknown	BH010, BI020
	Character		Text String	BH010, BI020
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	BH010, BI020
		15	Mean Sea Level	BH010, BI020
		999	Other	BH010, BI020
voi	Vertical Obstruction Identifier			
		UNK	Unknown	BH010, BI020
	Character		Text String	BH010, BI020
wid	Width [meters]			
		-32767	Unknown	BH010, BI020
		>0		BH010, BI020
zv2	Highest Z-Value [meters]			
		-32767	Unknown	BH010, BI020
	>=-400 and <=30000			BH010, BI020

TABLE C-21 Population Obstacle Line Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Population Obstacle Line Feature Table
 Table Name: popl.lft
 Thematic Index ID Number: 18

```
{Header length}L;
Population Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code18.lti,-,-,:
afa=S,1,N,Available Facilities,int.vdt,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:
bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),-,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,-,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
ttc=S,1,N,Tower Type Category,int.vdt,-,-,:
txt=T,*N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
Id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	AH050	Fortification	
		AK160	US-Stadium/Amphitheater	
			UK-Stadium/Amphitheatre	
		AL015	Building	
		AL018	Building Superstructure Addition	

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	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post	
	AL130	US-Monument UK-Monument/Folly	
	AL240	Tower (Non-Communication)	
	AQ010	US-Aerial Cableway Lines/Ski Lift Lines UK-Aerial Cableway Lines/Ski Lift Cables	
afa	Available Facilities		
	-32768	Null	AH050, AK160, AL110, AL130, AL240, AQ010
	0	Unknown	AL015, AL018
	19	Helipad	AL015, AL018
	995	None	AL018
	999	Other	AL015, AL018
aha	Absolute Horizontal Accuracy in Meters		
	-32767.0	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	>0.0		AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
aho	Accuracy of Obstruction Height Above Ground Level [meters]		
	-32767.0	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	>0.0		AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
atn	Aids to Navigation		
	0	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	3	Lit	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	4	Unlit	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
ava	Absolute Vertical Accuracy in Meters		
	-32767.0	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	>0.0		AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
bfc	Building Function Category		

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	-32768	Null	AK160,AL110,AL130, AL240,AQ010
	0	Unknown	AH050,AL015,AL018
	2	Government Building	AL015,AL018
	3	Capitol Building	AL015,AL018
	4	Castle	AH050
	6	Hospital	AL015,AL018
	7	House of Worship	AL015,AL018
	10	Observatory	AL015,AL018
	11	Palace	AL015,AL018
	13	Prison	AH050,AL015,AL018
	15	School	AL015,AL018
	16	House	AL015,AL018
	17	Multi Unit Dwelling	AL015,AL018
	28	Administration Building	AL015,AL018
	29	Aircraft Maintenance Shop	AL015
	30	Hangar	AL015
	53	Bank	AL015,AL018
	58	Observation	AL015,AL018
	99	Battery	AH050
	105	Reformatory	AL015,AL018
	106	Sanitarium	AL015,AL018
	111	Sportsplex	AL015,AL018
	122	Shopping Center	AL015,AL018
	129	Airport Terminal	AL015
	999	Other	AH050,AL015,AL018
bsb	Building Superstructure Shape		
	-32768	Null	AK160,AL018,AL110, AQ010
	0	Unknown	AH050,AL015,AL130, AL240
	1	Monitor	AH050,AL015,AL130
	2	Steeple	AH050,AL015,AL130, AL240
	3	Cupola	AL015,AL130,AL240
	4	Turret	AH050,AL015,AL130
	5	Tower	AH050,AL015,AL130
	6	Minaret	AL015,AL130,AL240
	998	Not Applicable	AH050,AL015,AL130, AL240
	999	Other	AH050,AL015,AL130, AL240
cdp	Calendar Date Type		
	0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	18	Receipt	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	19	Source	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010

		24	Up-to-dateness/revision	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
cdv	Calendar Date Value			
		UNK	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	Character		Text String	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
dir	Directivity			
		0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		1	Uni	AK160,AL015,AL018, AL130
		2	Bi	AH050,AK160,AL015, AL018,AL130,AQ010
		3	Omni	AH050,AK160,AL015, AL018,AL110,AL130, AL240
dmf	Density Measure (Feature Count)			
		-32767	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		>0		AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
exs	Existence Category			
		0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		5	Under Construction	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		7	Destroyed	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		8	Dismantled	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		999	Other	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
gug	Guyed or Unguyed Category			
		-32768	Null	AH050,AK160,AL015, AL018,AL130,AQ010
		0	Unknown	AL110,AL240
		1	Guyed	AL110,AL240
		2	Unguyed	AL110,AL240
hgt	Height Above Surface Level [meters]			

		-32767	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		>0		AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
hzd	Horizontal Datum			
		0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		300	World Geodetic System 1984	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		999	Other	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
len	Length/Diameter [meters]			
		-32767	Unknown	AH050,AK160,AL015, AL018, AL110,AL130,AL240, AQ010
		>0		AH050,AK160,AL015, AL018, AL110,AL130,AL240, AQ010
mcc	Material Composition Category			
		0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240
		20	Composition	AH050,AK160,AL015, AL018,AL110,AL130, AL240
		21	Concrete	AH050,AK160,AL015, AL018,AL110,AL130, AL240
		62	Masonry (Brick/Stone)	AH050,AK160,AL015, AL018,AL110,AL130, AL240
		64	Metal	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		72	Part Metal	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		107	Steel	AL015,AL018,AL110, AL130,AL240,AQ010
		117	Wood	AH050,AL015,AL018, AL110,AL130,AL240
		999	Other	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
prm	Permanency			

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	1	Permanent	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	2	Temporary	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
qle		Releasability	
	UNK	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
		Character Text String	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
sec		Security Classification	
	0	Unknown	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	1	Top Secret	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	2	Secret	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	3	Confidential	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	4	Restricted	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	5	Unclassified	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	999	Other	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
ssc		Structure Shape Category	
	-32768	Null	AH050,AL018,AQ010
	0	Unknown	AK160,AL015,AL110, AL130,AL240
	12	Pyramid	AL015,AL130
	17	Spherical (Hemispherical)	AL015,AL130
	52	'A' Frame	AL110,AL130,AL240
	53	'H' Frame	AL018,AL110,AL130
	54	'I' Frame	AL110,AL130,AL240
	56	'Y' Frame	AL110,AL130,AL240
	60	Mast	AL110,AL130,AL240
	65	Cylindrical with flat top	AL130
	66	Cylindrical with domed top	AL130
	71	Cylindrical/Peaked	AL130
	77	Arch	AL130
	79	Round	AL015,AL130,AL240

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	80	Rectangular	AL015,AL130,AL240
	83	Square	AL015,AL130,AL240
	84	Irregular	AL015,AL130,AL240
	109	Obelisk	AL015,AL130,AL240
	999	Other	AK160,AL015,AL110, AL130,AL240
ssr	Structure Shape of Roof		
	-32768	Null	AL110,AQ010
	0	Unknown	AH050,AK160,AL015, AL018,AL130,AL240
	6	Conical/Peaked/NUN	AL015,AL018,AL130, AL240
	38	Curved/Round (Quonset)	AL015,AL018,AL130, AL240
	40	Dome	AK160,AL015,AL018, AL130,AL240
	41	Flat	AH050,AL015,AL018, AL130,AL240
	42	Gable (Pitched)	AH050,AL015,AL018, AL130,AL240
	47	Sawtooth	AL015,AL018,AL130
	998	Not Applicable	AL130
	999	Other	AH050,AK160,AL015, AL018,AL130,AL240
stc	Source Type Code		
	1	Survey Source	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	2	Stereo Imagery Exploitation	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	3	Mono Imagery Exploitation	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	4	Cartographic Source	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	5	Reported Information	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	6	Multispectral	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	7	Hyperspectral	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	8	Synthetic Aperture Radar (SAR)	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
	999	Other	AH050,AK160,AL015, AL018,AL110,AL130, AL240,AQ010
ttc	Tower Type Category		

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		-32768	Null	AH050, AK160, AL015, AL018, AL110, AL130, AQ010
		0	Unknown	AL240
		2	Observation/Lookout	AL240
		12	Fire	AL240
		999	Other	AL240
txt	Text Attribute			
		UNK	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	Character		Text String	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
vdc	Vertical (Sounding) Datum Category			
		0	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
		15	Mean Sea Level	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
		999	Other	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
voi	Vertical Obstruction Identifier			
		UNK	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	Character		Text String	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
wid	Width [meters]			
		-32768	Null	AQ010
		-32767	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240
		>0		AH050, AK160, AL015, AL018, AL110, AL130, AL240
zv2	Highest Z-Value [meters]			
		-32767	Unknown	AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010
	>=-400 and <=30000			AH050, AK160, AL015, AL018, AL110, AL130, AL240, AQ010

TABLE C-22 Transportation Obstacle Line Feature Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Transportation Obstacle Line Feature Table
 Table Name: transl.lft
 Thematic Index ID Number: 19

```
{Header length}L;
Transportation Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code19.lti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bot=S,1,N,Bridge Opening Type,int.vdt,-,-,:
bsc=S,1,N,Bridge/Bridge Superstructure Category,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
wid=S,1,N,Width,int.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	AQ040	Bridge/Overpass/Viaduct	
		AQ050	Bridge Superstructure	
aha	Absolute Horizontal Accuracy in Meters	-32767.0	Unknown	AQ040,AQ050
		>0.0		AQ040,AQ050
aho	Accuracy of Obstruction Height Above Ground Level [meters]	-32767.0	Unknown	AQ040,AQ050
		>0.0		AQ040,AQ050
atn	Aids to Navigation			

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		0	Unknown	AQ040, AQ050
		3	Lit	AQ040, AQ050
		4	Unlit	AQ040, AQ050
ava	Absolute Vertical Accuracy in Meters			
		-32767.0	Unknown	AQ040, AQ050
		>0.0		AQ040, AQ050
bot	Bridge Opening Type			
		-32768	Null	AQ050
		0	Unknown	AQ040
		4	Draw/Bascule	AQ040
		10	Swing	AQ040
		11	Lift	AQ040
		13	Not Applicable	AQ040
		999	Other	AQ040
bsc	Bridge/Bridge Superstructure Category			
		0	Unknown	AQ040, AQ050
		1	Arch (assume open spandrel)	AQ040, AQ050
		2	Cantilever	AQ040, AQ050
		3	Deck	AQ040, AQ050
		6	Girder	AQ040, AQ050
		7	Tower Suspension	AQ040, AQ050
		8	Truss	AQ040, AQ050
		9	Suspension	AQ040, AQ050
		12	Transporter	AQ040, AQ050
		15	Slab	AQ040, AQ050
		16	Stringer (beam)	AQ040, AQ050
		17	Arch Suspension	AQ040, AQ050
		26	Arch (closed spandrel)	AQ040, AQ050
		27	Cable Stayed	AQ040, AQ050
		999	Other	AQ040, AQ050
cdp	Calendar Date Type			
		0	Unknown	AQ040, AQ050
		18	Receipt	AQ040, AQ050
		19	Source	AQ040, AQ050
		24	Up-to-dateness/revision	AQ040, AQ050
cdv	Calendar Date Value			
		UNK	Unknown	AQ040, AQ050
		Character	Text String	AQ040, AQ050
dir	Directivity			
		0	Unknown	AQ040, AQ050
		2	Bi	AQ040, AQ050
		3	Omni	AQ040, AQ050
dmf	Density Measure (Feature Count)			
		-32767	Unknown	AQ040, AQ050
		>0		AQ040, AQ050
exs	Existence Category			
		0	Unknown	AQ040, AQ050
		5	Under Construction	AQ040, AQ050
		7	Destroyed	AQ040, AQ050

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		8 Dismantled	AQ040,AQ050
		999 Other	AQ040,AQ050
hgt	Height Above Surface Level [meters]		
		-32767 Unknown	AQ040,AQ050
		>0	AQ040,AQ050
hzd	Horizontal Datum		
		0 Unknown	AQ040,AQ050
		300 World Geodetic System 1984	AQ040,AQ050
		999 Other	AQ040,AQ050
len	Length/Diameter [meters]		
		-32767 Unknown	AQ040,AQ050
		>0	AQ040,AQ050
mcc	Material Composition Category		
		0 Unknown	AQ040,AQ050
		20 Composition	AQ040,AQ050
		21 Concrete	AQ040,AQ050
		62 Masonry (Brick/Stone)	AQ040,AQ050
		64 Metal	AQ040,AQ050
		72 Part Metal	AQ040,AQ050
		107 Steel	AQ040,AQ050
		117 Wood	AQ040,AQ050
		999 Other	AQ040,AQ050
prm	Permanency		
		1 Permanent	AQ040,AQ050
		2 Temporary	AQ040,AQ050
qle	Releasability		
		UNK Unknown	AQ040,AQ050
		Character Text String	AQ040,AQ050
sec	Security Classification		
		0 Unknown	AQ040,AQ050
		1 Top Secret	AQ040,AQ050
		2 Secret	AQ040,AQ050
		3 Confidential	AQ040,AQ050
		4 Restricted	AQ040,AQ050
		5 Unclassified	AQ040,AQ050
		999 Other	AQ040,AQ050
stc	Source Type Code		
		1 Survey Source	AQ040,AQ050
		2 Stereo Imagery Exploitation	AQ040,AQ050
		3 Mono Imagery Exploitation	AQ040,AQ050
		4 Cartographic Source	AQ040,AQ050
		5 Reported Information	AQ040,AQ050
		6 Multispectral	AQ040,AQ050
		7 Hyperspectral	AQ040,AQ050
		8 Synthetic Aperture Radar (SAR)	AQ040,AQ050

		999 Other	AQ040,AQ050
txt	Text Attribute		
		UNK Unknown	AQ040,AQ050
	Character	Text String	AQ040,AQ050
vdc	Vertical (Sounding) Datum Category		
		0 Unknown	AQ040,AQ050
		15 Mean Sea Level	AQ040,AQ050
		999 Other	AQ040,AQ050
voi	Vertical Obstruction Identifier		
		UNK Unknown	AQ040,AQ050
	Character	Text String	AQ040,AQ050
wid	Width [meters]		
		-32767 Unknown	AQ040,AQ050
		>0	AQ040,AQ050
zv2	Highest Z-Value [meters]		
		-32767 Unknown	AQ040,AQ050
		>=-400 and <=30000	AQ040,AQ050

TABLE C-23 Utility Obstacle Line Feature Table

Thematic Layer:	Obstructions
Coverage Name:	obs
Feature Table Description:	Utility Obstacle Line Feature Table
Table Name:	utill.lft
Thematic Index ID Number:	20

```
{Header length}L;
Utility Obstacle Line Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code20.lti,-,-,:
aha=F,1,N,Absolute Horizontal Accuracy in Meters,-,-,-,:
aho=F,1,N,Accuracy of Obstruction Height Above Ground Level,-,-,-,:
atn=S,1,N,Aids to Navigation,int.vdt,-,-,:
ava=F,1,N,Absolute Vertical Accuracy in Meters,-,-,-,:
bfc=S,1,N,Building Function Category,int.vdt,-,-,:

bss=S,1,N,Building Superstructure Shape,int.vdt,-,-,:
cdp=S,1,N,Calendar Date Type,int.vdt,-,-,:
cdv=T,8,N,Calendar Date Value,char.vdt,-,-,:
dir=S,1,N,Directivity,int.vdt,-,-,:
dmf=S,1,N,Density Measure (Feature Count),int.vdt,-,-,:
exs=S,1,N,Existence Category,int.vdt,-,-,:
gug=S,1,N,Guyed or Unguyed Category,int.vdt,-,-,:
hgt=S,1,N,Height Above Surface Level,int.vdt,-,-,:
hzd=S,1,N,Horizontal Datum,int.vdt,-,-,:
kva=S,1,N,Kilovolt Capacity Attribute,int.vdt,-,-,:
len=S,1,N,Length/Diameter,int.vdt,-,-,:
mcc=S,1,N,Material Composition Category,int.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,-,-,:
pfg=F,1,N,Predominant Feature Height With greater than 1 meter
resolution,-,-,-:
prm=S,1,N,Permanency,int.vdt,-,-,:
qle=T,4,N,Releasability,char.vdt,-,-,:
sec=S,1,N,Security Classification,int.vdt,-,-,:
ssc=S,1,N,Structure Shape Category,int.vdt,-,-,:
ssr=S,1,N,Structure Shape of Roof,int.vdt,-,-,:
stc=S,1,N,Source Type Code,int.vdt,-,-,:
tst=s,1,N,Transmission Line Suspension,int.vdt,-,-,:
txt=T,*,N,Text Attribute,char.vdt,-,-,:
vdc=S,1,N,Vertical (Sounding) Datum Category,int.vdt,-,-,:
voi=T,11,N,Vertical Obstruction Identifier,char.vdt,-,-,:
zv2=S,1,N,Highest Z-Value,int.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		AQ113	Pipeline/Pipe	
		AT030	Power Transmission Line	
		AT050	Communication Building	
		AT060	Telephone Line/Telegraph Line	
		AT080	Communication Tower	
aha	Absolute Horizontal Accuracy in Meters			
		-32767.0	Unknown	AQ113,AT030,AT050, AT060,AT080
		>0.0		AQ113,AT030,AT050, AT060,AT080
aho	Accuracy of Obstruction Height Above Ground Level [meters]			
		-32767.0	Unknown	AQ113,AT030,AT050, AT060,AT080
		>0.0		AQ113,AT030,AT050, AT060,AT080
atn	Aids to Navigation			
		0	Unknown	AQ113,AT030,AT050, AT060,AT080
		3	Lit	AQ113,AT030,AT050, AT060,AT080
		4	Unlit	AQ113,AT030,AT050, AT060,AT080
ava	Absolute Vertical Accuracy in Meters			
		-32767.0	Unknown	AQ113,AT030,AT050, AT060,AT080
		>0.0		AQ113,AT030,AT050, AT060,AT080
bfc	Building Function Category			
		-32768	Null	AQ113,AT030,AT060, AT080
		0	Unknown	AT050
		40	Telephone Switching Station	AT050
		86	Telephone Exchange (Main)	AT050

bss	Building Superstructure Shape			
		-32768	Null	AQ113, AT030, AT060, AT080
		0	Unknown	AT050
		5	Tower	AT050
		998	Not Applicable	AT050
		999	Other	AT050
cdp	Calendar Date Type			
		0	Unknown	AQ113, AT030, AT050, AT060, AT080
		18	Receipt	AQ113, AT030, AT050, AT060, AT080
		19	Source	AQ113, AT030, AT050, AT060, AT080
		24	Up-to-dateness/revision	AQ113, AT030, AT050, AT060, AT080
cdv	Calendar Date Value			
		UNK	Unknown	AQ113, AT030, AT050, AT060, AT080
	Character		Text String	AQ113, AT030, AT050, AT060, AT080
dir	Directivity			
		0	Unknown	AQ113, AT030, AT050, AT060, AT080
		2	Bi	AQ113, AT030, AT050, AT060
		3	Omni	AQ113, AT050, AT080
dmf	Density Measure (Feature Count)			
		-32767	Unknown	AQ113, AT030, AT050, AT060, AT080
		>0		AQ113, AT030, AT050, AT060, AT080
exs	Existence Category			
		0	Unknown	AQ113, AT030, AT050, AT060, AT080
		5	Under Construction	AQ113, AT030, AT050, AT060, AT080
		7	Destroyed	AQ113, AT030, AT050, AT060, AT080
		8	Dismantled	AQ113, AT030, AT050, AT060, AT080
		999	Other	AQ113, AT030, AT050, AT060, AT080
gug	Guyed or Unguyed Category			
		-32768	Null	AQ113, AT030, AT050, AT060
		0	Unknown	AT080
		1	Guyed	AT080
		2	Unguyed	AT080

hgt	Height Above Surface Level [meters]		
	-32767	Unknown	AQ113, AT030, AT050, AT060, AT080
	>0		AQ113, AT030, AT050, AT060, AT080
hzd	Horizontal Datum		
	0	Unknown	AQ113, AT030, AT050, AT060, AT080
	300	World Geodetic System 1984	AQ113, AT030, AT050, AT060, AT080
	999	Other	AQ113, AT030, AT050, AT060, AT080
kva	Kilovolt Capacity Attribute		
	-32768	Null	AQ113, AT050, AT060, AT080
	-32767	Unknown	AT030
	>0		AT030
len	Length/Diameter [meters]		
	-32767	Unknown	AQ113, AT030, AT050, AT060, AT080
	>0		AQ113, AT030, AT050, AT060, AT080
mcc	Material Composition Category		
	0	Unknown	AQ113, AT030, AT050, AT060, AT080
	20	Composition	AT050, AT080
	21	Concrete	AQ113, AT050, AT080
	62	Masonry (Brick/Stone)	AQ113, AT050, AT080
	64	Metal	AQ113, AT030, AT050, AT060, AT080
	72	Part Metal	AQ113, AT050, AT080
	107	Steel	AQ113, AT050, AT080
	117	Wood	AQ113, AT050, AT080
	999	Other	AQ113, AT030, AT050, AT060, AT080
nst	Navigation System Types		
	-32768	Null	AQ113, AT030, AT050, AT060
	0	Unknown	AT080
	12	Radio	AT080
	15	TV	AT080
	16	Microwave	AT080
	998	Not Applicable	AT080
	999	Other	AT080

pfg	Predominant Feature Height With greater than 1 meter resolution			
		NaN	Null	AQ113,AT050
		-32767.0	Unknown	AT030,AT060,AT080
		>0.0		AT030,AT060,AT080
prm	Permanency	1	Permanent	AQ113,AT030,AT050, AT060,AT080
		2	Temporary	AQ113,AT030,AT050, AT060,AT080
qle	Releasability	UNK	Unknown	AQ113,AT030,AT050, AT060,AT080
			Character Text String	AQ113,AT030,AT050, AT060,AT080
sec	Security Classification	0	Unknown	AQ113,AT030,AT050, AT060,AT080
		1	Top Secret	AQ113,AT030,AT050, AT060,AT080
		2	Secret	AQ113,AT030,AT050, AT060,AT080
		3	Confidential	AQ113,AT030,AT050, AT060,AT080
		4	Restricted	AQ113,AT030,AT050, AT060,AT080
		5	Unclassified	AQ113,AT030,AT050, AT060,AT080
		999	Other	AQ113,AT030,AT050, AT060,AT080
ssc	Structure Shape Category	-32768	Null	AQ113,AT030,AT060
		0	Unknown	AT050,AT080
		52	'A' Frame	AT080
		53	'H' Frame	AT080
		54	'I' Frame	AT080
		56	'Y' Frame	AT080
		60	Mast	AT080
		79	Round	AT050
		80	Rectangular	AT050
		83	Square	AT050
		84	Irregular	AT050
		999	Other	AT050,AT080

ssr	Structure Shape of Roof		
	-32768	Null	AQ113, AT030, AT060, AT080
	0	Unknown	AT050
	40	Dome	AT050
	41	Flat	AT050
	42	Gable (Pitched)	AT050
	999	Other	AT050
stc	Source Type Code		
	1	Survey Source	AQ113, AT030, AT050, AT060, AT080
	2	Stereo Imagery Exploitation	AQ113, AT030, AT050, AT060, AT080
	3	Mono Imagery Exploitation	AQ113, AT030, AT050, AT060, AT080
	4	Cartographic Source	AQ113, AT030, AT050, AT060, AT080
	5	Reported Information	AQ113, AT030, AT050, AT060, AT080
	6	Multispectral	AQ113, AT030, AT050, AT060, AT080
	7	Hyperspectral	AQ113, AT030, AT050, AT060, AT080
	8	Synthetic Aperture Radar (SAR)	AQ113, AT030, AT050, AT060, AT080
	999	Other	AQ113, AT030, AT050, AT060, AT080
tst	Transmission line Suspension		
	-32768	Null	AQ113, AT050, AT080
	0	Unknown	AT030, AT060
	1	Normal Suspension	AT030, AT060
	2	Catenary (Over Mountains)	AT030, AT060
	3	Catenary (Over Water)	AT030, AT060
	998	Not Applicable	AT030, AT060
999	Other	AT030, AT060	
txt	Text Attribute		
	UNK	Unknown	AQ113, AT030, AT050, AT060, AT080
	Character	Text String	AQ113, AT030, AT050, AT060, AT080
vdc	Vertical (Sounding) Datum Category		
	0	Unknown	AQ113, AT030, AT050, AT060, AT080
	15	Mean Sea Level	AQ113, AT030, AT050, AT060, AT080
	999	Other	AQ113, AT030, AT050, AT060, AT080

voi	Vertical Obstruction Identifier		
	UNK Unknown		AQ113, AT030, AT050, AT060, AT080
	Character Text String		AQ113, AT030, AT050, AT060, AT080
zv2	Highest Z-Value [meters]		
	-32767 Unknown		AQ113, AT030, AT050, AT060, AT080
	>=-400 and <=30000		AQ113, AT030, AT050, AT060, AT080

TABLE C-24 Obstructions Feature Class Attribute Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Obstructions Feature Class Attribute Table
 Table Name: fca

```
{Header length}L;
Obstructions Feature Class Attribute Table;-;
id=I,1,P,Row Identifier,-,-,-,:
fclass=T,8,U,Feature Class Name,-,-,-,:
type=T,1,N,Feature Type,char.vdt,-,-,:
descr=T,*N,Description,-,-,-,;
```

Column	Description Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier	Sequential beginning with 1	
fclass	Feature Class Name		
	aerop		
	hydrop		
	indp		
	iwap		
	popp		
	transp		
	utilp		
	aeroc		
	hydroc		
	indc		
	iwac		
	popc		
	transc		
	utilc		
	aerol		
	indl		
	iwal		
	popl		
	transl		
	utill		
type	Feature Type		
		P Point/Node Feature	aerop hydrop indp iwap popp transp utilp aeroc hydroc indc

			iwac
			popc
			transc
			utilc
	L Line Feature		areol
			indl
			iwal
			popl
			transl
			utill
descr	Description		
	Aeronautical Obstacle Point Feature		aerop
	Hydrographic Obstacle Point Feature		hydrop
	Industry Obstacle Point Feature		indp
	Inland Water Obstacle Point Feature		iwap
	Population Obstacle Point Feature		popp
	Transportation Obstacle Point Feature		transp
	Utility Obstacle Point Feature		utilp
	Aeronautical Obstacle Connected Node Feature		aeroc
	Hydrographic Obstacle Connected Node Feature		hydroc
	Industry Obstacle Connected Node Feature		indc
	Inland Water Obstacle Connected Node Feature		iwac
	Population Obstacle Connected Node Feature		popc
	Transportation Obstacle Connected Node Feature		transc
	Utility Obstacle Connected Node Feature		utilc
	Aeronautical Obstacle Line Feature		aerol
	Industry Obstacle Line Feature		indl
	Inland Water Obstacle Line Feature		iwal
	Population Obstacle Line Feature		popl
	Transportation Obstacle Line Feature		transl
	Utility Obstacle Line Feature		utill

TABLE C-25 Obstructions Feature Class Schema Table

Thematic Layer: Obstructions
 Coverage Name: obs
 Feature Table Description: Obstructions Feature Class Schema Table
 Table Name: fcs

<pre>{Header length}L; Obstructions Feature Class Schema Table;-; id=I,1,P,Row Identifier,-,-,-,: feature_class=T,8,N,Name of Feature Class,-,-,-,: table1=T,12,N,First Table,-,-,-,: table1_key=T,16,N,Column Name in First Table,-,-,-,: table2=T,12,N,Second Table,-,-,-,: table2_key=T,16,N,Column Name in Second Table,-,-,-,;</pre>					
1.	aerop	aerop.pft	id	aerop.pjt	aerop.pft_id
2.	aerop	aerop.pjt	end_id	end	id
3.	aerop	end	id	aerop.pjt	end_id
4.	aerop	aerop.pjt	aerop.pft_id	aerop.pft	id
5.	aerop	aerop.pft	id	aerop.njt	aerop.pft_id
6.	aerop	aerop.njt	notes.rat_id	notes.rat	id
7.	aerop	notes.rat	id	aerop.njt	notes.rat_id
8.	aerop	aerop.njt	aerop.pft_id	aerop.pft	id
9.	hydrop	hydrop.pft	id	hydrop.pjt	hydrop.pft_id
10.	hydrop	hydrop.pjt	end_id	end	id
11.	hydrop	end	id	hydrop.pjt	end_id
12.	hydrop	hydrop.pjt	hydrop.pft_id	hydrop.pft	id
13.	hydrop	hydrop.pft	id	hydrop.njt	hydrop.pft_id
14.	hydrop	hydrop.njt	notes.rat_id	notes.rat	id
15.	hydrop	notes.rat	id	hydrop.njt	notes.rat_id
16.	hydrop	hydrop.njt	hydrop.pft_id	hydrop.pft	id
17.	indp	indp.pft	id	indp.pjt	indp.pft_id
18.	indp	indp.pjt	end_id	end	id
19.	indp	end	id	indp.pjt	end_id
20.	indp	indp.pjt	indp.pft_id	indp.pft	id
21.	indp	indp.pft	id	indp.njt	indp.pft_id
22.	indp	indp.njt	notes.rat_id	notes.rat	id
23.	indp	notes.rat	id	indp.njt	notes.rat_id
24.	indp	indp.njt	indp.pft_id	indp.pft	id
25.	iwap	iwap.pft	id	iwap.pjt	iwap.pft_id
26.	iwap	iwap.pjt	end_id	end	id
27.	iwap	end	id	iwap.pjt	end_id
28.	iwap	iwap.pjt	iwap.pft_id	iwap.pft	id
29.	iwap	iwap.pft	id	iwap.njt	iwap.pft_id
30.	iwap	iwap.njt	notes.rat_id	notes.rat	id
31.	iwap	notes.rat	id	iwap.njt	notes.rat_id
32.	iwap	iwap.njt	iwap.pft_id	iwap.pft	id
33.	popp	popp.pft	id	popp.pjt	popp.pft_id
34.	popp	popp.pjt	end_id	end	id
35.	popp	end	id	popp.pjt	end_id
36.	popp	popp.pjt	popp.pft_id	popp.pft	id
37.	popp	popp.pft	id	popp.njt	popp.pft_id
38.	popp	popp.njt	notes.rat_id	notes.rat	id
39.	popp	notes.rat	id	popp.njt	notes.rat_id
40.	popp	popp.njt	popp.pft_id	popp.pft	id

TABLE C-25 Obstructions Feature Class Schema Table (continued)

41.	transp	transp.pft	id	transp.pjt	transp.pft_id
42.	transp	transp.pjt	end_id	end	id
43.	transp	end	id	transp.pjt	end_id
44.	transp	transp.pjt	transp.pft_id	transp.pft	id
45.	transp	transp.pft	id	transp.njt	transp.pft_id
46.	transp	transp.njt	notes.rat_id	notes.rat	id
47.	transp	notes.rat	id	transp.njt	notes.rat_id
48.	transp	transp.njt	transp.pft_id	transp.pft	id
49.	utilp	utilp.pft	id	utilp.pjt	utilp.pft_id
50.	utilp	utilp.pjt	end_id	end	id
51.	utilp	end	id	utilp.pjt	end_id
52.	utilp	utilp.pjt	utilp.pft_id	utilp.pft	id
53.	utilp	utilp.pft	id	utilp.njt	utilp.pft_id
54.	utilp	utilp.njt	notes.rat_id	notes.rat	id
55.	utilp	notes.rat	id	utilp.njt	notes.rat_id
56.	utilp	utilp.njt	utilp.pft_id	utilp.pft	id
57.	aeroc	aeroc.pft	id	aeroc.pjt	aeroc.pft_id
58.	aeroc	aeroc.pjt	cnd_id	cnd	id
59.	aeroc	cnd	id	aeroc.pjt	cnd_id
60.	aeroc	aeroc.pjt	aeroc.pft_id	aeroc.pft	id
61.	aeroc	aeroc.pft	id	aeroc.njt	aeroc.pft_id
62.	aeroc	aeroc.njt	notes.rat_id	notes.rat	id
63.	aeroc	notes.rat	id	aeroc.njt	notes.rat_id
64.	aeroc	aeroc.njt	aeroc.pft_id	aeroc.pft	id
65.	hydroc	hydroc.pft	id	hydroc.pjt	hydroc.pft_id
66.	hydroc	hydroc.pjt	cnd_id	cnd	id
67.	hydroc	cnd	id	hydroc.pjt	cnd_id
68.	hydroc	hydroc.pjt	hydroc.pft_id	hydroc.pft	id
69.	hydroc	hydroc.pft	id	hydroc.njt	hydroc.pft_id
70.	hydroc	hydroc.njt	notes.rat_id	notes.rat	id
71.	hydroc	notes.rat	id	hydroc.njt	notes.rat_id
72.	hydroc	hydroc.njt	hydroc.pft_id	hydroc.pft	id
73.	indc	indc.pft	id	indc.pjt	indc.pft_id
74.	indc	indc.pjt	cnd_id	cnd	id
75.	indc	cnd	id	indc.pjt	cnd_id
76.	indc	indc.pjt	indc.pft_id	indc.pft	id
77.	indc	indc.pft	id	indc.njt	indc.pft_id
78.	indc	indc.njt	notes.rat_id	notes.rat	id
79.	indc	notes.rat	id	indc.njt	notes.rat_id
80.	indc	indc.njt	indc.pft_id	indc.pft	id
81.	iwac	iwac.pft	id	iwac.pjt	iwac.pft_id
82.	iwac	iwac.pjt	cnd_id	cnd	id
83.	iwac	cnd	id	iwac.pjt	cnd_id
84.	iwac	iwac.pjt	iwac.pft_id	iwac.pft	id
85.	iwac	iwac.pft	id	iwac.njt	iwac.pft_id
86.	iwac	iwac.njt	notes.rat_id	notes.rat	id
87.	iwac	notes.rat	id	iwac.njt	notes.rat_id
88.	iwac	iwac.njt	iwac.pft_id	iwac.pft	id

TABLE C-25 Obstructions Feature Class Schema Table (continued)

89.	popc	popc.pft	id	popc.pjt	popc.pft_id
90.	popc	popc.pjt	cnd_id	cnd	id
91.	popc	cnd	id	popc.pjt	cnd_id
92.	popc	popc.pjt	popc.pft_id	popc.pft	id
93.	popc	popc.pft	id	popc.njt	popc.pft_id
94.	popc	popc.njt	notes.rat_id	notes.rat	id
95.	popc	notes.rat	id	popc.njt	notes.rat_id
96.	popc	popc.njt	popc.pft_id	popc.pft	id
97.	transc	transc.pft	id	transc.pjt	transc.pft_id
98.	transc	transc.pjt	cnd_id	cnd	id
99.	transc	cnd	id	transc.pjt	cnd_id
100.	transc	transc.pjt	transc.pft_id	transc.pft	id
101.	transc	transc.pft	id	transc.njt	transc.pft_id
102.	transc	transc.njt	notes.rat_id	notes.rat	id
103.	transc	notes.rat	id	transc.njt	notes.rat_id
104.	transc	transc.njt	transc.pft_id	transc.pft	id
105.	utilc	utilc.pft	id	utilc.pjt	utilc.pft_id
106.	utilc	utilc.pjt	cnd_id	cnd	id
107.	utilc	cnd	id	utilc.pjt	cnd_id
108.	utilc	utilc.pjt	utilc.pft_id	utilc.pft	id
109.	utilc	utilc.pft	id	utilc.njt	utilc.pft_id
110.	utilc	utilc.njt	notes.rat_id	notes.rat	id
111.	utilc	notes.rat	id	utilc.njt	notes.rat_id
112.	utilc	utilc.njt	utilc.pft_id	utilc.pft	id
113.	aerol	aerol.lft	id	aerol.ljt	aerol.lft_id
114.	aerol	aerol.ljt	edg_id	edg	id
115.	aerol	edg	id	aerol.ljt	edg_id
116.	aerol	aerol.ljt	aerol.lft_id	aerol.lft	id
117.	aerol	aerol.lft	id	aerol.njt	aerol.lft_id
118.	aerol	aerol.njt	notes.rat_id	notes.rat	id
119.	aerol	notes.rat	id	aerol.njt	notes.rat_id
120.	aerol	aerol.njt	aerol.lft_id	aerol.lft	id
121.	indl	indl.lft	id	indl.ljt	indl.lft_id
122.	indl	indl.ljt	edg_id	edg	id
123.	indl	edg	id	indl.ljt	edg_id
124.	indl	indl.ljt	indl.lft_id	indl.lft	id
125.	indl	indl.lft	id	indl.njt	indl.lft_id
126.	indl	indl.njt	notes.rat_id	notes.rat	id
127.	indl	notes.rat	id	indl.njt	notes.rat_id
128.	indl	indl.njt	indl.lft_id	indl.lft	id
129.	iwal	iwal.lft	id	iwal.ljt	iwal.lft_id
130.	iwal	iwal.ljt	edg_id	edg	id
131.	iwal	edg	id	iwal.ljt	edg_id
132.	iwal	iwal.ljt	iwal.lft_id	iwal.lft	id
133.	iwal	iwal.lft	id	iwal.njt	iwal.lft_id
134.	iwal	iwal.njt	notes.rat_id	notes.rat	id
135.	iwal	notes.rat	id	iwal.njt	notes.rat_id
136.	iwal	iwal.njt	iwal.lft_id	iwal.lft	id

TABLE C-25 Obstructions Feature Class Schema Table (continued)

137.	popl	popl.lft	id	popl.ljt	popl.lft_id
138.	popl	popl.ljt	edg_id	edg	id
139.	popl	edg	id	popl.ljt	edg_id
140.	popl	popl.ljt	popl.lft_id	popl.lft	id
141.	popl	popl.lft	id	popl.njt	popl.lft_id
142.	popl	popl.njt	notes.rat_id	notes.rat	id
143.	popl	notes.rat	id	popl.njt	notes.rat_id
144.	popl	popl.njt	popl.lft_id	popl.lft	id
145.	transl	transl.lft	id	transl.ljt	transl.lft_id
146.	transl	transl.ljt	edg_id	edg	id
147.	transl	edg	id	transl.ljt	edg_id
148.	transl	transl.ljt	transl.lft_id	transl.lft	id
149.	transl	transl.lft	id	transl.njt	transl.lft_id
150.	transl	transl.njt	notes.rat_id	notes.rat	id
151.	transl	notes.rat	id	transl.njt	notes.rat_id
152.	transl	transl.njt	transl.lft_id	transl.lft	id
153.	utill	utill.lft	id	utill.ljt	utill.lft_id
154.	utill	utill.ljt	edg_id	edg	id
155.	utill	edg	id	utill.ljt	edg_id
156.	utill	utill.ljt	utill.lft_id	utill.lft	id
157.	utill	utill.lft	id	utill.njt	utill.lft_id
158.	utill	utill.njt	notes.rat_id	notes.rat	id
159.	utill	notes.rat	id	utill.njt	notes.rat_id
160.	utill	utill.njt	utill.lft_id	utill.lft	id

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APPENDIX D

FACC BY COVERAGE AND FEATURE TYPE

D.1 SCOPE

This appendix identifies the coverage and feature type for each FACC feature shown in VVOD. It is a mandatory part of this Specification. The information contained herein is intended for compliance.

D.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

D.3 FACC BY COVERAGE AND FEATURE TYPE

Layer	FACC Code	Feature Name	END	CND	EDG	FAC	TXT	CPX
obs	AA040	Rig/Superstructure	X	X				
obs	AB000	US-Disposal Site/Waste Pile	X	X				
		UK-Refuse Tip/Slag Heap						
obs	AC000	Processing Plant/Treatment Plant	X	X				
obs	AC010	Blast Furnace	X	X				
obs	AC020	Catalytic Cracker	X	X				
obs	AD010	US-Power Plant UK-Power Station	X	X	X			
obs	AF010	Chimney/Smokestack	X	X	X			
obs	AF020	Conveyor	X	X	X			
obs	AF030	Cooling Tower	X	X				
obs	AF040	Crane	X	X				
obs	AF050	US-Dredge/Powershovel/Dragline	X	X				
		UK-Dredger/Powershovel/Dragline						
obs	AF070	Flare Pipe	X	X				
obs	AF080	Hopper	X	X				
obs	AH050	Fortification	X	X	X			
obs	AJ050	Windmill	X	X				
obs	AJ051	Windmotor	X	X	X			
obs	AK020	Amusement Park Attraction	X	X				
obs	AK150	Ski Jump	X	X				
obs	AK160	US-Stadium/Amphitheater UK-Stadium/Ampitheatre	X	X	X			
obs	AL015	Building	X	X	X			
obs	AL018	Building Superstructure Addition	X	X	X			
obs	AL050	US-Display Sign UK-Display Sign/Notice Board	X	X				
obs	AL110	US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post	X	X	X			
obs	AL130	US-Monument UK-Monument/Folly	X	X	X			
obs	AL240	Tower (Non-Communication)	X	X	X			
obs	AM010	Depot (Storage)	X	X				
obs	AM020	Grain Bin/Silo	X	X				
obs	AM030	Grain Elevator	X	X				
obs	AM070	Tank	X	X	X			
obs	AM080	Water Tower	X	X				

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obs	AQ010	US-Aerial Cableway Lines/Ski Lift Lines UK-Aerial Cableway Lines/Ski Lift Cables			X		
obs	AQ020	Aerial Cableway Pylon/Ski Pylon	X	X			
obs	AQ040	Bridge/Overpass/Viaduct	X	X	X		
obs	AQ050	Bridge Superstructure	X	X	X		
obs	AQ055	Bridge Tower/Bridge Pylon	X	X			
obs	AQ060	Control Tower	X	X			
obs	AQ110	Mooring Mast	X	X			
obs	AQ113	Pipeline/Pipe			X		
obs	AT006	Overhead Cable	X	X			
obs	AT010	US-Disk/Dish UK-Disk Aerial/Dish Aerial	X	X			
obs	AT030	Power Transmission Line			X		
obs	AT040	US-Power Transmission Pylon UK-Power Transmission Pylon/Pole	X	X			
obs	AT050	Communication Building	X	X	X		
obs	AT060	Telephone Line/Telegraph Line			X		
obs	AT070	Telephone-Telegraph Pylon/Pole	X	X			
obs	AT080	Communication Tower	X	X	X		
obs	BC040	Light	X	X			
obs	BC050	Lighthouse	X	X			
obs	BC070	Light Vessel/Lightship	X	X			
obs	BD110	Platform	X	X			
obs	BH010	Aqueduct	X	X			
obs	BI020	Dam/Weir	X	X	X		
obs	BI050	Water Intake Tower	X	X	X		
obs	GA035	NAVAIDS (Aeronautical)	X	X	X		
obs	GB040	Launch Pad	X	X			
obs	GB220	Air Obstruction	X	X	X		
obs	GB221	Air obstruction Miscellaneous	X	X	X		

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APPENDIX E

FEATURE GLOSSARY

E.1 SCOPE

This provides the FACC feature definition for each feature included in VVOD. It is a mandatory part of this Specification. The information contained herein is intended for compliance.

E.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

E.3 VVOD FEATURE GLOSSARY

- AA040** Rig/Superstructure - A vertical structure fitted for drilling or lifting operations.
- AB000** US-Disposal Site/Waste Pile UK-Refuse Tip/Slag Heap - A site for collecting/depositing of refuse or discarded material. (See also AB010,AM010 and AM040)
- AC000** Processing Plant/Treatment Plant - A site used for changing or refining a particular material.
- AC010** Blast Furnace - A heat chamber used for smelting iron ore.
- AC020** Catalytic Cracker - A unit in which petroleum separation is carried out in the presence of a catalyst.
- AD010** US-Power Plant UK-Power Station - The building(s) and equipment necessary for the generation of electric power. (See also AD020.)
- AD030** Substation/Transformer Yard - A facility, along a power line route, in which electric current is transformed and/or distributed.
- AF010** Chimney / Smokestack - A vertical structure containing a passage or flue for discharging smoke and gases of combustion.
- AF020** Conveyor - An apparatus for moving materials from place to place on a moving belt or series of rollers.
- AF030** Cooling Tower - A tower used to cool liquids.
- AF040** Crane - A machine for lifting, shifting, and lowering objects or materials by means of a swinging boom or with the lifting apparatus supported on an overhead track.
- AF050** US-Dredge/Powershovel/Dragline UK-Dredger/Powershovel/Dragline - An excavating machine for removing earth or materials.
- AF070** Flare Pipe - An open-ended pipe at which waste gases are burned.

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- AF080** Hopper - A top-loaded funnel-shaped structure for temporary holding of loose material which will be dispensed from its bottom.
- AH050** Fortification - A facility constructed for the military defense of a site. (See also AM060.)
- AJ050** Windmill - A wind-driven system of vanes attached to a tower like structure (excluding wind-generated power plants).
- AJ051** Windmotor - A modern structure for use of wind power.
- AK020** Amusement Park Attraction - A large structure located in an Amusement Park.
- AK150** Ski Jump - A ramp used for ski jumping.
- AK160** Stadium / Amphitheater - An arena for holding and viewing events.
- AL015** Building - A relatively permanent structure, roofed and usually walled and designed for some particular use. (See also AL100.)
- AL018** Building Superstructure Addition - A supplemental portion of a building which rises from the roof but is not considered to be part of the general roof line.
- AL050** US-Display Sign UK-Display Sign/Notice Board - An upright panel used to convey visual information.
- AL110** US-Light Standard/Light Support UK-Light Standard/Light Support/Lamp Post - A structure serving as a support for lighting.
- AL130** US-Monument UK-Monument/Folly - A structure erected or maintained as a memorial to a person or event. (See also AL025 and AL090.)
- AL240** Tower (Non-Communication) - A relatively tall structure which may be used for observation, support, or storage, etc. (See also AF030, AM080, AQ060, and BI050.)
- AM020** Grain Bin / Silo - An enclosed container, used for storing grain or fodder.
- AM030** Grain Elevator - A tall structure, equipped for loading, unloading, processing and storing grain.
- AM070** Tank - A container used for the storage of liquids or gases.
- AM080** Water Tower - An elevated container and its supporting structure used to hold water.
- AQ010** Aerial Cableway Lines / Ski Lift Lines - Cables which are strung between elevated supports as part of a conveyor system on which cars, buckets, or other carrier units are suspended. (See also AF020.)

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- AQ020** Aerial Cableway Pylon/Ski Pylon - A tower supporting steel cables which convey cars, buckets, or other suspended carrier units.
- AQ040** Bridge / Overpass / Viaduct - A man-made structure spanning and providing passage over a body of water, depression, or other obstacles.
- AQ050** Bridge Superstructure - Those elements of the bridge structure which are above the lowest deck. (see also AQ055)
- AQ055** Bridge Tower/Brige Pylon - A tower or pylon from which a bridge's deck is suspended.
- AQ060** Control Tower - A tower-like structure that houses the persons and equipment used to control the flow of air, rail, or marine traffic. (See also AL240.)
- AQ110** Mooring Mast - A tower-like structure used to secure an airship.
- AQ113** Pipeline/Pipe - A tube for the conveyance of solids, liquids, or gases.
- AT006** Overhead Cable - An insulated wire, or group of wires formed into one continuous strand and located above ground or above water surface. (See also AT005, AT030 and AT060).
- AT010** Disk/Dish - A concave object used for transmitting or receiving e signals.
- AT030** Power Transmission Line - A system of above ground wires, including their supports, which transmit electricity over distance. (See also AT005.)
- AT040** US-Power Transmission Pylon UK-Power Transmission Pylon/Pole - A pylon or pole used to support a power transmission line.
- AT050** Communication Building - A building in which communication signals are processed or controlled.
- AT060** Telephone Line / Telegraph Line - A system of above ground wires including their supports which transmit electrical signals over distance.
- AT070** Telephone-Telegraph Pylon/Pole - A pylon or pole used to support a telephone or telegraph line.
- AT080** Communication Tower - A relatively tall structure used for transmitting and/or receiving e communication signals. (See also AQ060.)
- BC040** Light - A specially constructed device which displays a luminous or lighted aid to navigation.
- BC050** Lighthouse- A distinctive structure exhibiting light(s) designed to serve as an aid to navigation. (see also BC040)

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- BC070** Light Vessel/Lightship - A distinctively marked manned vessel anchored or moored at a defined point to serve as an aid to navigation.
- BD110** Platform - A flat surface raised above the sea, as a working stage for conducting offshore operations.
- BH010** Aqueduct - A pipe or artificial channel designed to transport water from a remote source, usually by gravity. (See also BH110)
- BI020** Dam / Weir - A permanent barrier across a watercourse used to impound water or to control its flow. (See also BI040.)
- BI050** Water Intake Tower - A tower-like structure associated with a dam or water source and used for the intake of water.
- GA035** NAVAIDA (Aeronautical) - Any visual or electronic device which provides point-to-point guidance information or position data.
- GB040** Launch Pad - A designated area or structure from which a rocket or missile is launched.
- GB220** Air Obstruction - An existing object of natural growth, or terrain at a fixed location within prescribed area with reference to which vertical clearance is or must be provided during flight operations.
- GB221** Air Obstruction Miscellaneous - A generic man-made air obstruction.

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ATTRIBUTE GLOSSARY

F.1 SCOPE

This provides the FACC attribute definition for each attribute included in VVOD. It is a mandatory part of this Specification. The information contained herein is intended for compliance.

F.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

F.3 VVPD ATTRIBUTE GLOSSARY

afa	Available Facilities - Facilities available at or in the near vicinity.
aha	Absolute Horizontal Accuracy in Meters - The difference between the recorded horizontal coordinates of features and their true positions expressed as a circular error at 90% probability.
aho	Accuracy of Obstruction Height Above Ground Level [meters]- Indicates the difference between the recorded heights above ground level of features and their true heights at 90% probability.
atn	Aids to Navigation - Indicates whether a feature is marked or unmarked by an aid to navigation.
ava	Absolute Vertical Accuracy in Meters - The difference between the recorded elevations of features and their true elevations at a specific point referenced to the same vertical datum at 90% probability.
bfc	Building Function Category - Type or purpose of the building.
bsc	Bridge/Bridge Superstructure Category - Structural design characteristics.
cdp	Calendar Date Type - The type of report or activity.
cdv	Calendar Date Value - The calendar date as specified by ISO 8601.
cra	Crane Type Category - Type of crane.
crm	Crane Mobility Type - Indicates the mobility of a crane type.
dir	Directivity - The side or sides of a feature which produces the greatest reflectivity potential.
dmf	Density Measure (Feature Count) Indicates the number of features of this type within an area.
exs	Existence Category - State or condition of the feature.
gug	Guyed or Unguyed Category - Presence of support wires.

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hgt	Height Above Surface Level [meters] - Distance measured from the lowest point of the base at ground or water level (downhill side/downstream side) to the tallest point of the feature.
hzd	Horizontal Datum- Horizontal Datum.
kva	Kilovolt Capacity Attribute - Maximum voltage available on the line, as reported in kilovolts.
len	Length/Diameter [meters] - A measurement of the longer of two linear axes in meters. For a square feature, measure either axis. For a round feature, measure the diameter. For a bridge, the length is the distance between bridge abutments.
loc	Status of feature relative to surrounding area or water.
mcc	Material Composition Category - Characteristics of primary material composition of feature.
min	Mining Category - Unique mining characteristic.
nst	Navigation System Types - Type of equipment or system used in electronic navigation (primary system).
opc	Offshore Platform Classification - Tabulates types of offshore platforms.
pfh	Predominant Feature Height With greater than 1 meter resolution - Predominant height within delineation of feature.
ppc	Power Plant Category - Energy source used to generate power.
prm	Permanency - Indicates whether an object is temporary or permanent.
pro	Product Category - Principal material involved or product resulting from activity at site.
qle	Releasability - Releasability statement with regard to the feature.
sec	Security Classification - Defines the highest level of security associated with a feature.
ssc	Structure Shape Category - Geometric form, appearance, or configuration of the feature.
ssr	Structure Shape of Roof - Roof shape.
stc	Source Type Code - The origin from which features are captured or upgraded.
tst	Transmission Line Suspension - Types of suspension of power transmission lines between pylons.
ttc	Tower Type Category - Appearance or configuration of the feature.
txt	Text Attribute - Narrative or other description.

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vdc	Vertical (Sounding) Datum Category - The reference line (0 elevation) from which heights and depths are measured.
voi	Vertical Obstruction Identifier - Identification code that uniquely identifies a feature that is a vertical obstruction to low-level flight. (1-2 First two characters of NA4 - Country Code; 3-6 World aeronautical Chart (WAC) Identifier; 7-10 Unique Obstruction Identification Number; 11 Producer Code)
wid	Width [meters] - A measurement of the shorter of two linear axes. For a square feature, measure either axis. For a round feature, width shall be equal to LEN. For a bridge, the width is the measurement perpendicular to the axis between the abutments.
zv2	Highest Z-Value [meters] - Elevation above a given datum to the highest portion of the feature.
comp_date	Compilation Date - Appropriate date value of source or space character filled if null.
cover	Data Quality Thematic Coverage - This is the thematic layer identifier for each layer in the database.
dqarea_id	Area Feature Identifier - Data quality area feature identifier.
dqdescr	Data Quality Description for the Feature - This item contains a text string describing specific conditions occurring within the database for a particular feature. Typically this refers to edgematch problems observed between two source charts and identifies any steps taken to resolve the problem.
dqline_id	Line Feature Identifier - Data quality line feature identifier.
edition	Map Sheet Edition - Alphanumeric String of the Map Sheet Edition.
f_code	FACC Feature Code - FACC Feature Code
print_date	Map Print Date - Appropriate date value or space character filled if null.
rat_id	Related Attribute Identifier - Relates feature to related attribute table.
rev_date	Map Revision Date - Appropriate date value or space character filled if null.
source_id	Source Identification Number - Alphanumeric String of the TLM, Map Sheet, or source Name or other Identification Number.
source_info	General Source Information - Contains a description of conditions occurring in the database, such as sheet-wide phenomena, regional phenomena, or marginalia.
source1	First Source Sheet or Data Identifier - This item contains the name of the first chart sheet number or other source where a line feature crosses and requires a data quality description (see dqline.rat) (e.g., IFR Enroute Low Altitude-U.S. L5)

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source2

Second Source Sheet or Data Identifier - This item contains the name of the second chart sheet number or other source where a line feature crosses and requires a data quality description (see dqline.rat) (e.g., IFR Enroute Low Altitude-U.S. L6)

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CONCLUDING MATERIAL

Preparing activity:
NGA - MP

(Project GINT-0374)

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