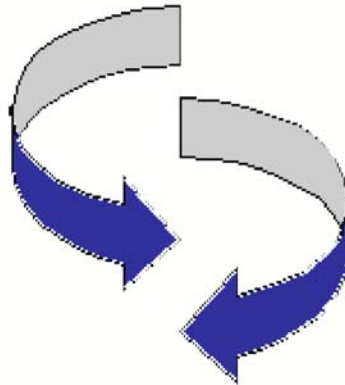

General Specifications for Aeronautical Surveys

Volume IV Exchange File Format

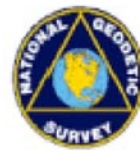
Updates to Version 3.3, September 2004



Federal
Aviation
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National
Oceanic and
Atmospheric
Administration



National
Geodetic
Survey

<http://www.ngs.noaa.gov/AERO/aero.html>

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1. Exchange File Overview

The Exchange File Format documentation is a user's guide for preparing and submitting data for storage in the Federal Aviation Administration's Airport Surveying-GIS Program and the National Geodetic Survey's Obstruction Chart Database (OCDB). It provides in detail the format and structure of every field allowable by the OCDB. Also included are dependencies, field widths, record order requirements and field choice lists.

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2. Record Format

The following sections describe all the possible records found in an Exchange File. These sections are broken down by record and then by field. Each field is further broken down by: description, position, range, format, and example. All records have the same basic structure. All records contain at most 132 characters. They consist of a variable number of fields. Each field has a corresponding existence code. The existence flags and their positions are defined in Appendix B. The field format contains a special symbol defined below.

A	Alphabetic upper and lower case characters only (A-Z)
9	Numeric and sign only (0-9, +, -, .)
X	Alphanumeric, sign and decimal point

Note: All alphabetic and alphanumeric values shall be left justified and all numeric values shall be right justified, unless otherwise specified. Alphabetic values may be upper or lower case. All numeric distance and length values are in U.S. Survey Feet unless otherwise specified.

2.1 Identification Code

Each record begins with a four character identification code. This code is broken down into two parts, the single upper case alpha character General Data Category and the three digit numeric General Data Record Type. The alpha character in the Identification code must be upper case.

2.1.1 General Data Category

The first character in column 1 is the general data category. All records for a given data category must be provided before the next category begins. There are eight valid data category codes:

V	Version Information
A	Airport Data
R	Runway Data
F	Feature Data
P	Poly Data
C	Chart Information
L	List Information
T	Task Information
X	End of File Record

Explanations of these categories will be given in further detail under the appropriate section for each category.

2.1.2 General Data Record Type

Characters 2-4 represent an integer value representing the data record for each category. If the first digit is a 3 through 9, the record is a standard series record. Otherwise it is a special format record. The following list contains the integer value range and the corresponding contents of the record:

000-299	Various Contents
300	Reference System Definition Codes
400	3D Positions With Date And Source
500	Distance And Elevation With Date And Source
600	Length And Width With Date And Source
700	2D Positions Without Date And Source

800	Value (Distance, Width, etc.) With Date And Source
900	Orthometric and Ellipsoidal Elevation With Date And Source

These data records are broken down into specific fields in sections 2.1.2.1 through 2.1.2.8.

2.1.2.1 Various Contents (000-299)

2.1.2.2 Reference System Definition Codes (300)

Field 1: Reference System Code

Description: Reference system in which the positions are expressed
 Position: Columns 5-9
 Range: None, value is always 0 (zero)
 Format: 99999
 Example: 0

Field 2: Zone Code

Description: Zone for the reference system
 Position: Columns 10-14
 Range: None, value is always 0 (zero)
 Format: 99999
 Example: 0

Field 3: Horizontal Unit Code

Description: Units in which positions are expressed.
 Position: Columns 15-19
 Range: Currently only:
 5 DMS (degrees, minutes, seconds)
 Note: Additional codes will be added in the future only if modifications to the OC Database allow for positions in units other than DMS.
 Format: 99999
 Example: 5

Field 4: Horizontal Datum Code

Description: Year of datum in which positions are expressed
 Position: Columns 20-24
 Range: Year of Datum, 27 or 83
 Format: 99999
 Example: 27

Field 5: Vertical Unit Code

Description: Units in which elevations and distances are expressed
 Position: Columns 25-29
 Range: Currently only:
 1 U.S Survey Feet
 Note: Additional unit codes will be added at some point in the future only if modifications to the OC Database allow for elevations and distances in units other than U.S Survey Feet
 Format: 99999
 Example: 1

Field 6: Vertical Datum Code

Description: Datum in which elevations are expressed

Position: Columns 30-34
Range: 29, 88, 9001 or 9003
Format: 99999
Example: 29

2.1.2.3 3D Positions (400)

Field 1: Longitude

Description: Longitude where sign represents hemisphere
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
-180 < DDD < + 180
0 <= MM <= 59
0 <= SS <= 59
Example: -1235832.1281

Field 2: Latitude

Description: Latitude where sign represents hemisphere
Position: Columns 20-34
Range: -900000 to +900000, values south represented as negative
Format: DDMMSS.SSSS where
-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 7: Source Code, Position

Description: Specifies the source of position
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 8: Source Code, Elevation

Description: Specifies the source of elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.1.2.4 Distance and Elevation (500)

Field 1: Distance

Description: Distance (real) from an endpoint
Position: Columns 5-19
Range: None
Format: 9999999999.999
Example: 72149.968

Field 2: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 12138.325

Field 3: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 14325.424

Field 4: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where

dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Source Code, Distance

Description: Specifies the source of distance
Position: Column 90
Range: See Appendix B
Format: A
Example: D

Field 7: Source Code, Elevation

Description: Specifies the source of elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.1.2.5 Length and Width (600)

Field 1: Distance

Description: Distance (real) from runway endpoint
Position: Columns 5-19
Range: None
Format: 9999999999.999
Example: 1244.945

Field 2: Width

Description: Width (real) of runway
Position: Columns 20-34
Range: None
Format: 9999999999.999
Example: 324.376

Field 3: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month

yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: Source Code, Distance

Description: Specifies the source of distance
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 6: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.1.2.6 2D Positions (700)

Field 1: Longitude

Description: Longitude where sign represents hemisphere
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
-180 < DDD < +180
0 <= MM <= 59
0 <= SS <= 59
Example: -1751119.1281

Field 2: Latitude

Description: Latitude where sign represents hemisphere
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where
-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

2.1.2.7 Value (Distance, Width, etc.) (800)

Field 1: Value (Distance, etc.)

Description: Distance, width or other miscellaneous real value
Position: Columns 5-19
Range: None
Format: 9999999999.9999
Example: 1231.4433

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 3: Source Code, Value

Description: Specifies the source of value
Position: Column 90
Range: See Appendix B
Format: A
Example: F

2.1.2.8 Orthometric and Ellipsoidal Elevation (900)

Field 1: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 13245.786

Field 2: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 14456.556

Field 3: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92

Range: See Appendix B
Format: A
Example: D

2.2 Specific Data Records

These records are specific to the three general data categories: Airport, Runway, and Feature. The first character represents which general category the record falls under. A - Airport, R - Runway, F - Feature, and P - Poly Feature. Like the General Data Record Type, characters 2-4 represent an integer value representing the data record for each category. If the second character is a 3 through 9, the record is a standard series record.

2.2.1 Airport Specific Records

The following records contain information about the airport.

2.2.1.1 Airport Identification (A000)

Note: This record must be present and should be the second record if there is a Version (V000) Record or the first record if there is no Version Record.

*Field 1: **OC Number***

Description: The National Geodetic Survey's Obstruction Chart tracking number from FAA's National Aeronautical Charting Office (AL number)

Position: Columns 5-10

Range: 1 to 999999

Format: 999999

Example: 4367

Dependency: This record or the Airport ID is required

*Field 2: **OC Edition***

Description: Most current

Position: Columns 11-16

Range: 1 to 99999

Format: 999999

Example: 6

*Field 3: **Airport ID***

Description: Airport Identifier (refer to FAA ORDER 7350.**, AS AMENDED)

Position: Columns 18-21

Range: None

Format: XXXX

Example: TWS

Dependency: This record or the OC Number is required

*Field 4: **Site ID***

Description: FAA Identification number

Position: Columns 23-32

Range: None

Format: (10)X

Example: 04508.A

*Field 5: **Previous Airport ID***

Description: The previous Airport Identifier (if applicable)
Position: Columns 34-37
Range: None
Format: XXXX
Example: CNW

2.2.1.2 Airport Name (A010)

Field 1: Name

Description: Name of Airport on Survey Date
Position: Columns 6-75
Range: None
Format: (70)A
Example: Baltimore Washington International Airport

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

2.2.1.3 Airport Jurisdiction (A020)

Field 1: City

Description: Associated City
Position: Columns 6-45
Range: None
Format: (40)A
Example: BALTIMORE

Field 2: State

Description: Name or 2 character abbreviation of state in which airport is located
Position: Columns 47-66
Range: Valid state name as defined in Annex A of "Input Formats and Specifications of the National Geodetic Survey Data Base (September 1994) (updated 1998, 2000)" are obtained by clicking "generate" on section 2.0 Get the Latest Country, State, and County Codes (<http://www.ngs.noaa.gov/FGCS/BlueBook/annexa/annexa.index.html>)
Format: (20)A
Example: MD

2.2.1.4 Airport Magnetic Declination (A030)

Note: This record contains computed values or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: Magnetic Declination

Description: East Declination is indicated by negative.

Position: Columns 5-12
Range: -180.0 to +180.0
Format: 999999.9
Example: -100.0

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 14-24
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

2.2.1.5 Airport Status (A040)

Field 1: Airport Vessel Code

Description: Specifies existence of a vessel that possibly obstructs the FAR 77 Horizontal, Conical or Transition OIS
Position: Column 6
Range: Y or N - Y, vessel present, N, no vessel present
Format: A
Example: Y

Field 2: Vessel Code Verified Date

Description: Most recent Survey Date that Vessel Code was verified
Position: Columns 8-18
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 3: Survey Date

Description: Date the field Survey was completed; this record must be the same as the Completed Date of the Survey Task Code (Record T000, Field 4 and with Field 1 = "S") when both are present. If not, the Survey Date will take the value of the last record in which it appears. It is acceptable to set the known flag for this field to "9" (ignore).
Position: Columns 20-30
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Published Date

Description: Publication date of Airport Obstruction Chart. This is a computed value or a value that is established by the NGS or the FAA and, as such, is provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties

submitting data to the NGS or the FAA do not need to populate this field.

Position: Columns 32-42

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 5: Date of ALP

Description: Date of original ARP position

Position: Columns 44-54

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 6: Date of ARP

Description: Most recent runway end Survey Date used in the ARP computation

Position: Columns 56-66

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 7: Airport Mode

Description: Designates the functionality of the airport in relation to the production of various reports

Position: Columns 68-71

Range: 0 Open

1 Closed

3 Testing

5 No Obstructions

7 Discontinued

Format: 9

Example: 1

Field 8: Airport Survey Type

Description: Specifies the type of survey conducted for the airport

Position: Columns 73-76

Range: 1 AOC (FAR-77) - a conventional AOC (FAR 77) survey

2 ANA - an ANA survey

3 AOC & ANA - a complete survey for AOC and ANA

4 NAVAID Only

5 Runway Only

6 STARS Only

7 Runway End

8 OEP

9 SafeFlight Only

10	RBI
11	ALP
12	CGR
99	Mixed

Format: 9999
Example: 1

2.2.1.6 Surface Type (A045)

Field 1: Surface Type 1

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 6-8

Range: NUL None
 F77 FAR Part-77
 ANA Area Navigation Approach
 RBI Ron Brown Airport Initiative
 OEP Operational Evolution Plan
 CGR Congressional

Format: AAA
Example: F77

Field 2: Surface Type 2

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 10-12

Range: NUL None
 F77 FAR Part-77
 ANA Area Navigation Approach
 RBI Ron Brown Airport Initiative
 OEP Operational Evolution Plan
 CGR Congressional

Format: AAA
Example: F77

Field 3: Surface Type 3

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 14-16

Range: NUL None
 F77 FAR Part-77
 ANA Area Navigation Approach
 RBI Ron Brown Airport Initiative
 OEP Operational Evolution Plan
 CGR Congressional

Format: AAA
Example: F77

Field 4: Surface Type 4

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 18-20

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA

Example: F77

Field 5: Surface Type 5

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 22-24

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA

Example: F77

Field 6: Surface Type 6

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 26-28

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA

Example: F77

Field 7: Surface Type 7

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 30-32

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA
Example: F77

Field 8: Surface Type 8

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 34-36

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA
Example: F77

Field 9: Surface Type 9

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 38-40

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA
Example: F77

Field 10: Surface Type 10

Description: Surface Type refers to the general type of surfaces used to analyze features. Surfaces of the same type usually are similar in nature with respect to certain aspects of the surface definition or may merely be representative of different programs within the airport charting community.

Position: Columns 42-44

Range: NUL None
F77 FAR Part-77
ANA Area Navigation Approach
RBI Ron Brown Airport Initiative
OEP Operational Evolution Plan
CGR Congressional

Format: AAA
Example: F77

Field 11: Surface Type Surveyed Flag 1

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 52

Range: 1 Features were surveyed relative to this type of surface

0 Features were not surveyed relative to this type of surface
Format: 9
Example: 1

Field 12: Surface Type Surveyed Flag 2

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 54

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface
Format: 9
Example: 1

Field 13: Surface Type Surveyed Flag 3

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 56

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface
Format: 9
Example: 1

Field 14: Surface Type Surveyed Flag 4

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 58

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface
Format: 9
Example: 1

Field 15: Surface Type Surveyed Flag 5

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 60

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface
Format: 9
Example: 1

Field 16: Surface Type Surveyed Flag 6

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous

survey and information is being carried forward.

Position: Column 62

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

Field 17: Surface Type Surveyed Flag 7

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 64

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

Field 18: Surface Type Surveyed Flag 8

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 66

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

Field 19: Surface Type Surveyed Flag 9

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 68

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

Field 20: Surface Type Surveyed Flag 10

Description: Specify which surfaces were actually considered for the current survey, refer to the surface types in Fields 1 - 10 respectively. When a particular surface is flagged as not being considered during the current survey, it means that the surface may have been considered during a previous survey and information is being carried forward.

Position: Column 70

Range: 1 Features were surveyed relative to this type of surface
0 Features were not surveyed relative to this type of surface

Format: 9

Example: 1

2.2.1.7 Datum Tie (A050)

Field 1: Horizontal Datum Tie Code

Description: Specifies the accuracy of the Horizontal Datum Tie relative to the National Spatial Reference System (NSRS)

Position: Columns 6-7

Range: See Appendix B

Format: AA

Example: B

Field 2: Ellipsoidal Datum Tie Code

Description: Specifies the accuracy of the Ellipsoidal Datum Tie relative to the National Spatial Reference System (NSRS)

Position: Columns 9-10

Range: See Appendix B

Format: AA

Example: B

Field 3: Orthometric Datum Tie Code

Description: Specifies the accuracy of the Orthometric Datum Tie relative to the National Spatial Reference System (NSRS)

System (NSRS)

Position: Columns 12-13

Range: See Appendix B

Format: AA

Example: D

Field 4: Date of Horizontal Datum Tie

Description: The adjustment date for the Primary Airport Control Station position.

Position: Columns 15-25

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 5: Date of Ellipsoidal Datum Tie

Description: The adjustment date for the Primary Airport Control Station ellipsoid height.

Position: Columns 27-37

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 6: Date of Orthometric Datum Tie

Description: The adjustment date for the Primary Airport Control Station orthometric height.

Position: Columns 39-49

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

2.2.1.8 Airport Elevation (A060)

Note: This record contains computed values or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: Airport Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 213.887

Field 2: Geoid Height (at ALP)

Description: The difference between the Ellipsoid and Orthometric elevation at the approximate center of the runway.
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 134.578

2.2.1.9 Reported Elements Record (A070)

Note: This record contains computed values or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: Runways Reported Flag

Description: Denotes whether or not runways are to be reported, and if so, they have been reported
Position: Column 6
Range: 2 runways are not to be reported
1 runways are to be reported
3 runways have been reported
Format: 9
Example: 2

Field 2: NAVAIDS Reported Flag

Description: Denotes whether or not NAVAIDS are to be reported, and if so, they have been reported
Position: Column 8
Range: 2 NAVAIDS are not to be reported
1 NAVAIDS are to be reported
3 NAVAIDS have been reported
Format: 9
Example: 2

Field 3: OEP Reported Flag

Description: Denotes whether or not the OEP information is to be reported, and if so, it has been reported

Position: Column 10
Range: 2 OEP is not to be reported
1 OEP is to be reported
3 OEP has been reported
Format: 9
Example: 2

Field 4: Obstructions Reported Flag

Description: Denotes whether or not the obstructions are to be reported, and if so, they have been reported
Position: Column 12
Range: 2 obstructions are not to be reported
1 obstructions are to be reported
3 obstructions have been reported
Format: 9
Example: 2

Field 5: STARS Reported Flag

Description: Denotes whether or not the STARS information is to be reported, and if so, if it has been reported
Position: Column 14
Range: 2 STARS information is not to be reported
1 STARS information is to be reported
3 STARS information have been reported
Format: 9
Example: 2

Field 6: Additional Flag - Reserved for future use

Description: Year of datum in which positions are expressed
Position: Column 16
Range: Reserved for future use
Format: NA
Example: NA

Field 7: Additional Flag - Reserved for future use

Description: Units in which elevations are expressed
Position: Column 18
Range: Reserved for future use
Format: NA
Example: NA

Field 8: Additional Flag - Reserved for future use

Description: Year of datum in which elevations are expressed
Position: Column 20
Range: Reserved for future use
Format: NA
Example: NA

2.2.1.10 Air Traffic Control Tower Floor Elevation - indexed (A080)

Field 1: Point Feature Number

Description: The number must match a Point Feature Number (Field 1) from an F000 Record. Only one A080 record may be used and the Point Feature Number of the A080 must correspond to the Point Feature

Number of the F000 record for the primary ATCT.
Position: Columns 6-9
Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999
Format: XXXX
Example: 1

Field 2: Elevation, Orthometric

Description:
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 12138.325

Field 3: Elevation, Ellipsoidal

Description:
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 14325.424

Field 4: Verified Date

Description: Most recent survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: Source Code, Elevation

Description: Specifies the source of the Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.1.11 Epoch Dates (A090)

Field 1: Datum Tag

Description: Displayed for horizontal NAD 83 Latitude, Longitudes only.
Position: Columns 35-40
Range: None
Format: Shown in parentheses immediately following NAD 83.

NAD 83 (1986) indicates positions on the NAD83 datum for the North American Adjustment, completed in 1986.

NAD 83 (nnnn) indicates positions on the NAD83 datum for the North American Adjustment, but readjusted to a State High Accuracy Reference Network (HARN) on the date shown in (nnnn).

NAD 83 (CORS) indicates positions which are part of the CORS

NAD 83 (CORS) is an obsolete Tag which has been replaced by (CORS96), (PACP00), and (MARP00)

NAD 83 (CORS96) indicates a CORS position referenced to the North American tectonic plate.

NAD 83 (PACP00) indicates a CORS position referenced to the Pacific tectonic plate.

NAD 83 (MARP00) indicates a CORS position referenced to the Mariana tectonic plate.

Field 2: Horizontal Epoch Date

Description: The date the published horizontal coordinate is valid

Position: Columns 42-52

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 3: Ellipsoidal Epoch Date

Description: The date the published ellipsoidal height is valid

Position: Columns 54-64

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 4: Orthometric Epoch Date

Description: The date the published orthometric height is valid

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

2.2.1.12 Airport Reference System (A310)

Field 1: Reference System Code

Description: Reference system in which positions are expressed

Position: Columns 5-9

Range: None, value is always 0 (zero) indicating Geographic

Format: 99999

Example: 0

Field 2: Zone Code

Description: Zone for the reference system

Position: Columns 10-14

Range: None, value is always 0

Format: 99999
Example: 0

Field 3: Horizontal Unit Code

Description: Units in which positions are expressed
Position: Columns 15-19
Range: None, value is always 5
Format: 99999
Example: 5

Field 4: Horizontal Datum Code

Description: Year of datum in which positions are expressed
Position: Columns 20-24
Range: 27 or 83
Format: 99999
Example: 27

Field 5: Vertical Unit Code

Description: Units in which elevations are expressed
Position: Columns 25-29
Range: None, value is always 1
Format: 99999
Example: 1

Field 6: Vertical Datum Code

Description: Datum in which elevations are expressed
Position: Columns 30-34
Range: Year of Datum:
29 NGVD 29
88 NAVD 88
9001 Mean Sea Level
9003 Local Tidal
Format: 99999
Example: 29

2.2.1.13 Airport Location Point (A710)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
-180 < DD < +180
0 <= MM <= 59
0 <= SS <= 59
Example: -1751119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where

-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

2.2.1.14 Air Traffic Control Tower (A910)

Note: This Record should not be present in Exchange Format versions beyond version 1.0 (Refer to Record A080)

Field 1: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 13434.977

Field 2: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 123.333

Field 3: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2 Runway Specific Records

The following records contain information about a specific runway at the airport. Note that each record following the R000 record refers to that specific R000 record. If no R000 record is present, all runway records are invalid. Also any runway records preceding the R000 record are invalid. When the fourth character of the identification code is designated by an asterisk '*' the valid values specify the end of the runway. The low numbered end of the runway is designated by a one '1' and the high numbered end of the runway is designated by a two '2'.

2.2.2.1 Runway Identification (R000)

Note: Runway identification numbers must be unique. They are identified by the magnetic direction in which they point, rounding to the nearest ten degrees. So, for example, a runway identified with "36" would stand for a 360

degrees direction (i.e. North). Each runway can be used in two directions, and hence has two numbers. Since the directions are necessarily opposite, the number of a runway can always be found by adding or subtracting 18 from the opposite runway number (whichever yields a positive number less than 37). If an airport has more than one runway pointing in the same direction, the runways are further identified by the letters L, C and R, for Left, Center and Right, behind the number. Such an example would be runways "36L", "36C" and "36R". If a runway end identification number includes a letter the opposite runway end must also include the opposite directional letter. Such an example of letter designations would be 18R/36L, 18C/36C, and 18L/36R. If a planned runway is designated with an 'X' then the opposite runway end must also be designated with an 'X'.

Field 1: Low End Identification Number

Description: Identifies the low end of the runway, measured from 10 degrees to 180 degrees. Note that the 0 is dropped from the degree reading.

Position: Columns 6-8

Range: 1-18 followed by:
blank - only runway with this azimuth
L - left runway
R - right runway
C - center runway
X - unmarked runway

Format: 99A

Example: 16R

Field 2: High End Identification Number

Description: Identifies the high end of the runway, measured from 190 degrees to 360 degrees. Note that the 0 is dropped from the degree reading.

Position: Columns 9-11

Range: 19-36 followed by:
blank - only runway with this azimuth
L - left runway
R - right runway
C - center runway
X - unmarked runway

Format: 99A

Example: 34L

2.2.2.2 Runway Width (R810)

Field 1: Width

Description: Width (real) of runway

Position: Columns 5-19

Range: None

Format: 9999999999.9999

Example: 156.4565

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year

Example: 18-DEC-1996

Field 3: Source Code, Value

Description: Specifies the source of value

Position: Column 90

Range: See Appendix B

Format: A

Example: F

2.2.2.3 Runway Type (R010)

Field 1: Runway Type Code

Description: Material used in finish of runway

Position: Column 6

Range: P - Paved

S - Specially prepared, unpaved

U - Unpaved (not a specially prepared hard surface)

Format: A

Example: P

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified

Position: Columns 8-18

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

2.2.2.4 Runway Flags (R02*)

Note: Fields 1, 2, 5, 6 and 7 of the R02* record are ignored when an R*03 record is found. The R*03 record is now the preferred method for specifying approach types.

Field 1: This Field is no longer in use

Description:

Position:

Range:

Format:

Example:

Field 2: This Field is no longer in use

Description:

Position:

Range:

Format:

Example:

Field 3: Runway Vessel Code

Description: Specifies the existence of a vessel that possibly obstructs the FAR 77 Approach or Primary

OIS

Position: Column 14

Range: Y or N - Y, vessel present, N, no vessel present
Format: A
Example: D

Field 4: Runway Vessel Verified Date

Description: Most recent Survey Date the Runway Vessel Code was verified
Position: Columns 16-26
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: This Field is no longer in use

Description:
Position:
Range:
Format:
Example:

Field 6: This Field is no longer in use

Description:
Position:
Range:
Format:
Example:

Field 7: This Field is no longer in use

Description:
Position:
Range:
Format:
Example:

Field 8: Profile Method Flag Code

Description: Specifies the method used to collect runway profile information
Position: Column 34
Range: 0 - Conventional profiling
 1 - Kinematic GPS profiling
 2 - Photogrammetric Methods
 3 - LIDAR
Format: 9
Example: 1

2.2.2.5 Runway Approach Type (R03*)

Note: The approach types reported in Fields 1-10 must be an approach of the general surface type specified in the corresponding field in the A045 record. The Approach Surveyed Flags in Fields 11-20 specify whether or not the approach surfaces was used for feature penetration analysis during the current survey, and must refer to the Approach Types specified in fields 1 - 10 respectively. When a particular approach is flagged as not being considered during the current survey, it means that the approach surface may have been considered during a

previous survey and information is being carried forward.

Field 1: Approach Type 1

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 6-8
Range: See Appendix B
Format: AAA
Example: PIR

Field 2: Approach Type 2

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 10-12
Range: See Appendix B
Format: AAA
Example: PIR

Field 3: Approach Type 3

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 14-16
Range: See Appendix B
Format: AAA
Example: PIR

Field 4: Approach Type 4

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 18-20
Range: See Appendix B
Format: AAA
Example: PIR

Field 5: Approach Type 5

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 22-24
Range: See Appendix B
Format: AAA
Example: PIR

Field 6: Approach Type 6

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 26-28
Range: See Appendix B
Format: AAA
Example: PIR

Field 7: Approach Type 7

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 30-32
Range: See Appendix B
Format: AAA
Example: PIR

Field 8: Approach Type 8

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 34-36
Range: See Appendix B
Format: AAA
Example: PIR

Field 9: Approach Type 9

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 38-38
Range: See Appendix B
Format: AAA
Example: PIR

Field 10: Approach Type 10

Description: Approach Type refers to the specific type of approach surface used to analyze features.
Position: Columns 42-44
Range: See Appendix B
Format: AAA
Example: PIR

Field 11: Approach Surveyed Flag 1

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 52
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 12: Approach Surveyed Flag 2

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 54
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 13: Approach Surveyed Flag 3

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 56
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 14: Approach Surveyed Flag 4

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 58
Range: 1 Features were surveyed relative to this approach surface

0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 15: Approach Surveyed Flag 5

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 60
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 16: Approach Surveyed Flag 6

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 62
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 17: Approach Surveyed Flag 7

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 64
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 18: Approach Surveyed Flag 8

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 66
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 19: Approach Surveyed Flag 9

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.
Position: Column 68
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

Field 20: Approach Surveyed Flag 10

Description: Specify whether or not the approach surface was used for feature penetration analysis during the current survey; refer to the Approach Types specified in fields 1 - 10 respectively.

Position: Column 70
Range: 1 Features were surveyed relative to this approach surface
0 Features were not surveyed relative to this approach surface
Format: 9
Example: 1

2.2.2.6 Runway End Position (R40*)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
-180 < DD < +180
0 <= MM <= 59
0 <= SS <= 59
Example: -1751119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where
-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position

Position: Column 90

Range: See Appendix B

Format: A

Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Elevation

Position: Column 92

Range: See Appendix B

Format: A

Example: F

2.2.2.7 Displaced Threshold - by position (R41*)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDMMSS.SSSS where

-90 < DD < +90

0 <= MM <= 59

0 <= SS <= 59

Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2.8 Stopway - by position (R42*)

Note: A corresponding R82* record should be present to specify the width and width source. If not found, the width and width source will be assumed to be the same as the runway width.

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where

-180 < DD < +180
0 <= MM <= 59
0 <= SS <= 59
Example: -761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where
-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position
Position: Column 90

Range: See Appendix B
Format: A
Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2.9 Stopway Width (R82*)

Field 1: Width

Description: Specifies the width and width source for the stopway. If omitted, the runway width and width source is assumed to be the same as for the runway. The Date field is ignored.
Position: Columns 5-19
Range: None
Format: 9999999999.9999
Example: 156.4565

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 3: Source Code, Value

Description: Specifies the source of value
Position: Column 90
Range: See Appendix B
Format: A
Example: F

2.2.2.10 Blast Pad - by position (R43*)

Note: A corresponding R83* record should be present to specify the width and width source. If not found, the width and width source will be assumed to be the same as the runway width.

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
 -180 < DD < +180
 0 <= MM <= 59
 0 <= SS <= 59
Example: -761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where
 -90 < DD < +90
 0 <= MM <= 59
 0 <= SS <= 59
Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2.11 Blast Pad - by distance (R63*)

Field 1: Distance

Description: Distance (real) from end of runway
Position: Columns 5-19
Range: None
Format: 9999999999.999
Example: 455.331

Field 2: Width

Description: Width (real) of runway
Position: Columns 20-34
Range: None
Format: 9999999999.999
Example: 74.332

Field 3: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: Source Code, Distance

Description: Specifies the source of Distance
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 6: Source Code, Width

Description: Specifies the source of Width
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2.12 Blast Pad Width (R83*)

Field 1: Width

Description: Specifies the width and width source for the blast pad. If omitted, the runway width and width source is assumed to be the same as for the runway. The Date field is ignored.
Position: Columns 5-19
Range: None
Format: 9999999999.9999
Example: 156.4565

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 3: Source Code, Value

Description: Specifies the source of value
Position: Column 90
Range: See Appendix B
Format: A
Example: F

2.2.2.13 Distance To Boundary - by position (R74*)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
 -180 < DD < +180
 0 <= MM <= 59
 0 <= SS <= 59
Example: -1761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDDMMSS.SSSS where
 -90 < DD < +90

0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

2.2.2.14 Distance To Boundary - by distance (R84*)

Field 1: Value (Distance, etc.)

Description: Distance (real) to boundary from endpoint
Position: Columns 5-19
Range: None
Format: 9999999999.9999
Example: 325.3443

Field 2: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 3: Source Code, Value

Description: Specifies the source of value
Position: Column 90
Range: See Appendix B
Format: A
Example: F

2.2.2.15 TDZE - output only (R92*)

Note: This record contains computed value or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 13245.786

Field 2: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 14456.556

Field 3: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 4: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: D

2.2.2.16 Profile Point Status (R090)

Field 1: Runway Identification Number From Which Distance Is Measured

Description: Runway azimuth varies from 10 to 360 degrees. Note that the trailing zero (0) is dropped from the identification number
Position: Columns 6-8
Range: 1-36 followed by:
 blank - only runway with this azimuth
 L - left runway
 R - right runway
 C - center runway
 X - unmarked runway
Note: Must match field 1 or field 2 of R000 record
Format: 99A
Example: 18

Field 2: Profile Point Type Code

Description: Software generated type code (can be left blank)
Position: Column 10
Range: Software Generated (can be left blank)
Format: A
Example: X

2.2.2.17 Profile Point - by position (R490)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
 -180 < DD < +180
 0 <= MM <= 59
 0 <= SS <= 59
Example: -1761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign
Position: Columns 20-34
Range: -900000 to +900000 values south represented as negative
Format: DDMMSS.SSSS where
-90 < DD < +90
0 <= MM <= 59
0 <= SS <= 59
Example: 245328.7315

Field 3: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 4: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Position
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.2.18 Profile Point - by distance (R590)

Field 1: Distance

Description: Distance (real) from endpoint
Position: Columns 5-19
Range: None
Format: 9999999999.999
Example: 121.332

Field 2: Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 485.332

Field 3: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 384.322

Field 4: Determined Date

Description: Survey Date that data in this record was determined
Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 5: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 6: Source Code, Distance

Description: Specifies the source of Distance
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 7: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.3 Feature Specific Records

The following records contain information about a feature at the airport. Note that each record following the F000 record refers to that specific F000 record.

2.2.3.1 Feature Identification (F000)

Field 1: Point Feature Number

Description: Unique “number” for a feature which identifies the feature for life of the airport
Position: Columns 6-9
Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999
Format: XXXX
Example: 1

Field 2: Feature Description

Description: Description of feature (refer to FAA NO. 405 for allowed abbreviations). If the feature is a PACS (P) or SACS (A) control point then the NGS designated Permanent Identifier (PID) must be included as the first six characters followed by a blank ‘ ’ or slash ‘/’ character for readability. If the PID is unknown then XXXXXX should be used.
Position: Columns 11-50
Range: None
Format: (40)X
Example: TREE

2.2.3.2 Feature Status Record (F010)

Field 1: Feature Status Flag

Description: Specifies whether or not a feature is to be considered as a possible obstruction
Position: Column 6
Range: 0 - Active - point is completely active and to be considered for all surfaces
1 - Disabled (Completely) - the point still exists but should not be considered for any surfaces due to clutter or other reasons; will be deleted from the database when the next edition is created
2 - Investigate – the point was collected with remote sensing techniques and is to be scrutinized when verified during the following field survey
3 - Deleted - the point no longer physically exists and will not be considered for any surfaces; will be deleted from the database when the next edition is created
4 - Disabled for AOC only - the point should be considered for all surfaces except for AOC surfaces

- 5 - Remove - the point still exist but it is recommended by (field surveyor) that it not be published
- 6 - Disabled for ANA only - the point should be considered for all surfaces except for ANA surfaces
- 7 - Replaced – another representative point was collected and this one is no longer required. It is not considered active and should be omitted from future surveys.
- 8 - Inactive - the point still exists but only for historical or informational purposes; is not considered for any surfaces
- 9 – Rejected – the point was surveyed in this latest edition but was later determined by (field surveyor) to be discarded.

Format: 9

Example: 1

Field 2: Accuracy Code

Description: Specifies the accuracy standard (refer to FAA NO. 405). Note: This accuracy code is for point feature accuracy relative to the FAA 405 requirements for obstructions. NAVAIDS and control points without a top elevation should use the accuracy code “99”.

Position: Columns 8-9

Range: See Appendix B

Format: XX

Example: 1A

Field 3: Point Survey Status Attribute

Description: Specifies the action performed to verify/determine features in the current survey.

Position: Column 12

Range: See Appendix B

Format: A

Example: P

Field 4: Control Type Attribute

Description: Type of Control point.

Feature Description.

Position: Column 14

Range: See Appendix B

Format: A

Example: P

Field 5: NAVAID Type Attribute

Description: Specifies whether or not the feature is a navigational aid and/or STARS component and, if so, what kind. Each Active NAVAID (with the exception of the Airport Beacon) shall be uniquely identified based on the NAVAID Type, Facility ID, and if applicable, Runway End ID attributes. This does not apply to NAVAIDS with NAVAID Type Code =: (STARS) or NAVAIDS that are Under Construction, Out of Service or Non-commissioned.

Position: Column 16

Range: See Appendix B

Format: A and some special characters, see Appendix B

Example: W

Field 6: Special Attribute

Description: Specifies one or more special attributes

Position: Column 18

Range: See Appendix B

Format: A
Example: T

Field 7: Feature Survey Type

Description: Specifies the type of survey for which the feature was surveyed

Position: Columns 20-23

Range: 1 - AOC (FAR-77)
2 - ANA
3 - AOC and ANA
4 - NAVAID Only
5 - Runway Only
6 - Stars Only
7 - Runway End
8 - OEP
9 - SafeFlight Only
10 - Ron Brown Airport Initiative
11 - ALP
12 - CGR
99 - Mixed
100 - None/Unknown

Format: 9999

Example: 1

2.2.3.3 Feature Position (F410)

Field 1: Longitude

Description: Longitude with hemisphere represented by sign

Position: Columns 5-19

Range: -1800000 to +1800000, values west represented as negative

Format: DDDMMSS.SSSS where

-180 < DD < +180

0 <= MM <= 59

0 <= SS <= 59

Example: -1761119.1281

Field 2: Latitude

Description: Latitude with hemisphere represented by sign

Position: Columns 20-34

Range: -900000 to +900000 values south represented as negative

Format: DDMMSS.SSSS where

-90 < DD < +90

0 <= MM <= 59

0 <= SS <= 59

Example: 245328.7315

Field 3: Top Elevation, Orthometric

Description: The top elevation will be the highest point of a feature (Refer to the FAA NO. 405).

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

Field 4: Top Elevation, Ellipsoidal

Description: The top elevation will be the highest point of a feature (Refer to the FAA NO. 405).

Position: Columns 50-64

Range: None

Format: 9999999999.999

Example: 382.289

Field 5: Determined Date

Description: Survey Date that data in this record was determined

Position: Columns 66-76

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 6: Verified Date

Description: Most recent Survey Date that data in this record was verified

Position: Columns 78-88

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 7: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position

Position: Column 90

Range: See Appendix B

Format: A

Example: F

Field 8: Source Code, Vertical Position

Description: Specifies the source of Vertical Position

Position: Column 92

Range: See Appendix B

Format: A

Example: F

2.2.3.4 Base Elevation Record (F020)

Field 1: Elevation, Orthometric

Description: Refer to the FAA NO. 405

Position: Columns 35-49

Range: None

Format: 9999999999.999

Example: 469.845

Field 2: Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 3: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.3.5 Reference Elevation Record (F025)

Field 1: Elevation, Orthometric

Description: The reference elevation will be one of several kinds of mutually exclusive elevations depending upon the NAVAID flag (F010, Field 5). The possibilities are : Mid-Point Elevation, Phase Center Elevation and ATCT Floor Elevation (only if feature is an ATCT). (Refer to the FAA No. 405)
Position: Columns 35-49
Range: None
Format: 9999999999.999
Example: 469.845

Field 2: Elevation, Ellipsoidal

Description: The reference elevation will be one of several kinds of mutually exclusive elevations depending upon the NAVAID flag (F010, Field 5). The possibilities are : Base Elevation, Mid-Point Elevation, and Phase Center Elevation. (Refer to the FAA No. 405)
Position: Columns 50-64
Range: None
Format: 9999999999.999
Example: 382.289

Field 3: Source Code, Elevation

Description: Specifies the source of Elevation
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.3.6 Auxiliary Date (F030)

Field 1: Auxiliary Date

Description: Extra date field left over from previous definition of dates. Only used internally.
Position: Columns 6-16
Range: None
Format: dd-mmm-yyyy where
dd - 2 character integer day
mmm - First 3 alpha characters of the month

yyyy - 4 character integer year
Example: 18-DEC-1996

2.2.3.7 Feature Cross-Reference Record (F040)

Field 1: Facility ID

Description: ID of the associated Facility. Note that the Facility ID for NAVAIDS associated with an ILS/MLS, references the associated ILS/MLS system identifier.

Position: Columns 6-9

Range: None

Format: XXXX

Example: SUN

Field 2: Runway End IDs

Description: Runway end associated with the NAVAID

Position: Columns 11-57

Range: Runway End ID that matches either Field 1 or Field 2 in any R000 Record; in special cases can be "NON" (for NONE); or can be a list of valid IDs separated by a '/' such as 9L/26R/3.

Format: (47) X

Example: 34L

Field 3: Usage Status Code

Description:

Position: Columns 59-61

Range: Possible values are:

NUL - NONE

UNC - UNDER CONSTRUCTION

OTS - OUT OF SERVICE

NCM - NON-COMMISSIONED

Format: AAA

Example: UNC

Field 4: Z (Elev) offset

Description: The Z Offset (Field 4) is a value added to the true elevation to reflect the elevation at which the feature should be considered for penetration (Refer to FAA No. 405). This is to accommodate features such as roads or railroads which are themselves at a given, or true, elevation but may have vehicles on them which raise the effective elevation. In this instance, the Z Offset would be the value added to the true elevation to allow for the height of the vehicle. A feature's true elevation is the Orthometric Elevation minus the Z Offset.

Position: Columns 63-77

Range: Refer to FAA No. 405

Format: (15) X

Example: 23

Field 5: source code, for Z Offset

Description: Specifies the source for the presence of the Z Offset

Position: Column 92

Range: See Appendix B

Format: A

Example: F

2.2.3.8 Feature Comment Record - Field Survey (F050)

Field 1: Feature Comment, Field Survey

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example: West Dedham Church

2.2.3.9 Feature Comment Record - Requirements (F051)

Field 1: Feature Comment, Requirements

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example: CPME associated with ASR (ABC)

2.2.3.10 Feature Comment Record - Compilation (F052)

Field 1: Feature Comment, Compilation

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example: OBST #366 RD(N) 918, approximately 235 feet NE of rwy end 22, was moved 15 feet east.

2.2.3.11 Photo ID Record (F008)

Field 1: Photo Identification

Description: Photo ID for Photo Identified features
Position: Columns 6-45
Range: None
Format: (40) X
Example: SS#1(C)2000

2.2.3.12 Collection Interface Record (F009)

Field 1: Date-Time Visited

Description: Date-time (any kind)
Position: Columns 6-22
Range: None
Format: dd-mmm-yyyy hh:mm where
dd - 2 character integer day
mmm - First 3 alpha characters of the month
yyyy - 4 character integer year
hh - 2 character integer hour
mm - 2 character integer minute
Example: 18-DEC-1995 13:57

Field 2: Date-Time Horizontal Position Edited

Description: Date-time (any kind)
Position: Columns 23-39
Range: None
Format: dd-mmm-yyyy hh:mm where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
 hh - 2 character integer hour
 mm - 2 character integer minute
Example: 18-DEC-1995 13:57

Field 3: Date-Time Vertical Position (Top) Edited

Description: Date-time (any kind)
Position: Columns 40-56
Range: Text
Format: dd-mmm-yyyy hh:mm where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
 hh - 2 character integer hour
 mm - 2 character integer minute
Example: 18-DEC-1995 13:57

Field 4: Date-Time Description Edited

Description: Date-time (any kind)
Position: Columns 57-73
Range: Text
Format: dd-mmm-yyyy hh:mm where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
 hh - 2 character integer hour
 mm - 2 character integer minute
Example: 18-DEC-1995 13:57

Field 5: Date-Time Other Attribute(s) Edited

Description: Date-time (any kind)
Position: Columns 74-90
Range: Text
Format: dd-mmm-yyyy hh:mm where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
 hh - 2 character integer hour
 mm - 2 character integer minute
Example: 18-DEC-1995 13:57

Field 6: Temporary Subject to Review Flag

Description: Feature designated for review by Quality Control
Position: Columns 90-92
Range: 0 - False

1 - True
Format: 999
Example: 1

2.2.3.13 Reference to Poly Feature Record (F005)

Field 1: Reference to Poly Feature

Description: The Poly Feature Number of the poly feature to which this point belongs
Position: Columns 6-9
Range: 0 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999. Note that 0 implies it does not belong to a poly feature.
Format: XXXX
Example: 1

2.2.4 Poly Feature Records

The following records contain information about a specific polygon or polyline feature at the airport. Note that each record following a Poly Feature Class record (P000) refers to that specific P000 record. If no P000 record is present, all poly feature records are invalid. Poly Feature Attribute records (P005) and Feature Comment Records (P05*) apply to the poly feature as a whole and reference the most recent Poly Feature Class (P000) record. There should be at least 2 Poly Vertex (P010) records for each polyline feature, and 3 Poly Vertex (P010) records for each polygon feature. There is no limit to the number of vertices per feature. Each Vertex Comment (P015) record is associated with the most recent Poly Vertex (P010) record and is intended to provide information about each vertex. The Vertex Comment (P015) record is most useful during a field survey to keep track of what has been done (Example: NW Corner). Poly Vertex (P010) records are expected to be in sequence. The Feature Comment Records (P05*) and Vertex Comment (P015) records are optional.

2.2.4.1 Poly Feature Class Record (P000)

Field 1: Poly Feature Number

Description: Unique "number" for a poly feature which identifies the feature for life of the airport
Position: Columns 6-9
Range: 1 to 9999, A1 to A999, B1 to B999, ... Z1 to Z999, a1 to a999, b1 to b999, ... z1 to z999
Format: XXXX
Example: 1

Field 2: Poly Feature Class

Description: A collection of features with similar attributes
Position: Columns 11-90
Range: None
Format: (80) X
Example: Buildings

2.2.4.2 Poly Feature Attribute Record (P005)

Field 1: Description

Description: Description of the feature
Position: Column 6-45
Range: None
Format: (40)X
Example: BLDG

Field 2: Type (G polygon, L polyline)

Description: Geometric representation of the feature

Position: Column 47

Range: G for a polygon, L for a polyline

Format: 9

Example: G

Field 3: Poly Feature Status Flag

Description: Specifies whether or not a poly feature is to be considered for the current survey.

Position: Column 49

Range: 0 - Active - point is completely active and to be considered for all surfaces

1 - Disabled (Completely) - the point still exists but should not be considered for any surfaces due to clutter or other reasons; will be deleted from the database when the next edition is created

3 - Deleted - the point no longer physically exists and will not be considered for any surfaces; will be deleted from the database when the next edition is created.

7 - Replaced - another representative point was collected and this one is no longer required. It is not considered active and should be omitted from future surveys.

8 - Inactive - the point still exist but only for historical or informational purposes; is not considered for any surfaces.

Format: 9

Example: 1

Field 4: Poly Feature Survey Status Attribute

Description: Specifies the action performed to verify/determine features in the current survey.

Position: Column 51

Range: See Appendix B

Format: A

Example: S

Field 5: Poly Feature Usage Status Code

Description: The state of surface at time of survey.

Position: Columns 53-55

Range: Possible values are:

NUL - None

UNC - UNDER CONSTRUCTION

NIU - NOT IN USE

Format: AAA

Example: UNC

Field 6: Poly Feature Accuracy Code

Description: Specifies the accuracy standard (refer to FAA NO. 405). Note: This accuracy code is for the actual polygon feature and not necessarily the vertices that comprise the polygon.

Position: Columns 57-58

Range: See Appendix B

Format: XX

Example: 99

Field 7: Determined Date

Description: Survey Date that data in this record was determined

Position: Columns 66-76
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 8: Verified Date

Description: Most recent Survey Date that data in this record was verified
Position: Columns 78-88
Range: None
Format: dd-mmm-yyyy where
 dd - 2 character integer day
 mmm - First 3 alpha characters of the month
 yyyy - 4 character integer year
Example: 18-DEC-1996

Field 9: Source Code, Horizontal Position

Description: Specifies the source of Horizontal Position
Position: Column 90
Range: See Appendix B
Format: A
Example: F

Field 10: Source Code, Vertical Position

Description: Specifies the source of Vertical Position
Position: Column 92
Range: See Appendix B
Format: A
Example: F

2.2.4.3 Vertex Record (P010)

Field 1: Longitude

Description: Longitude where sign represents hemisphere
Position: Columns 5-19
Range: -1800000 to +1800000, values west represented as negative
Format: DDDMMSS.SSSS where
 $-180 < DDD < +180$
 $0 \leq MM \leq 59$
 $0 \leq SS \leq 59$
Example: -1235832.1281

Field 2: Latitude

Description: Latitude where sign represents hemisphere
Position: Columns 20-34
Range: -900000 to +900000, values south represented as negative
Format: DDMMSS.SSSS where
 $-90 < DD < +90$
 $0 \leq MM \leq 59$

0 <= SS <= 59
Example: 245328.7315

Field 3: Top Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 35-45
Range: None
Format: 9999999.999
Example: 469.845

Field 4: Top Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 46-56
Range: None
Format: 9999999.999
Example: 382.289

Field 5: Base Elevation, Orthometric

Description: Refer to the FAA NO. 405
Position: Columns 57-67
Range: None
Format: 9999999.999
Example: 469.845

Field 6: Base Elevation, Ellipsoidal

Description: Refer to the FAA NO. 405
Position: Columns 68-78
Range: None
Format: 9999999.999
Example: 382.289

2.2.4.4 Vertex Comment Record (P015)

Field 1: Vertex Comment

Description: Comment
Position: Columns 6-45
Range: None
Format: (40) X
Example: NW Corner

2.2.4.5 Poly Feature Comment Record - Field Survey (P050)

Note: Poly Feature Comment records (P05*) reference the most recent Poly Feature Class record (P000).

Field 1: Poly Feature Comment, Field Survey

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example:

2.2.4.6 Poly Feature Comment Record - Requirements (P051)

Field 1: Poly Feature Comment, Requirements

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example:

2.2.4.7 Poly Feature Comment Record - Compilation (P052)

Field 1: Poly Feature Comment, Compilation

Description: Comment
Position: Columns 6-85
Range: None
Format: (80) X
Example:

2.2.5 Miscellaneous Records

The following records contain miscellaneous information.

2.2.5.1 Chart Reference System (C310)

Note: This record contains computed values or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: Reference System Code

Description: Reference system in which positions are expressed
Position: Columns 5-9
Range: 1 - UTM
 2 - State Plane
Format: 99999
Example: 1

Field 2: Zone Code

Description: Zone for the reference system
Position: Columns 10-14
Range: UTM or State Plane zone code
Format: XXXXX
Example: 17

Field 3: Horizontal Unit Code

Description: Units in which positions are expressed
Position: Columns 15-19
Range: None, value is always 1
Format: 99999
Example: 1

Field 4: Horizontal Datum Code

Description: Specifies year of Datum

Position: Columns 20-24
Range: 27 or 83
Format: 99999
Example: 83

Field 5: Vertical Unit Code

Description: Units in which positions are expressed
Position: Columns 25-29
Range: None, value is always 1
Format: 99999
Example: 1

Field 6: Vertical Datum Code

Description: Datum in which elevations are expressed
Position: Columns 30-34
Range: Year of Datum:
29 NGVD 29
88 NAVD 88
9001 Mean Sea Level
9003 Local Tidal
Format: 99999
Example: 88

2.2.5.2 NGVD29 to NAVD88 Conversion Adjustment (C010)

Field 1: Conversion Adjustment

Description: Added to NGVD29 data to convert to NAVD88 data. This is a computed value or a value that is established by the NGS or the FAA and, as such, is provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA. Third parties submitting data to the NGS or the FAA do not need to populate this field.
Position: Columns 6-12
Range: None
Format: 9999.99
Example: 469.84

2.2.5.3 Version Number Record (V000)

Note: Upon input to the National Geodetic Survey Obstruction Chart Database (OCDB), the Version Date (Field 2) will be ignored. An Exchange File which does not have this record will be considered Version 1.00.

Field 1: Exchange File Version

Description: Exchange File Version
Position: Columns 6-12
Range: 2.000 to 999.999
Format: mmm.sss, where
mmm is the major version
sss is the minor version
A change in major version number indicates the addition of new records
A change in minor version number indicates all other changes
Example: 2.00

Field 2: Version Date

Description: Date Version became effective

Position: Columns 14-24

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

2.2.5.4 Version Format Record (V010)

Note: This record must be the first record present in an Exchange File

The comma delimited format is similar to the standard format:

o All fields are the same, where the Record Id field is considered Field 0 for all records. Otherwise, if a record has 5 fields (not including Record Id) in the standard format, it will have the same 5 fields in the comma delimited format

o There must be a comma following the last field

o The comma delimited format does not have existence codes. Instead, a field with no characters indicates that the value is not known. A blank is considered a value character.

For example, consider the Airport Elevation (A060) which has two fields, plus the Record Id Field: Field 1 is the "Airport Elevation, Orthometric" and field 2 is the "Geoid Height (at ALP)".

A comma delimited record of:

A060,0,134.23 or A060, ,134.23,

both indicate that the Airport Elevation is 0.

However,

A060,,134.23,

Indicates that the Airport Elevation is unknown

Field 1: Version Format Record

Description: Exchange File Version

Position: Column 5

Range: S for standard format, C for comma delimited format

Format: A

Example: S

2.2.5.5 Task Status Record (T000)

Note: When Field 1 (Task Code) = "S", Field 4 (Date Completed) must be identical to the Survey Date Field (Record A040, Field 3) if both fields are populated.

Field 1: Task Code

Description: For an exchange file going out to or coming in from a contractor the only possible value is "S".

Position: Column 6

Range: S for survey, all other values are for internal use only

Format: A

Example: S

Field 2: User

Description: In general, this is the person or persons who performed the task. If the task was performed by

a contractor, this will be a unique six-character NGS assigned contractor identification code and a colon; then optionally followed by the name of the specific person who performed the task.

Position: Columns 8-27

Range: None

Format: 20X

Example: TX8537:SMITH

Field 3: Date Started

Description: Date the field survey was begun

Position: Columns 29-39

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

Field 4: Date Completed

Description: Date the field survey was concluded

Position: Columns 41-51

Range: None

Format: dd-mmm-yyyy where

dd - 2 character integer day

mmm - First 3 alpha characters of the month

yyyy - 4 character integer year

Example: 18-DEC-1996

2.2.5.6 List Record (L000)

"L" (List) Records are used to contain updated lists (of codes, for example) for selected fields within the exchange file which may change dynamically. Each such record indicates the id code of the exchange file record to which it applies, the field number of the record to which it applies, and the name of a the List File containing a list of codes, descriptions, and other pertinent information. The "other pertinent information" which may appear in a file is of importance and must be applied on a case-by-case basis.

The file name will have 5 character descriptive name and a three-digit version number, plus an extension of .TXT. If the user has on hand a higher version of a given file than that specified the higher version may be used. For example, a file called NAVAD001.TXT could be specified in the exchange file, but the user has NAVAD002.TXT on hand because the list was updated after the Exchange File was created but before the Exchange File was processed. The user may use NAVAD002.TXT.

In general, these files will contain: a file header record (name, date, description of file), data header record(s), a separator record and data records (code, description of code, etc).

The intent is to enable programs which are written to interact with the exchange file the ability to read in certain information instead of embedding information in the program, thus avoiding a rebuild of the program. Such information may be used to provide lists of valid codes, display descriptions of codes instead of cryptic code values, and enable validation.

These records and the associated list files are intended for the most part as an aid to those building software to interact with the Exchange File. One important list file is the NAVAD001.TXT file. This file notes required DEPENDENCIES for features based on the NAVAID code (as specified in the 405).

Note: This record contains computed values or values that are established by the NGS or the FAA and, as such, are provided by the NGS or the FAA for informational purposes and will be ignored upon input to the NGS or the FAA.

Third parties submitting data to the NGS or the FAA do not need to populate these fields.

Field 1: **Record ID**

Description: Record ID of affected record
Position: Columns 8-11
Range: An exchange file record ID
Format: XXXX
Example: F000

Field 2: **Field Number**

Description: Field Number of affected field
Position: Columns 14-15
Range: 1-50
Format: 99
Example: 3

Field 3: **List File Name**

Description: Name of List File
Position: Columns 18-29
Range: None
Format: (12) X
Example: NAVAD002.TXT

2.2.5.7 End of File Record (X000)

No Fields in this Record, only the record type in columns 1-4. Record signals the end of the exchange file and must be the last Record.