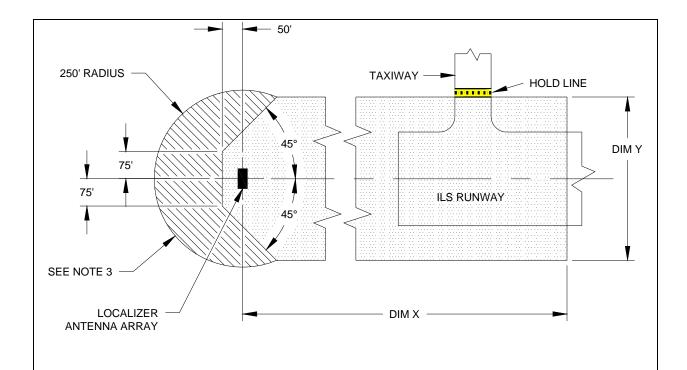
5.10. Group: NAVIGATIONAL AIDS

All of the different navigational aids are represented using a single feature type. To assist the data producer in identifying the different aids, each individual navigational aids is defined separately even though they are all represented by the single feature type NavigationalAidEquipment. Accuracies differ for many navigational aids. Be sure to collect the navigational aid within the accuracy stated in each navigational aid table.

5.10.1. NAVAID Critical Area

_	Definition: A zone encompassing a specific ground area in the vicinity of a radiating antenna array				
which must be protected from parking and unlimited movement of surface and air traffic. The					
drawings included in this table			the official source t	o ensure the	
appropriate area is protected. [S	Source: FAA Orde	r 6750.16C]			
Feature Group	NavigationalAid	S			
Feature Class Name	NavaidCriticalA	rea			
Feature Type	Polygon				
CADD Standard Requiremen	ts				
Layer/Level		Descr	iption		
C-AIRF-AIDS-CRIT	A	irfield Navigationa	l Aid - Critical Are	a	
	Color Linetype Line Weight Symbol				
	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards	Color 3		Line Weight 1 MM		
AutoDesk Standards MicroStation Standards	3 2	- Continuous		User Defined	
	3				
MicroStation Standards	3 2	Continuous			
MicroStation Standards	3 2 Restricted	Continuous	1 MM 7 entAreaExtension	User Defined	
MicroStation Standards Sensitivity	3 2 Restricted AIXM	Continuous ObstacleAssessm	1 MM 7 entAreaExtension CriticalArea	User Defined Extension	
MicroStation Standards Sensitivity	3 2 Restricted AIXM FGDC SDSFIE	Continuous ObstacleAssessm NavigationalAide	1 MM 7 entAreaExtension CriticalArea	User Defined Extension	
MicroStation Standards Sensitivity Equivalent Standards	3 2 Restricted AIXM FGDC	Continuous ObstacleAssessm NavigationalAide	1 MM 7 entAreaExtension CriticalArea	User Defined Extension	

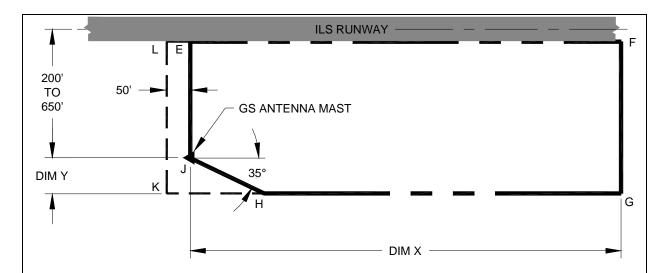
Data Capture Rules: Collect a closed polygon encompassing the greatest horizontal extents of the critical area for the NAVAID. Critical areas are normally associated with the localizer, glideslope, MLS azimuth, MLS elevation, and Precision Approach Radars. If necessary, identify the area using multiple polygons. Adjacent polygons must have shared edges and vertices and must not overlap polygons of the same feature.



DIMENSIONS X AND Y VALUES (IN FE	<u>EET)</u>		LEGEND
	<u>DIM X</u>	<u>DIM Y</u>	
CATEGORY I (SEE NOTE 4)	2000	400	AREA A
CATEGORY II/III (SEE NOTE 5)	2000	400	
CATEGORY II	4000	500	
CATEGORY III	7000	500	AREA B

NOTES:

- 1. THE CRITICAL AREA IS INDICATED BY THE SHADED ZONES.
- 2. HOLD LINE/SIGNS INDICATE THE POSITION BEYOND WHICH AIRCRAFT/VEHICLES WILL REQUIRE ATCT AUTHORIZATION BEFORE PROCEEDING ON OR ACROSS THE RUNWAY.
- 3. AREA B IS DELETED FROM THE CRITICAL AREA WHEN A UNIDIRECTIONAL LOCALIZER ANTENNA IS INSTALLED. THE STANDARD LOG-PERIODIC DIPOLE ANTENNA ARRAY IS IN THIS CATEGORY.
- 4. FOR 8-ELEMENT LOCALIZER ARRAYS WITH COURSE WIDTHS LESS THEN 4 DEGREES AND RUNWAYS WHICH OPERATE B-747 SIZE OR LARGER AIRCRAFT, THE Y DIMENSION SHALL BE 600 FEET.
- 5. THESE DIMENSIONS APPLY WHERE AIRCRAFT SIZE IS EQUAL TO OR LESS THAN 135 FEET IN LENGTH OR 42 FEET IN HEIGHT(I.E.B-737).
- 6. CRITICAL AREAS FOR LDA, SDF, AND THE OFFSET LOCALIZER FACILITIES ARE THE SAME AS CATEGORY I, BUT ARE CENTERED ABOUT THE COURSE LINE.



NOTES:

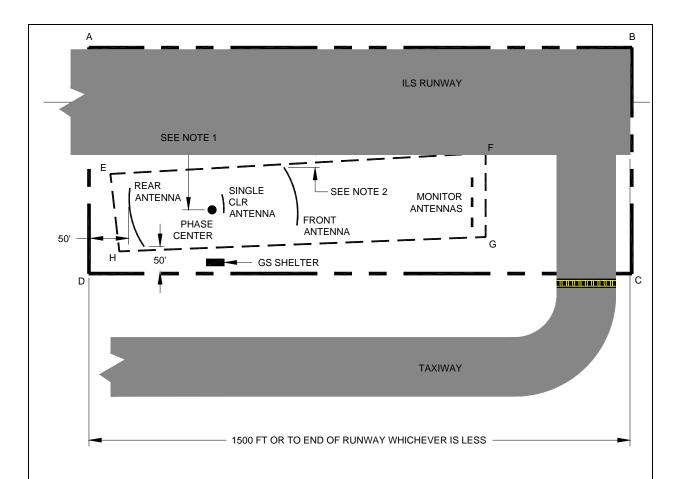
- 1. THE CRITICAL AREA IS DEFINED BY THE PENTAGON "EFGHJ".
- 2. ALL AIRCRAFT MAY BE PARKED AS CLOSE AS 50' BEHIND A GLIDESLOPE MAST WITH DIRECTIONAL ANTENNAS AS DEFINED BY LINE "KL".

3. FACILITY TYPE	CATEGO	ORY I	CATEGO	DRY II/III
	DIM X	DIM Y	DIM X	DIM Y
ALL IMAGE GLIDE SLOPES SMALL AIRCRAFT ●	800	100	800	100
NULL REFERENCE MEDIUM AIRCRAFT LARGE AIRCRAFT ●●●	2000	200	2500	200
	3100	200	3200	200
SIDEBAND AND CAPTURE EFFECT MEDIUM AND LARGE AIRCRAFT ◆◆/◆◆◆	1300	200	1300	200

ALL DISTANCES ARE IN FEET AND REPRESENT THE MINIMUM ALLOWABLE DISTANCES FROM THE NEAREST POINT ON THE AIRCRAFT LONGITUDINAL AXIS (LINE FROM NOSE TO TAIL) TO THE GLIDE SLOPE ANTENNA, AS DEFINED IN FIGURE 1-3.

- SMALL AIRCRAFT ARE DEFINED AS AIRCRAFT WITH DIMENSIONS LESS THAN 60' IN LENGTH AND 20' IN HEIGHT (I.E. KINGAIR). THIS INCLUDES ALL SURFACE VEHICLES AND HELICOPTERS.
- •• MEDIUM AIRCRAFT ARE DEFINED AS AIRCRAFT WITH DIMENSIONS LESS THAN 160' IN LENGTH AND 38' IN TAIL HEIGHT (I.E. B-737, MD-80).
- ••• LARGE AIRCRAFT ARE DEFINED AS AIRCRAFT GREATER THAN 160' IN LENGTH OR GREATER THAN 38' IN TAIL HEIGHT.

THE SMALL, MEDIUM AND LARGE AIRCRAFT SIZES ARE BASED UPON THE DIMENSIONS USED IN COMPUTER MODELING OF CRITICAL AREAS AND APPLY TO THIS DOCUMENT ONLY.



NOTES:

- 1. THIS DISTANCE IS APPROXIMATELY 200 FEET DEPENDING ON RUNWAY WIDTH. REFER TO FAA DRAWINGS D-6226-1 AND D-6226-2 FOR INSTALLATION LAYOUT.
- 2. THIS DISTANCE SHALL NOT BE LESS THAN 25 FEET.
- 3. THE CRITICAL AREA IS DEFINED BY THE AREA "ABCD". UNRESTRICTED TAXIING OR HOLDING AIRCRAFT IS PERMITTED IN UNSHAPED AREA.
- 4. SNOW REMOVAL AREA IS DEFINED AS "EFGH".

Monumentation	No r	nonumentation required.		
Survey Point Location		Horizontal	Vertical	
Survey Form Location		N/A	N/	A
A course De suivements (in		Horizontal	Vert	ical
Accuracy Requirements (in feet)		Horizontai	Orthometric	Ellipsoidal
leet)		± 3 ft	± 5 ft	N/A
Resolution		Geographic Coordinates	Distances and Elevations	
Resolution		Hundredth of arc second	Tenth of foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature.		
description (VARCHAR2 (255)))	Description of the feature.		
status (Enumeration: codeStatus	as) A temporal description of the operational status of the feature			s of the feature.
		This attribute is used to describe real-time status.		
dimensionX (Integer)		The linear dimension of the critical area in the X axis.		

dimensionY (Integer)	The linear dimension of the critical area in the Y axis.	
userFlag (String 254)	An operator-defined work area. This attribute can be used by	
	the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.	

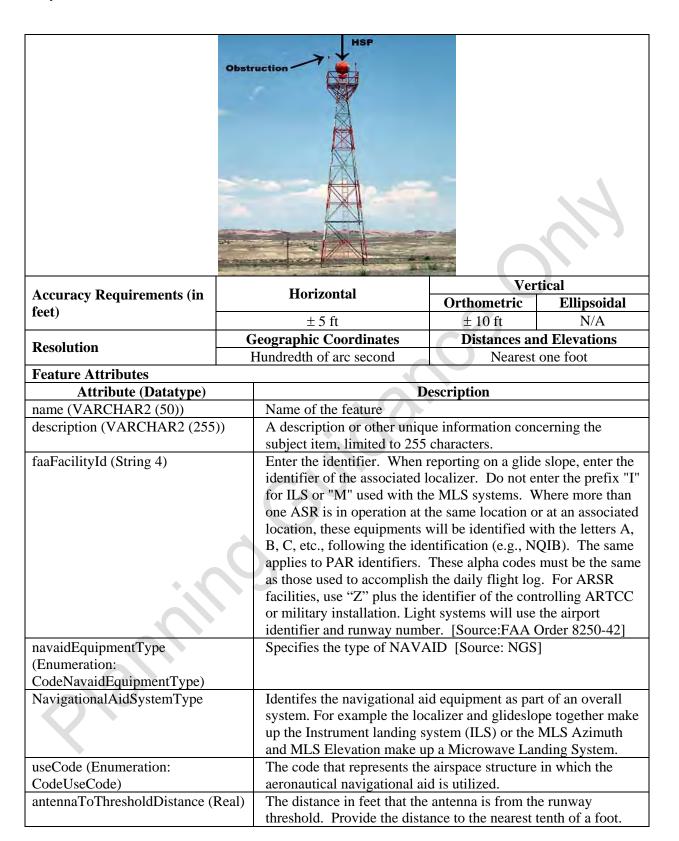
5.10.2. Navaid Equipment – Airport Beacon (APBN)

Definition: A visual NAVAID operated at many airports. At civil airports, alternating white and green flashes indicate the location of the airport. At military airports, the beacons flash alternately white and green, but are differentiated from civil beacons by dual-peaked (two quick) white flashes between the green flashes.

green masnes.				
Feature Group	Navigational Aid	ds		
Feature Class Name	NavaidEquipmen	nt		
Feature Type	Point			
CADD Standard Requireme	ents			
Layer/Level		Descri	iption	
C-AFLD-AIDS-	Airfield Navigat	ional Aid		
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	User Defined
Sensitivity	Unclassified	. 20		
	AIXM	NavaidEquipment	Extension	Extension
Equivalent Standards	FGDC	NavigationalAidEquipment		
	SDSFIE	E navigational_aid_point		
Documentation and Submission Requirements	Document this fe	eature as described i	n paragraphs 1.6.	2 and 1.6.3.
Related Features				

Data Capture Rules: Collect the horizontal and vertical positions of the NAVAID using the survey point identified below. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID using the OBSTACLE feature type and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

	Horizontal	Vertical
Survey Point Location Cen	nter of cover or axis of rotation	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
, ,	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS, and
	PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above
	the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.3. Navaid Equipment – Air Route Surveillance Radar (ARSR) or Airport Surveillance Radar (ASR)

Definition: These radars are used to detect and display an aircraft's position while operating in the				
terminal area (ASR) and en route (ARSR) between terminal areas.				
Feature Group Navigational Aids				
Feature Class Name	NavaidEquipment			

Feature Type	Point				
CADD Standard Requirement	nts				
Layer/Level		Descr	ription		
C-AFLD-AIDS-	Airfield Navigat	ional Aid -			
	Color Line Type Line Weight Symbol				
AutoDesk Standards	4	Continuous	1	User Defined	
MicroStation Standards	7	Continuous	7	User Defined	
Sensitivity	Unclassified				
	AIXM	NavaidEquipmen	nt	Extension	
Equivalent Standards	FGDC	NavaidEquipmen	ntExtension	Extension	
	SDSFIE navigational_aid_point				
Documentation and	Downwart this feature as described in newscards 162 and 162				
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Related Features					

Data Capture Rules: Collect the horizontal and vertical positions of the NAVAID using the survey point identified below. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as using the OBSTACLE feature type and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.			
	Horizontal	Vertical		
Survey Point Location	Center of cover or axis of rotation	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.		



A acuracy Dogwinsmants (in	Horizontal	Vertical		
Accuracy Requirements (in feet)	Horizontai	Orthometric	Ellipsoidal	
leet)	\pm 10 ft \pm 20 ft		N/A	
Resolution	Geographic Coordinates	Distances and Elevations		
Resolution	Hundredth of arc second	Nearest on	ne foot	
Feature Attributes				
Attribute (Datatype)	D	Description		
name (VARCHAR2 (50))	Name of the feature			

description (VARCHAR2 (255))	A description or other unique information concerning the
	subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix "I"
	for ILS or "M" used with the MLS systems. Where more than
	one ASR is in operation at the same location or at an associated
	location, these equipments will be identified with the letters A,
	B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same
	as those used to accomplish the daily flight log. For ARSR
	facilities, use "Z" plus the identifier of the controlling ARTCC
	or military installation. Light systems will use the airport
	identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
11 Pl (P 1)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical
	runway end. This should be the same distance as the antenna to
	threshold distance unless the runway end the navigational aid
	serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
stopEndDistance (Real)	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	A description of the control of the
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
owner (String 75)	This attribute is used to describe real-time status. The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
runwayEndid (Suing 3)	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS, and
· ·	PAR.
referencePointEllipsoidHeight	

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.4. Navaid Equipment – Approach Light System (ALS)

Definition: An airport lighting facility providing visual guidance to landing aircraft by radiating light beams in a directional pattern the pilot uses to align the aircraft with the extended centerline of the runway on final approach for landing. Some airports have Condenser-Discharge Sequential Flashing Lights or Sequenced Flashing Lights in conjunction with the ALS.

Eights of Bequenced Flushing	Eights in conjunction with the ries.
Feature Group	Navigational Aids
Feature Class Name	NavaidEquipment
Feature Type	Point
CADD Standard Requirements	
Layer/Level	Description

Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Conunuous	7	User Defined
Sensitivity	Unclassified			
	AIXM	NavaidEquipment		Extension
Equivalent Standards	FGDC	NavaidEquipmentE	Extension	Extension
	SDSFIE navigational_aid_point			
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Related Features				

Data Capture Rules: Collect the horizontal and vertical positions of the NAVAID using the survey point identified below. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as using the OBSTACLE feature type and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

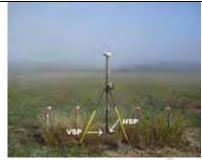
Monumentation	No monumentation required.		
	Horizontal	Vertical	
Survey Point Location	Horizontal center of the center light of the first and last lights rows	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Pilot's perspective of an ALSF-2.



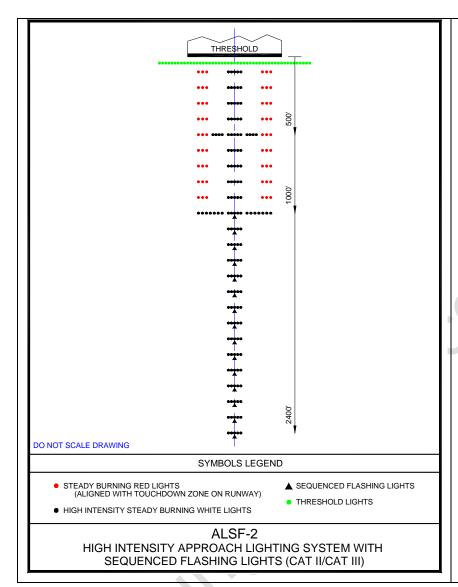
Collecting the first light or center light of the first row.



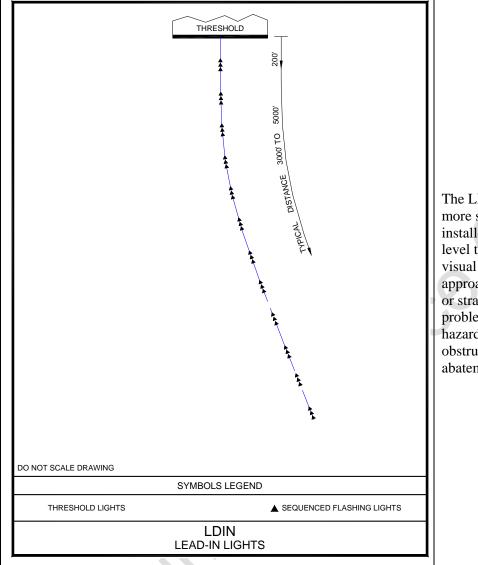
Collecting the last light or center light of last row.

Types of Approach Light Systems are:

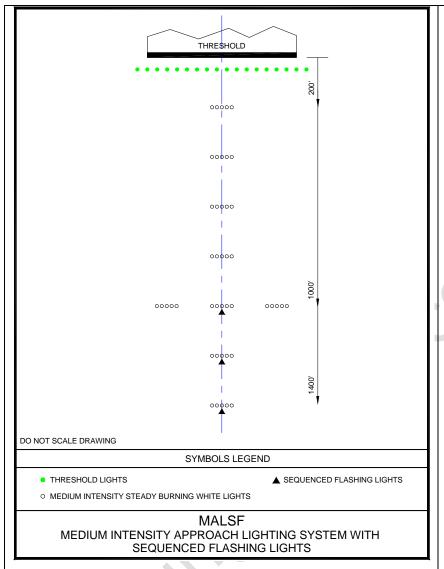
- 1. ALSF-1- Approach Light System with Sequenced Flashing Lights in ILS Cat-I configuration.
- **2.** ALSF-2- Approach Light System with Sequenced Flashing Lights in ILS Cat-II configuration. The ALSF-2 may operate as an SSALR when weather conditions permit.
- 3. SSALF- Simplified Short Approach Light System with Sequenced Flashing Lights.
- 4. SSALR- Simplified Short Approach Light System with Runway Alignment Indicator Lights.
- 5. MALSF- Medium Intensity Approach Light System with Sequenced Flashing Lights.
- 6. MALSR- Medium Intensity Approach Light System with Runway Alignment Indicator Lights.
- 7. LDIN- Lead-in-light system.
- **8.** RAIL- Runway Alignment Indicator Lights- Sequenced Flashing Lights which are installed only in combination with other light systems.
- 9. ODALS- Omnidirectional Approach Lighting System.



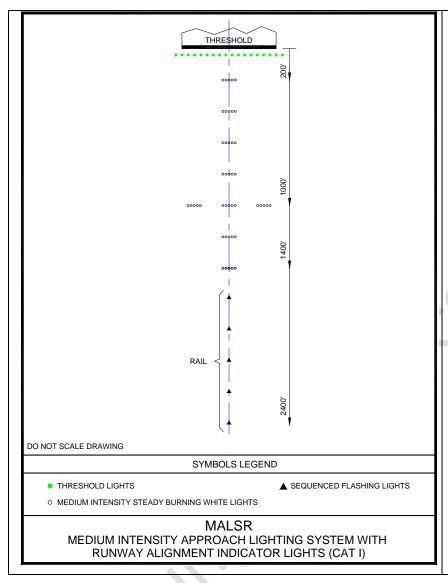
The ALSF-2 is a system of light bars and barrettes in the approach zone immediately ahead of the runway threshold. The standard length of an ALSF-2 is 3000 feet unless terrain or other local conditions prevent a full length installation. Then the length may be shortened to not less than 2400 feet. The ALSF-2 consists of centerline light barrettes, sequence flashing lights, 1000-foot crossbar, 500-foot crossbar, side row barrettes, and threshold lights. A barrette is three or more lights closely spaced in a transverse line so that from a distance they appear as a single short illuminated bar. For the ALSF-2, the length of a barrette shall not exceed 15 feet and the center-tocenter spacing of the lights shall not exceed 5 feet.



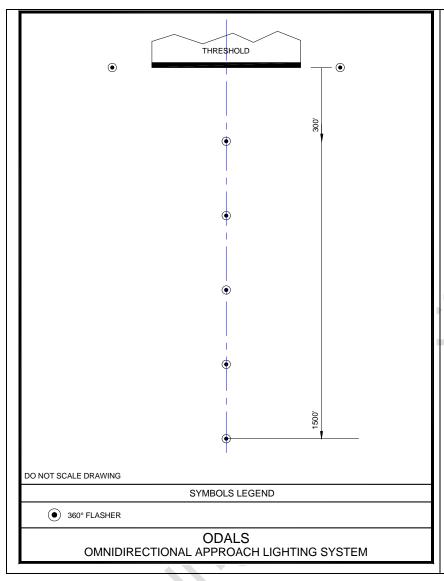
The LDIN consists of one or more series of flashing lights installed at or near ground level that provides positive visual guidance along an approach path, either curving or straight, where special problems exist with hazardous terrain, obstructions, or noise abatement procedures.



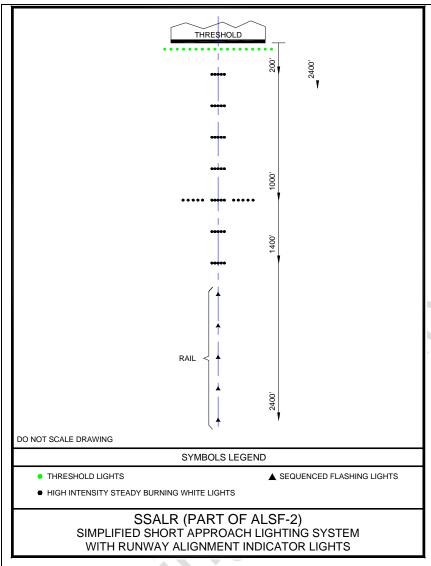
A MALSF is a subset of MALSR. A MALSR has 45 lights, 5 flashers, and is 2400 ft in length. A MALSF has 45 lights, 3 flashers, and is 1400 ft in length. MALS has 45 lights, no flashers, and is 1400 ft in length.



The MALSR is a system that supports Category I instrument approaches. It is a medium intensity light system that identifies the extended runway centerline from threshold to 2,400 feet before the threshold. The MALSR supports Category I instrument approaches and presents to the pilot the illusion of a ball of light traveling from the outer end of the system to a point approximately 1,400 feet from the end of the runway. A row of green lights marks the threshold of the runway.



The ODALS consists of seven omnidirectional flashing lights located in the approach area of a nonprecision runway. Five lights are located on the runway centerline extended with the first light located 300 feet from the threshold and extending at equal intervals up to 1,500 feet from the threshold. The other two lights are located, one on each side of the runway threshold, at a lateral distance of 40 feet from the runway edge, or 75 feet from the runway edge when installed on a runway equipped with a VASI.



A SSALR System is a high intensity approach lighting system that provides a visual lighting path for landing aircraft. It usually is a 2400-foot-long array of lights but can be longer or shorter depending on local terrain and requirements.

A typical SSALR system consist of the following light fixture components:

- 9 light bars each with 5 steady burning white fixtures
- 5 sequence flashing white fixtures
- Threshold bar of 18 steady burning green fixtures.

A course ou De coniners outs (in	Horizontal	Vertical		
Accuracy Requirements (in	Horizontai	Orthometric	Ellipsoidal	
feet)	±3 ft	± 5 ft	N/A	
Resolution	Geographic Coordinates	Distances and Elevations		
Resolution	Hundredth of arc second	Nearest one foot		
Feature Attributes				
Attribute (Datatype)	D	escription		
name (VARCHAR2 (50))	Name of the feature	Name of the feature		
description (VARCHAR2 (255))) A description or other uniqu	A description or other unique information concerning the		
	subject item, limited to 255	characters.		

navaidEquipmentType (Enumeration:	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42] Specifies the type of NAVAID [Source: NGS]
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance	The distance in feet that the antenna is from the runway
(Real)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	A. 11 '.' 61 61 6 .
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]

thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.5. Navaid Equipment – Back Course Marker (BCM)

5.10.5. Navaid Equipment – back Course Marker (bCM)				
Definition: Provides runway	y alignment aircraf	t guidance on approa	ch.	
Feature Group	Navigational Aid	S		
Feature Class Name	NavaidEquipmen	t		
Feature Type	Point			
CADD Standard Requirem	nents			
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Naviga	Airfield Navigational Aid -		
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	User Defined
Sensitivity	Unclassified			
	AIXM	AIXM NavaidEquipment Extension		
Equivalent Standards	FGDC NavaidEquipmentExtension Extension		Extension	
	SDSFIE navigational_aid_point			
Documentation and	Description of this feature as described in processors 1.62 and 1.62			
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
D 1 4 1 1 1 1 1				
Related Features				

Data Capture Rules: Collect the horizontal and vertical positions of the NAVAID using the survey point identified below. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as using the OBSTACLE feature type and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.		
	Horizontal Vertical		ertical
Survey Point Location		The intersection of the ground,	
Survey I omt Location	Center of antenna array.	gravel, concrete pad, or other base	
		and plumb line through the HSP.	
Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 10 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the
*	subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix "I"
	for ILS or "M" used with the MLS systems. Where more than
	one ASR is in operation at the same location or at an associated
	location, these equipments will be identified with the letters A,
	B, C, etc., following the identification (e.g., NQIB). The same
	applies to PAR identifiers. These alpha codes must be the same
	as those used to accomplish the daily flight log. For ARSR
	facilities, use "Z" plus the identifier of the controlling ARTCC
	or military installation. Light systems will use the airport
	identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
1' D' (D 1)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical
	runway end. This should be the same distance as the antenna to
	threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the
	nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
stopEndDistance (Rear)	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
orisetDistance (Real)	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	, , , , , , , , , , , , , , , , , , ,
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
,	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS, and
	PAR.

referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.6. Navaid Equipment – Distance Measuring Equipment (DME)

3.10.0. Navaiu Equipment –		0 1 1				
Definition: Provides distance	Definition: Provides distance (and in some systems groundspeed) information only from the ground					
facility to aircraft.	facility to aircraft.					
Feature Group	Navigational A	Aids				
Feature Class Name	NavaidEquipm	nent				
Feature Type	Point					
CADD Standard Requireme	nts					
Layer/Level		De	escription			
C-AFLD-AIDS-	Airfield Navig	ational Aid				
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	Hear Defined		
MicroStation Standards	7 Continuous 7 User Defined					
Mici obtation Standards	,					
Sensitivity Standards	Unclassified					
	Unclassified AIXM	NavaidEquipme	ent	Extension		
	•	NavaidEquipme NavaidEquipme		Extension Extension		
Sensitivity	AIXM		entExtension			
Sensitivity	AIXM FGDC SDSFIE	NavaidEquipme navigational_a	entExtension id_point	Extension		
Sensitivity Equivalent Standards	AIXM FGDC SDSFIE	NavaidEquipme navigational_a	entExtension	Extension		
Sensitivity Equivalent Standards Documentation and	AIXM FGDC SDSFIE	NavaidEquipme navigational_a	entExtension id_point	Extension		

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
Survey Point Location	Horizontal	Vertical
DME or DME paired with a LOC	Center of antenna cover.	Center of antenna cover.

DME frequency paired with MLS azimuth, NDB or VOR	Center of antenna cover	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.
---------------------------------------------------	-------------------------	-----------------------------------------------------------------------------------------------------



	TT : 4.1	Ve	rtical	
Accuracy Requirements (in	Horizontal	Orthometric	Ellipsoidal	
feet)	± 1 ft	± 1 ft	N/A	
Resolution	Geographic Coordinates	Distances a	nd Elevations	
	Hundredth of arc second	Neares	t one foot	
Feature Attributes				
Attribute (Datatype)		Description		
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255			ncerning the	
	subject item, limited to 25	5 characters.		
faaFacilityId (String 4)	Enter the identifier. When			
	identifier of the associated		•	
	"I" for ILS or "M" used w	•		
		than one ASR is in operation at the same location or at an		
		associated location, these equipments will be identified with		
		the letters A, B, C, etc., following the identification (e.g.,		
		NQIB). The same applies to PAR identifiers. These alpha		
		codes must be the same as those used to accomplish the daily		
0.0		flight log. For ARSR facilities, use "Z" plus the identifier of		
	•	the controlling ARTCC or military installation. Light systems		
		will use the airport identifier and runway number.		
	[Source:FAA Order 8250-			
navaidEquipmentType	Specifies the type of NAV	AID [Source: NG	·S]	
(Enumeration:				
CodeNavaidequipmentType)				
NavigationalAidSystemType		Identifes the navigational aid equipment as part of an overall		
	-	system. For example the localizer and glideslope together make		
	up the Instrument landing			
	and MLS Elevation make	up a Microwave L	anding System	

was Cada (Emmanation)	The sede that represents the simple of structure in relich the
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical
, ,	runway end. This should be the same distance as the antenna
	to threshold distance unless the runway end the navigational
	aid serves has a displaced threshold. Provide this distance to
	*
F 151 (5 1)	the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
Telefencer omtempsolarieight	-
C D'(TI 1 11(D 1)	referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold.
	Provide this distance to the nearest tenth of a foot. [Source:
	FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above
	the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-
	100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data integrity and should not be used to
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
empsolucievation (Real)	
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.
L	

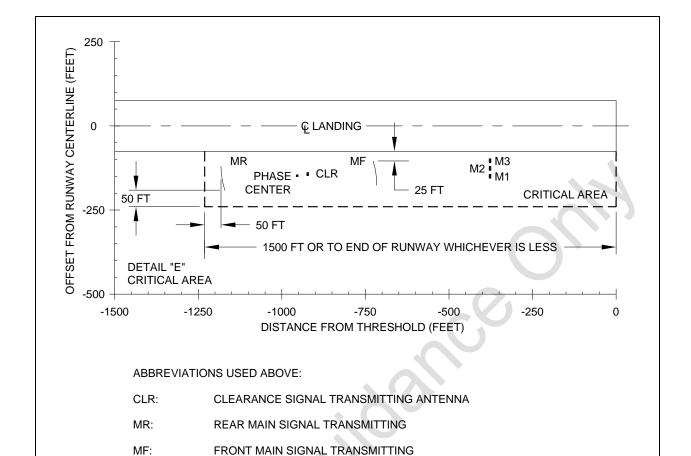
5.10.7. Navaid Equipment – End Fire Type Glide Slope (GS)

5.10.7. Navaid Equipment – End Fire Type Glide Slope (GS)						
Definition: Provides vertical g	Definition: Provides vertical guidance for aircraft during approach and landing.					
Feature Group	Navigational Aids					
Feature Class Name	NavaidEquipment					
Feature Type	Point					
CADD Standard Requireme	nts					
Layer/Level		Descri	ption			
C-AFLD-AIDS-	Airfield Navigation	onal Aid -				
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	4 Continuous 1 Heaven				
MicroStation Standards	7 Continuous 7 User Defined					
Sensitivity	Unclassified					
	AIXM	NavaidEquipmen	nt .	Extension		
Equivalent Standards	FGDC	NavaidEquipmen	ntExtension	Extension		
	SDSFIE navigational_aid_point					
Documentation and	Decement this factors as described in garages he 1 (2) and 1 (2)					
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Related Features	7.9					

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
Survey Point Location	Horizontal	Vertical
	Phase center reference point.	Phase center reference point.





M1, M2, M3: SIG	GNAL MONITOR ANTENNAS			
A course ou De conincer ente (in	Horizontal	Vertical		
Accuracy Requirements (in feet)	Horizontai	Orthometric	Ellipsoidal	
leet)	± 1 ft	± 0.25 ft	N/A	
Resolution	Geographic Coordinates	Distances an	d Elevations	
	Hundredth of arc second	Nearest	one foot	
Feature Attributes				
Attribute (Datatype)		escription		
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255)	A description or other unique information concerning the subject item, limited to 255 characters.		erning the	
faaFacilityId (String 4)	subject item, limited to 255 characters. Enter the identifier. When reporting on a glide slope, ent identifier of the associated localizer. Do not enter the prefor ILS or "M" used with the MLS systems. Where more one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letter B, C, etc., following the identification (e.g., NQIB). The applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. Fo ARSR facilities, use "Z" plus the identifier of the control ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]		There more than at an associated ith the letters A, QIB). The same must be the ht log. For he controlling will use the	

navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration: CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration: CodeLightingConfigurationType)	CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.

ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.8. Navaid Equipment – Fan Marker (FM)

Definition: Electronic NAVA	AID that provides horiz	zontal (alignment) guidance for airc	craft on a final		
approach.						
Feature Group	Navigational Aids					
Feature Class Name	NavaidEquipment					
Feature Type	Point					
CADD Standard Requireme	ents					
Layer/Level		Descri	otion			
C-AFLD-AIDS-	Airfield Navigationa	l Aid -				
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined		
MicroStation Standards	7 Continuous 7 User Defined					
Sensitivity	Unclassified					
	AIXM	NavaidEquipm	ent	Extension		
Equivalent Standards	FGDC	NavaidEquipm	entExtension	Extension		
	SDSFIE	navigational_a	id_point			
Documentation and	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Documentation and	Dogument this footur	o og dogorihad in				
Submission Requirements	Document this featur	e as described in	paragraphs 1.6.2	and 1.6.3.		

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation		No monumentation required.		
		Horizontal	Verti	cal
Survey Point Location			The intersection of	the ground,
Survey I omt Location	Cente	er of antenna array.	gravel, concrete pa	d, or other base
			and plumb line thro	ough the HSP.
A course of Degree romants		Horizontal	Verti	cal
Accuracy Requirements		Horizontai	Orthometric	Ellipsoidal
(in feet)	± 10 ft		± 20 ft	N/A
Resolution	Ge	Geographic Coordinates Distances and Elevati		Elevations
Resolution	Hundredth of arc second		Nearest one foot	
Feature Attributes				
Attribute (Datatype)			Description	
name (VARCHAR2 (50))		Name of the feature		
description (VARCHAR2 (25	5))	A description or other unique information concerning the		
		subject item, limited to 240 characters.		

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
(D. 1)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stanEndDistance (Bool)	
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
offsetDistance (Real)	centerline to the stop end of the runway. The distance in feet that the feature is offset from the runway
offsetDistance (Real)	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
· ·	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.9. Navaid Equipment – Glideslope (GS)

3.10.7. Mavaid Equipment	Giracorope (GD)				
Definition: Provides vertical	Definition: Provides vertical guidance for aircraft during approach and landing.				
Feature Group	Navigational Ai	ids			
Feature Class Name	NavaidEquipme	ent			
Feature Type	Point	* ()			
CADD Standard Requireme	ents				
Layer/Level		Desc	cription		
C-AFLD-AIDS-	Airfield Navigational Aid -				
	Color Line Type Line Weight Symbol				
AutoDesk Standards	4	Continuous 1 7		User Defined	
MicroStation Standards	7				
Sensitivity	Unclassified				
	AIXM NavaidEquipment Extension				
Equivalent Standards	FGDC NavaidEquipmentExtension Extension				
	SDSFIE navigational_aid_point				
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Related Features					

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location	Center of Antenna Supporting Structure	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



A course on Decreion and		Horizontal	Vertical		
Accuracy Requirements (in feet)	Horizontal		Orthometric	Ellipsoidal	
(III leet)	± 1 ft		± 0.25 ft	± 0.20 ft	
Resolution		ographic Coordinates	Distances a	and Elevations	
Resolution	Ηι	andredth of arc second	Neares	st one foot	
Feature Attributes					
Attribute (Datatype))		Description		
name (VARCHAR2 (50))		Name of the feature			
description (VARCHAR2 (25	55))	A description or other uni		oncerning the	
		subject item, limited to 25			
faaFacilityId (String 4)		Enter the identifier. Whe			
		identifier of the associated			
		"I" for ILS or "M" used w			
* 1		than one ASR is in operation at the same location or at an			
		associated location, these equipments will be identified with			
		the letters A, B, C, etc., following the identification (e.g.,			
		NQIB). The same applies to PAR identifiers. These alpha			
		codes must be the same as those used to accomplish the daily			
		flight log. For ARSR facilities, use "Z" plus the identifier of			
		the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number.			
		[Source:FAA Order 8250-42]			
navaidEquipmentType		Specifies the type of NAV		721	
(Enumeration:		specifies the type of NA	VAID [Source, IV	Joj	
CodeNavaidequipmentType)					
NavigationalAidSystemType			aid equipment as	nart of an overall	
Travigational habystellitype		Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make			
		up the Instrument landing system (ILS) or the MLS Azimuth			
	and MLS Elevation mak				
useCode (Enumeration:	The code that represents				
CodeUseCode)		aeronautical navigational			

antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical
	runway end. This should be the same distance as the antenna
	to threshold distance unless the runway end the navigational
	aid serves has a displaced threshold. Provide this distance to
	the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold.
	Provide this distance to the nearest tenth of a foot. [Source:
	FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above
	the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-
FI (G): 050	100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
allings delegation (Deel)	store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
Altamativa (Intagar?)	NGS] Discriminator used to the features of a plan or perspect
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.10.Navaid Equipment – Ground Controlled Approach (GCA) Touchdown Reflectors Definition: Electronic NAVAID equipment that provides precision approach information for incoming aircraft.

Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipmen	ıt		
Feature Type	Point			
CADD Standard Requiremen	ts			
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color Line Type Line Weight Symbol			
AutoDesk Standards	4 Continuous 1		User Defined	
MicroStation Standards	7 Continuous 7 User Defined			
Sensitivity	Unclassified			
	AIXM NavaidEquipment Extension			
Equivalent Standards	FGDC NavaidEquipmentExtension Extension			
	SDSFIE navigational_aid_point			
Documentation and	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Submission Requirements	Document and reacure as described in paragraphs 1.0.2 and 1.0.5.			
Related Features				

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.		
	Horizontal	Vertical	
Survey Point Location	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Accuracy Requirements (in Horizontal Vertical

feet)		Orthometric	Ellipsoidal		
	\pm 10 ft \pm 20 ft \pm				
Daniladian	Geographic Coordinates Distances and Elevations				
Resolution	Hundredth of arc second	Hundredth of arc second Nearest one foot			
Feature Attributes		•			
Attribute (Datatype)	De	Description			
name (VARCHAR2 (50))	Name of the feature				
description (VARCHAR2 (255))	A description or other uniqu	e information conc	erning the		
	subject item, limited to 255				
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of				
	the controlling ARTCC or n will use the airport identifier [Source:FAA Order 8250-42	nilitary installation. r and runway numb	Light systems		
navaidEquipmentType	Specifies the type of NAVA				
(Enumeration: CodeNavaidequipmentType)	. 0				
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall				
	system. For example the loc up the Instrument landing sy and MLS Elevation make up	alizer and glideslop ystem (ILS) or the Monayon a Microwave Land	be together make MLS Azimuth ding System		
useCode (Enumeration:	The code that represents the	_	in which the		
CodeUseCode)	aeronautical navigational aid				
antennaToThresholdDistance (Real	The distance in feet that the threshold. Provide the distance		•		
centerlineDistance (Real)	Distance from the centerline				
	_ ·	physical runway end. This should be the same distance as the			
	antenna to threshold distance				
	navigational aid serves has a	_	d. Provide this		
11 - F - 1D' - ((D - 1)	distance to the nearest tenth				
stopEndDistance (Real)	Provide the distance distance		ma along the		
offsetDistance (Real)	centerline to the stop end of The distance in feet that the		m the minuser		
onscidistance (Real)	centerline. Provide this dist		•		
offsetDirection	Enter the direction (right, let				
(Enumeration:	navigational aid is offset fro				
CodeOffsetDirection)	appropriate direction from the runway.	_			
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigatio CodeNavigationalAid Syste				
status (Enumeration: codeStatus)	A temporal description of th This attribute is used to description				

owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.11.Navaid Equipment – Inner Marker (IM)

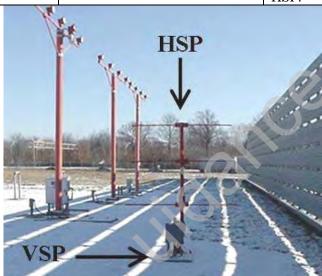
Definition: marker beacon used with an ILS (CAT II) precision approach located between the middle marker and the end of the ILS runway, transmitting a radiation pattern keyed at six dots per second and indicating to the pilot, both aurally and visually, that he/she is at the designated decision height (DH), normally 100 feet above the touchdown zone elevation, on the ILS CAT II approach. It also marks progress during a CAT III approach.

Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipm	ent		
Feature Type	Point			
CADD Standard Requirements				
Layer/Level		Desc	ription	
C-AFLD-AIDS	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4 Continuous 1		User Defined	
MicroStation Standards	7	Continuous	7	Oser Defined
Sensitivity Unclassified				
	AIXM NavaidEquipment Extension			
Equivalent Standards	FGDC NavaidEquipmentExtension Extension		Extension	
	SDSFIE navigational_aid_point			
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			

Related Features

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location		The intersection of the ground,
	Center of Antenna Array	gravel, concrete pad, or other
		base and plumb line through the
		HSP.



Accuracy Requirements (in feet)	Horizontal	Vertical	
		Orthometric	Ellipsoidal
	± 10 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
	Hundredth of arc second	Nearest one foot	

Feature Attributes

Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the
	subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]

navaidEquipmentType (Enumeration:	Specifies the type of NAVAID [Source: NGS]
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.

ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.12. Navaid Equipment	Localizer (Localizer)	OC)			
Definition: The component of an ILS that provides course guidance to the runway.					
Feature Group	Navigational A	Navigational Aids			
Feature Class Name	NavaidEquipm	ent			
Feature Type	Point				
CADD Standard Requiren	ients				
Layer/Level			Descri	ption	
C-AFLD-AIDS-	Airfield Navig	ationa	ıl Aid -		
	Color		Line Type	Line Weight	Symbol
AutoDesk Standards	4		Continuous	1	User Defined
MicroStation Standards	7		Continuous	7	Osei Deilieu
Sensitivity	Unclassified				
	AIXM	Nav	aidEquipment		Extension
Equivalent Standards	FGDC	Nav	aidEquipmentExt	tension	Extension
	SDSFIE	navi	igational_aid_poi	int	
Documentation and					
Submission	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Requirements					
Related Features					
Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP.					
If the NAVAID penetrates ar			•		
classify and document the N					
NAVAID as an obstacle, sur	vey the highest p	oint c	on the entire struc	cture as the top ele	vation including
appurtenances.					
				ey point for validat	
		_		e. When the ends o	•
Monumentation				he positions using	
	washer, chisel square, or paint if possible with a distinctive inscription to				
	ensure future identification. Mark the survey point with a nail and washer				
inscribed with the setting company's name and year.					
	Horizontal Vertical				
Survey Point Location Center of Antenna Supporting The intersection of the					
201.0,1000.2000.000	Structure Supporting		gravel, concrete pad, or other base		
	Structure			and plumb line th	nrough the HSP.

Determining the HSP and Vertical Point #1 of a Localizer

A localizer (LOC) antenna array is normally located beyond the departure end of the runway it serves (localizer 17 is on the south end of the runway) and generally consists of several pairs of directional antennas. The localizer operates as a component of the Instrument Landing System or ILS; however, it can be operated by itself. Since the localizer is made up of a set of arrays (antenna's) it provides a unique challenge in determining the center of the antenna unit. In the figure below, there are 14 antenna elements. The proper method of determining the HSP is to find the center of the supporting structure at the center of the antenna array. In this figure, this is the center of the center of structures supporting the seventh antenna element from each side.

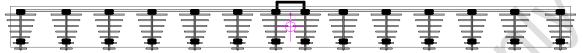
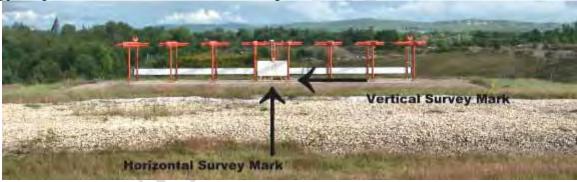


Illustration of a localizer antenna array depicting each of the elements and the selection of the HSP and Vertical Point #1.

In order to locate the center of the supporting structure the surveyor, is required to first locate the center of the array and then the center of the supporting structure. In order to locate the center of the supporting structure in the figure above, the surveyor would locate the center of the space between the seventh element from each end. It is recommended the surveyor use tape measures or string to form a "X" and then use a plumb bob to locate the point at the base of the antenna. Another method of the same technique is to draw lines in between the bolts supporting the elements and forming an "X" to locate the center. If the antenna array has an odd number of elements such as 15, then the center of the supporting structure would be the center of the eighth element.





A common De cuinom ente	Horizontal	Vertical		
Accuracy Requirements	Horizontai	Orthometric	Ellipsoidal	
(in feet)	± 1 ft	± 0.25 ft	N/A	
Resolution	Geographic Coordinates	Distances and	Elevations	
Resolution	Hundredth of arc second	Nearest one foot		

Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType (Enumeration:	Specifies the type of NAVAID [Source: NGS]
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the navigational
(Enumeration:	aid is offset from the runway. Determine the appropriate
CodeOffsetDirection)	direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration: CodeLightingConfigurationType)	CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility

runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.13.Navaid Equipment – Localizer Type Directional Aid (LDA)

Definition: A NAVAID used for nonprecision instrument approaches with utility and accuracy						
comparable to a localizer but w	comparable to a localizer but which is not a part of a complete ILS and is not aligned with the runway.					
Feature Group	Navigational Aids	S				
Feature Class Name	NavaidEquipmen	t				
Feature Type	Point					
CADD Standard Requiremen	ts					
Layer/Level		Descr				
C-AFLD-AIDS-	Airfield Navigational Aid -					
	Color Line Type Line Weight Symbol					
AutoDesk Standards	Continuous 1 User Defined					
MicroStation Standards	7 Continuous 7 User Defined					
Sensitivity	Unclassified					
	AIXM	NavaidEquipme	ent	Extension		
Equivalent Standards	FGDC NavaidEquipmentExtension Extension					
	SDSFIE navigational_aid_point					
Documentation and	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Submission Requirements	Document and readule as described in paragraphs 1.6.2 and 1.6.5.					
Related Features						

Monumentation	No r	nonumentation required.			
	Horizontal Vertical				
			The intersection		
Survey Point Location	Cent	ter of Antenna Supporting	gravel, concrete pad, or other		
		cture	base and plumb l		
			HSP.		
A source of Description and a (in		Horizontal	Ver	tical	
Accuracy Requirements (in feet)		Horizontai	Orthometric	Ellipsoidal	
leet)		± 1 ft	± 1 ft	N/A	
Resolution	(Geographic Coordinates	Distances an		
		Hundredth of arc second	Nearest	one foot	
Feature Attributes					
Attribute (Datatype)			escription		
name (VARCHAR2 (50))		Name of the feature			
description (VARCHAR2 (255)))	A description or other uniqu		the the	
faaFacilityId (String 4)		subject item, limited to 255 Enter the identifier. When r		salona antaritha	
Taaracintyid (String 4)		identifier of the associated le			
		"I" for ILS or "M" used with		•	
		than one ASR is in operation			
		associated location, these eq			
		the letters A, B, C, etc., follo			
		NQIB). The same applies to	•		
		codes must be the same as the		•	
		flight log. For ARSR facilit			
		the controlling ARTCC or n	nilitary installation	. Light systems	
		will use the airport identifier	and runway numb	er.	
		[Source:FAA Order 8250-42	2]		
navaidEquipmentType		Specifies the type of NAVA	ID [Source: NGS]		
(Enumeration:					
CodeNavaidequipmentType)					
NavigationalAidSystemType		Identifes the navigational aid			
		system. For example the loc			
	•	up the Instrument landing sy and MLS Elevation make up			
useCode (Enumeration:		The code that represents the			
CodeUseCode)		aeronautical navigational aid	•	iii wiiicii tiic	
antennaToThresholdDistance (I	Real)	The distance in feet that the		e riinway	
unterma l'o l'in esmore distance (i	(Cur)	threshold. Provide the dista		•	
centerlineDistance (Real)		Distance from the centerline perpendicular point to the			
		physical runway end. This s			
		antenna to threshold distance unless the runway end the			
		navigational aid serves has a displaced threshold. Provide this			
		distance to the nearest tenth			
stopEndDistance (Real)		Provide the distance distance		nna along the	
		centerline to the stop end of			
offsetDistance (Real)		The distance in feet that the			
centerline. Provide this distance to the nearest ter				tenth of a foot.	

offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.14.Navaid Equipment – Middle Marker (MM)

Definition: A marker beacon that defines a point along the glideslope of an ILS normally located at or near the point of decision height (ILS Category I). It is keyed to transmit alternate dots and dashes, with the alternate dots and dashes keyed at the rate of 95 dot/dash combinations per minute on a 1300 Hz tone, which is received aurally and visually by compatible airborne equipment.

Feature Group	Navigational Aids				
Feature Class Name	NavaidEquipment				
Feature Type	Point				
CADD Standard Requiremen	ts				
Layer/Level	Description				
C-AFLD-AIDS-	Airfield Navigational Aid -				
	Color Line Type Line Weight Symbol				
AutoDesk Standards	4 Continuous 1 User Defined				
MicroStation Standards	7	Continuous	7	User Derilled	

Sensitivity	Unclassified			
	AIXM	NavaidEquipment	Extension	
Equivalent Standards	FGDC	NavaidEquipmentExtension	Extension	
_	SDSFIE	navigational_aid_point		
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Related Features				

Monumentation	No monumentation required.		
	Horizontal	Vertical	
Survey Point Location	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



Accuracy Requirements (in feet)	Horizontal	Vertical		
	Horizontai	Orthometric	Ellipsoidal	
	± 10 ft	± 20 ft	N/A	
Resolution	Geographic Coordinates	Distances and Elevations		
Resolution	Hundredth of arc second	Nearest one foot		
Feature Attributes	re Attributes			
Attribute (Datatype)	Attribute (Datatype) Description			
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255)	A description or other uniqu	e information conc	erning the	
_	subject item, limited to 255 characters.			

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
(D. 1)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stanEndDistance (Bool)	
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
offsetDistance (Real)	centerline to the stop end of the runway. The distance in feet that the feature is offset from the runway
offsetDistance (Real)	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
· ·	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.

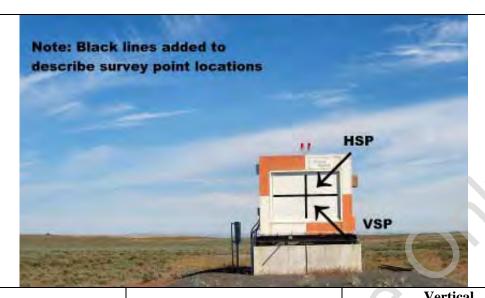
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.15.Navaid Equipment – MLS Azimuth Antenna (MLSAZ)

Definition: Antenna in a Microwave Landing System (MLS) providing horizontal guidance for incoming aircraft. MLS is precision instrument approach system operating in the microwave spectrum which normally consists of an Azimuth Station, an Elevation Station and Precision Distance Measuring Equipment.

Equipment.		_ A MA NO				
Feature Group	Navigational Aids					
Feature Class Name	NavaidEquipment					
Feature Type	Point					
CADD Standard Requirement	its					
Layer/Level		Descr	iption			
C-AFLD-AIDS-	Airfield Navigat	ional Aid -				
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined		
MicroStation Standards	7	Continuous	7	Osei Delliled		
Sensitivity	Unclassified					
	AIXM	NavaidEquipmen	nt .	Extension		
Equivalent Standards	FGDC	C NavaidEquipmentExtension Extension				
	SDSFIE navigational_aid_point					
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Related Features						
Data Contuna Dulage Callagt	the position of the	MANAID using the	UCD and the alon	ation at the VCD		

Monumentation	No monumentation required.		
Survey Doint Logotion	Horizontal Vertical		
Survey Point Location	Phase Center Reference Point	Phase Center Reference Point	



ccuracy Requirements (in Horizontal		Vertical	
Accuracy Requirements (in feet)	Horizontai	Orthometric	Ellipsoidal
leet)	± 1 ft	± 1 ft	N/A
Resolution	Geographic Coordinates	Distances and Elevations	
Resolution	Hundredth of arc second	Nearest	one foot
Feature Attributes		>	
Attribute (Datatype)	De	escription	
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255)	A description or other unique subject item, limited to 255		cerning the
faaFacilityId (String 4)	Enter the identifier. When ridentifier of the associated let "I" for ILS or "M" used with than one ASR is in operation associated location, these equation the letters A, B, C, etc., follow NQIB). The same applies to codes must be the same as the flight log. For ARSR facility the controlling ARTCC or making will use the airport identifier [Source:FAA Order 8250-42]	ocalizer. Do not en the MLS systems at the same location uipments will be in the bowing the identifier of PAR identifiers. hose used to accomies, use "Z" plus the illitary installation and runway number	nter the prefix . Where more ion or at an dentified with ation (e.g., These alpha applish the daily ne identifier of . Light systems per.
navaidEquipmentType	Specifies the type of NAVA	ID [Source: NGS]]
(Enumeration:			
CodeNavaidequipmentType)			
NavigationalAidSystemType	Identifes the navigational aid system. For example the loc up the Instrument landing sy and MLS Elevation make up	alizer and glideslog stem (ILS) or the	pe together make MLS Azimuth
useCode (Enumeration:	The code that represents the	in which the	
CodeUseCode)	aeronautical navigational aid		
antennaToThresholdDistance (F			•
	threshold. Provide the distant	nce to the nearest t	entii 01 a 100t.

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.16.Navaid Equipment – MLS Elevation Antenna (MLSEZ)

Definition: Antenna in a Microwave Landing System (MLS) providing vertical guidance for incoming aircraft. MLS is precision instrument approach system operating in the microwave spectrum which normally consists of an Azimuth Station, an Elevation Station and Precision Distance Measuring Equipment.

Feature Group	Navigational	Navigational Aids			
Feature Class Name	NavaidEquip	ment			
Feature Type	Point				
CADD Standard Requirements					
Layer/Level	Description				
C-AFLD-AIDS-	Airfield Nav	igational Aid -			
	Color Line Type Line Weight Symbol				
AutoDesk Standards	4	Continuous	1	User Defined	
MicroStation Standards	7	Continuous	7	Oser Defined	
Sensitivity	Unclassified				
	AIXM NavaidEquipment Extension				
Equivalent Standards	FGDC	NavaidEquipmentExtension Extension			
	SDSFIE navigational_aid_point				
Documentation and Submission	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Requirements	Document and reacure as described in paragraphs 1.0.2 and 1.0.5.				
Related Features					

Monumentation	No monumentation required.			
Currey Doint I agation	Horizontal	Vertical		
Survey Point Location	Phase Center Reference Point	Phase Center Reference Point		



Accuracy Requirements (in feet)	Horizontal	Vertical		
	Horizontai	Orthometric	Ellipsoidal	
	± 1 ft	± 0.25 ft	N/A	
Resolution	Geographic Coordinates	Geographic Coordinates Distances and Elevat		
	Hundredth of arc second	d Nearest one foot		
Feature Attributes				
Attribute (Datatype)	Description			
name (VARCHAR2 (50))	Name of the feature			

description (VARCHAR2 (255))	A description or other unique information concerning the subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	_
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	Identifies the nevigetional oid agriculture to a next of an array 11
NavigationalAidSystemType	Identifies the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together
	make up the Instrument landing system (ILS) or the MLS
	Azimuth and MLS Elevation make up a Microwave Landing
C1(F	System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
and the Distance (Deel)	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this
stonEndDistance (Paul)	distance to the nearest tenth of a foot. Provide the distance distance the from the entenne along the
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
offeet Distance (Deal)	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
official Discouling	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
1: 1: 7	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.

referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.		
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]		
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).		
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]		
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.		
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]		
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.		

5.10.17.Navaid Equipment – Non-Directional Beacon (NDB)

Definition: An L/MF or UHF radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and "home" on or track to or from the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

Feature Group	Navigational Aids				
Feature Class Name	NavaidEquipme	NavaidEquipment			
Feature Type	Point				
CADD Standard Requirement	S				
Layer/Level		Descri	ption		
C-AFLD-AIDS-		Airfield Navig	gational Aid -		
	Color Line Type Line Weight Symbol				
AutoDesk Standards	4	Continuous	1	User Defined	
MicroStation Standards	7	Continuous	7	User Defined	
Sensitivity	Unclassified				
	AIXM	NavaidEquipment		Extension	
Equivalent Standards	FGDC NavaidEquipmentExtension Extension				
0.0	SDSFIE navigational_aid_point				
Documentation and	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Submission Requirements	Document this reactive as described in paragraphs 1.0.2 and 1.0.5.				
Related Features		·	·	·	

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

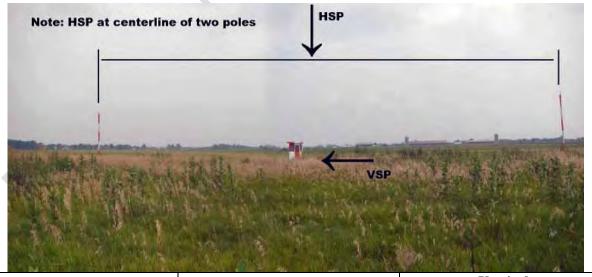
Monumentation No monumentation required.

	Horizontal	Vertical
Survey Point Location	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.

The following photograph displays an NDB of the single frame type:



The following photography displays a NDB of the dual frame type:



A course ou De cuivements (in	Horizontal	Vertical	
Accuracy Requirements (in	Orthometric		Ellipsoidal
feet)	± 10 ft	± 20 ft	N/A

Resolution	Geographic Coordinates Hundredth of arc second	Distances and Elevations Nearest one foot		
Feature Attributes	Trundredin of arc second	inearest one root		
Attribute (Datatype)	Des	scription		
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255))	A description or other unique	A description or other unique information concerning the subject item, limited to 255 characters.		
faaFacilityId (String 4)	Enter the identifier. When re identifier of the associated loo "I" for ILS or "M" used with than one ASR is in operation associated location, these equ the letters A, B, C, etc., follow NQIB). The same applies to codes must be the same as the flight log. For ARSR facilities the controlling ARTCC or mi will use the airport identifier [Source:FAA Order 8250-42]	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number.		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVAI	D [Source: NGS]		
NavigationalAidSystemType	system. For example the local up the Instrument landing sys	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System		
useCode (Enumeration: CodeUseCode)	The code that represents the a	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.		
antennaToThresholdDistance (Re	eal) The distance in feet that the a	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.		
centerlineDistance (Real)	antenna to threshold distance	nould be the same distance as the unless the runway end the displaced threshold. Provide this		
stopEndDistance (Real)		the from the antenna along the		
offsetDistance (Real)	The distance in feet that the fe	eature is offset from the runway nce to the nearest tenth of a foot.		
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left navigational aid is offset from appropriate direction from the runway.			
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigation CodeNavigationalAid System	al aid systems (use only when n Type is set to "Visual")		
status (Enumeration: codeStatus)	A temporal description of the	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.		
owner (String 75)	The owner of the facility			

runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.18.Navaid Equipment – Outer Marker (OM)

Definition: A marker beacon at or near the glideslope intercept altitude of an ILS approach. It is keyed to transmit two dashes per second on a 400 Hz tone, which is received aurally and visually by compatible airborne equipment. The OM is normally located four to seven miles from the runway threshold on the extended centerline of the runway.

threshold on the extended centerline of the runway.				
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipme	ent		
Feature Type	Point			
CADD Standard Requirement	S			
Layer/Level		Descr	ription	
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	Oser Defined
Sensitivity	Unclassified			
	AIXM NavaidEquipment Extension			Extension
Equivalent Standards	FGDC	NavaidEquipmentExtension Extension		Extension
	SDSFIE navigational_aid_point			
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			

Related Features

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location	Center of Antenna Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



Accuracy Requirements (in		Horizontal	Vertical	
		Horizontai	Orthometric	Ellipsoidal
feet)		± 10 ft	± 20 ft	N/A
Resolution	A	Geographic Coordinates Distances and Elevations		
	Hundredth of arc second Nearest one foot		one foot	
Feature Attributes	1			
Attribute (Datatype)		Description		
name (VARCHAR2 (50))		Name of the feature		

Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the
	subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]

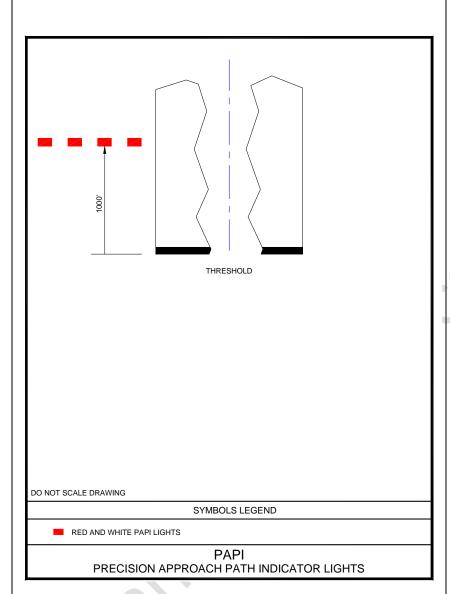
Specifies the type of NAVAID [Source: NGS]
Identifes the navigational aid equipment as part of an overall
system. For example the localizer and glideslope together make
up the Instrument landing system (ILS) or the MLS Azimuth
and MLS Elevation make up a Microwave Landing System
The code that represents the airspace structure in which the
aeronautical navigational aid is utilized.
The distance in feet that the antenna is from the runway
threshold. Provide the distance to the nearest tenth of a foot.
Distance from the centerline perpendicular point to the
physical runway end. This should be the same distance as the
antenna to threshold distance unless the runway end the
navigational aid serves has a displaced threshold. Provide this
distance to the nearest tenth of a foot.
Provide the distance distance the from the antenna along the
centerline to the stop end of the runway.
The distance in feet that the feature is offset from the runway
centerline. Provide this distance to the nearest tenth of a foot.
Enter the direction (right, left, or on centerline) the
navigational aid is offset from the runway. Determine the
appropriate direction from the approach threshold down the
runway.
The type of visual navigational aid systems (use only when
CodeNavigationalAid System Type is set to "Visual")
A temporal description of the operational status of the feature.
This attribute is used to describe real-time status.
The owner of the facility
Identify the primary instrument runway served by the facility.
When more than one runway is served by a precision approach
aid (such as a PAR), provide a separate feature for each
runway. This attribute is only required for ILS, MLS, TLS,
and PAR. Drawide the height chave the ellipseid (HAE) for the
Provide the height above the ellipsoid (HAE) for the referencePoint.
Distance from the runway reference point to the threshold.
Provide this distance to the nearest tenth of a foot. [Source:
FAA AAS-100]
The designated crossing height of the flight path angle above
the Landing Threshold Point (or Fictitious Threshold Point).
Maximum approach light vertical angle [Source: FAA AAS-
100]
An operator-defined work area. This attribute can be used by
the operator for user-defined system processes. It does not
affect the subject item's data integrity and should not be used to

ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.19.Navaid Equipment – Precision Approach Path Indicator (PAPI) System

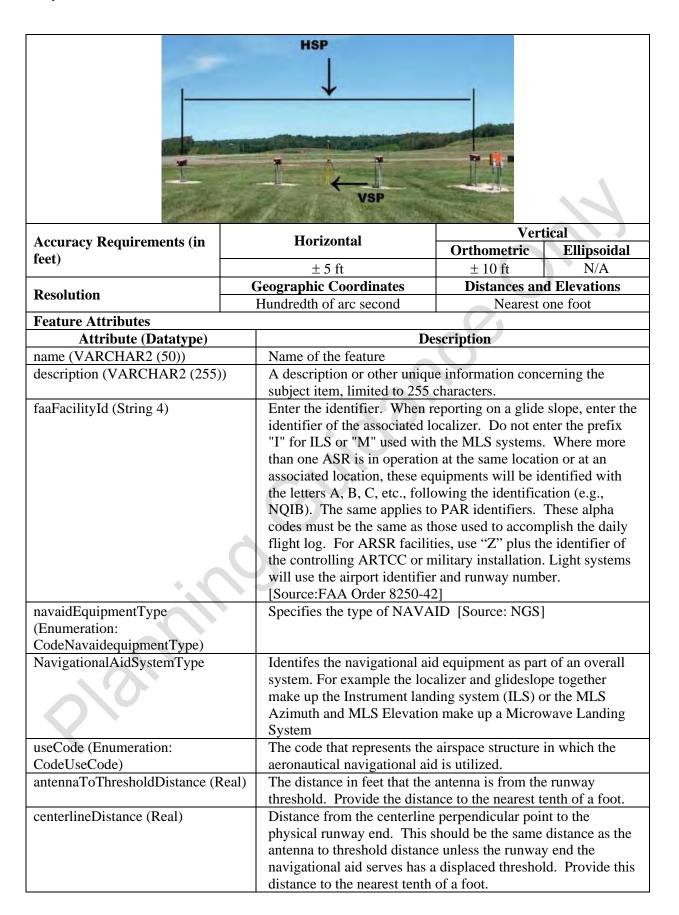
Definition: An airport lighting facility, similar to VASI, providing vertical approach slope guidance to aircraft during approach to landing. PAPIs consist of a single row of either two or four lights, normally installed on the left side of the runway, and have an effective visual range of about 5 miles during the day and up to 20 miles at night. PAPIs radiate a directional pattern of high intensity red and white focused light beams which indicate that the pilot is "on path" if the pilot sees an equal number of white lights and red lights, with white to the left of the red; "above path" if the pilot sees more white than red lights; and "below path" if the pilot sees more red than white lights.

ngines, and below path if the	phot sees more rea	man winte fights.			
Feature Group	Navigational Aic	Navigational Aids			
Feature Class Name	NavaidEquipmer	NavaidEquipment			
Feature Type	Point				
CADD Standard Requiremen	nts				
Layer/Level		Descri	iption		
C-AFLD-AIDS-		Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol	
AutoDesk Standards	4	Continuous	1	User Defined	
MicroStation Standards	7	Continuous	7	User Defined	
Sensitivity	Unclassified				
	AIXM	NavaidEquipmentExtensionNavaidEquipmentExtensionExtension		Extension	
Equivalent Standards	FGDC			Extension	
	SDSFIE navigational_aid_point				
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Related Features					



The PAPI is a simple visual aid to assist pilots during their approach to landing in Visual Flight Rules (VFR) conditions. It enables pilots to acquire the correct glide slope and subsequently to maintain their position on it, thus ensuring an accurate approach and landing. The PAPI system consists of four sharp transition projector units located at the side of the runway spaced laterally ±30 foot intervals. A second complementary set is sometimes provided on the opposite side of the runway. The setting angles of the red/white interfaces of the four units are graded; the differences in angle between the units being typically 20 minutes of arc. The nominal glide slope is midway between the angular settings of the center pair of units and the on-glide-slope signal and is thus two red and two white lights in the bar. If the aircraft goes below the glide slope, the pilot will see a progressively increasing number of red lights. Conversely, if the aircraft goes above the glide slope, the number of white lights seen is increased.

Monumentation	No monumentation required.		
	Horizontal	Vertical	
Survey Point Location	Center of light array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



stopEndDistance (Real)	Provide the distance distance the from the antenna along the
offsetDistance (Real)	centerline to the stop end of the runway. The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.20.Navaid Equipment – Precision Approach Radar (PAR) Touchdown Reflectors

Definition: Radar equipment in some ATC facilities operated by the FAA and/or the military services at joint-use civil/military locations and separate military installations to detect and display azimuth, elevation, and range of aircraft on the final approach course to a runway.

Feature Group	Navigational Aids
Feature Class Name	NavaidEquipment
Feature Type	Point
CADD Standard Requiremen	ts
Layer/Level	Description
C-AFLD-AIDS-	Airfield Navigational Aid -

	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	User Defined
Sensitivity	Unclassified			
	AIXM	NavaidEquipment		Extension
Equivalent Standards	FGDC	NavaidEquipmentExtension		Extension
	SDSFIE navigational_aid_point			
Documentation and	Dogument this fo	otumo os dosamihad	in noncomonha 1 6	2 and 1 6 2
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Related Features			·	

Management 4.4:	NI	1		7	
Monumentation	No monumentation req	uired.			
	Horizontal		Vertical		
Survey Point Location	Center of array		The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.		
A course ou De gardiname and a Cin	Horizontal		Vert	ical	
Accuracy Requirements (in feet)	norizontal	Horizontai		Ellipsoidal	
icci)	± 5 ft		± 10 ft	N/A	
Resolution	Geographic Coord		Distances an		
	Hundredth of arc s	econd	Nearest	one foot	
Feature Attributes					
Attribute (Datatype)			escription		
name (VARCHAR2 (50))	Name of the feat				
description (VARCHAR2 (255)	A description or subject item, lim		ue information concerning the characters.		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	identifier of the august associated location the letters A, B, NQIB). The same codes must be the flight log. For A the controlling A will use the airpo [Source:FAA On Specifies the types]	associated least used with in operation on, these equipments to the same as the arror or nortidentified are second of NAVA	ID [Source: NGS]	where more on or at an lentified with ation (e.g., These alpha plish the daily e identifier of Light systems er.	
NavigationalAidSystemType	system. For example the Instrument	nple the loc at landing sy	d equipment as part alizer and glideslop ystem (ILS) or the M p a Microwave Lan	be together make MLS Azimuth	

useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
, ,	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this
	distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
stopEndDistance (Real)	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
offsetDistance (Real)	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	
	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
11.1.1.00	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold.
	Provide this distance to the nearest tenth of a foot. [Source:
* ()	FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above
	the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-
	100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
r ()	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
1 1101111111 (111105012)	together into a version.
	1 together into a version.

5.10.21.Navaid Equipment – Pulse Light Approach Slope Indicator (PLASI) System

Definition: Pulse Light Approac	ch Slope Indicator	(PLASI) systems a	are a visual approa	ach aid for use in
visual flight conditions.				
Feature Group	Navigational Ai	ids		
Feature Class Name	NavaidEquipme	ent		
Feature Type	Point			
CADD Standard Requirement	S			
Layer/Level		Descr	iption	
C-AFLD-AIDS-		Airfield Navi	gational Aid -	
	Color Line Type Line Weight Symbol			
AutoDesk Standards	4		1	
Autopesk Stallualus	7	Continuous	1	Hear Defined
MicroStation Standards	7	Continuous	7	User Defined
	7 Unclassified	Continuous	7	User Defined
MicroStation Standards	7	Continuous NavaidEquipmen		User Defined Extension
MicroStation Standards	7 Unclassified		t	
MicroStation Standards Sensitivity	7 Unclassified AIXM	NavaidEquipmen	t tExtension	Extension
MicroStation Standards Sensitivity	7 Unclassified AIXM FGDC SDSFIE	NavaidEquipmen NavaidEquipmen navigational_aid	t tExtension point	Extension Extension
MicroStation Standards Sensitivity Equivalent Standards	7 Unclassified AIXM FGDC SDSFIE	NavaidEquipmen NavaidEquipmen	t tExtension point	Extension Extension

Monumentation	No	No monumentation required.			
		Horizontal	Vertical		
			The intersection of the ground,		
Survey Point Location	Cen	ter of light array	gravel, concrete		
	CCII	ter or right array	base and plumb	line through the	
			HSP.		
Accuracy Requirements (in		Horizontal	Vertical		
feet)		Horizontai	Orthometric	Ellipsoidal	
ieet)		± 5 ft	± 10 ft	N/A	
Resolution		Geographic Coordinates	Distances and Elevations		
Resolution		Hundredth of arc second	Nearest one foot		
Feature Attributes					
Attribute (Datatype)	Description				
name (VARCHAR2 (50))	Name of the feature				
description (VARCHAR2 (255)) A description or other		A description or other unique	information conc	erning the	
	subject item, limited to 255 characters.				

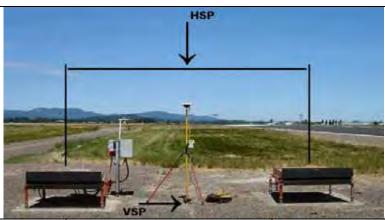
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
ruar demoj tu (Suring 1)	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this
	distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
C D THE CONTRACT	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.22. Navaid Equipment – Pulsating Visual Approach Slope Indicator (PVASI)

5.10.22.Navaiu Equipment –	I dibuding Tibudi	Tippiouen Stope in	2020002 (2 11202	,	
Definition: The Visual Approa					
runway that provides visual de	scent guidance in	formation during the	approach to a ru	nway.	
Feature Group	Navigational A	ids			
Feature Class Name	NavaidEquipme	ent			
Feature Type	Point				
CADD Standard Requirement	nts				
Layer/Level		Descri	iption		
C-AFLD-AIDS-	Airfield Navigational Aid -				
	Color Line Type Line Weight Symbol				
1 . 7 . 7 . 7					
AutoDesk Standards	4	Continuous	1	Hear Defined	
AutoDesk Standards MicroStation Standards	7	Continuous	7	User Defined	
	4 7 Unclassified	Continuous	7	User Defined	
MicroStation Standards	4 7 Unclassified AIXM	Continuous NavaidEquipment	7	User Defined Extension	
MicroStation Standards			1 7		
MicroStation Standards Sensitivity	AIXM	NavaidEquipment		Extension	
MicroStation Standards Sensitivity	AIXM FGDC SDSFIE	NavaidEquipment NavaidEquipmentE navigational_aid_p	point	Extension Extension	
MicroStation Standards Sensitivity Equivalent Standards	AIXM FGDC SDSFIE	NavaidEquipment NavaidEquipmentE	point	Extension Extension	
MicroStation Standards Sensitivity Equivalent Standards Documentation and	AIXM FGDC SDSFIE	NavaidEquipment NavaidEquipmentE navigational_aid_p	point	Extension Extension	

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location	Center of light array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



A course or Decuirements	Horizontal	Vertical		
Accuracy Requirements	Horizontal	Orthometric	Ellipsoidal	
(in feet)	± 5 ft	± 10 ft	N/A	
Resolution	Geographic Coordinates	Distances and Elevations		
Resolution	Hundredth of arc second	Nearest one foot		

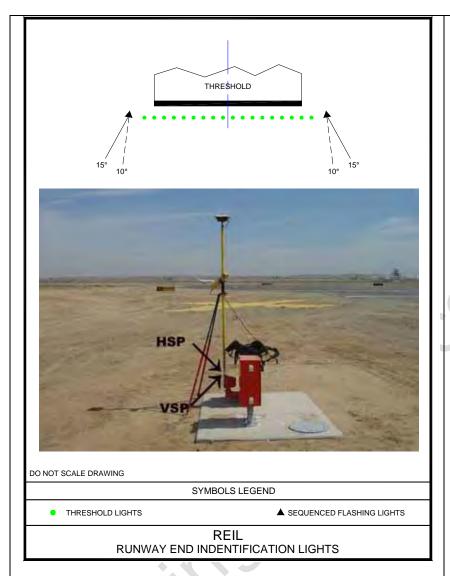
Feature Attributes	
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature
description (VARCHAR2 (255))	A description or other unique information concerning the
	subject item, limited to 255 characters.
faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	Specifies the type of NAVAID [Source, NOS]
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
Travigational Irasystem Type	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.23.Navaid Equipment – Runway End Identifier Lights (REIL)

Definition: Two synchronized flashing lights, one on each side of the runway threshold, which provide			
rapid and positive identification of the approach end of a particular runway.			
Feature Group Navigational Aids			
Feature Class Name NavaidEquipment			

Feature Type	Point					
CADD Standard Requiremen	CADD Standard Requirements					
Layer/Level		Desc	ription			
C-AFLD-AIDS-		Airfield Nav	igational Aid -			
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined		
MicroStation Standards	7	Continuous	7	User Defined		
Sensitivity	Unclassified					
	AIXM NavaidEquipment Extension					
Equivalent Standards	FGDC	NavaidEquipmentExtension		Extension		
	SDSFIE navigational_aid_point					
Documentation and	Description for the fortune of described in new annuals 1 (2) and 1 (2)					
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Related Features						



The REIL is an airport lighting system consisting of two flashing, white, high intensity lights located at each approach end corner of a runway. The REILs are directed towards the approach zone to enable pilots to identify the end of the runway.

Monumentation	No monumentation required.				
	Horizontal	Vei	Vertical		
Survey Point Location		The intersection	The intersection of the ground,		
Survey Foint Education	Center of Light	_	gravel, concrete pad, or other base		
		and plumb line the	nrough the HSP.		
Accuracy Requirements (in	Horizontal	Vei	rtical		
feet)	Horizontai	Orthometric	Ellipsoidal		
	± 3 ft	± 5 ft	N/A		
Resolution	Geographic Coordinates	Distances and Elevations			
Resolution	Hundredth of arc second	Nearest one foot			
Feature Attributes					
Attribute (Datatype)	Description				
name (VARCHAR2 (50))	Name of the feature				
description (VARCHAR2 (255)	(i) A description or other unique information concerning the				
	subject item, limited to 255 characters.				

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the identifier of the associated localizer. Do not enter the prefix "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the daily flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number. [Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	specifies and type of that the [source 1, e.g.]
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration: CodeOffsetDirection)	navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.24.Navaid Equipment – Simplified Directional Facility (SDF)

Definition: NAVAID used for nonprecision instrument approaches. The final approach course is similar to that of an ILS localizer except that the SDF course may be offset from the runway, generally not more than 3 degrees, and the course may be wider than the localizer, resulting in a lower degree of accuracy.

Feature Group	Navigational Aid	ls				
Feature Class Name	NavaidEquipmen	nt				
Feature Type	Point	J				
CADD Standard Requiremen	ts					
Layer/Level		Descri	ption			
C-AFLD-AIDS-		Airfield Navig	gational Aid -			
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined		
MicroStation Standards	7	Commuous	7	Oser Dermed		
Sensitivity	Unclassified					
	AIXM NavaidEquipment Extension					
Equivalent Standards	FGDC NavaidEquipmentExtension Extension					
	SDSFIE navigational_aid_point					
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Related Features						

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation No monumentation required.

		Horizontal	Verti	ical	
Survey Point Location		eer of Antenna Supporting cture	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.		
Acquirements (in		Horizontal	Verti	ical	
Accuracy Requirements (in feet)			Orthometric	Ellipsoidal	
Teet)		± 1 ft	± 1 ft	N/A	
Resolution	(Geographic Coordinates	Distances and		
Easture Attributes		Hundredth of arc second	Nearest o	one foot	
Feature Attributes Attribute (Datatype)		Do	scription	\wedge	
name (VARCHAR2 (50))		Name of the feature	scription		
description (VARCHAR2 (255)	3	A description or other unique	a information conce	orning the	
description (VARCHAR2 (233))	subject item, limited to 255 c		Tilling the	
navaidEquipmentType (Enumeration: CodeNavaidequipmentType) NavigationalAidSystemType		Enter the identifier. When reporting on a glide slope, enter identifier of the associated localizer. Do not enter the prefi. "I" for ILS or "M" used with the MLS systems. Where more than one ASR is in operation at the same location or at an associated location, these equipments will be identified with the letters A, B, C, etc., following the identification (e.g., NQIB). The same applies to PAR identifiers. These alpha codes must be the same as those used to accomplish the dair flight log. For ARSR facilities, use "Z" plus the identifier of the controlling ARTCC or military installation. Light system will use the airport identifier and runway number. [Source:FAA Order 8250-42] Specifies the type of NAVAID [Source: NGS] Identifes the navigational aid equipment as part of an overal system. For example the localizer and glideslope together in		where more on or at an entified with tion (e.g., These alpha blish the daily e identifier of Light systems er.	
0.1.0		up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System The code that represents the airspace structure in which the			
useCode (Enumeration: CodeUseCode)		The code that represents the airspace structure in which the aeronautical navigational aid is utilized.			
antennaToThresholdDistance (R	Real)	The distance in feet that the a			
(2	1001)	threshold. Provide the distar		•	
centerlineDistance (Real)		Distance from the centerline perpendicular point to the			
		physical runway end. This s	distance as the		
			antenna to threshold distance unless the runway end the		
		navigational aid serves has a displaced threshold. Provide this			
		distance to the nearest tenth			
stopEndDistance (Real)		Provide the distance distance the from the antenna along the			
offeetDistance (Best)		centerline to the stop end of the runway.			
offsetDistance (Real)		The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.			
		centerine. Provide this dista	mee to the nearest t	CHUI 01 & 100l.	

(Enumeration: CodeOffsetDirection) lightingType (Enumeration: CodeLightingConfigurationType) status (Enumeration: codeStatus) owner (String 75) runwayEndId (String 3) The owner of the facility When more than one runway is served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR. referencePointEllipsoidHeight referencePointThreshold (Real) thresholdCrossingHeight (Real) thresholdCrossingHeight (Real) bighAngle (Real) userFlag (String 254) A temporal description of the operational status of the feature. This attribute is used to describe real-time status. A temporal description of the operational status of the feature. This attribute is used to describe real-time status. A temporal description of the operational status of the feature. This attribute is used to describe real-time status. A temporal description of the operational status of the feature. This attribute is used to describe real-time status. Owner (String 3) Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR. Provide the height above the ellipsoid (HAE) for the referencePoint. referencePointThreshold (Real) Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100] thresholdCrossingHeight (Real) The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point). Maximum approach light vertical angle [Source: FAA AAS-100] userFlag (String 254) An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.	cc D: .:	
CodeOffsetDirection appropriate direction from the approach threshold down the runway.	offsetDirection	Enter the direction (right, left, or on centerline) the
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elevation is the phase center of the reference point. [Source:		
NGS1	* 1	NGS]
Alternative (Integer2) Discriminator used to tie features of a plan or poroposal	Alternative (Integer2)	,
together into a version.		

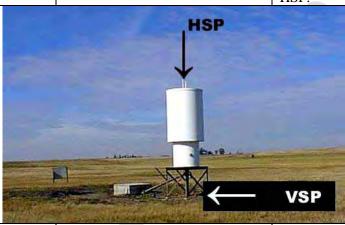
5.10.25.Navaid Equipment – Tactical Air Navigation (TACAN)

Definition: An ultra-high frequency electronic rho-theta air navigation aid which provides suitably						
equipped aircraft a continuous i	equipped aircraft a continuous indication of bearing and distance to the TACAN station.					
Feature Group	Navigational	Aids				
Feature Class Name	NavaidEquip	oment				
Feature Type	Point					
CADD Standard Requirements						
Layer/Level	Description					
C-AFLD-AIDS-		Airfield Navigational Aid -				
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4 Continuous 1 User Defined					
MicroStation Standards	7 Continuous 7					
Sensitivity Unclassified						
Equivalent Standards	AIXM	NavaidEquipmen	t	Extension		

	FGDC	NavaidEquipmentExtension	Extension		
	SDSFIE	navigational_aid_point			
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.				
Related Features					

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
Survey Point Location	Horizontal	Vertical
	Center of Antenna Cover	The intersection of the ground,
		gravel, concrete pad, or other
	Center of Antenna Cover	base and plumb line through the
		HSP.



Horizontal	Vertical		
Horizontai	Orthometric	Ellipsoidal	
± 10 ft	± 20 ft	N/A	
Geographic Coordinates	Distances and Elevations		
Hundredth of arc second	Nearest one foot		
De	scription		
Name of the feature			
A description or other unique information concerning the			
subject item, limited to 255 characters.			
	Geographic Coordinates Hundredth of arc second De Name of the feature A description or other unique	Horizontal	

faaFacilityId (String 4)	Enter the identifier. When reporting on a glide slope, enter the
	identifier of the associated localizer. Do not enter the prefix
	"I" for ILS or "M" used with the MLS systems. Where more
	than one ASR is in operation at the same location or at an
	associated location, these equipments will be identified with
	the letters A, B, C, etc., following the identification (e.g.,
	NQIB). The same applies to PAR identifiers. These alpha
	codes must be the same as those used to accomplish the daily
	flight log. For ARSR facilities, use "Z" plus the identifier of
	the controlling ARTCC or military installation. Light systems
	will use the airport identifier and runway number.
	[Source:FAA Order 8250-42]
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]
(Enumeration:	
CodeNavaidequipmentType)	
NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall
	system. For example the localizer and glideslope together make
	up the Instrument landing system (ILS) or the MLS Azimuth
	and MLS Elevation make up a Microwave Landing System
useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this
	distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
00 71 1	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
Later Ton	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	A temporal description of the operational status of the facture
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	This autribute is used to describe real-time status. The owner of the facility
owner (String 75)	Identify the primary instrument runway served by the facility.
runwayEndId (String 3)	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
referencer offitzinpsoluriergiit	referencePoint.
	references onit.

referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

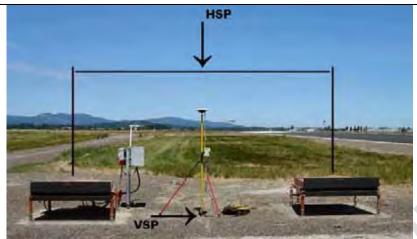
5.10.26.Navaid Equipment – Tricolor Visual Approach Slope Indicator System (TRCV)

Definition: Tri-color visual approach slope indicators normally consist of a single light unit projecting a three-color visual approach path into the final approach area of the runway upon which the indicator is installed.

Feature Group	Navigational Aid	ls				
Feature Class Name	NavaidEquipmen	nt				
Feature Type	Point					
CADD Standard Requiremen	its					
Layer/Level		Descr	iption			
C-AFLD-AIDS-		Airfield Navig	gational Aid -			
	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined		
MicroStation Standards	7	Continuous	7	User Derined		
Sensitivity	Unclassified					
	AIXM	NavaidEquipmen	nt .	Extension		
Equivalent Standards	FGDC	NavaidEquipmen	tExtension	Extension		
	SDSFIE navigational_aid_point					
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.					
Related Features						

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.		
	Horizontal	Vertical	
Survey Point Location	Center of light array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.	



A D :	II - vi vi l	Vert	Vertical		
Accuracy Requirements (in	Horizontal	Orthometric	Ellipsoidal		
feet)	± 5 ft	± 10 ft	N/A		
Resolution	Geographic Coordinates	Distances an	Distances and Elevations		
Resolution	Hundredth of arc second	Nearest	one foot		
Feature Attributes					
Attribute (Datatype)	De	escription			
name (VARCHAR2 (50))	Name of the feature				
description (VARCHAR2 (255)	A description or other unique subject item, limited to 255		erning the		
navaidEquipmentType (Enumeration: CodeNavaidequipmentType) NavigationalAidSystemType	Enter the identifier. When ridentifier of the associated let "I" for ILS or "M" used with than one ASR is in operation associated location, these equation the letters A, B, C, etc., follow NQIB). The same applies to codes must be the same as the flight log. For ARSR facility the controlling ARTCC or making will use the airport identifier [Source:FAA Order 8250-42]. Specifies the type of NAVA	ocalizer. Do not en the MLS systems. In at the same locati- quipments will be ico towing the identificato PAR identifiers. Those used to accom- ties, use "Z" plus the military installation. In and runway number and runway number.	ter the prefix Where more on or at an dentified with ation (e.g., These alpha plish the daily ate identifier of Light systems eer.		
	system. For example the loc up the Instrument landing sy and MLS Elevation make up	alizer and glideslop ystem (ILS) or the I o a Microwave Lan	be together make MLS Azimuth ding System		
useCode (Enumeration:	^	the airspace structure in which the			
CodeUseCode)	aeronautical navigational aid is utilized.				
antennaToThresholdDistance (F	Real) The distance in feet that the threshold. Provide the distance				

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.27. Navaid Equipment – "T" Visual Approach Slope Indicator System (T-VASI) Definition: T-VASI system provides approach slope guidance by means of illuminated

Definition: I-VASI system provides approach slope guidance by means of illuminated symbols like			
the PAPI.			
Feature Group	Navigational Aids		
Feature Class Name	NavaidEquipment		

Feature Type	Point	_					
CADD Standard Requireme	nts						
Layer/Level	Description						
C-AFLD-AIDS-		Airfield Navi	gational Aid -				
	Color	Color Line Type Line Weight Symbol					
AutoDesk Standards	4	Continuous	1	User Defined			
MicroStation Standards	7	Continuous	7	Oser Defined			
Sensitivity	Unclassified						
	AIXM	NavaidEquipment		Extension			
Equivalent Standards	FGDC	NavaidEquipmentExtension		Extension			
	SDSFIE	navigational_aid_point					
Documentation and	Dogument this	Continuo on donomibad	in managements 1.6	2 and 1.6.2			
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.						
Related Features							
Data Capture Rules: Collect	• •						

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

No monumentation required.

Monumentation

Monumentation	110 1110	municitation required.		
2	Horizontal		Vertical	
			The intersection of the ground,	
Survey Point Location	Center	of light array	gravel, concrete p	
		or regard unitary	base and plumb li	ne through the
			HSP.	
Accuracy Requirements (in		Horizontal	Vert	
feet)			Orthometric	Ellipsoidal
Teet)		± 5 ft	± 10 ft	± 10 ft
Resolution	G	eographic Coordinates	Distances and	d Elevations
Resolution	H	undredth of arc second	Nearest of	one foot
Feature Attributes				
Attribute (Datatype)		D	escription	
name (VARCHAR2 (50))	, v	Name of the feature		
description (VARCHAR2 (255)	A description or other unique information concerning the			cerning the
		subject item, limited to 255	characters.	
faaFacilityId (String 4)		Enter the identifier. When		
	the identifier of the associated localizer. Do not enter the			
	prefix "I" for ILS or "M" used with the MLS systems. Where			
	more than one ASR is in operation at the same location or at			
	an associated location, these equipments will be identified			
	with the letters A, B, C, etc., following the identification (e.g.,			
		NQIB). The same applies	to PAR identifiers.	These alpha
		codes must be the same as	those used to accon	nplish the daily
		flight log. For ARSR facili	ities, use "Z" plus t	he identifier of
		the controlling ARTCC or		
	will use the airport identifier and runway number. [Source:FAA Order 8250-42]			ber.
navaidEquipmentType	Specifies the type of NAVAID [Source: NGS]			
(Enumeration:				
CodeNavaidequipmentType)				

NavigationalAidSystemType	Identifes the navigational aid equipment as part of an overall system. For example the localizer and glideslope together make up the Instrument landing system (ILS) or the MLS Azimuth and MLS Elevation make up a Microwave Landing System
useCode (Enumeration: CodeUseCode)	The code that represents the airspace structure in which the aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration: CodeLightingConfigurationType)	CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold.
	Provide this distance to the nearest tenth of a foot. [Source:
thresholdCrossingHeight (Real)	FAA AAS-100] The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.

ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.10.28. Navaid Equipment – VHF Omni Directional Range (VOR)

Definition: A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the NAS. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature. Voice features may be used by ATC or FSS for transmitting instructions/information to pilots.

instructions/information to pil	ots.			
Feature Group	Navigational Aids			
Feature Class Name	NavaidEquipment			
Feature Type	Point			
CADD Standard Requireme	ents			
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	User Dernied
Sensitivity	Unclassified	Unclassified		
	AIXM	NavigationalAidEquipment Extension		Extension
Equivalent Standards	FGDC	NavaidEquipmentExtension Ext		Extension
	SDSFIE	DSFIE navigational_aid_point		
Documentation and	D (41.6) 1 11.11 1 1.60 11.60			
Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Related Features	A			

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location		The intersection of the ground,
	Center of Antenna Cover	gravel, concrete pad, or other base
		and plumb line through the HSP.





Standalone VOR

VOR coupled with DME

~ ************************************	, , ,	Vok coupied with Birlie		
Accuracy Requirements (in	Horizontal			
feet)	10.6		Ellipsoidal	
	± 10 ft	± 20 ft	N/A	
Resolution	Geographic Coordinates		nd Elevations	
	Hundredth of arc second	Nearest	one foot	
Feature Attributes				
Attribute (Datatype)		escription		
name (VARCHAR2 (50))	Name of the feature			
description (VARCHAR2 (255)	A description or other unique	ue information con	ncerning the	
	subject item, limited to 255	characters.		
faaFacilityId (String 4)	Enter the identifier. When	reporting on a glid	le slope, enter the	
	identifier of the associated l	ocalizer. Do not e	enter the prefix	
	"I" for ILS or "M" used wit	h the MLS system	s. Where more	
	than one ASR is in operation	n at the same loca	tion or at an	
	associated location, these ed	quipments will be	identified with	
	the letters A, B, C, etc., foll			
	NQIB). The same applies t	•		
	codes must be the same as t		•	
	flight log. For ARSR facili			
	the controlling ARTCC or r			
	will use the airport identifie			
		[Source:FAA Order 8250-42]		
navaidEquipmentType	Specifies the type of NAVA	•	S 1	
(Enumeration:	specifies the type of 141141	ne [bource.1106	7 1	
CodeNavaidequipmentType)				
NavigationalAidSystemType	Identifes the navigational ai	d equinment as na	art of an overall	
Travigational radbystem type	system. For example the loc			
	up the Instrument landing s		1 0	
	and MLS Elevation make u			
useCode (Enumeration:				
CodeUseCode)	The code that represents the		on which the	
	aeronautical navigational ai			
antennaToThresholdDistance (I				
	threshold. Provide the dista	ince to the nearest	tenth of a foot.	

centerlineDistance (Real)	Distance from the centerline perpendicular point to the physical runway end. This should be the same distance as the antenna to threshold distance unless the runway end the navigational aid serves has a displaced threshold. Provide this distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection (Enumeration: CodeOffsetDirection)	Enter the direction (right, left, or on centerline) the navigational aid is offset from the runway. Determine the appropriate direction from the approach threshold down the runway.
lightingType (Enumeration: CodeLightingConfigurationType)	The type of visual navigational aid systems (use only when CodeNavigationalAid System Type is set to "Visual")
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.29.Navaid Equipment – Visual Approach Slope Indicator System (VASI)

Definition: An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he/she is "on path" if he/she sees red/white, "above path" if white/white, and "below path" if red/red. Some airports serving large aircraft have three-bar VASIs which provide two visual glide paths to the same runway.

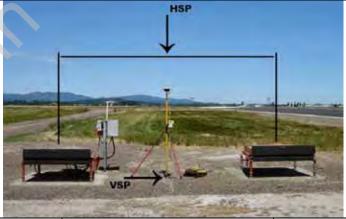
Easture Class Names NewsidEssignment	
Feature Class Name NavaidEquipment	
Feature Type Point	

CADD Standard Requirements

CABB Standard Requiremen		D	•	
Layer/Level	Description			
C-AFLD-AIDS-	Airfield Navigational Aid -			
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User Defined
MicroStation Standards	7	Continuous	7	User Defined
Sensitivity	Unclassified			
	AIXM	NavaidEquipmen	et e	Extension
Equivalent Standards	FGDC	NavaidEquipmentExtension Extension		Extension
	SDSFIE	navigational_aid	point	
Documentation and Submission Requirements	Document this feature as described in paragraphs 1.6.2 and 1.6.3.			
Related Features				
	1	ATATTATEST	TICD II I	. I LICE

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location	Center of Light Array	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



A common Dograficom onto (in	Horizontal	Vertical	
Accuracy Requirements (in	Horizontai	Orthometric	Ellipsoidal
feet)	± 5 ft	± 10 ft	N/A

Resolution	Geographic Coordinates Hundredth of arc second	Distances and Elevations Nearest one foot	
Feature Attributes	Trundredin of arc second	Nearest one root	
Attribute (Datatype)	De	escription	
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique information concerning the		
faaFacilityId (String 4)	identifier of the associated lo "I" for ILS or "M" used with than one ASR is in operation associated location, these eq the letters A, B, C, etc., follo NQIB). The same applies to codes must be the same as the flight log. For ARSR facilities	eporting on a glide slope, enter the ocalizer. Do not enter the prefix the MLS systems. Where more at the same location or at an uipments will be identified with owing the identification (e.g., o PAR identifiers. These alphanose used to accomplish the daily ies, use "Z" plus the identifier of nilitary installation. Light systems and runway number.	
navaidEquipmentType (Enumeration: CodeNavaidequipmentType)	Specifies the type of NAVA	ID [Source: NGS]	
NavigationalAidSystemType	system. For example the loca up the Instrument landing sy	d equipment as part of an overall alizer and glideslope together make stem (ILS) or the MLS Azimuth a Microwave Landing System	
useCode (Enumeration: CodeUseCode)		airspace structure in which the	
antennaToThresholdDistance (Real)	The distance in feet that the		
centerlineDistance (Real)	antenna to threshold distance	should be the same distance as the e unless the runway end the displaced threshold. Provide this	
stopEndDistance (Real)		e the from the antenna along the	
offsetDistance (Real)	The distance in feet that the	feature is offset from the runway ance to the nearest tenth of a foot.	
offsetDirection (Enumeration: CodeOffsetDirection)		It, or on centerline) the m the runway. Determine the ne approach threshold down the	
lightingType (Enumeration: CodeLightingConfigurationType)		nal aid systems (use only when m Type is set to "Visual")	
status (Enumeration: codeStatus)	A temporal description of the This attribute is used to desc	e operational status of the feature.	
owner (String 75)	The owner of the facility		

runwayEndId (String 3)	Identify the primary instrument runway served by the facility. When more than one runway is served by a precision approach aid (such as a PAR), provide a separate feature for each runway. This attribute is only required for ILS, MLS, TLS, and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold. Provide this distance to the nearest tenth of a foot. [Source: FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the elevation is the center of the antenna cover. For MLSAZ, MLSEL, and End Fire Type Glide Slope Antennas, the elevation is the phase center of the reference point. [Source: NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together into a version.

5.10.30.Navaid Equipment – VOR/TACAN (VORTAC)

Definition: A navigation aid prov	viding VOD ozim		th and TACAN di	stanca
•	- 100	uui, TACAN aziiliu	ili, aliu TACAN ul	Stance
measuring equipment (DME) at o	one site.			
Feature Group	Navigational Ai	ds		
Feature Class Name	NavaidEquipme	nt		
Feature Type	Point			
CADD Standard Requirements				
Layer/Level		Descrip	otion	
C-AFLD-AIDS-		Airfield Naviga	ational Aid -	
	Color	Line Type	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1	User
MicroStation Standards	7	Continuous	7	Defined
Sensitivity	Unclassified			
	AIXM	NavaidEquipment		Extension
Equivalent Standards	FGDC	NavaidEquipment	Extension	Extension
	SDSFIE	navigational_aid_	point	
Documentation and	Dogument this f	cotumo os dosamile - d	in noncomplication) and 1.6.2
Submission Requirements	Document this i	eature as described	ın paragrapns 1.6.2	2 and 1.0.3.
Related Features				

Data Capture Rules: Collect the position of the NAVAID using the HSP and the elevation at the VSP. If the NAVAID penetrates an OIS or is selected as a representative object, additionally identify, classify and document the NAVAID as an Obstacle and associated accuracy. When identifying a NAVAID as an obstacle, survey the highest point on the entire structure as the top elevation including appurtenances.

Monumentation	No monumentation required.	
	Horizontal	Vertical
Survey Point Location	Center of Antenna Cover	The intersection of the ground, gravel, concrete pad, or other base and plumb line through the HSP.



A course or Decrinoments (in	Horizontal	Verti	cal
Accuracy Requirements (in feet)	Horizontal	Orthometric	Ellipsoidal
leet)	± 10 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances and	Elevations
Resolution	Hundredth of arc second	Nearest or	ne foot
Feature Attributes			
Attribute (Datatype)	Desc	ription	
name (VARCHAR2 (50))	Name of the feature		
description (VARCHAR2 (255))	A description or other unique		ning the
	subject item, limited to 255 ch		
faaFacilityId (String 4)	Enter the identifier. When rep	0	•
	identifier of the associated loc		
	"I" for ILS or "M" used with the		
	than one ASR is in operation a		
	associated location, these equi		
	the letters A, B, C, etc., follow		
	NQIB). The same applies to F		
	codes must be the same as tho		
	flight log. For ARSR facilities		
	the controlling ARTCC or mil		
	will use the airport identifier a	nd runway number	•
	[Source:FAA Order 8250-42]	NCC1	
navaidEquipmentType	Specifies the type of NAVAID	[Source: NGS]	
(Enumeration:			
CodeNavaidequipmentType)	I dentification and a 1 11		£
NavigationalAidSystemType	Identifes the navigational aid e		
	system. For example the locali		•
	up the Instrument landing syst		
	and MLS Elevation make up a	Microwave Landii	ng System

useCode (Enumeration:	The code that represents the airspace structure in which the
CodeUseCode)	aeronautical navigational aid is utilized.
antennaToThresholdDistance (Real)	The distance in feet that the antenna is from the runway
` ,	threshold. Provide the distance to the nearest tenth of a foot.
centerlineDistance (Real)	Distance from the centerline perpendicular point to the
,	physical runway end. This should be the same distance as the
	antenna to threshold distance unless the runway end the
	navigational aid serves has a displaced threshold. Provide this
	distance to the nearest tenth of a foot.
stopEndDistance (Real)	Provide the distance distance the from the antenna along the
1	centerline to the stop end of the runway.
offsetDistance (Real)	The distance in feet that the feature is offset from the runway
, , ,	centerline. Provide this distance to the nearest tenth of a foot.
offsetDirection	Enter the direction (right, left, or on centerline) the
(Enumeration:	navigational aid is offset from the runway. Determine the
CodeOffsetDirection)	appropriate direction from the approach threshold down the
,	runway.
lightingType	The type of visual navigational aid systems (use only when
(Enumeration:	CodeNavigationalAid System Type is set to "Visual")
CodeLightingConfigurationType)	
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
owner (String 75)	The owner of the facility
runwayEndId (String 3)	Identify the primary instrument runway served by the facility.
	When more than one runway is served by a precision approach
	aid (such as a PAR), provide a separate feature for each
	runway. This attribute is only required for ILS, MLS, TLS,
	and PAR.
referencePointEllipsoidHeight	Provide the height above the ellipsoid (HAE) for the
	referencePoint.
referencePointThreshold (Real)	Distance from the runway reference point to the threshold.
	Provide this distance to the nearest tenth of a foot. [Source:
	FAA AAS-100]
thresholdCrossingHeight (Real)	The designated crossing height of the flight path angle above
	the Landing Threshold Point (or Fictitious Threshold Point).
highAngle (Real)	Maximum approach light vertical angle [Source: FAA AAS-
	100]
userFlag (String 254)	An operator-defined work area. This attribute can be used by
7.0	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
ellipsoidElevation (Real)	The Base Elevation for most NAVAIDs. For ILS DME, the
	elevation is the center of the antenna cover. For MLSAZ,
	MLSEL, and End Fire Type Glide Slope Antennas, the
	elevation is the phase center of the reference point. [Source:
	NGS]
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

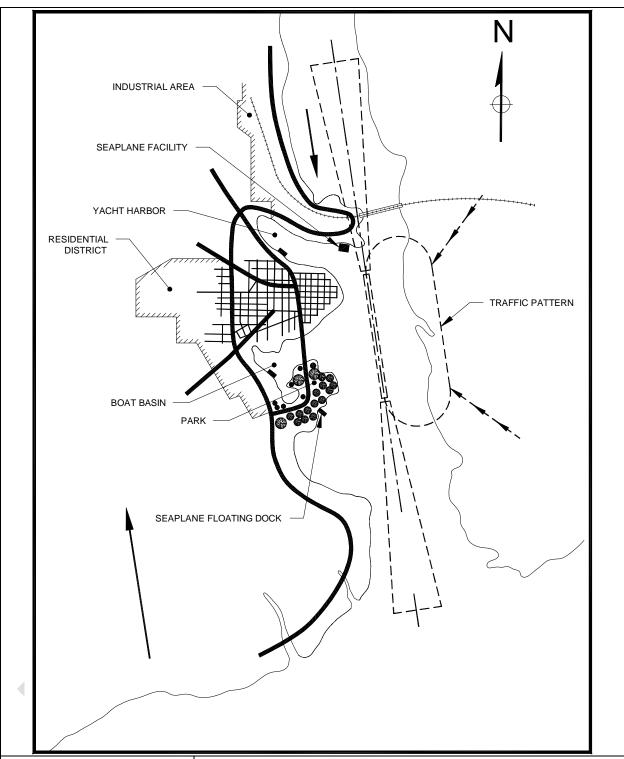
5.10.31.NAVAID Site

5.10.31.NAVAID Site				
Definition: The parcel, lease, or ri	ight-of-way b	oundary for a NAV	AID or facility the	hat is located off
airport property.				
Feature Group	Navigationa			
Feature Class Name	NAVAIDSi	te		
Feature Type	Polygon			
CADD Standard Requirements				
Layer/Level			cription	
C-AIRF-AIDS-SITE	Airfield Nav	vigational Aid - Site		
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	1	Continuous	1	User Defined
MicroStation Standards	3	Continuous	7	Oser Defined
Sensitivity	Unclassified	l		
	AIXM	NavaidSite		Extension
Equivalent Standards	FGDC	NavigationalAidS	lite	Extension
	SDSFIE	Airfield_facility	surface_site	
Documentation and Submission	No doguma	atation required		
Requirements	No documen	ntation required.		
Related Features				
Data Capture Rules: Collect a clo	osed polygon i	to its greatest horize	ontal extent.	
Monumentation	No monume	entation required.	•	
Curryay Daint I agatian	Но	orizontal	Ver	tical
Survey Point Location		N/A	N.	/A
A D : 4 (:	TT.		Ver	tical
Accuracy Requirements (in	Ho	orizontal	Orthometric	Ellipsoidal
feet)		± 5 ft	± 10 ft	N/A
D. L.C.	Geograph	nic Coordinates	Distances an	d Elevations
Resolution		h of arc second	Nearest	one foot
Feature Attributes		•		
Attribute (Datatype)				
		Des	cription	
name (VARCHAR2 (50))	Name of t		cription	
name (VARCHAR2 (50)) description (VARCHAR2 (255))		he feature		al characteristics.
	A brief de		lity and any specia	
description (VARCHAR2 (255))	A brief de A tempora	he feature escription of the faci	lity and any special operational status	of the feature.
description (VARCHAR2 (255)) status (Enumeration: codeStatus)	A brief de A tempora This attrib	he feature escription of the faci al description of the	lity and any special operational status libe real-time statu	of the feature.
description (VARCHAR2 (255))	A brief de A tempora This attrib The locati	he feature escription of the faci al description of the oute is used to descri	lity and any special operational status libe real-time statued to the feature by	of the feature. s. y FAA
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16)	A brief de A tempora This attrib The locati The type o	he feature escription of the faci al description of the oute is used to descri on identifier assign of facility or feature	lity and any special operational status libe real-time statued to the feature by related to airfield	of the feature. s. y FAA operations.
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4)	A brief de A tempora This attrib The locati The type of The region	he feature scription of the faci al description of the oute is used to descri on identifier assigne	lity and any special operational status libe real-time statued to the feature by related to airfield	of the feature. s. y FAA operations.
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16)	A brief de A tempora This attrib The locati The type of The region ownership	the feature description of the faci al description of the oute is used to description on identifier assigned of facility or feature and property manage	lity and any special operational status libe real-time statued to the feature by related to airfield ement office response.	of the feature. s. y FAA operations. onsible for
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16) propertyCustodian (String 50)	A brief de A tempora This attrib The locati The type of The region ownership An operat	he feature escription of the faci al description of the oute is used to descri on identifier assigne of facility or feature hal property manage of the site	lity and any special operational status ibe real-time statued to the feature by related to airfield ement office response. This attribute of	of the feature. s. y FAA operations. onsible for can be used by
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16) propertyCustodian (String 50)	A brief de A tempora This attrib The locati The type of The region ownership An operat the operat	the feature escription of the faci- al description of the oute is used to descri- on identifier assigna- of facility or feature hal property manage of the site or-defined work are	lity and any special operational status abe real-time statused to the feature by related to airfield ement office responsa. This attribute cosystem processes.	of the feature. s. y FAA operations. onsible for can be used by It does not
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16) propertyCustodian (String 50)	A brief de A tempora This attrib The locati The type of The region ownership An operat the operat affect the	the feature escription of the facilitation identifier assigned of facility or feature facilitation of the site facilitation of the site for defined work are for user-defined site.	lity and any special operational status abe real-time statused to the feature by related to airfield ement office responsa. This attribute cosystem processes.	of the feature. s. y FAA operations. onsible for can be used by It does not
description (VARCHAR2 (255)) status (Enumeration: codeStatus) faaFacilityId (String 4) facilityType (String 16) propertyCustodian (String 50)	A brief de A tempora This attrib The locati The type of The region ownership An operat the operat affect the store the s Discrimin	the feature rescription of the facilitation of the facility or feature of facility or feature of the site or defined work are or for user-defined subject item's data is	lity and any special operational status operational status and to the feature by related to airfield ement office responsive a. This attribute of system processes.	of the feature. s. y FAA operations. onsible for can be used by It does not Id not be used to

5.11. Group: SEAPLANE

5.11.1. Water Operating Area

Definition: An area designated	d and marked for the	he takeoff and landi	ng of aircraft. Thi	is is equivalent to
the Airport Operating Area of	a land based airpor	rt.		
Feature Group	SeaPlane			
Feature Class Name	WaterOperating	Area		
Feature Type	Polygon			
CADD Standard Requireme	nts			4.6
Layer/Level		Descr	iption	
C-SEAP-WTOA-		Seaplar	ne dock	
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	3	Continuous	1 MM	User Defined
MicroStation Standards	2	Continuous	7	User Denned
Sensitivity	Unclassified			
	AIXM	None	(Z)	
Equivalent Standards	FGDC	None	7	
	SDSFIE	None		
Documentation and	None			
Submission Requirements	110110			
Related Features			,	
Data Capture Rules: Collect	t the Wat <mark>erOperat</mark>	ingArea using a bo	unding polygon to	capture the area
at its greatest extents.	•		••	-



Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Ver	tical
Survey Fornt Location	N/A	N/	'A
A common De aminementa (in	Horizontal	Ver	tical
Accuracy Requirements (in feet)	Horizontai	Orthometric	Ellipsoidal
leet)	± 5 ft	± 20 ft	N/A

Resolution	(Geographic Coordinates	Distances and Elevations
Resolution	Fi	ve hundredth of arc second	Nearest foot
Feature Attributes			
Attribute (Datatype)		Des	scription
name (VARCHAR2 (50))		Name of the feature water bo	dy (river/lake).
description (VARCHAR2 (255)))	Description of the feature.	
status (Enumeration: codeStatus	s)		operational status of the feature.
		This attribute is used to descr	ribe real-time status.
surfaceMaterial		Code used to indicate the type	e of water the water operating area
(Enumeration: CodeSurfaceMat	erial	is on or planned to use.	
length (Integer)			the WaterOperatingArea to the
		nearest 5 feet	
width (Integer)			he waterOperatingArea to the
		nearest 5 feet	· · ·
currentFlowRate (Integer)		Measure and specify the rate	
		WaterOperatingArea in miles	
compassLocation		Specify the magnetic bearing	of the current flow direction
(Enumeration:			
CodeCompassLocation)			
tidalRange (Integer)			fference in height from mean low
		mean high tide	*
coordinatedUseType			ted use of the waterway. If no
(Enumeration:			majority of the coordinated use
CodeCoordinatedUseType)		then specify multiple.	
coordinatedUseActivityLevel			y based on percentage of daily use
(Integer)		-	se type. If coordinated use type is
		70 12	ctivity level of the single most
		expected activity.	
userFlag (String 254)			ea. This attribute can be used by
			system processes. It does not
		M 100	integrity and should not be used to
		store the subject item's data.	
Alternative (Integer2)		Discriminator used to tie feat	ures of a plan or poroposal
		together into a version.	

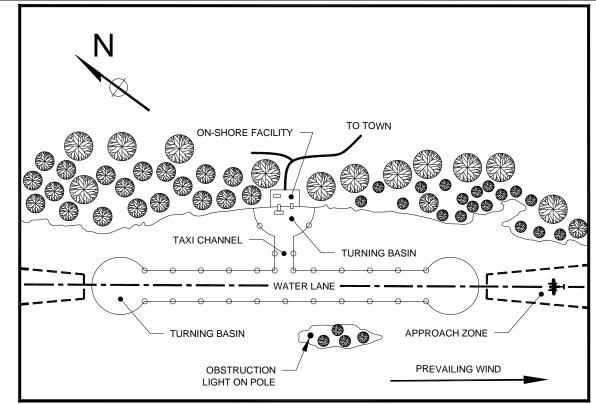
5.11.2. Water Lane End

Definition: The end of the water lane (typically located at the furthest end of a turning basin) suitable for landing or takeoff runs of aircraft. WaterLaneEnds define the water lane and describe the approach/departure procedure characteristics of a water lane.

Feature Group	SeaPlane			
Feature Class Name	WaterLaneEnd			
Feature Type	Point			
CADD Standard Requiremen	ts			
Layer/Level		Descr	iption	
C-SEAP-LNDA-	Seaplane landing	area		
	Color	Linetype	Line Weight	Symbol
AutoDesk Standards	4	Continuous	1 MM	User Defined
MicroStation Standards	7	Continuous	7	User Defined
Sensitivity	Restricted			

	AIXM	None
Equivalent Standards	FGDC	None
	SDSFIE	None
Documentation and	None	
Submission Requirements	Trone	
Related Features		

Data Capture Rules: Collect a point on the turning basin boundary identifying the point where aeronautical activity is expected to occur. Typically, markers or buoys define the area, locate the WaterLaneEnd at least 10 feet inside the markers or buoys.



Monumentation	No monumentation required.		
Survey Point Location	Horizontal	Vert	tical
Survey Foint Location	N/A	N/	'A
A	Horizontal	Vert	tical
Accuracy Requirements (in	Horizontai	Orthometric	Ellipsoidal
feet)	± 5 ft	± 20 ft	N/A
Resolution	Geographic Coordinates	Distances an	d Elevations
Resolution	Five hundredth of arc second	Neares	st foot
Feature Attributes			
Attribute (Datatype)	De	scription	
name (VARCHAR2 (50))	Name of the feature.		
description (VARCHAR2 (255)	Description of the feature.		
magneticBearing	Compute and specify the mag	gnetic bearing of th	e primary water
	lane to the nearest degree bas	sed on the location	of the reciprocal
	WaterLaneEnd points. This i	s similar to the run	way magnetic
	bearing for a land based airpo	ort.	

compassLocation (Enumeration: CodeCompassLocation) restriction (String 240) airMarker (Boolean) type (Boolean) color (Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance Code indicating the cardinal compass location of the turning basin from centroid of the WaterLaneEnd. This feature is similar to the land based airport RunwayEnd. Any restrictions or cautions associated with the sea plane landing area. Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location. Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
CodeCompassLocation) similar to the land based airport RunwayEnd. Any restrictions or cautions associated with the sea plane landing area. airMarker (Boolean) Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location. type (Boolean) Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N color (Enumeration: CodeColor) IightingType (Enumeration: CodeLightingType) Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
restriction (String 240) Any restrictions or cautions associated with the sea plane landing area. airMarker (Boolean) Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location. Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N color (Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance Any restrictions or cautions associated with the sea plane landing area. Tode specifying if a standard air maker is used to indicate if a standard air marker at the location. Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
airMarker (Boolean) Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location. type (Boolean) Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N color (Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance Identifies the type of approach guidance in use or planned for
airMarker (Boolean) Code specifying if a standard air maker is used to indicate if a standard air marker is in use at the location. type (Boolean) Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N color (Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance Identifies the type of approach guidance in use or planned for
standard air marker is in use at the location. type (Boolean) Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N color (Enumeration: CodeColor) IightingType (Enumeration: CodeLightingType) approachGuidance Identifies the type of approach guidance in use or planned for
type (Boolean) Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N Color (Enumeration: CodeColor) IightingType (Enumeration: CodeLightingType) approachGuidance Identifies the WaterLaneEnd as the primary or alternate. Primary = Y, alternate=N The color of the air marker at the location (if any) Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
Primary = Y, alternate=N
color (Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance The color of the air marker at the location (if any) Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
(Enumeration: CodeColor) lightingType (Enumeration: CodeLightingType) approachGuidance Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
lightingType (Enumeration: CodeLightingType) approachGuidance Type of lighting available at the location (if any) Identifies the type of approach guidance in use or planned for
(Enumeration: CodeLightingType) approachGuidance Identifies the type of approach guidance in use or planned for
approachGuidance Identifies the type of approach guidance in use or planned for
(Farmer and in a second in a s
(Enumeration: the water operating area.
CodeApproachGuidance)
Length (Number 10) Specify the overall length of the primary water lane
width (Number 10) Specify the overall width of the primary water lane
depth (Number 10) Specify the depth of the primary water lane with respect to
mean lowest low tide
centroid The geographic location of the primary water centroid, used to
determine the primary and alternate water lanes within the water
operating area.
status (Enumeration: codeStatus) Describes the operational status of the feature.
userFlag (String 254) An operator-defined work area. This attribute can be used by
the operator for user-defined system processes. It does not
affect the subject item's data integrity and should not be used to
store the subject item's data.
Alternative (Integer2) Discriminator used to tie features of a plan or poroposal
internative (megers)

5.11.3. Taxi Channel

Definition: A water channel u	ised for the move	ement of aircraft b	etween on shore	facilities and the			
water lane. [Source AC 150/5395-1]							
Feature Group	SeaPlane						
Feature Class Name	TaxiChannel						
Feature Type	Polygon						
CADD Standard Requiremen	its						
Layer/Level		Descr	ription				
C-SEAP-TAXI-	Seaplane landing area						
	Color	Linetype	Line Weight	Symbol			
AutoDesk Standards	4	Continuous	1 MM	User Defined			
MicroStation Standards	7	Continuous	7	User Defined			
Sensitivity	Restricted						
	AIXM	None					
Equivalent Standards	FGDC	None					
	SDSFIE	None					
Documentation and	None						
Submission Requirements	None						
Related Features							

Data Capture Rules: Collect the taxi channel at its greatest horizontal extents. Existing markers or buoys may define the width. In the instance the taxi channel is not marked for width, refer to width published by FAA in the U.S. Terminal Procedures.

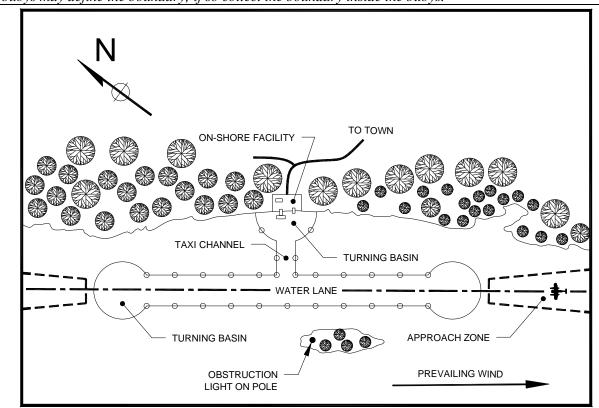
Monumentation	No	monumentation required.			
Curvey Daint Legation		Horizontal	Vertical		
Survey Point Location	N/A		N/A		
A D : 4 (:		Harimantal	Vert	ical	
Accuracy Requirements (in		Horizontal	Orthometric	Ellipsoidal	
feet)		± 5 ft	± 20 ft	N/A	
Resolution		Geographic Coordinates	Distances an	d Elevations	
Resolution	F	ive hundredth of arc second	Neares	st foot	
Feature Attributes					
Attribute (Datatype)		De	escription		
name (VARCHAR2 (50))	Any commonly used name associated with the taxi cha				
description (VARCHAR2 (255)	Description of the feature.				
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature.			
		This attribute is used to describe real-time status.			
restriction (String 240)		Any restrictions or cautions a	associated with the	taxi channel	
length (Number 10)		Specify the overall length of	the taxi channel		
width (Number 10)		Specify the overall width of	the taxi channel		
depth (Number 10)		Specify the depth of the taxi	channel with respec	ct to mean	
		lowest low tide			
userFlag (String 254)			an operator-defined work area. This attribute can be used by		
	the operator for user-defined system processes. It do			It does not	
	affect the subject item's data integrity and should not be				
		store the subject item's data.			
Alternative (Integer2)		Discriminator used to tie fear	tures of a plan or po	oroposal	
		together into a version.			

5.11.4. Turning Basin

Definition: A water area used for the maneuvering of aircraft where the use of water surface is restricted. Turning basins should be located adjacent to shoreline facilities and at each end of the water operating area.[Source AC 150/5395-1] **Exercise Group**SeaPlane

Feature Group	SeaPlane						
Feature Class Name	TurningBasin						
Feature Type	Polygon						
CADD Standard Requiremen	nts						
Layer/Level	Description						
C-SEAP-TBSN-	Seaplane landing	g area					
	Color	Linetype	Line Weight	Symbol			
AutoDesk Standards	4	Continuous	1 MM	User Defined			
MicroStation Standards	7	Continuous	7	User Defined			
Sensitivity	Restricted						
	AIXM	None					
Equivalent Standards	FGDC	None					
	SDSFIE	None					
Documentation and	None						
Submission Requirements	None						
Related Features			<u>-</u>	·			

Data Capture Rules: Collect the turning basin at its greatest horizontal extents. Existing markers or buoys may define the boundary; if so collect the boundary inside the buoys.



Monumentation	No n	No monumentation required.				
Survey Daint Leastion	Horizontal		Vertical			
Survey Point Location		N/A	N/	'A		
A course or Decreivements (in		Horizontal	Vert	tical		
Accuracy Requirements (in feet)		Horizontal	Orthometric	Ellipsoidal		
reet)		± 5 ft	± 20 ft	N/A		
Resolution		Geographic Coordinates	Distances an	d Elevations		
Resolution	Fi	ve hundredth of arc second	Neares	st foot		
Feature Attributes						
Attribute (Datatype)		De	scription			
name (VARCHAR2 (50))		A commonly used name for the turning basin				
status (Enumeration: codeStatus	s)	A temporal description of the	operational status	of the feature.		
		This attribute is used to descr	ibe real-time status	S.		
restriction (String 240)		Any restrictions or cautions a	ssociated with the	turning basin		
length (Number 10)		Specify the overall length of	the turning basin to	the nearest 5		
		feet.				
width (Number 10)		Specify the overall width of t	he turning basin to	the nearest 5		
		feet				
depth (Number 10)	Specify the depth of the turning basin with respect to mean					
		lowest low tide to the nearest 0.5 foot.				
diameter (Number 10)		The diameter of the turning b	asin available for u	use by aircraft to		
	the nearest 5 feet.					

compassLocation	Code indicating the cardinal compass location of the turning
(Enumeration:	basin from centroid of the WaterLaneEnd
CodeCompassLocation)	
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.11.5. Navigation Buoy					
Definition: A floating marker				ecific known locat	ion, which is
used as an aid to navigation or	for othe	er special pu	irpose.		
Feature Group	SeaP	lane			
Feature Class Name	Navi	gationBuoy	•		
Feature Type	Point	t			7
CADD Standard Requiremen	nts				
Layer/Level			Descr	iption	
C-SEAP-BUOY-	Seap	lane naviga	tion buoy		
		Color	Line type	Line Weight	Symbol
AutoDesk Standards		2	Continuous	1 MM	User Defined
MicroStation Standards		4	Continuous	7	User Defined
Sensitivity	Uncl	assified	. 20		
	AIX	M	NavigationBuoy		Core
Equivalent Standards	FGD	C	NavigationBuoy		
_	SDS	FIE	marine_navigation	n_buoy_point	
Documentation and	None			•	
Submission Requirements	None				
Related Features					
Data Capture Rules: Collect of	at the ce	enter and hi	ighest point on the	buoy regardless oj	f water level at
time of data collection.		A			
Monumentation	No m	onumentati	on required.		
Survey Point Location		Horiz	zontal	Ver	tical
Survey I offit Location		N/A		N/A	
A course or De cuivements (in		Цогі	zontol	Ver	tical
Accuracy Requirements (in feet)		Horizontal		Orthometric	Ellipsoidal
leet)		± :	5 ft	± 20 ft	N/A
Resolution	G	eographic	Coordinates	Distances an	d Elevations
Resolution	Fiv	e hundredt	h of arc second	Neare	st foot
Feature Attributes					
Attribute (Datatype)			Des	scription	
name (VARCHAR2 (50))		Any comm	nonly used name as	sociated with the l	ouoy.
description (VARCHAR2 (255))	A descript	ion or other unique	information conce	erning the buoy
		limited to	255 characters. Us	e this to describe r	navigational
			nts or warnings.		
designator (String 20)		The officia	al number of the bu	oy.	
status (Enumeration: codeStatu	s)		l description of the		of the feature.
	This attribute is used to describe real-time status.				

type (Enumeration:	Discriminator - The type of the buoy or marker.
CodeBuoyType)	
lightingType	Type of lighting available at the location (if any)
(Enumeration: CodeLightingType)	
color	Code used to indicate the navigational color of the buoy.
(Enumeration:CodeColor)	
owner	Code indicating the owner of the navigation buoy.
(Enumeration: CodeOwner)	
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.11.6. Seaplane Ramp Cente	erline						
Definition: The centerline of ra	mps specifically	designed to transit	seaplanes to or from	n land or water			
Feature Group	SeaPlane						
Feature Class Name	SeaplaneRamp	Centerline					
Feature Type	Line						
CADD Standard Requiremen	ents						
Layer/Level		Descr	ription				
C-SEAP-RAMP-CNTR	Seaplane ramp	centerline					
	Color	Linetype	Line Weight	Symbol			
AutoDesk Standards	2	Continuous	1 MM	User Defined			
MicroStation Standards	4	Continuous	7	Oser Defined			
Sensitivity	Restricted						
	AIXM	SeaplaneRampSi	ite	Core			
Equivalent Standards	FGDC	SeaplaneRampC	Centerline				
	SDSFIE sea_plane_ramp_centerline						
Documentation and	None						
Submission Requirements	None						
Related Features							
Data Capture Rules: Collect				face type utilized			
for entering and exiting water.			pron or taxiway.				
Monumentation	No monumenta	*					
Survey Point Location		rizontal		tical			
Survey 1 ome 12 ocuron		N/A		/A			
Accuracy Requirements (in	Ho	rizontal		tical			
feet)	110	1 IZOIIIII	Orthometric	Ellipsoidal			
Teet)		± 5 ft	± 20 ft	N/A			
Resolution	Geograph	ic Coordinates	Distances an	d Elevations			
Resolution	Five hundre	dth of arc second	Neare	st foot			
Feature Attributes							
Attribute (Datatype)		De	escription				
name (VARCHAR2 (50))	Name of	the feature.					
description (VARCHAR2 (255))) Descript	ion of the feature.					
240Bstatus (Enumeration:		oral description of th					
codeStatus)	This attribute is used to describe real-time status.						

length (Integer)	Specify the length of the seaplane ramp centerline from the				
	water to the shoreline				
userFlag (String 254)	An operator-defined work area. This attribute can be used by				
	the operator for user-defined system processes. It does not				
	affect the subject item's data integrity and should not be used to				
	store the subject item's data.				
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal				
	together into a version.				

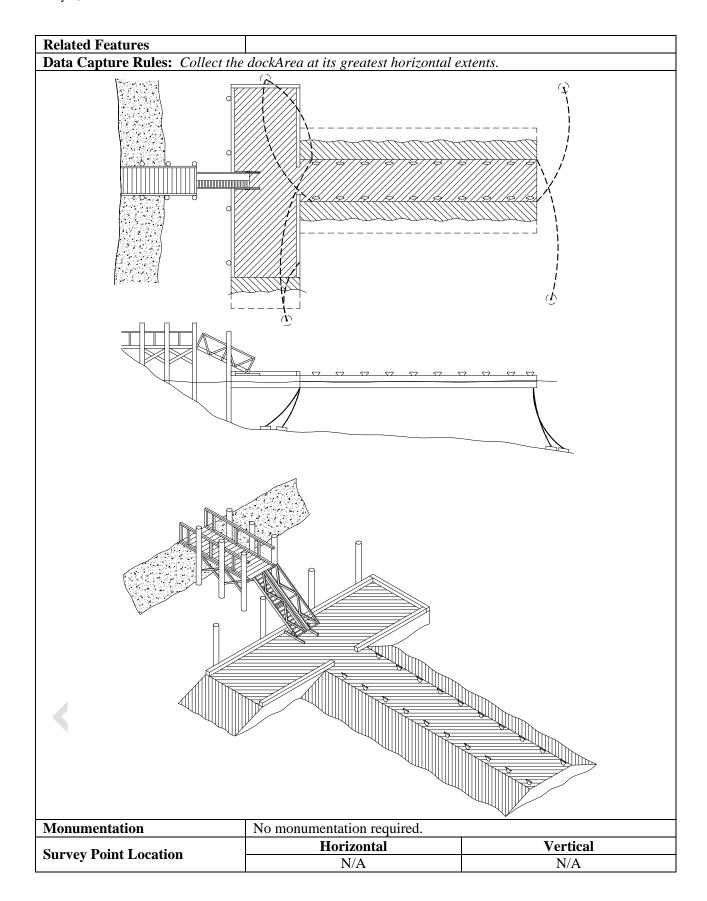
5.11.7. Seaplane Ramp Site

5.11.7. Seaplane Ramp Site							
Definition: Ramps specifically	design	ned to transit s	eaplanes to or fro	m land to water.			
Feature Group	SeaP	SeaPlane					
Feature Class Name	Seap	laneRampSite					
Feature Type	Poly	gon					
CADD Standard Requiremen	ts				/		
Layer/Level			Desci	ription			
C-SEAP-RAMP-	Seap	lane ramp site		\mathcal{O}_{Λ}			
		Color	Linetype	Line Weight	Symbol		
AutoDesk Standards		3	Continuous	1 MM	User Defined		
MicroStation Standards		2	Continuous	7	User Defined		
Sensitivity	Resti	ricted					
	AIX	M	SeaplaneRam	pSite	Core		
Equivalent Standards	FGD	C	SeaplaneRam	pSite			
	SDS	FIE	sea_plane_rai	np_site			
Documentation and	No d	agumantation	is required for thi	a faatura			
Submission Requirements	No documentation is required for this feature.						
Related Features							
Data Capture Rules: Collect	the rar	np width at its	greatest horizoni	tal limits.			
Monumentation	Non	nonumentation	required.				
Survey Point Location		Horizo	ntal	Ve	ertical		
Survey I offit Location	N/A			N/A			
Accuracy Requirements (in		Horizontal		Vertical			
feet)				Orthometric	Ellipsoidal		
icet)		± 5 ft		± 20 ft	N/A		
Resolution		Geographic C	oordinates	Distances a	and Elevations		
Resolution	Fi	ive hundredth	of arc second	Near	est foot		
Feature Attributes							
Attribute (Datatype)			De	escription			
name (VARCHAR2 (50))		Name of the	feature.				
decomination (VIADCIIAD2 (255	5)) Description of the feature.						
description (VARCHAR2 (255							
status (Enumeration: codeStatu		A temporal d	escription of the		of the feature. This		
status (Enumeration: codeStatu		A temporal dattribute is us	escription of the sed to describe re-	al-time status.	of the feature. This		
status (Enumeration: codeStatu width (Integer)		A temporal d attribute is us Identify the v	escription of the sed to describe re- width of the seapl	al-time status. ane ramp site			
status (Enumeration: codeStatu width (Integer) slope (integer)		A temporal dattribute is used Identify the variation. The slope of	escription of the sed to describe re- width of the seapl the ramp specifie	al-time status. ane ramp site d as an integer va	lue.		
status (Enumeration: codeStatu width (Integer)		A temporal dattribute is us Identify the value of An operator-	escription of the sed to describe re- width of the seapl the ramp specified defined work are	al-time status. ane ramp site d as an integer va a. This attribute c	lue. an be used by the		
status (Enumeration: codeStatu width (Integer) slope (integer)		A temporal dattribute is used Identify the way. The slope of An operator-operator for the slope of the slope	escription of the sed to describe re- width of the seapl the ramp specified defined work area user-defined system	al-time status. ane ramp site d as an integer va a. This attribute c em processes. It d	lue. an be used by the oes not affect the		
status (Enumeration: codeStatu width (Integer) slope (integer)		A temporal dattribute is used Identify the way. The slope of An operator-operator for the slope of the slope	escription of the sed to describe re- width of the seapl the ramp specified defined work area user-defined systes s data integrity an	al-time status. ane ramp site d as an integer va a. This attribute c	lue. an be used by the oes not affect the		

Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal together
	into a version.

5.11.8. Docking Area

Definition: A defined area on a seaplane base either fixed or floating, intended to accommodate						
aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.						
Feature Group	SeaPlane					
Feature Class Name	DockArea					
Feature Type	Polygon					
CADD Standard Requirements						
Layer/Level	Description					
C-SEAP-DOCK-	Seaplane dock					
	Color	Linetype	Line Weight	Symbol		
AutoDesk Standards	3	Continuous	1 MM	- User Defined		
MicroStation Standards	2	Continuous	7	User Defined		
Sensitivity	Unclassified					
	AIXM	FloatingDockSite	2	Core		
Equivalent Standards	FGDC	FloatingDockSite	2			
	SDSFIE	floating_dock_si	te			
Documentation and	None					
Submission Requirements	None		7			



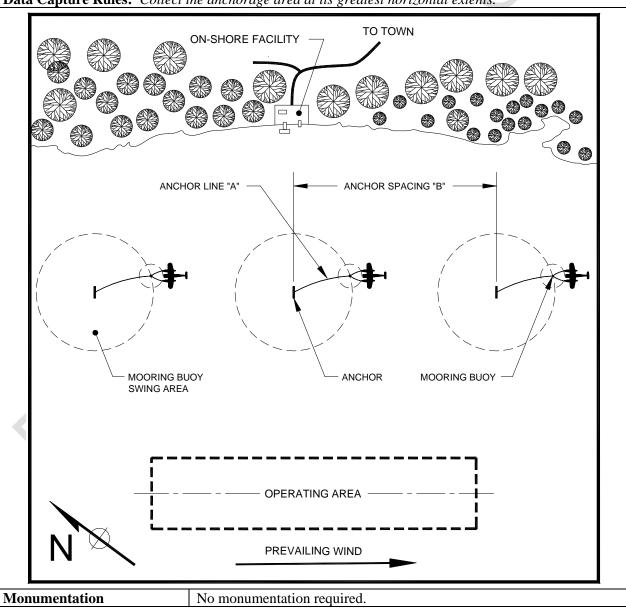
	**	Vertical			
Accuracy Requirements (in	Horizontal	Orthometric	Ellipsoidal		
feet)	± 5 ft	± 20 ft	N/A		
D 1.0	Geographic Coordinates Distances and Eleva		d Elevations		
Resolution	Five hundredth of arc second				
Feature Attributes					
Attribute (Datatype)	Des	cription			
name (VARCHAR (50))	Name of the feature.				
description (VARCHAR (255))	Description of the feature.				
status (Enumeration: codeStatus)	A temporal description of the o	perational status o	f the feature.		
	This attribute is used to describ	e real-time status.			
userFlag (String 254)	An operator-defined work area	. This attribute can	n be used by the		
	operator for user-defined system				
	subject item's data integrity and	d should not be use	ed to store the		
	subject item's data.				
pier (Boolean)	Specify if a pier is available in				
pierLength (Integer)	Specify the overall length avail				
pierWidth (Integer)	Specify the overall length avail				
pierMaterial (Enumeration:	Specify the materials used in the	ne construction of t	the pier.		
CodeVerticalStructureMaterial))					
hoistingCapability (Integer)		Specify the hoisting capability in pounds			
marineRailwayPlatformLength	Specify the length of the marine railway platform				
(Integer)					
marineRailwayPlatformWidth	Specify the width of the marine railway platform				
(Integer)					
marineRailwayPlatformCapacity	Specify the capacity of the mar	ine railway platfor	m in pounds		
(Integer)					
gangway (Boolean)	Specify if a gangway is availab				
gangwayLength (Integer)	Specify the overall length avail				
gangwayWidth (Integer)	Specify the overall length avail		/ay		
floatingDock (Boolean)	Specify if a floating dock is ava				
gangwayMaterial (Enumeration:	Specify the material used to co	nstruct the gangwa	ıy		
CodeVerticalStructureMaterial)					
floatingDockLength (Integer)	Specify the overall length avail				
floatingDockWidth (Integer)	Specify the overall length avail				
floatingDockMaterial (Enumeration:	Specify the material used in co	nstructing the dock	Area		
CodeVerticalStructureMaterial)					
floatingBarge (Boolean)	Specify if a floating barge is av		•		
floatingBargeLength (Integer)	Specify the overall length avail				
floatingBargeWidth (Integer)	Specify the overall length avail				
floatingBargeMaterial Enumeration:	Specify the material used in constructing the floatingBarge				
CodeVerticalStructureMaterial)					
Alternative (Integer2)	Discriminator used to tie featur	es of a plan or por	oposal together		
	into a version.				

5.11.9. Anchorage Area

Definition: An area designated specifically for the parking of seaplanes.		
Feature Group	SeaPlane	
Feature Class Name	AnchorageArea	

Feature Type	Polygon						
CADD Standard Requirement	nts						
Layer/Level		Description					
C-SEAP-ANCH-		Seapla	ane dock				
	Color	Color Linetype Line Weight Symbol					
AutoDesk Standards	3	Continuous	1 MM	User Defined			
MicroStation Standards	2	Continuous	7	User Defined			
Sensitivity	Unclassified						
	AIXM	None					
Equivalent Standards	FGDC	None					
	SDSFIE	None					
Documentation and	None		-				
Submission Requirements	None						
Related Features							

Data Capture Rules: Collect the anchorage area at its greatest horizontal extents.



319

Survey Point Location		Horizontal	Vertical N/A		
Survey I omit Location		N/A			
A D : 4 (:		Horizontal	Vei	rtical	
Accuracy Requirements (in feet)		Horizontai	Orthometric	Ellipsoidal	
reet)		± 5 ft	± 20 ft	N/A	
Resolution	•	Geographic Coordinates	Distances ar	nd Elevations	
Resolution	Fi	ive hundredth of arc second	Neare	est foot	
Feature Attributes					
Attribute (Datatype)		D	escription		
name (VARCHAR2 (50))		Name of the feature.			
description (VARCHAR2 (255))	Description of the feature.			
status (Enumeration: codeStatus	s)	A temporal description of the	e operational status	of the feature.	
	This attribute is used to describe real-time stat		ribe real-time status	S.	
userFlag (String 254)		An operator-defined work are	ea. This attribute c	an be used by the	
		operator for user-defined system processes. It does not affect the			
		subject item's data integrity and should not be used to store the			
		subject item's data.			
mooringLocations (Integer)		Specify the number of moori	ng locations provid	ed in the	
		AnchorageArea.			
length (Integer)		Specify the overall length av	ailable for the Anch	norageArea	
width (Integer)		Specify the overall length av			
depth (Integer) Specify the depth of the turning basin with respe		ect to mean lowest			
	low tide to the nearest 0.5 foot.				
bottomConditions (String 240)	Specify the type of bottom conditions in the AnchorageArea.			chorageArea.	
restriction (String 240)		Any restrictions or cautions a			
Alternative (Integer2)		Discriminator used to tie features of a plan or poroposal together			
-	into a version.		-		

5.12. Group: SECURITY

5.12.1. Security Area

5.12.1. Security Area					
Definition: An area of the airr		rity measures requ	ired by 49 CFR 1	542.201 must be	
carried out [Source: 49 CFR 15	_				
Feature Group Feature Class Name	Security				
	SecurityArea				
Feature Type	Polygon				
CADD Standard Requiremen	its				
Layer/Level		Descri		1 11 10 CED	
C- SECR-SECA	An area of the airport in which security measures required by 49 CFR 1542.201				
	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards	6	Continuous	1 MM	User Defined	
MicroStation Standards	5	Continuous	7	Osci Denned	
Sensitivity	Secret				
	AIXM	SecurityElement		Extension	
Equivalent Standards	FGDC	SecurityArea		Extension	
	SDSFIE	None			
Documentation and Submission Requirements	None				
Related Features		2.0			
Data Capture Rules: Collect	outline of security	area at its greates	t horizontal exten	ts. Extents can be	
defined by fences, paint lines, o					
Monumentation	No monumentati				
		Horizontal Vertical			
Survey Point Location	N/A		N	/A	
			Ver	tical	
Accuracy Requirements (in	Hori	zontal	Orthometric	Ellipsoidal	
feet)	+	5 ft	± 5 ft	N/A	
		Coordinates		nd Elevations	
Resolution		ns of arc second		est foot	
Feature Attributes	11.5 Hallarodd	31 411 3000114	1,0410		
Attribute (Datatype)		Dec	scription		
name (VARCHAR2 (50))	Name of the		,c.ipuon		
description (VARCHAR2 (255		n of the feature.			
status (Enumeration: codeStatu		l description of the	operational status	of the feature.	
	· .	ute is used to descr	*		
userFlag (String 254)		or-defined work are			
		or for user-defined			
	affect the subject item's data integrity and should not be used to				
	store the subject item's data.				
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal				
(6- /	together into a version.				

5.12.2. Security Identification Display Area

Definition: Portions of an airport, specified in the airport security program, in which security measures					
required by regulation must be, carried out. This area includes the security area and may include other					
areas of the airport. [Source: DHS]					
E4 C	G				

Feature Group	Security
Feature Class Name	SecurityIdDisplayArea
Feature Type	Polygon
CADD Standard Requireme	nts

Layer/Level	Description			
C-AIRF-SECR-SIDA	Security Identi	Security Identification Display Area		
	Color	Linetype Line Weight		Symbol
AutoDesk Standards	6	Continuous	1 MM	User Defined
MicroStation Standards	5		7	User Defined
Sensitivity	Secret			
	AIXM	SecurityElement		Extension
Equivalent Standards	FGDC	SecurityIdentificationDisplayArea Extension		Extension
	SDSFIE none			
Documentation and Submission Requirements	None			
Related Features				

Data Capture Rules: Collect outline of security area at its greatest horizontal extents. Extents can be defined by fences, paint lines, or specific limits defined by airport authorities.

Monumentation	No monumentation required.			
Common Daint I agation	Horizontal	Vertical		
Survey Point Location	N/A N/A		/A	
A company Dogwinson anto (in	Horizontal	Ver	tical	
Accuracy Requirements (in feet)	Horizontai	Orthometric	Ellipsoidal	
	± 5 ft	± 5 ft	N/A	
Resolution	Geographic Coordinates	Distances ar	nd Elevations	
Resolution	Five hundredth of arc second	nd Nearest foot		
Feature Attributes				

Feature Attributes

reature Attributes	/ \
Attribute (Datatype)	Description
name (VARCHAR2 (50))	Name of the feature.
description (VARCHAR2 (255))	Description of the feature.
status (Enumeration: codeStatus)	A temporal description of the operational status of the feature.
	This attribute is used to describe real-time status.
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not
	affect the subject item's data integrity and should not be used to
	store the subject item's data.
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.12.3. Security Perimeter Line

Definition: Any type of perimeter, such as barbed wire, high fences, motion detectors and armed				
guards at gates, that ensure no unauthorized visitors can gain entry.				
Feature Group Security				
Feature Class Name SecurityPerimeterLine				
Feature Type Polygon				

CADD Standard Requiremen	its				
Layer/Level		Descr	ription		
C-DETL-FENC-SECU	Security Fencing				
	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards	4	None	1 MM	User Defined	
MicroStation Standards	7	None	7	User Defined	
Sensitivity	Confidential				
	AIXM	SecurityElement	Extension		
Equivalent Standards	FGDC	SecurityPerimete	erLine	Extension	
	SDSFIE	security_perimet	er_line		
Documentation and	None				
Submission Requirements	None				
Related Features					
Data Capture Rules: Collect		_		ts. Extents can be	
defined by fences, paint lines, o			thorities.		
Monumentation	No monumentation required.				
Survey Point Location	Horizontal		Vertical		
Survey 1 ome Location	N	/A	N/A		
Accuracy Requirements (in	Hori	zontal		tical	
feet)	Horizontai		Orthometric ± 5 ft	Ellipsoidal	
1000)		± 5 ft		N/A	
Resolution		Coordinates	Distances and Elevations		
Resolution	Five hundredt	h of arc second	Nearest foot		
Feature Attributes					
Attribute (Datatype)			scription		
name (VARCHAR2 (50))	Name of the				
description (VARCHAR2 (255)		ion or other unique			
		m, limited to 255 c	haracters. [Source	e: SDSFIE	
	Attribute 7				
status (Enumeration: codeStatu	100	l description of the			
FI (G. 1 254)		ute is used to descr			
userFlag (String 254)	_	or-defined work are		•	
		or for user-defined	· .		
		subject item's data	integrity and shoul	ia not be used to	
Altemative (Interes)	store the subject item's data.				
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal togethe			oroposai together	
	into a version.				

5.12.4. Sterile Area

Definition: Portions of an airport defined in the airport security program that provide passengers access to boarding aircraft and to which the access is generally controlled by TSA, an aircraft operator, or a foreign air carrier. [Source: DHS]Feature GroupSecurityFeature Class NameSterile AreaFeature TypePolygonCADD Standard Requirements

Layer/Level	Description
C-AFLD-SECR-STER	Airfield sterile area

	C	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards		6		1 MM	V	
MicroStation Standards		5	Continuous	7	User Defined	
Sensitivity	Secret			1	•	
•	AIXM	1	SecurityElement		Extension	
Equivalent Standards	FGDO	7	SterileArea		Extension	
	SDSF	IE	None			
Documentation and	None					
Submission Requirements	None					
Related Features						
Data Capture Rules: Collect	outline	of security	area at its greates	t horizontal exten	ts. Extents can be	
defined by fences, paint lines, o				thorities.		
Monumentation	No mo	onumentati	on required.			
Survey Point Location		Horiz		Vertical		
Survey I omit Escation		N.	/A	N/A		
Accuracy Requirements (in		Horizontal		Vertical		
feet)		110112		Orthometric	Ellipsoidal	
icci)	± 5 ft			± 5 ft	N/A	
Resolution			Coordinates	Distances and Elevations		
Resolution	Five	e hundredtl	n of arc second	Nearest foot		
Feature Attributes						
Attribute (Datatype)				escription		
name (VARCHAR2 (50))			he feature.			
description (VARCHAR2 (255)			on of the feature.			
status (Enumeration: codeStatu	s)		al description of the operational status of the feature.			
	This attribute is used to describe real-time status.					
userFlag (String 254)		An operator-defined work area. This attribute can be used by				
		the operator for user-defined system processes. It does not				
	300		affect the subject item's data integrity and should not be used to			
			subject item's data.			
Alternative (Integer2)			ator used to tie feanto a version.	itures of a plan or	poroposal	
		40000410000				

5.13. Group: SURFACE TRANSPORTATION

5.13.1. Bridge

Definition: A structure used by		es that allov	ws passage over or	under an obstacle	such as a river,		
chasm, mountain, road or railro	1	T	<u> </u>				
Feature Group		Surface Transportation					
Feature Class Name		Bridge					
Feature Type	Polyg	on					
CADD Standard Requiremen	1	• .•					
Layer/Level		ription	1 . 1 1	<u> </u>			
C-STRC-OTLN-			eakwaters, docks,	floats, etc outlin	ies		
L-SITE-BRDG-	Bridge						
M-MATL-CRAN-			o cranes, and mono		,		
V-SITE-STRC-			es, sheds, foundati				
V-STRC-OTLN-	·		eakwaters, docks,				
		Color	Linetype	Line Weight	Symbol		
AutoDesk Standards		(all)	Continuous	1 (all)	User Defined		
MicroStation Standards	7	(all)	(all)	7 (all)	Oser Defined		
Sensitivity	Restri	cted					
	AIXN	1	Bridge	-	Extension		
Equivalent Standards	FGD	C	Bridge	>	Extension		
	SDSF	ΊE	road_bridge_are	ra			
Documentation and	None						
Submission Requirements	None						
Related Features							
Data Capture Rules: Capture	the out	line of bria	lge at its greatest h	norizontal extents.			
Monumentation			on required.				
G D: 41		Horiz	zontal	Ver	tical		
Survey Point Location		N	/A	N	/A		
			4.1	Ver	tical		
Accuracy Requirements (in		Horn	zontal	Orthometric	Ellipsoidal		
feet)		± :	5 ft	± 5 ft	N/A		
	G		Coordinates		nd Elevations		
Resolution			h of arc second		est foot		
Feature Attributes							
Attribute (Datatype)			De	escription			
name (VARCHAR2 (50))		Name of t	the feature.	•			
description (VARCHAR2 (255))	Description	on of the feature.				
status (Enumeration: codeStatu				e operational statu	s of the feature.		
	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.						
userFlag (String 254)	An operator-defined work area. This attribute can be used by						
			or for user-defined		•		
	affect the subject item's data integrity and should no						
	store the subject item's data.						
surfaceMaterial (Enumeration:			rial used as a surfa				
CodeSurfaceMaterial)							
bridgeType							
(Enumeration: CodeBridgeType	e)						
(Zisineration, CodeDirageryp	-,						

verticalStructureMaterial	
Enumeration:	
CodeVerticalStructureMaterial)	
directionality	Code indicating the traffic flow of the bridge being classified.
(Enumeration: CodeDirectionality)	
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.13.2. Driveway Area							
Definition: An access to a but	ilding o	r other vehi	cle parking lot or s	torage area.	4.6		
Feature Group	Surfac	Surface Transportation					
Feature Class Name	Drive	DrivewayArea					
Feature Type	Polygo	on					
CADD Standard Requirement	nts						
Layer/Level			Descri	ption	/		
C-ROAD-DRIV-	Drive	way edge o	f pavement				
		Color	Linetype	Line Weight	Symbol		
AutoDesk Standards		4	Continuous	1	User Defined		
MicroStation Standards		7	Continuous	7	User Defined		
Sensitivity	Restri	cted					
	AIXN	1	DrivewayArea		Extension		
Equivalent Standards	FGDO	2	DrivewayArea		Extension		
	SDSF	IE	driveway_area				
Documentation and	None						
Submission Requirements	None						
Related Features							
Data Capture Rules: Captur	e the ou	tline of dri	veway at its greates	t horizontal exten	ts.		
Monumentation	No mo	onumentatio	on required.				
Survey Point Location		Horiz	zontal	Ver	tical		
Survey I omit Location		N.	/A	N	T/A		
Accuracy Doguiroments (in		Horis	zontal	Ver	tical		
Accuracy Requirements (in feet)		110112	ZUIITAI	Orthometric	Ellipsoidal		
ieet)		± 5	5 ft	$\pm 5 \text{ ft}$	N/A		
Resolution	G	eographic	Coordinates	Distances and Elevations			
Resolution	Fiv	e hundredtl	n of arc second	Nearest Foot			
Feature Attributes							
Attribute (Datatype)			De	scription			
name (VARCHAR2 (50))		Name of the	he feature.				
description (VARCHAR2 (255	5))	Descriptio	n of the feature.				
status (Enumeration: codeStatu	ıs)		al description of the				
			ute is used to descr				
userFlag (String 254)			or-defined work are		•		
	operator for user-defined system processes. It does not affect						
	subject item's data integrity and should not be used to store the						
	subject item's data.						
surfaceMaterial (enumeration:		The mater	ial used as a surface	e for the driveway	· .		
CodeSurfaceMaterial)							
Alternative (Integer2)			ator used to tie feat	ures of a plan or p	oroposal together		
		into a vers	ion.				

5.13.3. Driveway Centerline

5.13.3. Driveway Centerline							
Definition: The center of the date	riveway as measu	red from the edge o	f the paved surface	e. The segments			
of a driveway centerline will co	incide with the ro	ad segments in orde	er to provide netwo	ork connectivity.			
Feature Group	Surface Transportation						
Feature Class Name	DrivewayCenter	rline					
Feature Type	Line						
CADD Standard Requiremen	its						
Layer/Level		Descr	iption				
C-ROAD-DRIV-CNTR	Driveway center	rline					
	Color	Linetype	Line Weight	Symbol			
AutoDesk Standards	4	Continuous	1	User Defined			
MicroStation Standards	7	Continuous	7	User Defined			
Sensitivity	Restricted						
	AIXM	DrivewayCenteri	line	Extension			
Equivalent Standards	FGDC	DrivewayCenteri		Extension			
_	SDSFIE	None					
Documentation and	NI						
Submission Requirements	None						
Related Features							
Data Capture Rules: Collect	in the horizontal p	plane at the center o	of driveway, and to	intersect with			
centerline of road/drive/ramp.	•						
Monumentation	No monumentat	ion required.					
Curvey Daint Leastion	Hor	izontal	Ver	tical			
Survey Point Location]	V/A	N	/A			
A D (How	izontal	Ver	tical			
Accuracy Requirements (in	пог	izontai	Orthometric	Ellipsoidal			
feet)	<u>+</u>	5 ft	± 5 ft	N/A			
D 1.4	Geographi	c Coordinates	Distances ar	nd Elevations			
Resolution		th of arc second	Neare	st Foot			
Feature Attributes			-				
Attribute (Datatype)		Des	scription				
name (VARCHAR2 (50))	Name of t	he feature.	•				
description (VARCHAR2 (255		on of the feature.					
status (Enumeration: codeStatu	•	al description of the	operational status	of the feature.			
,		oute is used to descr					
userFlag (String 254)		or-defined work are					
	•	or for user-defined		•			
		t item's data integri					
		t item's data.					
Alternative (Integer2)		ator used to tie feat	ures of a plan or p	oroposal			
` ' '		nto a version.	1 1				

5.13.4. Parking Lot

Definition: An area of an airport used for parking of automobiles, buses, etc.				
Feature Group	Surface Transportation			
Feature Class Name	ParkingLot			
Feature Type	Polygon			

CADD Standard Requirements	3					
Layer/Level	Description					
C-PKNG-ISLD-	Parking islands					
C-PKNG-OTLN-	Parking lots					
	Color		Line type	Line Weight	Symbol	
AutoDesk Standards	84 (all)		Dashed-Spaced	1 mm (all)	- User Defined	
MicroStation Standards	256 (all))	(all)	7 (all)	User Defined	
Sensitivity	Restricted					
	AIXM		ParkingLot		Extension	
Equivalent Standards	FGDC		ParkingLot		Extension	
	SDSFIE		vehicle_parking_	area		
Documentation and	None					
Submission Requirements	None					
Related Features						
Data Capture Rules: Collect or		king	lot at its greatest h	orizontal extents.		
Monumentation	None					
Survey Point Location	-	Hori	izontal	Ver	tical	
Survey I omit Location		N	J/A		/A	
Acouracy Doguinoments (in		Hori	izontal	Ver	tical	
Accuracy Requirements (in feet)	-	11011	izuitai	Orthometric	Ellipsoidal	
ieet)		\pm	5 ft	± 5 ft	N/A	
Resolution	Geogra	phic	Coordinates	Distances and Elevations		
Resolution	Five hun	dred	th of arc second	Nearest Foot		
Feature Attributes						
Attribute (Datatype)				scription		
name (VARCHAR2 (50))			nonly used name for		•	
description (VARCHAR2 (255))			ion of the parking l			
status (Enumeration: codeStatus)			l description of the			
			ute is used to descr		S.	
parkingLotUse (String 16)	The pi	rimaı	ry use of the parkin	ig area.		
totalNumberSpaces (Integer)			arking spaces avai		cluding	
			ed or reserved space			
numberHandicapSpaces (Integer)		The total number of spaces marked as being handicapped				
		parking.				
owner	The ov	wner	of the parking lot			
(Enumeration: CodeOwner)			1.6' 1 1	TDI 1 1 1	1 11	
userFlag (String 254)	_	An operator-defined work area. This attribute can be used by				
0,0,	the operator for user-defined system processes. It does not					
	the subject item's data integrity and should not be used to sto the subject item's data.					
and action (Europeantian)				ad to operators at its	- cumfo ao	
surfaceType (Enumeration:	Type	oi ai	fferent materials us	sed to construct the	e surrace.	
codeSurfaceType)	Diggari	mino	ntor used to tie feet	uras of a plan or p	oronogal	
Alternative (Integer2)			ntor used to tie feat to a version.	ures or a prair or p	oroposar	
	400041-					

5.13.5. Railroad Centerline

Definition: Represents the centerline of each pair of rails [Source: ANSI: Data Content Standards For						
Transportation Networks: Roads]						
Feature Group Surface Transportation						

Feature Class Name	RailroadCenterline					
Feature Type	Line					
CADD Standard Requiremen		•				
Layer/Level			Descri	ntion		
C-RAIL-CNTR-	Cent	terlines	Descri	<i>5</i> 11011		
C-RAIL-TRAK-		roads				
C-RAIL-TRAIC-	Kan	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards		91 (all)	Linetype	1 (all)	Symbol	
MicroStation Standards	_	106 (all)	Continuous (all)	7 (all)	User Defined	
Sensitivity		fidential		/ (all)		
Sensitivity	AIX		RailroadCenterlin		Extension	
Equivalent Standards	FGI		RailroadCenterlin		Extension	
Equivalent Standards					Extension	
D	SDS	of IE	railroad_centerlin	<u>le</u>	 	
Documentation and	Non	e				
Submission Requirements					<u> </u>	
Related Features	<u> </u>	, 1 1	11 , 1: 1	. 1:	1	
Data Capture Rules: In the h				e centerline of ea	cn pair of rails.	
In the vertical plane, collect the			of nignest rail.			
Monumentation	Non			77	4. 1	
Survey Point Location			zontal		rtical	
		N	I/A		I/A	
Accuracy Requirements (in		Hori	zontal		rtical	
feet)		Horizontai		Orthometric	Ellipsoidal	
,			5 ft	± 5 ft	N/A	
Resolution			Coordinates	Distances and Elevations		
	Five hundredth of arc second			Nearest Foot		
		ive nunareat	n of arc second	rveare	st Poot	
Feature Attributes	1	ive nundred			est Poot	
Attribute (Datatype)	1		Desc	cription	ast Poot	
Attribute (Datatype) name (VARCHAR2 (50))		Any comm	Description Descri	cription the railroad.	St Poot	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255))))	Any comm	Description Descri	cription the railroad.		
Attribute (Datatype) name (VARCHAR2 (50)))))	Any comm Any narrat The curren	Description Descri	cription the railroad.		
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255))))	Any comm	Description Descri	cription the railroad.		
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255))))	Any comm Any narrat The curren used. The number	Description of tracks present	cription the railroad.		
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus)))	Any comm Any narrat The curren used. The number	Descionly used name for ive remarks concernt status as to whether	cription the railroad.		
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus) numberOfTracks (Integer))))	Any comm Any narrat The curren used. The number	Description of tracks present of the rail track	the railroad. The railroad. The railroad seg	gment is being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner)))	Any comm Any narrat The curren used. The number	Description of tracks present	the railroad. The railroad. The railroad seg	gment is being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner))))	Any comm Any narrat The curren used. The numbe The owner Indicates g not a bridg	Description of the rail track given railroad segments.	eription the railroad. hing the railroad see the railroad see	gment is being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner))))	Any comm Any narrat The curren used. The numbe The owner Indicates g not a bridg	Description of the rail track	eription the railroad. hing the railroad see the railroad see	gment is being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean))))	Any comm Any narrat The curren used. The numbe The owner Indicates g not a bridg	Description of tracks present of tracks present of the rail track given railroad segments.	eription the railroad. hing the railroad see the railroad see	gment is being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean))))	Any comm Any narrat The curren used. The number The owner Indicates g not a bridg Indicates g not a tunner	Description of tracks present of tracks present of the rail track given railroad segments.	eription the railroad. The railroad. The railroad segment is bridge (Y- a	gment is being a is bridge, N- is a tunnel, N- is	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean))))	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operate the	Description of the rail track given railroad segments. The rail track given railroad segments are railroad segments. The railroad segments of the rail track given railroad segments. The railroad segments of the railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments of the railroad segments.	eription the railroad. hing the railroad. er the railroad seg- ent is bridge (Y- a ent is tunnel (Y- i a. This attribute c ystem processes.	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean))))	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject	Description of the rail track given railroad segments. The rail track given railroad segments are railroad segments. The rail track given railroad segments given railroad segments. The railroad segments given railroad segments given railroad segments. The railroad segments given railroad segments given railroad segments given railroad segments given railroad segments. The railroad segments given railroad segmen	eription the railroad. hing the railroad. er the railroad seg- ent is bridge (Y- a ent is tunnel (Y- i a. This attribute c ystem processes.	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatus numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean))))	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject the	Description of the rail track representation of the rail track rep	eription the railroad. hing the railroad. er the railroad segment is bridge (Y- a ent is tunnel (Y- i a. This attribute c ystem processes. y and should not	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatu numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean) userFlag (String 254)))) s)	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject the	Description of the rail track given railroad segments. The rail track given railroad segments are railroad segments. The rail track given railroad segments given railroad segments. The railroad segments given railroad segments given railroad segments. The railroad segments given railroad segments given railroad segments given railroad segments given railroad segments. The railroad segments given railroad segmen	eription the railroad. hing the railroad. er the railroad segment is bridge (Y- a ent is tunnel (Y- i a. This attribute c ystem processes. y and should not	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatu numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean) userFlag (String 254)))) s)	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject the	Description of the rail track representation of the rail track rep	eription the railroad. hing the railroad. er the railroad segment is bridge (Y- a ent is tunnel (Y- i a. This attribute c ystem processes. y and should not	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatu numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean) userFlag (String 254)))) s)	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operate the subject the subject Code indicates indicates indicates indicates good a tunner the operate the subject the subject Code indicates	Description of the rail track representation of the rail track rep	eription the railroad. hing the railroad. er the railroad segment is bridge (Y-a ent is tunnel (Y-i a. This attribute c ystem processes. y and should not w of the railroad segment is tunnel (Y-i a. This attribute c	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store segment being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatu numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean) userFlag (String 254) directionality (Enumeration: CodeDirectional	lity)	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject the subject Code indicates indicated Code indicated	Description of the rail track given railroad segments. The rail track given railroad segments of the rail track given railroad segments. The railroad segments of the rail track given railroad segments. The railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments of the railroad segments of the railroad segments of the railroad segments. The railroad segments of the railroad segments. The railroad segments of the rail	eription the railroad. Ining the railroad. In the railroad segment is bridge (Y-a) In the railroad segment is tunnel (Y-in) In this attribute construction of the railroad segment is tunnel (Y-in) In this attribute construction of the railroad segment is tunnel (Y-in) In this attribute construction of the railroad segment is tunnel (Y-in) In the railroad segment is the railroad segment is tunnel (Y-in) In the railroad segment is the railroad segment is tunnel (Y-in) In the railroad segment is the railroad segment is tunnel (Y-in) In the railroad segment is tunnel (Y-in) In the railroad segment is the railroad segment is tunnel (Y-in) In the	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store segment being	
Attribute (Datatype) name (VARCHAR2 (50)) description (VARCHAR2 (255) Status (Enumeration codeStatu numberOfTracks (Integer) owner (Enumeration: CodeOwner) isBridge (Boolean) istunnel (Boolean) userFlag (String 254) directionality (Enumeration: CodeDirectional segmentType	lity)	Any common Any narrate The current used. The number The owner Indicates good a bridge Indicates good a tunner the operated the subject the subject Code indical classified. Code indical classified in the subject the subject the subject classified in the classified in the classified in the subject classif	Description of the rail track representation of the rail track rep	eription the railroad. In the railroad. In the railroad. In the railroad segment is bridge (Y-action at the railroad segment is tunnel (Y-in). This attribute converge processes. In the railroad segment is tunnel (Y-in). In this attribute converge processes. In this attribute processes proc	gment is being a is bridge, N- is a tunnel, N- is an be used by It does not affect be used to store segment being segment being	

5.13.6. Railroad Yard

5.13.6. Railroad Yard							
Definition: Represents a railr	oad yar	d [Source: A	ANSI: Data Content	Standards For Tra	ansportation		
Networks: Roads]							
Feature Group	Surfac	Surface Transportation					
Feature Class Name	Railro	oadYard					
Feature Type	Polyg	on					
CADD Standard Requireme	ents	'					
Layer/Level			Descri	ption			
C-RAIL-YARD-	Railro	oad Yard			•		
	(Color	Linetype	Line Weight	Symbol		
AutoDesk Standards		4		1			
MicroStation Standards		7	Continuous	7	User Defined		
Sensitivity	Confi	dential	L				
	AIXN		RailroadYard		Extension		
Equivalent Standards	FGD		RailroadYard		Extension		
1	SDSF		railroad_yard_are	ea e			
Documentation and		-		74			
Submission Requirements	None						
Related Features							
Data Capture Rules: Collect	t outline	e of the var	d area its greatest h	orizontal extents.	Represented by		
fences, road or change in gro			a an ear ms 8. earrest m		tiepresented by		
Monumentation	None	<u> </u>					
		Hori	zontal	Ver	tical		
Survey Point Location			J/A		/A		
					tical		
Accuracy Requirements		Hori	zontal	Orthometric	Ellipsoidal		
(in feet)		+	5 ft	± 5 ft	N/A		
	(Coordinates		d Elevations		
Resolution			th of arc second		st Foot		
Feature Attributes		, o manarout	ii oi uic second	1 10010	J. 1 001		
Attribute (Datatype)			Dec	scription			
name (VARCHAR2 (50))		A name t	hat represent the rail				
description (VARCHAR2 (25	(5))		description of the f	•			
status (Enumeration: codeStat			al description of the		of the feature		
Simus (Entamoration, codebia			bute is used to descr				
owner (Enumeration: CodeOv	vner)		er of the rail track	100 1001 tillio bittita	~•		
userFlag (String 254)	<u> </u>	+	tor-defined work are	ea This attribute c	an be used by		
useri ing (suring 25 t)		_	tor for user-defined				
			ct item's data integri				
</td <td></td> <td></td> <td>ct item's data.</td> <td></td> <td>22 22 23 20 20 20 20 20 20 20 20 20 20 20 20 20</td>			ct item's data.		22 22 23 20 20 20 20 20 20 20 20 20 20 20 20 20		
Alternative (Integer2)			nator used to tie feat	ures of a plan or p	oroposal		
1			nto a version.	r r	1		

5.13.7. Road Centerline

Definition: The center of the roadway as measured from the edge of the paved surface. The segments					
of a road centerline will coincide with the road segments in order to have similar characteristics.					
Feature Group Surface Transportation					
Feature Class Name RoadCenterline					
Feature Type	Line				

CADD Standard Requirement	its					
Layer/Level	Description					
C-ROAD-CNTR-	Centerlines					
	Color	Linetype	Line Weight	Symbol		
AutoDesk Standards	6	Continuous	1	User Defined		
MicroStation Standards	5	Continuous	7	Oser Defined		
Sensitivity	Confidential					
	AIXM	RoadCenterline	RoadCenterline Extens			
Equivalent Standards	FGDC	RoadCenterline	dCenterline Exter			
	SDSFIE	road_centerline				
Documentation and Submission Requirements	None					
Related Features						
Data Capture Rules: Collect	the centerline of	road by splitting the	edge of pavement	or painted		
centerline, which ever is better	defined.					
Monumentation	None					
Survey Point Location	Horizontal		Vertical			
Survey Fourt Location	N/A		N/A			
Accuracy Requirements (in	Horizontal			tical		
feet)			Orthometric	Ellipsoidal		
1000)	± 5 ft		$\pm 5 \text{ ft}$ N/A			
Resolution	Geographic Coordinates		Distances and Elevations			
resolution	Five hundred	lth of arc second	Neare	Nearest Foot		
Feature Attributes						
Attribute (Datatype)	_		scription			
name (VARCHAR2 (50))			or the road centerline.			
description (VARCHAR2 (255		on of the feature.				
status (Enumeration: codeStatu						
				is used to describe real-time status.		
Color (Enumeration: CodeColo	/ 100	r of the centerline m				
userFlag (String 254)		tor-defined work are				
* 1	the operator for user-defined system processes. It does not					
		the subject item's data integrity and should not be used to store				
	the subject item's data.					
	Discriminator used to tie features of a plan or por			oronocal		
Alternative (Integer2)		into a version.	ures of a plan of p	oroposar		

5.13.8. Road Point

Definition: A point along the roadway system which has some special significance either for starting or ending a road segment or for representing a significant position along the roadway system such as the start or center of a bridge or the center of an intersection [Source: ANSI: Data Content Standards For Transportation Networks: Roads]

Feature Group	Surface Transportation
Feature Class Name	RoadPoint
Feature Type	Point
CADD Standard Requirem	ients
Layer/Level	Description
C-ROAD-POIN-	Road Point

	(Color	Line type	Line Weight	Symbol	
AutoDesk Standards		2	VI	1 mm	Han Dafinad	
MicroStation Standards		Continuous		7	User Defined	
Sensitivity	Confid	dential				
-	AIXM	Ī	RoadPoint	Extension		
Equivalent Standards	FGDO	7	RoadPoint		Extension	
	SDSF	SDSFIE None				
Documentation and	None					
Submission Requirements	None					
Related Features						
Data Capture Rules: Collect	t point a	t desired lo	cation using the tec	chnique necessary	to achieve	
accuracy						
Monumentation	None					
Survey Point Location	Horizontal		Vertical			
Survey I omt Location	N/A		N/A			
Accuracy Requirements (in	Horizontal		Vertical			
feet)			Orthometric	Ellipsoidal		
1000)	± 5 ft		± 5 ft	N/A		
Resolution	Geographic Coordinates			- Control of the Cont	nd Elevations	
	Fi	ve hundredtl	n of arc second	Nearest Foot		
Feature Attributes						
Attribute (Datatype)				scription		
name (VARCHAR2 (50))		Name of the	W 10. WA			
description (VARCHAR2 (25:			on of the feature.			
status (Enumeration: codeStatus)		A temporal description of the operational status of the feature.				
		This attribute is used to describe real-time status.				
userFlag (String 254)		An operator-defined work area. This attribute can be used by				
		the operator for user-defined system processes. It does not affect				
	the subject item's data integrity and should not be used to store					
	the subject item's data.					
Alternative (Integer2)		Discriminator used to tie features of a plan or poroposal				
4		together in	to a version.			

5.13.9. Road Segment

Definition: Represents a linear section of the physical road system designed for, or the result of,					
human or vehicular movement; must be continuous (no gaps) and cannot branch; no mandates are					
provided on how to segmen	t the road system except that data providers adopt a consistent method				
[Source: ANSI: Data Conte	nt Standards For Transportation Networks: Roads]				
Feature Group	Surface Transportation				
Feature Class Name	RoadSegment				
Feature Type	Polygon				
CADD Standard Requirer	ments				
Layer/Level	Description				
C-PROF-ROAD-	Roads				
C-ROAD-CURB-	Curbs				
C-ROAD-OTLN- Roads					
V-PROF-ROAD- Roads					

		Color	Linetype	Line Weight	Symbol	
AutoDesk Standards	1	(all)		1 mm (all)	_	
MicroStation Standards	3 (all)		Continuous (all)	7 (all)	User Defined	
Sensitivity	Confidential					
•	AIXM		RoadSegment		Extension	
Equivalent Standards	FGDC		RoadSegment		Extension	
•	SDSFI	E	road_site			
Documentation and			-			
Submission Requirements	None					
Related Features						
Data Capture Rules: Collect	ct all roa	d segments d	as individual polygo	on objects. Where	two or more	
roadway segments intersect, o						
Collect roadway at the outer						
Monumentation	None		,			
G Diak di		Horiz	ontal	Ver	tical	
Survey Point Location		N/	A	N	Z/A	
		тт .	4.1	Ver	tical	
Accuracy Requirements		Horiz	ontal	Orthometric	Ellipsoidal	
(in feet)		± 5	ft	± 5 ft	N/A	
	G		Coordinates		nd Elevations	
Resolution			of arc second	Nearest Foot		
Feature Attributes	111	e manarean.	or ure second	Titouro	501 000	
Attribute (Datatype)			Desc	cription		
name (VARCHAR2 (50))		A common name or street name used to refer to the stretch of				
name (Vintern itt2 (30))		road.				
description (VARCHAR2 (255))			description of the ro	ad		
status (Enumeration: codeSta					of the feature	
status (Enumeration: codesta	.tus)	A temporal description of the operational status of the feature. This attribute is used to describe real-time status.				
alternateName (String 30)		The alternate name or second name for the road.				
route1Name (String 30)		The route number or other identifier that is affiliated with the				
Toute Traine (String 50)		first route type				
route1Type (Enumeration:		The first route type for the road (Interstate, US, State, etc.)				
CodeRouteType)		The mst re	oute type for the fou	a (mersiaic, es,	State, etc.)	
route2Name (String 30)		The route number or other identifier that is affiliated with the				
Toute21 tuille (String 50)		second route type				
route2Type (Enumeration:		The second route type for the road (Interstate, US, State, etc.)				
CodeRouteType)		The second	a route type for the r	oud (Interstate, C	s, state, etc.)	
route3Name (String 30)		The number or other identifier that is affiliated with the third				
Toutest tame (String 30)		route type				
route3Type (Enumeration:		The third route type for the road (Interstate, US, State, etc.)				
CodeRouteType)		-110 1111101	- I to the for	(1110131410, 00	, =,	
numberOfLanes (Integer)		The total n	umber of lanes of tr	affic, counting be	oth directions.	
number Or Lanes (integer)		The total number of lanes of traffic, counting both directions, not including turning lanes. [Source: SDSFIE Feature Table]				
length (Real)		The length of the road segment measured at the centerline.				
length (Real)	iciigui (Keai)		[Source: SDSFIE Feature Table]			
length (Real)		The average width of the road segment. [Source: SDSFIE				
				segment [Source	e: SDSFIE	
width (Real)		The averag	ge width of the road	segment. [Source	e: SDSFIE	
		The average Feature Ta	ge width of the road			

isTunnel (Boolean)	Indicates given road segment is tunnel (Y- is a tunnel, Nis not a
	tunnel). [Source: SDSFIE Feature Table]
directionality	Code indicating the traffic flow on the road segment.
(Enumeration: CodeDirectionality)	
segmentType	Code indicating the type of segment being classified.
(Enumeration: CodeSegmentType)	
userFlag (String 254)	An operator-defined work area. This attribute can be used by
	the operator for user-defined system processes. It does not affect
	the subject item's data integrity and should not be used to store
	the subject item's data.
surfaceType	Type of material used to construct the surface.
(Enumeration: codeSurfaceType)	
surfaceMaterial	Material used to construct the surface of the road.
(Enumeration:	
CodeSurfaceMaterial)	
Alternative (Integer2)	Discriminator used to tie features of a plan or poroposal
	together into a version.

5.13.10.Sidewalk

Definition: A paved or concre	ete pad used as a	pedestrian walkway	y. Usually is con	nposed of one or	
more SideWalkSegments.					
Feature Group	Surface Transpor	rtation			
Feature Class Name	Sidewalk	A.O.			
Feature Type	Polygon				
CADD Standard Requirement	its				
Layer/Level		Descri	ption		
C-SITE-WALK-	Walks, trails ar	nd bicycle paths			
L-SITE-WALK-	Walks and step	s			
V-SITE-WALK-	Walks, trails, a	nd bicycle paths			
	Color	Linetype	Line Weight	Symbol	
AutoDesk Standards	8 (all)	Continuous (all)	1 mm (all)	User Defined	
MicroStation Standards	9 (all)		7 (all)	User Defined	
Sensitivity	Restricted				
	AIXM	Sidewalk Ex		Extension	
Equivalent Standards	FGDC	Sidewalk		Extension	
	SDSFIE	pedestrian_sidewalk_area			
Documentation and	None				
Submission Requirements	None				
Related Features	ires				
Data Capture Rules: Collect	all sidewalks as in	ıdividual polygon ob	jects. Where two	or more	
sidewalks intersect, collect as s		depicting beginning,	intersection and	end. Collect	
sidewalk at the outer edge of po	ivement.				
Monumentation	None				
Survey Point Location	Survey Point Location Horizontal Vertical				

N/A

Horizontal

± 5 ft

N/A

Vertical

Orthometric

 $\pm 5 \text{ ft}$

Ellipsoidal

N/A

feet)

Survey Point Location

Accuracy Requirements (in

Resolution	Geographic Coordinates	Distances and Elevations			
Resolution	Five hundredth of arc second	Nearest Foot			
Feature Attributes					
Attribute (Datatype)	Des	cription			
name (VARCHAR2 (50))	Name of the feature.				
description (VARCHAR2 (255))	A brief description of any special sidewalk.	cial characteristics of the			
status (Enumeration: codeStatus)	A temporal description of the This attribute is used to descri	operational status of the feature. be real-time status.			
walkUse (String 26)	A short description of the prin	nary use of the sidewalk.			
AmericanDisabilitiesAct (Boolean	n) Boolean indicating whether or	Boolean indicating whether or not the walkway is in compliance			
	with the American Disabilities	with the American Disabilities Act.			
length (Real)	The overall length of the sidev	walk section.			
width (Real)	The mean width of the sidewa	The mean width of the sidewalk section.			
surfaceMaterial	Primary material used in the s	Primary material used in the sidewalk and/or trail.			
(Enumeration:					
CodeSurfaceMaterial)					
userFlag (String 254)	the operator for user-defined s	An operator-defined work area. This attribute can be used by the operator for user-defined system processes. It does not affect the subject item's data integrity and should not be used to store the subject item's data.			
segmentType		Code indicating the type of segment being classified.			
(Enumeration: CodeSegmentTyp					
Alternative (Integer2)	Discriminator used to tie featutogether into a version.	Discriminator used to tie features of a plan or poroposal together into a version.			

5.13.11.Tunnel

3.13.11.1 uiiiiti						
Definition: The area of a transpunder a natural obstacle.	portation passage	e, open at both ends,	used to provide a	access through or		
Feature Group	Surface Transp	oortation				
Feature Class Name	Tunnel					
Feature Type	Polygon					
CADD Standard Requirement	ts					
Layer/Level		Descr	iption			
L-SITE-TUNL-	Tunnels					
	Color	Linetype	Line Weight	Symbol		
AutoDesk Standards	7	1 MM	User Defined			
MicroStation Standards	0	Continuous 7 User				
Sensitivity	Restricted					
	AIXM	Tunnel		Extension		
Equivalent Standards	FGDC	FGDC Tunnel Extension				
	SDSFIE	tunnel_area				
Documentation and	Documentation and None					
Submission Requirements	None					
Related Features						
Data Capture Rules: Collect the tunnel extending between the entrance points with a width defined						
by edge of pavement at either entrance.						
Monumentation None						

Survey Point Location —		Horizontal	Vertical		
		N/A	N/A		
A course ou De quinemente (in		Horizontal	Vertical		
Accuracy Requirements (in feet)		Horizontai	Orthometric	Ellipsoidal	
leet)		± 5 ft	± 5 ft	N/A	
Resolution		Geographic Coordinates	Distances and Elevations		
Resolution	F	Five hundredth of arc second	Neare	st Foot	
Feature Attributes					
Attribute (Datatype)		Des	cription		
name (VARCHAR2 (50))		Name of the feature.			
description (VARCHAR2 (255))		Description of the feature.			
status (Enumeration: codeStatus))	A temporal description of the			
		This attribute is used to descri	be real-time statu	S.	
type (String 16) The code that represents the type of tunnel					
verticalClearance (Real)		Indicates the actual vertical cle	earance to the top	of the tunnel	
		imposed by any restrictions.			
averageHeight (Real)		The average height of the tunn			
averageWidth (Real)		The average width of the tunn	el.		
length (Real)		The length of the tunnel.			
userFlag (String 254)		An operator-defined work area			
		the operator for user-defined s			
		the subject item's data integrit	y and should not b	be used to store	
		the subject item's data.			
directionality					
(Enumeration:CodeDirectionality	y)				
segmentType		Code indicating the type of segment being classified.			
(Enumeration: CodeSegmentTyp	e)				
Alternative (Integer2)		Discriminator used to tie features of a plan or poroposal			
		together into a version.			