

OBSTRUCTION DATA SHEET

ODS 5440
HAYS MUNICIPAL AIRPORT
HAYS, KANSAS

DIGITIZED FROM

OC 5440
SURVEYED NOVEMBER 1987
5TH EDITION



PREPARED AND DISTRIBUTED BY
THE NATIONAL OCEAN SERVICE
U.S. DEPARTMENT OF COMMERCE
FOR THE FEDERAL AVIATION ADMINISTRATION

OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

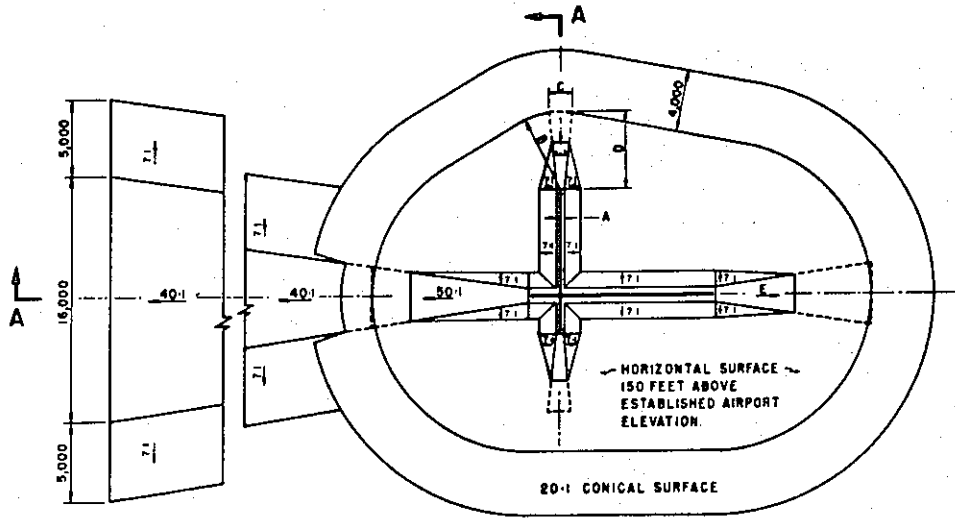
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

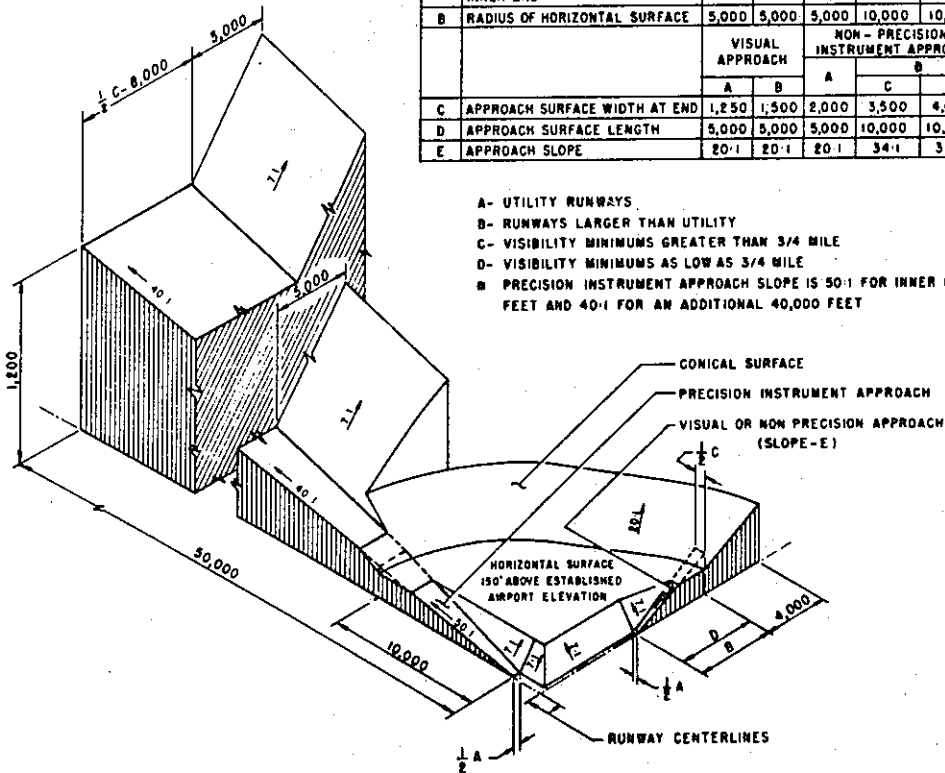
A(V) Utility runway - visual approach only
 A(NP) Utility runway - nonprecision instrument approach
 B(V) Nonutility runway - visual approach only
 C Nonutility runway - nonprecision instrument approach with
 visibility minimums greater than 3/4 mile
 D Nonutility runway - nonprecision instrument approach with
 visibility minimums as low as 3/4 mile
 PIR Precision instrument runway
 SUPLC ... Supplemental C underlying a B(V)

FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	•
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	•



- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- E- PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

ISOMETRIC VIEW OF SECTION A-A

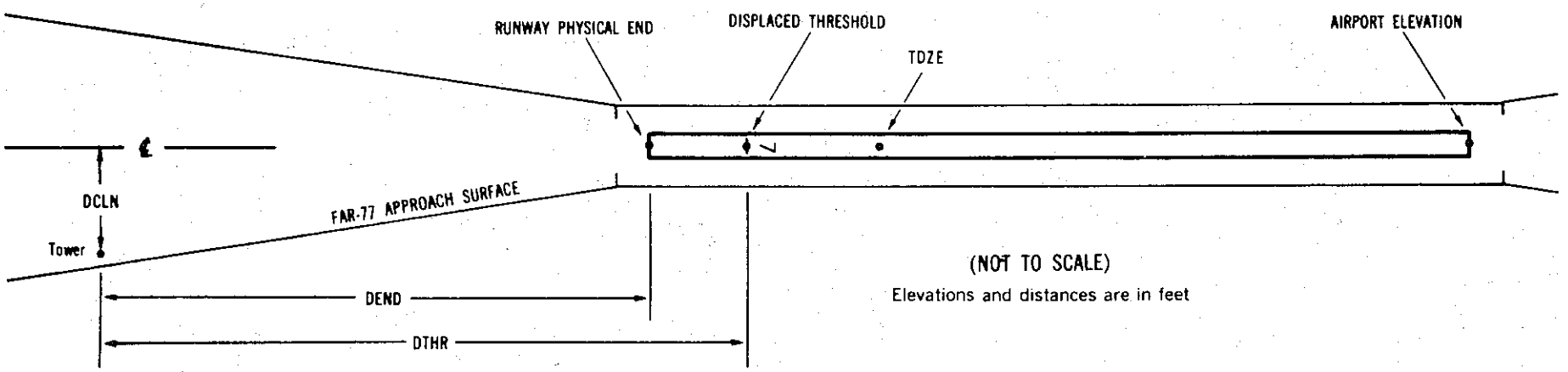
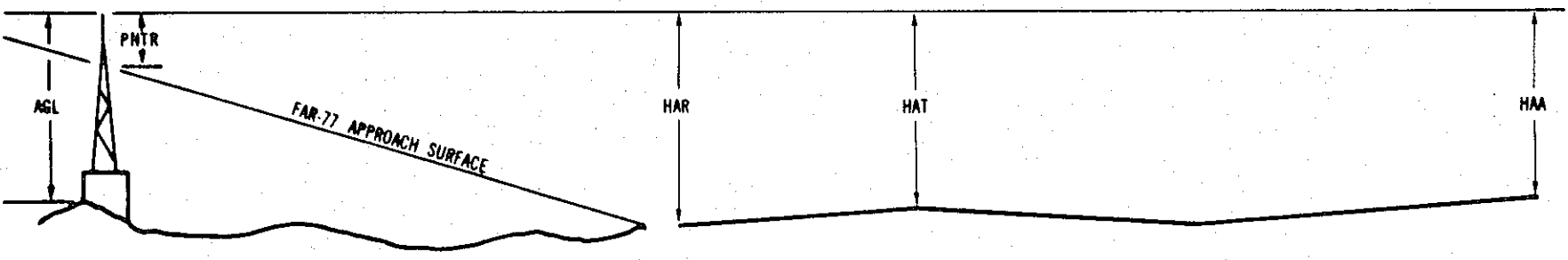
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X ¹	X ²	XXXX/XXXX ³	XXXXXX.XXX ⁴	XXXXXXX.XXX ⁴	XXXXXXX ⁵	XXXX/XXXX ⁶	XXXXXX.XXX ⁷	XXXXXXX.XXX ⁷				
OBJECT	LAT	LONG	A ⁸	ELEV ⁹	AGL ¹⁰	HAR ¹¹	HAT ¹¹	HAA ¹¹	DEND ¹²	DTHR ¹²	DCLN ¹²	PNTR ¹³
XXXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



(NOT TO SCALE)
Elevations and distances are in feet

EXPLANATION OF FOOTNOTES

- 1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- 2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- 3 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code: Horizontal Vertical
- | | |
|--------|--------|
| 1 = 20 | A = 2 |
| 2 = 40 | B = 5 |
| | C = 20 |
- 9 Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- 10 Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- 11 HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
 DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.
- A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC5440

AIRPORT ELEVATION 1998

16 C 1998/1998 385112.135N 0991633.847W 3472315

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	385017.91	0991624.81	1A	1990		-8	-8	-8	-5510		500R	2
FENCE	385030.86	0991628.57	1A	2001		3	3	3	-4166		504R	9
OL ON WINDSOCK	385048.62	0991621.93	1A	2015		17	17	17	-2528		401L	21
LIGHT STANDARD	385107.97	0991626.04	1A	2022		24	24	24	-546		510L	25
OL WINDSOCK	385108.94	0991636.97	1A	2022		24	24	24	-262		312R	24
ANT ON BUILDING	385112.90	0991627.41	1A	2030		32	32	32	-35		514L	32
FENCE	385115.26	0991628.09	1A	2006		8	8	8	209		514L	8
FENCE	385116.98	0991628.51	1A	2006		8	8	8	387		519L	3
TREE	385118.00	0991641.12	1A	2041		43	43	43	704		432R	28
TREE	385120.27	0991630.29	1A	2018		20	20	20	742		455L	4
OL LOCALIZER	385120.36	0991636.20	1A	2004		6	6	6	853		0L	-13
RAILROAD	385122.65	0991629.22	1A	2027		29	29	29	958		590L	7
TREE	385120.66	0991641.25	1A	2042		44	44	44	969		383R	21
POLE	385122.32	0991636.39	1A	2021		23	23	23	1050		28L	-2
TREE	385122.31	0991642.48	1A	2058		60	60	60	1153		441R	32
TREE	385130.79	0991647.39	1A	2048		50	50	50	2075		633R	-5

OC5440

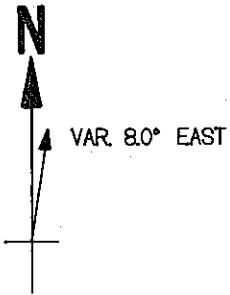
AIRPORT ELEVATION 1998

34 PIR 1985/1993 385011.361N 0991616.462W 1672326

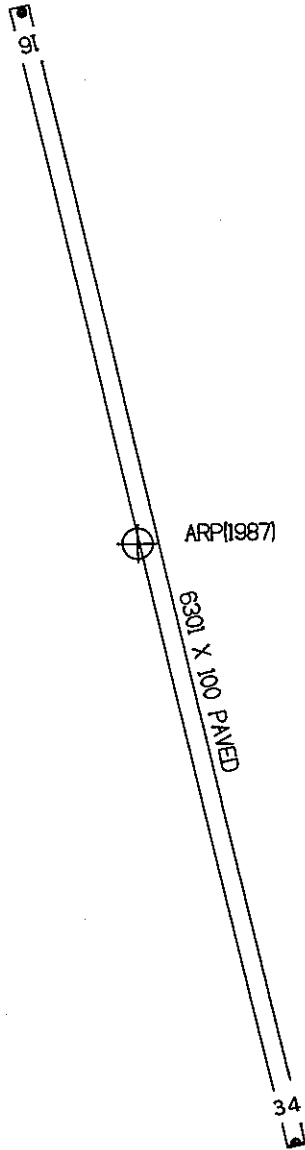
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	385115.26	0991628.09	1A	2006		21	13	8	-6509		514R	8
ANT ON BUILDING	385112.90	0991627.41	1A	2030		45	37	32	-6265		514R	32
OL WINDSOCK	385108.94	0991636.97	1A	2022		37	29	24	-6039		312L	24
LIGHT STANDARD	385107.97	0991626.04	1A	2022		37	29	24	-5754		510R	25
OL ON WINDSOCK	385048.62	0991621.93	1A	2015		30	22	17	-3773		401R	21
FENCE	385030.86	0991628.57	1A	2001		16	8	3	-2134		504L	9
FENCE	385017.91	0991624.81	1A	1990		5	-3	-8	-791		500L	2
FENCE	385004.91	0991617.84	1A	1985		0	-8	-13	613		249L	-8
ROD ON TMSSN TR	384933.87	0991616.65	1A	2020		35	27	22	3698		843L	-35
ROD ON TMSSN TR	384933.90	0991607.81	1A	2022		37	29	24	3848		159L	-36
ROD ON TMSSN TR	384933.92	0991558.89	1A	2035		50	42	37	4000		530R	-26

ARP 385043.593N 0991626.319W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
OL VORTAC	385051.48	0991634.97	1A	2025		27	311	24	1051
ANT ON APT BCN	385111.06	0991626.77	1A	2056		58	351	16	2779
OL GRAIN ELEV	385105.19	0991424.09	1B	2177		179	69	16	9914



AIRPORT ELEVATION 1998



TOUCHDOWN ZONE

RUNWAY	ELEVATION
16	1998
34	1993

EL. 1985

HAYS MUNICIPAL AIRPORT
HAYS, KANSAS
(NOT TO SCALE)