

OBSTRUCTION DATA SHEET

**ODS 5209
WORTHINGTON MUNICIPAL AIRPORT
WORTHINGTON, MINNESOTA**

DIGITIZED FROM

**OC 5209
SURVEYED 22 JUNE 1992
6TH EDITION**

**HORIZONTAL DATUM NAD83
VERTICAL DATUM NGVD29**



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THE NATIONAL OCEAN SERVICE
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ATTENTION

See SPECIAL NOTICES in "Dates of Latest Editions, Airport Obstruction Charts - Obstruction Data Sheets," for possible corrections. National Oceanic and Atmospheric Administration (NOAA) publications are available through NOAA Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone: 301-436-6990

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 No. 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 the OC depict a representation of objects that existed at the time of the OC field survey.

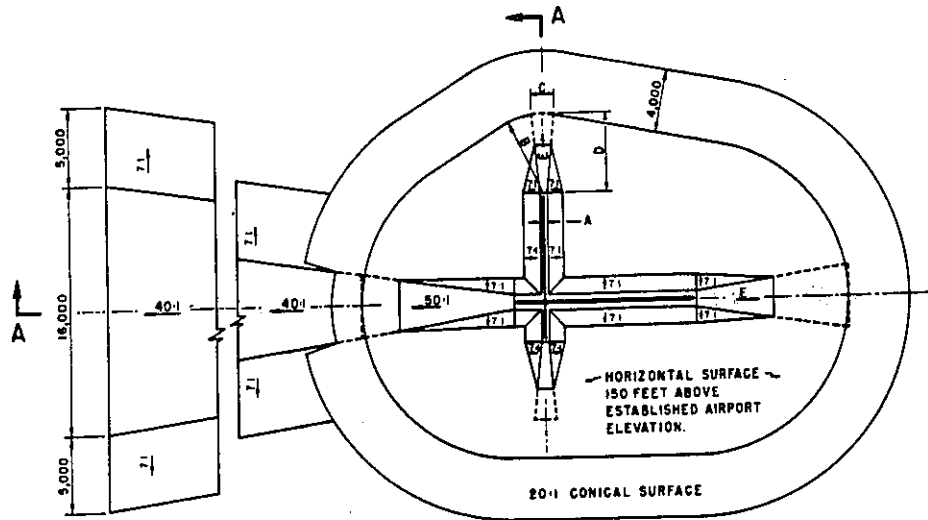
ODS information is arranged as follows:

1. Objects located in an FAR-77 approach or primary and listed with the associated runway (reference runway).
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:

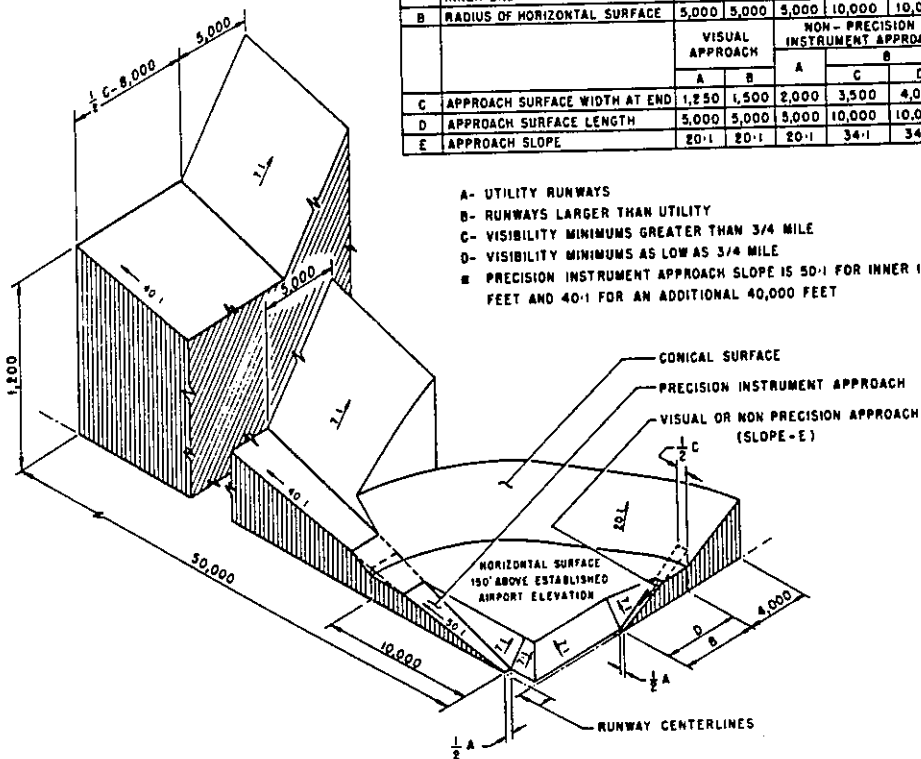
- A(V) Utility runway - visual approach only
- A(NP) Utility runway - nonprecision instrument approach
- B(V) Nonutility runway - visual approach only
- C Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
- D Nonutility runway- nonprecision instrument 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.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	C	D	
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
C	APPROACH SURFACE WIDTH AT END	VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	C	D	
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
- * 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

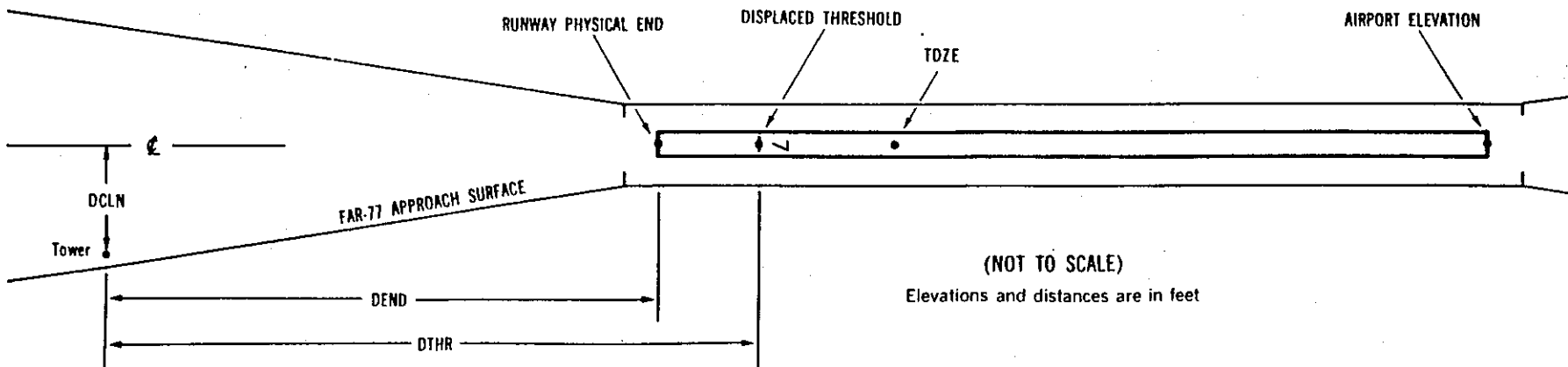
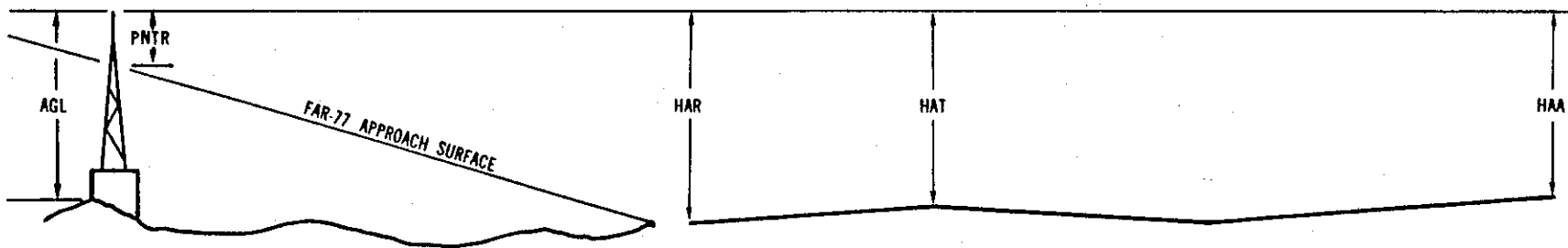
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

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	XXXXXX.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



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 areas 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 Elevation at approach end of reference runway/touchdown zone elevation
- 4 Latitude and longitude at approach end of reference runway
- 5 Geodetic azimuth of reference runway reckoned from north
- 6 Elevation at reference runway displaced threshold/touchdown zone elevation
- 7 Latitude and longitude at reference runway displaced threshold
- 8 Accuracy codes: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Elevation above mean sea level (MSL) 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). AGL's are provided only for manmade objects appearing on the OC and equal to or greater than 200 feet AGL. AGL accuracy is 10 feet.
- 11 HAA - Height above airport
 HAR - Height above approach end of reference runway
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point nearest to object (perpendicular) to approach end of runway
 DTHR - Distance along reference runway centerline from point nearest to object (perpendicular) to displaced 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 that object is in primary on roll-out side of zero distance point.
- 13 PTNR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

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AIRPORT ELEVATION 1574

11 C 1574/1574 433927.491 -953507.470 1144320.
OBJECT LAT LONG A EL AGL HAR HAT HAA DEND DTHR DCLN PNTR
TREE 433930.58 -953524.00 1A 1599 25 25 25 1234 224R -5

29 C 1565/1570 433904.744 -953359.444 2944407.
OBJECT LAT LONG A EL AGL HAR HAT HAA DEND DTHR DCLN PNTR
ANT ON BLDG 433857.49 -953339.46 1A 1577 12 7 3 1642 53L -30

17 C 1568/1574 433941.757 -953500.500 1795826.
OBJECT LAT LONG A EL AGL HAR HAT HAA DEND DTHR DCLN PNTR

*** NO OBSTRUCTIONS ***

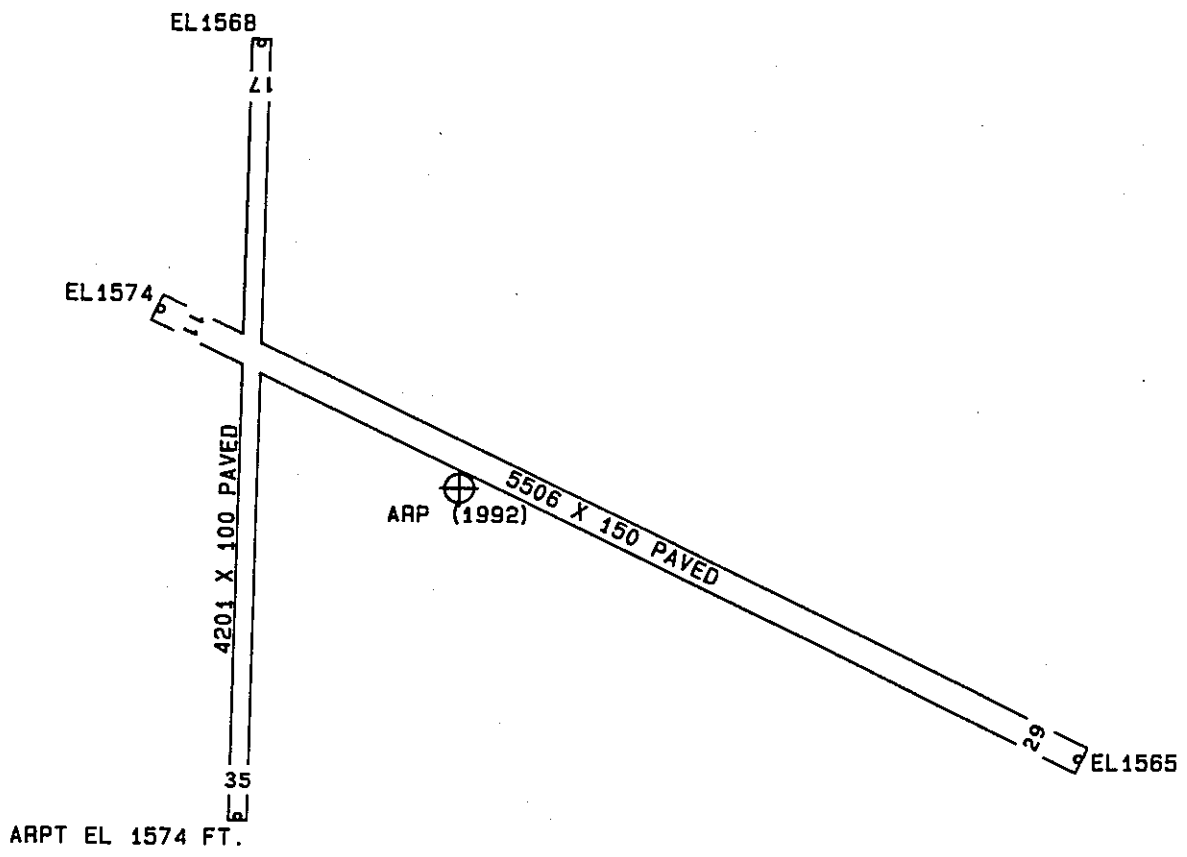
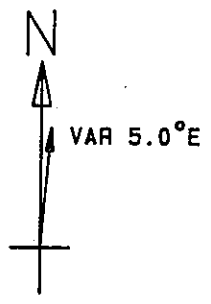
35 C 1574/1574 433900.275 -953500.474 3595827.
OBJECT LAT LONG A EL AGL HAR HAT HAA DEND DTHR DCLN PNTR
ROAD (N) 433843.46 -953500.32 1A 1584 10 10 10 1702 10R -34
LADDER ON OL TK 433724.89 -953519.32 1A 1731 157 157 157 9658 1391L -121

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AIRPORT ELEVATION 1574

ARP 433918.238 -953445.153

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ANT ON OL TWR	433908.85	-953432.79	1A	1601		27	13117	1316
TREE	433922.63	-953425.33	1A	1635		61	6802	1524
OL WINDSOCK	433902.50	-953456.27	1A	1594		20	20208	1791
TREE	433921.58	-953516.30	1A	1614		40	27325	2315
ROD ON OL APBN	433855.13	-953510.75	1A	1629		55	21348	3003
TREE	433925.82	-953524.67	1A	1625		51	27948	3005
VOR	433848.90	-953455.04	1A	1586		12	18844	3059
DME	433848.39	-953454.59	1A	1599		25	18756	3101
LADDER ON OL TK	433756.30	-953405.81	1B	1726		152	15546	8787
ANT ON OL GRAIN ELEVATOR	433747.31	-953433.33	1A	1794	209	220	16936	9248
OL GRAIN ELEVATOR	433908.35	-953226.38	1B	1696		122	9035	10252



TOUCHDOWN ZONE RUNWAY ELEVATION	
11	1574
29	1570
17	1574
35	1574

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 WORTHINGTON, MINNESOTA
 (NOT TO SCALE)