

OBSTRUCTION DATA SHEET

ODS 84
CLEVELAND-HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

DIGITIZED FROM

OC 84
SURVEYED NOVEMBER 1993
11TH EDITION

HORIZONTAL DATUM NAD 83
VERTICAL DATUM NGVD 29



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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.

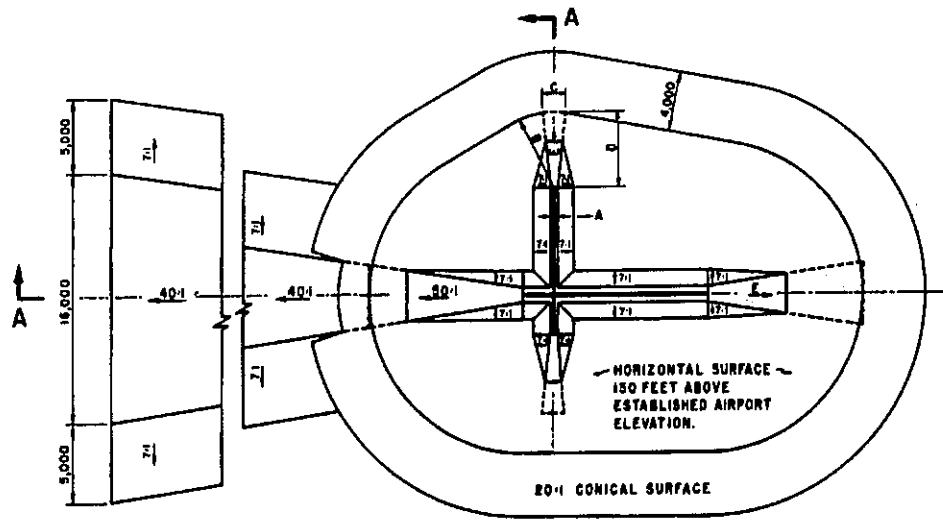
ODS information is arranged as follows:

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.

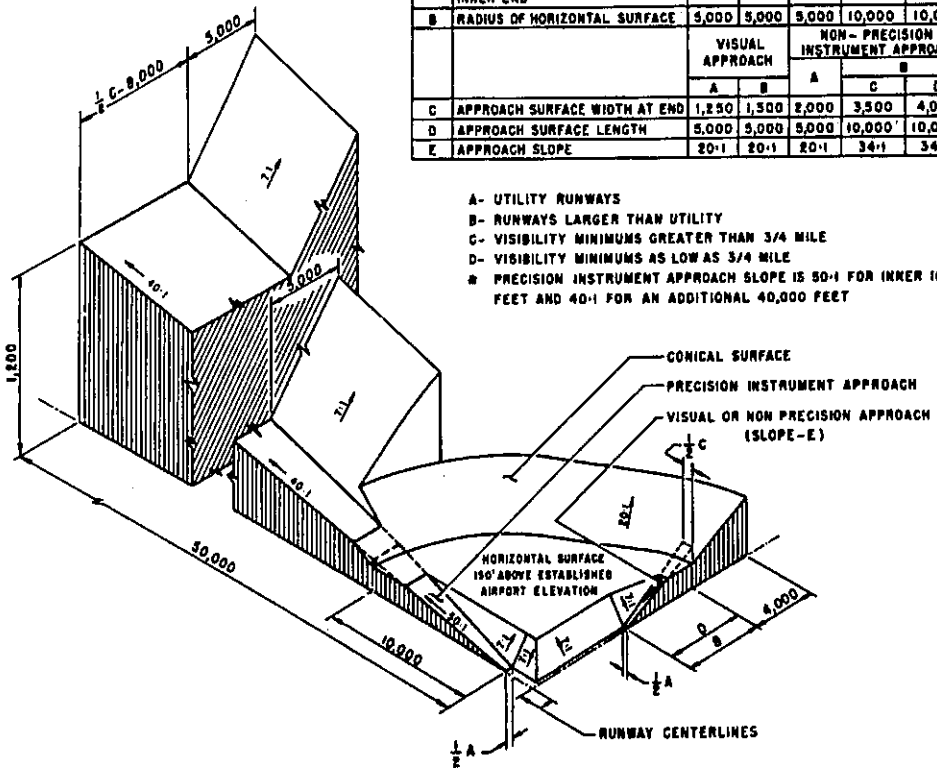
The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows:

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	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	3,000	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	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
- * PRECISION INSTRUMENT APPROACH SLOPE IS 30:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

ISOMETRIC VIEW OF SECTION A-A

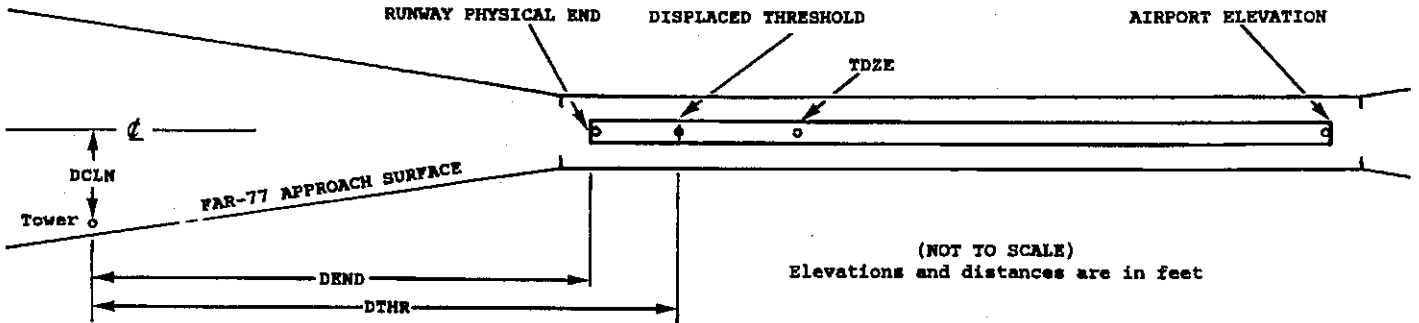
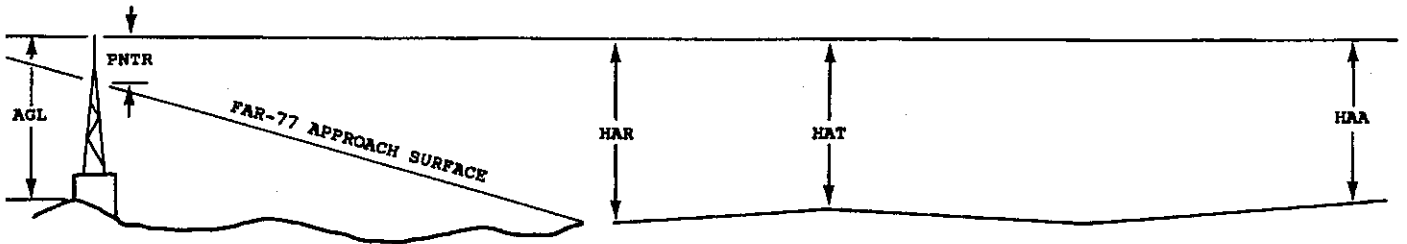
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

1 X	2 X	3 XXXX/XXXX	4 XXXXXX.XXX	4 XXXXXX.XXX	5 XXXXXXX	6 XXXX/XXXX	7 XXXXXX.XXX	7 XXXXXX.XXX	8 A	9 ELEV	10 AGL	11 HAR	11 HAT	11 HAA	12 DEND	12 DTHR	12 DCLN	13 PNTR
XXXXXXXXXXXX			XXXXXX.XXX	XXXXXX.XXX	XX XXXX XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX	XXXX	XXXXX	XXXXX	XXXX	XXXX	XXXX
XXXXXXXXXXXX			XXXXXX.XXX	XXXXXX.XXX	XX XXXX XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX	XXXX	XXXXX	XXXXX	XXXX	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 (Ft.) Vertical (Ft.)

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 PNTR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

OC0084

AIRPORT ELEVATION 792

10 C 763/ 782 412501.435 -815119.621 931803.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON GS	412502.46	-815012.31	1A	814		51	32	22	-5113		400L	27
TREE	412506.11	-815114.99	1A	784		21	2	-8	-325		493L	19
TREE	412504.56	-815120.38	1A	772		9	-10	-20	76		313L	9
OL LOC	412501.51	-815121.26	1A	763		0	-19	-29	125		OR	0
TREE	412502.94	-815122.57	1A	776		13	-6	-16	233		139L	12
ROAD (N)	412501.59	-815123.60	1A	773		10	-9	-19	304		1R	7
ANT ON OL BLDG	412459.26	-815123.83	1A	775		12	-7	-17	307		238R	9
TREE	412503.83	-815126.46	1A	778		15	-4	-14	534		212L	6
TREE	412501.34	-815128.89	1A	784		21	2	-8	705		50R	7
TREE	412459.23	-815129.49	1A	785		22	3	-7	738		266R	7
TREE	412458.63	-815133.58	1A	802		39	20	10	1045		344R	15
TREE	412501.04	-815134.08	1A	802		39	20	10	1097		103R	13
TREE	412458.72	-815141.61	1A	819		56	37	27	1656		371R	14
TREE	412457.97	-815215.76	1A	866		103	84	74	4250		596R	-16

28 PIR 792/ 792 412458.005 -815000.809 2731855.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL LOC	412501.51	-815121.26	1A	763		-29	-29	-29	-6139		OR	0
TREE	412504.56	-815120.38	1A	772		-20	-20	-20	-6090		313R	9
TREE	412506.11	-815114.99	1A	784		-8	-8	-8	-5690		493R	19
OL ON GS	412502.46	-815012.31	1A	814		22	22	22	-901		400R	27
BLDG	412453.26	-814950.57	1A	804		12	12	12	807		435L	0
ROAD (N)	412503.58	-814945.55	1A	818		26	26	26	1128		631R	8
LT POLE	412454.86	-814939.74	1A	826		34	34	34	1621		225L	6
TREE	412504.35	-814928.79	1A	851		59	59	59	2398		783R	15
LT POLE	412500.87	-814929.01	1A	839		47	47	47	2402		429R	3
LT POLE	412454.84	-814928.83	1A	839		47	47	47	2451		179L	2
BLDG	412458.53	-814925.15	1A	845		53	53	53	2709		210R	3
STACK	412451.90	-814924.45	1A	854		62	62	62	2802		457L	10
LT POLE	412448.95	-814924.13	1A	852		60	60	60	2843		753L	7

OC0084

AIRPORT ELEVATION 792

18 C 780/ 785 412500.994 -815053.553 1790503.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	412506.86	-815053.58	1A	786		6	1	-6	593		7L	-5
ROAD (N)	412507.31	-815053.67	1A	794		14	9	2	640		1L	2
TREE	412508.12	-815058.02	1A	792		12	7	0	726		328R	-3
TREE	412516.31	-815048.27	1A	823		43	38	31	1543		427L	4

36 C 789/ 789 412357.670 -815052.208 3590504.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	412355.64	-815055.45	1A	790		1	1	-2	202		250L	1
RAILROAD	412348.35	-815052.23	1A	812		23	23	20	943		17L	1
POLE	412342.62	-815055.68	1A	816		27	27	24	1519		289L	-12
TREE	412340.98	-815057.62	1A	823		34	34	31	1682		439L	-10
TREE	412337.12	-815053.50	1A	838		49	49	46	2078		132L	-7
TREE	412333.77	-815044.07	1A	858		69	69	66	2429		582R	3
TREE	412332.17	-815046.26	1A	858		69	69	66	2587		412R	-1
OL ON ELEVATOR	412320.05	-815053.98	1A	876		87	87	84	3805		196L	-19
TANK	412245.74	-815105.15	1A	911		122	122	119	7264		1103L	-86

5L C 770/ 778 412416.492 -815141.436 495637.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FENCE	412412.48	-815150.24	1A	775		5	-3	-17	775		121L	-12
TREE	412409.25	-815200.09	1A	806		36	28	14	1560		353L	-4
ANT ON OL BLDG	412401.67	-815200.22	1A	777		7	-1	-15	2061		226R	-48
TREE	412403.97	-815205.76	1A	806		36	28	14	2235		223L	-24
OL ON DME	412400.91	-815202.66	1A	777		7	-1	-15	2253		166R	-53
TREE	412404.14	-815211.49	1A	825		55	47	33	2557		518L	-14
TREE	412403.13	-815210.71	1A	817		47	39	25	2578		401L	-23
TREE	412357.51	-815222.33	1A	831		61	53	39	3622		535L	-40
TREE	412351.39	-815225.10	1A	839		69	61	47	4182		197L	-48
TREE	412343.42	-815216.69	1A	819		49	41	27	4210		833R	-69
TREE	412338.11	-815226.18	1A	845		75	67	53	5110		778R	-69

OC0084

AIRPORT ELEVATION 792

23R C 784/ 784 412501.600 -815030.155 2295724.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	412507.27	-815027.27	1A	797		13	13	5	538		298R	3
TREE	412507.83	-815026.42	1A	813		29	29	21	624		300R	16
ROAD (N)	412507.28	-815022.58	1A	797		13	13	5	812		69R	-5
TREE	412517.04	-815015.43	1A	839		55	55	47	1864		475R	6
TREE	412514.63	-815004.49	1A	824		40	40	32	2346		249L	-23
TREE	412527.88	-814949.47	1A	869		85	85	77	4084		42R	-29
TREE	412531.32	-814943.15	1A	871		87	87	79	4676		1L	-45
TREE	412530.94	-814929.90	1A	882		98	98	90	5425		679L	-56

5R PIR 768/ 777 412404.086 -815152.036 495632.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON GS	412452.34	-815030.48	1A	809		41	32	17	-7900		260R	24
OL ON TMOM	412451.89	-815031.43	1A	800		32	23	8	-7815		249R	15
OL ON TMOM	412450.19	-815034.15	1A	800		32	23	8	-7546		247R	15
ROD ON OL GS	412407.55	-815138.42	1A	813		45	36	21	-1020		400R	42
ANT ON OL BLDG	412401.67	-815200.22	1A	777		9	0	-15	635		215L	1
OL ON DME	412400.91	-815202.66	1A	777		9	0	-15	826		275L	-3
ROD ON BLDG	412354.13	-815158.80	1A	787		19	10	-5	1043		440R	2
TREE	412351.39	-815225.10	1A	839		71	62	47	2756		638L	20
TREE	412343.42	-815216.69	1A	819		51	42	27	2784		392R	0
TREE	412338.11	-815226.18	1A	845		77	68	53	3684		337R	8

OC0084

AIRPORT ELEVATION 792

23L PIR 786/ 786 412501.294 -815021.634 2295732.

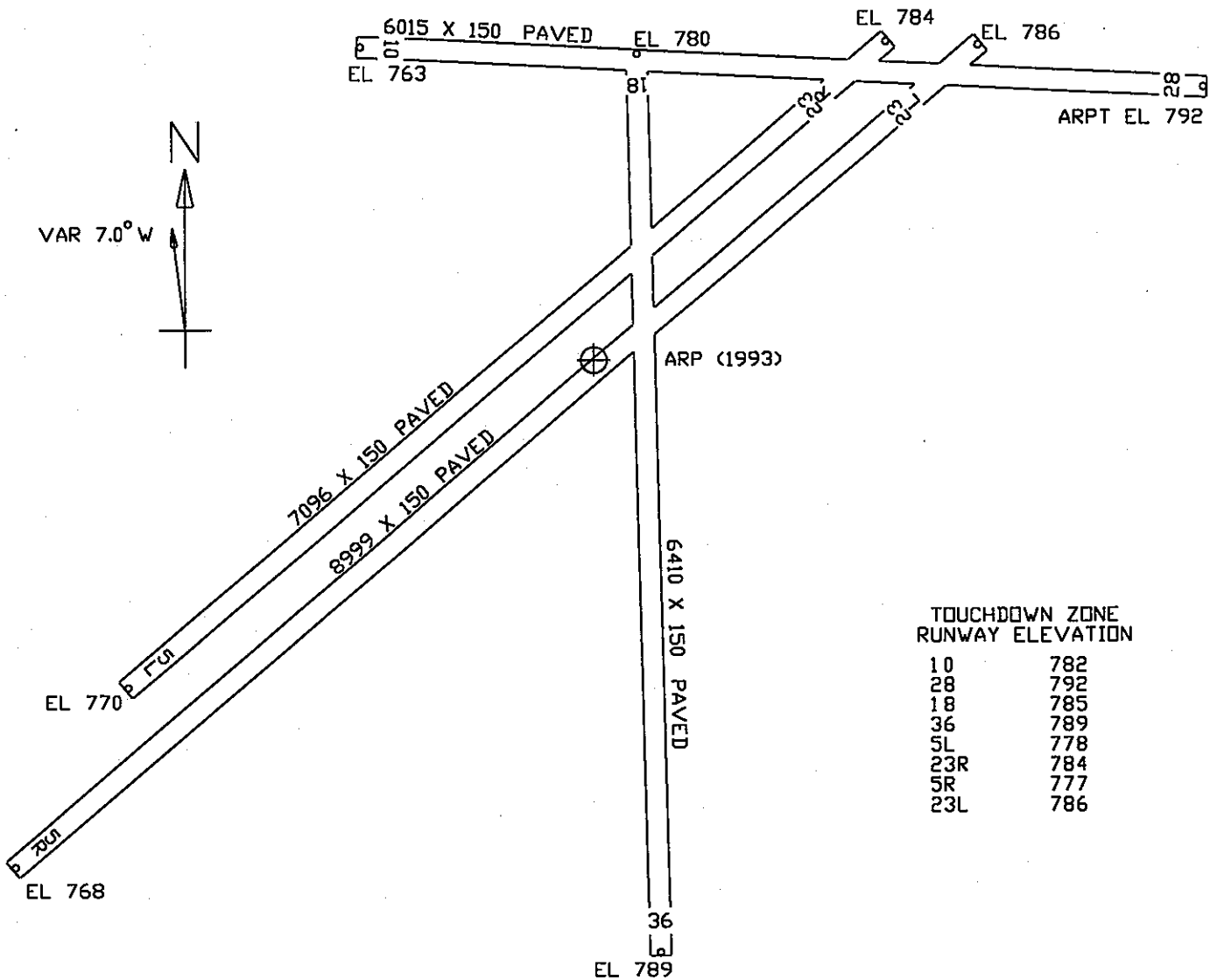
OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GS	412407.55	-815138.42	1A	813		27	27	21	-7978		400L	42
OL ON TMOM	412450.19	-815034.15	1A	800		14	14	8	-1453		247L	15
OL ON TMOM	412451.89	-815031.43	1A	800		14	14	8	-1184		249L	15
OL ON GS	412452.34	-815030.48	1A	809		23	23	17	-1099		260L	24
ROAD (N)	412507.28	-815022.58	1A	797		11	11	5	335		510R	8
LOC	412505.10	-815015.62	1A	792		6	6	0	599		0R	-2
OL ON GS	412502.46	-815012.31	1A	814		28	28	22	620		366L	19
POLE	412508.59	-814958.26	1A	825		39	39	33	1839		581L	6
TREE	412514.63	-815004.49	1A	824		38	38	32	1868		193R	4
TREE	412514.08	-814953.63	1A	838		52	52	46	2466		382L	6
TREE	412527.88	-814949.47	1A	869		83	83	77	3607		484R	15
TREE	412531.32	-814943.15	1A	871		85	85	79	4199		440R	5
TREE	412524.02	-814931.07	1A	880		94	94	88	4429		717L	9
TREE	412530.94	-814929.90	1A	882		96	96	90	4948		238L	1

OC0084

AIRPORT ELEVATION 792

ARP 412439.219 -815057.828

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ROD ON OL RTR TWR	412449.39	-815105.90	1A	832		40	33608	1199
ROD ON OL ASDG	412451.65	-815125.23	1A	852		60	30804	2438
ANT ON OL ASR	412413.10	-815108.21	1A	889		97	20340	2759
POLE	412507.06	-815104.30	1A	787		-5	35704	2861
ANT ON OL ATCT	412441.22	-815019.63	1A	993	207	201	9300	2917
ANT ON DOME	412447.41	-815135.10	1A	890		98	29316	2959
POLE	412506.94	-815044.58	1A	800		8	2647	2982
OL ON HANGAR	412453.32	-815133.65	1A	855		63	30436	3080
TREE	412511.39	-815059.97	1A	814		22	407	3260
LT POLE	412508.59	-815123.04	1A	793		1	33408	3539
OL ON BLDG	412508.79	-815029.88	1A	830		38	4225	3674
OL ON BLDG	412400.47	-815104.31	1A	853		61	19410	3953
TREE	412511.83	-815026.11	1A	845		53	4312	4091
LT POLE	412358.15	-815101.63	1A	840		48	19058	4167
TREE	412518.64	-815019.87	1A	864		72	4256	4928
LT POLE	412451.48	-814951.64	1A	809		17	8310	5194
TREE	412413.34	-815157.07	1A	826		34	24652	5220
ANT ON BLDG	412507.84	-814954.33	1A	833		41	6605	5639
LT POLE	412503.50	-814949.99	1A	810		18	7133	5724
TREE	412408.50	-815204.83	1A	837		45	24540	5978
LT POLE	412449.26	-814938.49	1A	842		50	8726	6130
SIGN	412504.38	-814944.02	1A	830		38	7237	6174
TREE	412407.34	-815207.47	1A	833		41	24542	6210
OL STACK	412444.54	-814933.42	1A	927		135	9212	6454
TREE	412351.49	-815155.64	1A	807		15	22922	6538
OL TANK	412442.43	-814931.79	1A	930		138	9409	6564
TREE	412530.89	-815002.27	1A	877		85	4558	6728
LT POLE	412514.29	-814935.85	1A	870		78	6722	7184
SIGN	412506.01	-814927.55	1A	857		65	7528	7393
POLE	412512.70	-814922.11	1A	912		120	7203	8042
CRANE ON TANK	412241.66	-815125.82	1A	941		149	19709	12088
ANT ON OL BLDG	412505.88	-815402.73	1A	982	228	190	28751	14344
ANT ON OL BLDG	412447.53	-815440.83	1A	966	207	174	27951	17012
OL ON TWR	412313.40	-814141.30	1A	2048	1138	1256	10831	43292



CLEVELAND-HOPKINS INTERNATIONAL AIRPORT
 CLEVELAND, OHIO
 (NOT TO SCALE)
 (ELEVATIONS AND DISTANCES IN FEET)