

# OBSTRUCTION DATA SHEET

**ODS 909  
SANFORD MUNICIPAL AIRPORT  
SANFORD, MAINE**

**DIGITIZED FROM**

**OC 909  
SURVEYED OCTOBER 1989  
1ST 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:

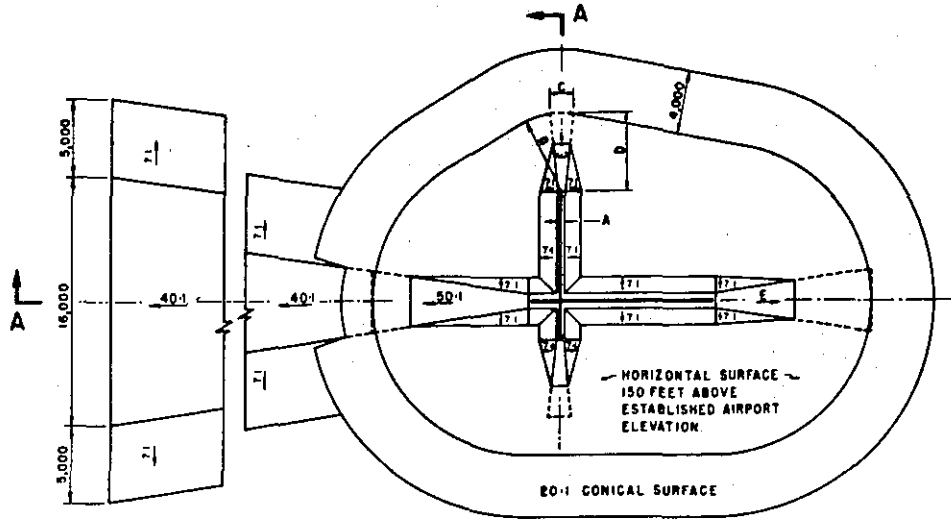
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the 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)

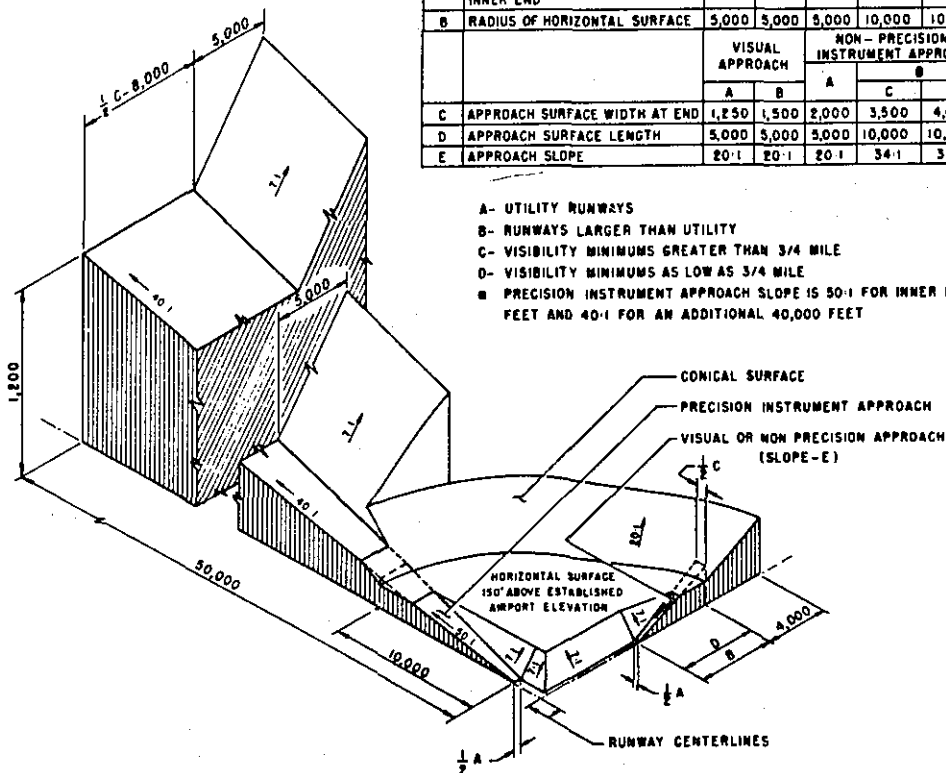
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

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	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
		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

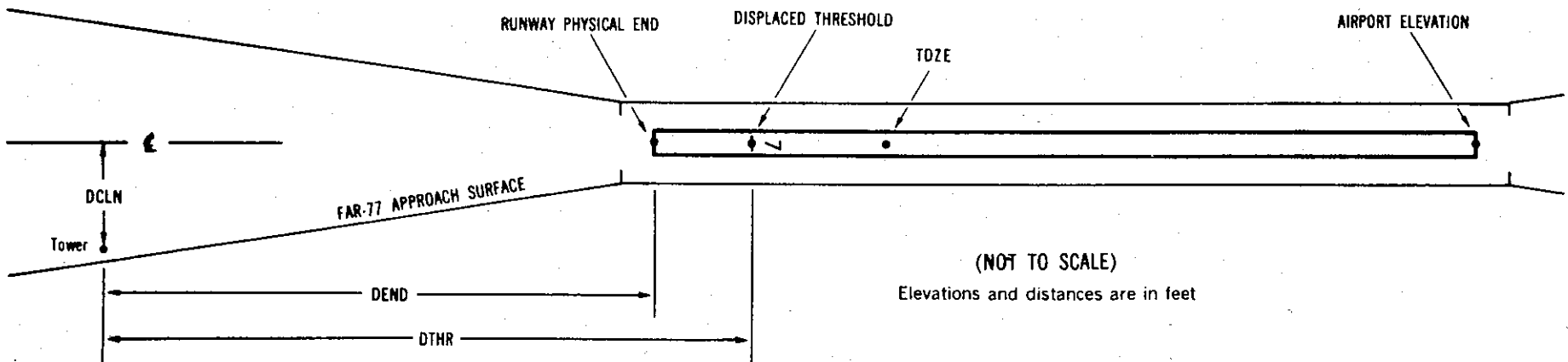
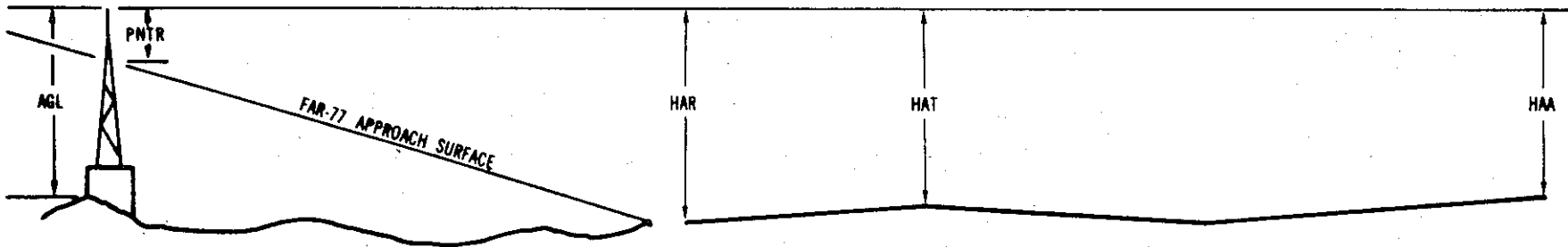
# ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

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

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## EXPLANATION OF FOOTNOTES

- <sup>1</sup> 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.
- <sup>2</sup> For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- <sup>3</sup> Reference runway approach physical end elevation/touchdown zone elevation
- <sup>4</sup> Latitude and longitude of reference runway approach physical end
- <sup>5</sup> Reference runway geodetic azimuth reckoned clockwise from south
- <sup>6</sup> Reference runway displaced threshold elevation/touchdown zone elevation
- <sup>7</sup> Latitude and longitude of reference runway displaced threshold
- <sup>8</sup> Accuracy Code:
- | Horizontal | Vertical |
|------------|----------|
| 1 = 20     | A = 2    |
| 2 = 40     | B = 5    |
|            | C = 20   |
- <sup>9</sup> 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.
- <sup>10</sup> 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  $\pm 10$  feet.
- <sup>11</sup> HAA - Height above airport  
 HAR - Height above reference runway approach physical end  
 HAT - Height above reference runway touchdown zone elevation
- <sup>12</sup> 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.
- <sup>13</sup> PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0909

AIRPORT ELEVATION 244

7 PIR 238/239 432312.546N 0704311.047W 2382156

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	432348.15	0704204.36	1A	276		38	37	32	-6083		487L	43
WINDSOCK	432338.12	0704202.77	1A	244		6	5	0	-5651		439R	11
BUSH	432334.86	0704214.45	1A	239		1	0	-5	-4743		268R	6
TREE	432326.93	0704226.08	1A	265		27	26	21	-3592		501R	32
BUSH	432333.04	0704238.35	1A	242		4	3	-2	-3144		501L	9
OL ON GLIDE SLOPE (U/Cn)	432314.88	0704257.30	1A	267		29	28	23	-988		332R	29
WINDSOCK	432313.47	0704259.39	1A	250		12	11	6	-782		372R	12
TREE	432306.77	0704310.60	1A	279		41	40	35	279		515R	39
TREE	432305.64	0704314.73	1A	296		58	57	52	598		453R	50
TREE	432312.61	0704324.04	1A	289		51	50	45	814		509L	39
TREE	432311.75	0704328.19	1A	313		75	74	69	1120		596L	57
TREE	432302.56	0704322.50	1A	299		61	60	55	1250		418R	40
TREE	432305.72	0704326.05	1A	293		55	54	49	1306		7R	33
TREE	432309.44	0704330.91	1A	303		65	64	59	1414		502L	41
TREE	432306.88	0704328.76	1A	292		54	53	48	1415		197L	30
TREE	432250.57	0704340.88	1A	345		107	106	101	3043		739R	50
TREE	432255.44	0704345.44	1A	305		67	66	61	3071		142R	10
TREE	432158.72	0704530.35	1A	537		299	298	293	12680		965R	37
TREE	432155.25	0704530.30	1A	545		307	306	301	12862		1266R	40

OC0909

AIRPORT ELEVATION 244

25 C 233/233 432343.621N 07042 1.860W 0582244

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
WINDSOCK	432313.47	0704259.39	1A	250		17	17	6	-5218		372L	12
OL ON GLIDE SLOPE (U/Cn)	432314.88	0704257.30	1A	267		34	34	23	-5012		332L	29
BUSH	432333.04	0704238.35	1A	242		9	9	-2	-2856		501R	9
TREE	432326.93	0704226.08	1A	265		32	32	21	-2408		501L	32
BUSH	432334.86	0704214.45	1A	239		6	6	-5	-1257		268L	6
WINDSOCK	432338.12	0704202.77	1A	244		11	11	0	-349		439L	11
TREE	432348.15	0704204.36	1A	276		43	43	32	83		487R	43
TREE	432349.36	0704202.07	1A	264		31	31	20	291		502R	28
TREE	432341.38	0704152.82	1A	252		19	19	8	449		543L	12
TREE	432351.40	0704157.72	1A	271		38	38	27	673		511R	24
TREE	432343.43	0704150.05	1A	283		50	50	39	733		473L	34
TREE	432354.09	0704154.55	1A	298		65	65	54	1015		620R	41
TREE	432345.91	0704144.78	1A	279		46	46	35	1195		464L	17
TREE	432354.15	0704151.34	1A	288		55	55	44	1220		501R	25
TREE	432352.71	0704149.55	1A	280		47	47	36	1257		308R	16
TREE	432351.79	0704146.00	1A	278		45	45	34	1430		90R	9
TREE	432350.47	0704140.14	1A	299		66	66	55	1729		250L	21
TREE	432356.79	0704130.11	1A	297		64	64	53	2695		94L	-9
TREE	432403.88	0704122.38	1A	312		79	79	68	3558		219R	-20

OC0909

AIRPORT ELEVATION 244

14 SUPLC 244/ 432400.938N 0704253.305W 2985346 241/241 432356.665N 0704242.688W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DIHR	DCLN	PNTR
BUSH	432334.37	0704154.62	1A	241		-3	0	-3	-5093	-4198	261R	10
WINDSOCK	432338.12	0704202.77	1A	244		0	3	0	-4383	-3488	219R	12
BUSH	432350.48	0704219.88	1A	241		-3	0	-3	-2672	-1777	266L	5
POLE	432404.99	0704255.37	1A	262		18	21	18	332	1227	286L	14
TREE	432404.70	0704258.10	1A	282		38	41	38	494	1389	162L	29
TREE	432406.21	0704259.72	1A	305		61	64	61	673	1568	239L	47
TREE	432404.32	0704303.36	1A	280		36	39	36	816	1711	59R	18
TREE	432406.24	0704304.82	1A	299		55	58	55	1004	1899	59L	31
TREE	432404.40	0704306.88	1A	282		38	41	38	1047	1942	178R	13
TREE	432404.05	0704309.86	1A	301		57	60	57	1223	2118	315R	27
TREE	432405.02	0704315.25	1A	343		99	102	99	1618	2513	421R	57
TREE	432407.03	0704317.61	1A	347		103	106	103	1869	2764	327R	54
TREE	432411.11	0704314.81	1A	323		79	82	79	1888	2783	135L	29
TREE	432413.84	0704314.09	1A	325		81	84	81	1975	2870	403L	29
TREE	432412.48	0704319.24	1A	342		98	101	98	2241	3136	98L	38
TREE	432414.65	0704320.45	1A	320		76	79	76	2425	3320	247L	11
TREE	432415.32	0704332.20	1A	374		130	133	130	3218	4113	112R	41
TREE	432419.50	0704332.64	1A	364		120	123	120	3450	4346	243L	24
TREE	432415.78	0704336.47	1A	384		140	143	140	3516	4412	224R	42
TREE	432413.64	0704338.90	1A	400		156	159	156	3569	4464	500R	57
TREE	432419.93	0704338.63	1A	381		137	140	137	3858	4754	67L	29
TREE	432415.67	0704348.97	1A	422		178	181	178	4319	5214	680R	57



OC0909

AIRPORT ELEVATION 244

32 SUPLC 231/238 432337.071N 0704154.020W 1185426

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	432350.48	0704219.88	1A	241		10	3	-3	-2328		266R	5
WINDSOCK	432338.12	0704202.77	1A	244		13	6	0	-617		219L	12
BUSH	432334.37	0704154.62	1A	241		10	3	-3	93		261L	10
BUSH	432337.37	0704146.68	1A	242		11	4	-2	460		289R	3
TREE	432336.21	0704142.90	1A	250		19	12	6	761		320R	3
TREE	432329.17	0704144.40	1A	266		35	28	22	1008		357L	11
TREE	432335.10	0704139.67	1A	256		25	18	12	1024		337R	1
TREE	432331.46	0704138.97	1A	259		28	21	15	1247		40R	-3
POLE	432333.01	0704134.86	1A	263		32	25	19	1437		324R	-4
TREE	432323.58	0704124.73	1A	287		56	49	43	2554		150L	-13

OC0909

AIRPORT ELEVATION 244

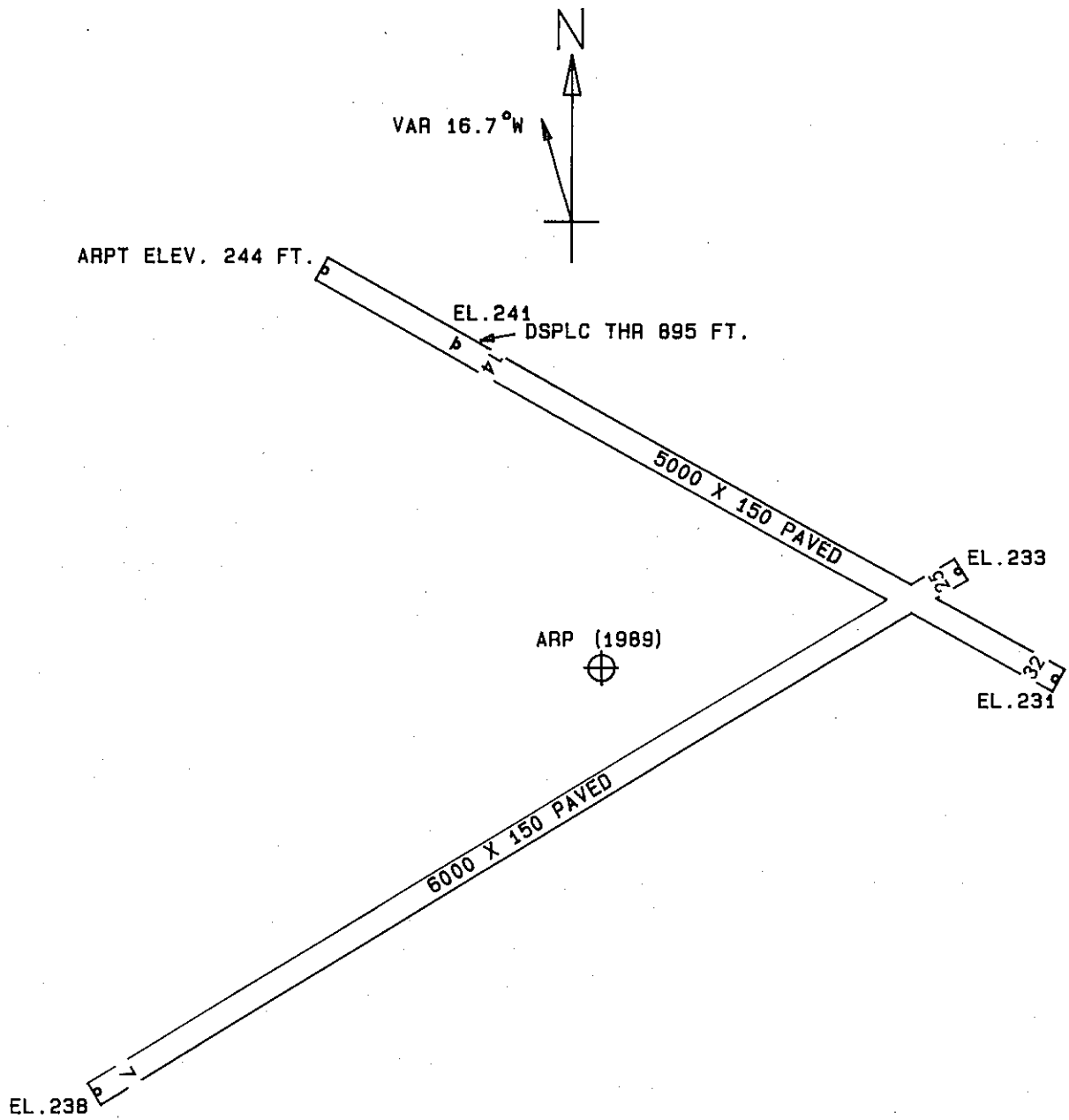
ARP 432337.594N 0704230.640W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
BUSH	432348.07	0704228.94	1A	244		0	23 27	1068
TREE	432328.01	0704222.29	1A	282		38	164 15	1149
TREE	432331.83	0704213.51	1A	279		35	131 28	1393
TREE	432351.65	0704218.94	1A	285		41	47 58	1665
TREE	432353.64	0704223.00	1A	280		36	35 51	1720
TREE	432321.04	0704236.00	1A	300		56	209 59	1723
OL ON LIGHTED WINDSOCK	432352.74	0704245.77	1A	269		25	340 38	1897
TREE	432347.11	0704207.54	1A	279		35	77 15	1959
TREE	432336.57	0704203.50	1A	254		10	109 39	2007
HANGAR	432358.52	0704235.58	1A	254		10	6 56	2150
TREE	432318.22	0704243.12	1A	278		34	221 52	2167
TREE	432334.24	0704157.04	1A	254		10	114 29	2504
OL ON BUILDING	432324.65	0704300.10	1A	287		43	255 38	2540
TREE	432331.56	0704154.61	1A	270		26	119 38	2730
BUSH	432332.41	0704152.03	1A	246		2	117 7	2899
TREE	432322.07	0704304.09	1A	269		25	254 14	2927
TREE	432340.07	0704149.44	1A	278		34	101 59	3053
TREE	432313.30	0704255.57	1A	267		23	233 31	3072
TREE	432338.63	0704146.75	1A	275		31	104 50	3243
OL AIRPORT BEACON	432354.40	0704310.01	1A	384		140	317 3	3368
TREE	432359.94	0704305.87	1A	301		57	327 43	3447
TREE	432319.07	0704310.54	1A	284		40	254 13	3492
TREE	432356.00	0704311.36	1A	395		151	318 30	3537
TREE	432327.55	0704144.42	1A	285		41	123 17	3561
TREE	432406.89	0704257.60	1A	302		58	342 50	3572
TREE	432317.43	0704314.31	1A	287		43	254 22	3816
TREE	432308.87	0704304.53	1A	308		64	237 25	3837
TREE	432401.07	0704315.80	1A	356		112	322 11	4095
TREE	432315.80	0704318.31	1A	286		42	254 37	4155
TREE	432334.82	0704134.23	1A	278		34	110 33	4175
ANTENNA ON TANK ON BLDG	432418.91	0704243.21	1B	336		92	4 12	4285
TREE	432403.88	0704318.20	1A	356		112	323 52	4406
TREE	432359.08	0704333.46	1B	394		150	311 50	5123

AIRPORT ELEVATION 244

ARP 432337.594N 0704230.640W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	432357.46	0704336.79	1B	399		155	309 6	5282
TREE	432410.02	0704336.91	1A	395		151	320 34	5892
TREE	432412.61	0704356.67	1B	431		187	315 53	7275
TREE	432246.15	0704342.19	1A	371		127	242 7	7420
TREE	432221.30	0704301.34	1B	384		140	213 4	8050
TREE	432238.21	0704344.19	1B	401		157	238 48	8102
TREE	432230.23	0704341.03	1B	395		151	234 1	8576
TREE	432156.29	0704333.30	1B	407		163	220 59	11253



TOUCHDOWN ZONE RUNWAY ELEVATION	
7	239
25	233
14	241
32	238

SANFORD MUNICIPAL AIRPORT  
 SANFORD, MAINE  
 (NOT TO SCALE)