

# OBSTRUCTION DATA SHEET

**ODS 5089  
FREDERICK MUNICIPAL AIRPORT  
FREDERICK, MARYLAND**

**DIGITIZED FROM**

**OC 5089  
SURVEYED SEPTEMBER 1991  
3RD EDITION**



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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 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:

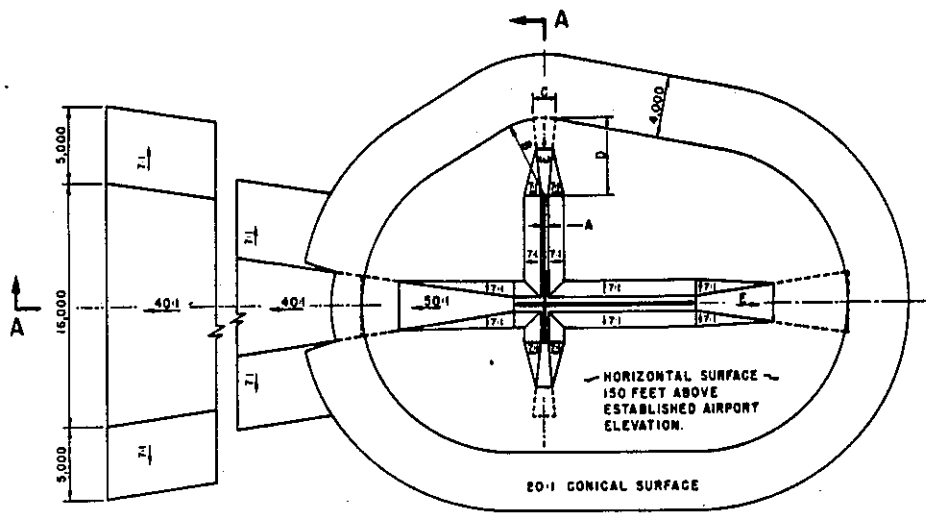
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the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

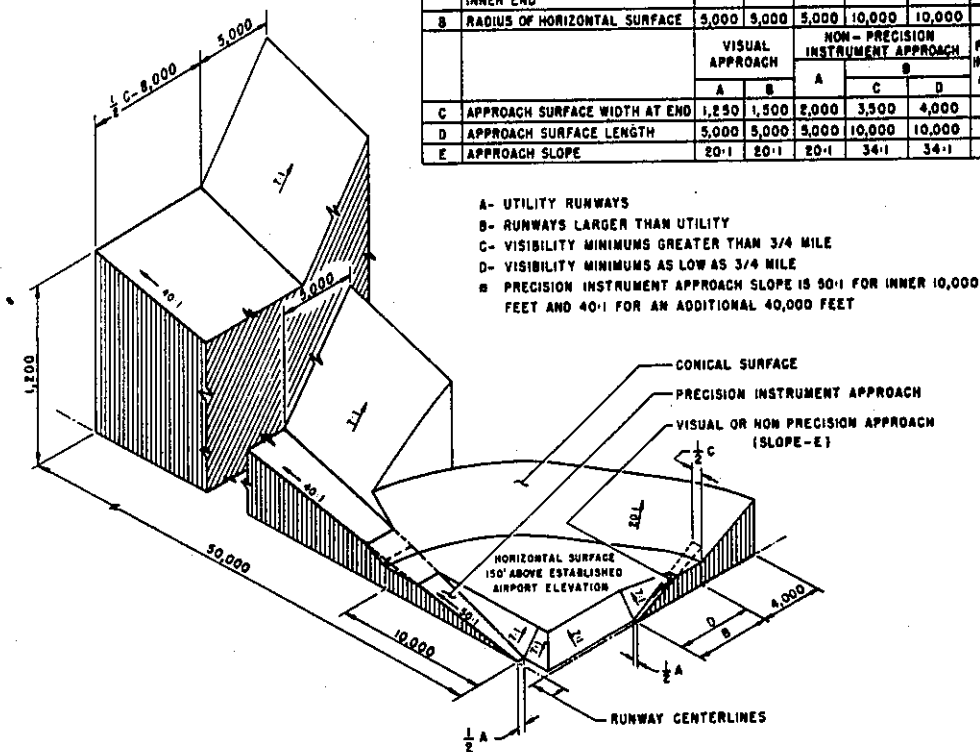
A(V) ..... Utility runway - visual approach only  
 A(NP) .... Utility runway - nonprecision instrument approach  
 B(V) ..... Nonutility runway - visual approach only  
 C ..... Nonutility runway - nonprecision instrument approach with  
           visibility minimums greater than 3/4 mile  
 D ..... 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	9,000	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	9,000	3,000	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

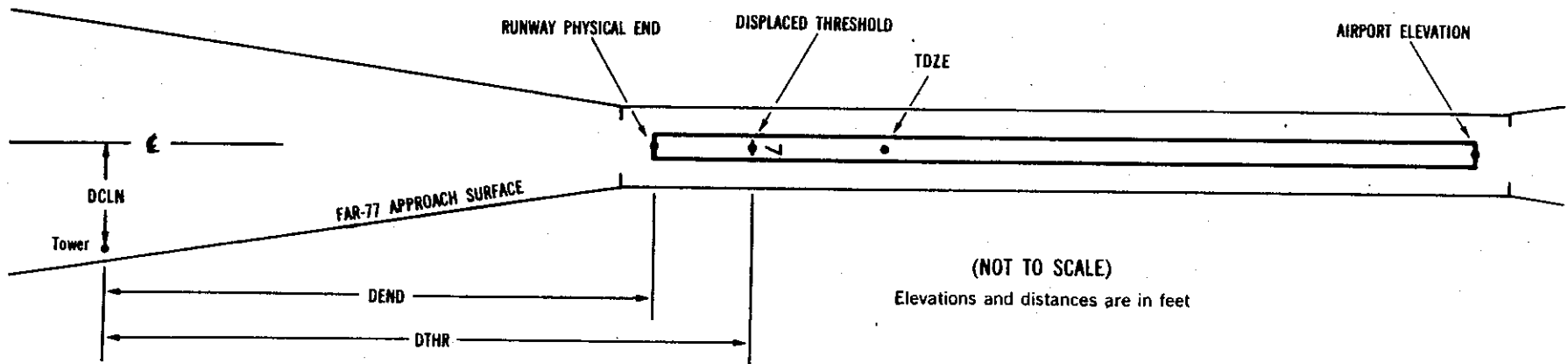
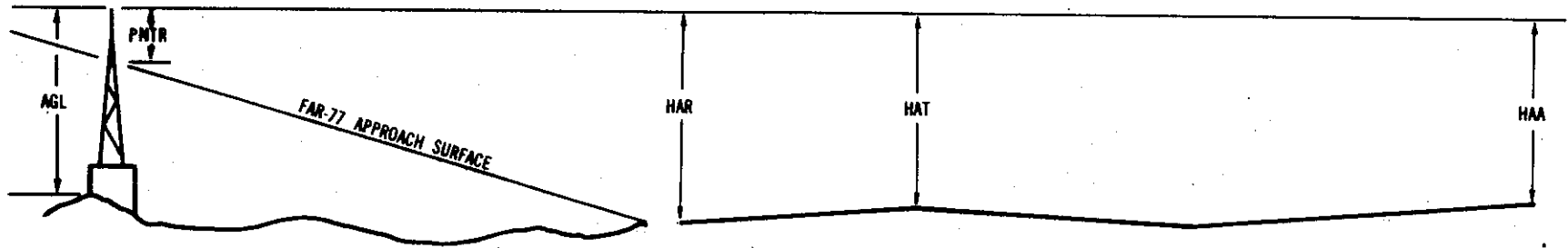
OC XXXX

AIRPORT ELEVATION XXXX

X<sup>1</sup> X<sup>2</sup> XXXX/XXXX<sup>3</sup> XXXXXX.XXX<sup>4</sup> XXXXXXXX.XXX<sup>4</sup> XXXXXXXX<sup>5</sup> XXXX/XXXX<sup>6</sup> XXXXXX.XXX<sup>7</sup> XXXXXXXX.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>
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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(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  $\pm 10$  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).

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AIRPORT ELEVATION 304

5 SUPLC 304/304 392434.198N 0772250.630W 2202859

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	392509.68	0772215.37	1A	304		0	0	0	-4527		226L	18
OL ON GLIDE SLOPE	392504.12	0772212.01	1A	327		23	23	23	-4271		340R	39
SIGN	392504.91	0772221.68	1A	293		-11	-11	-11	-3839		289L	3
POLE	392457.94	0772216.27	1A	316		12	12	12	-3578		492R	25
GROUND	392458.01	0772221.86	1A	294		-10	-10	-10	-3298		153R	2
OL ON LTD WSK & WIND TEE	392452.31	0772239.17	1A	318		14	14	14	-1978		505L	20
ANTENNA ON POLE	392444.33	0772231.92	1A	341		37	37	37	-1733		451R	42
OL VOR	392443.70	0772231.60	1A	335		31	31	31	-1701		512R	35
GROUND	392429.73	0772247.66	1A	310		6	6	6	193		471R	6
GROUND	392433.59	0772253.77	1A	308		4	4	4	206		148L	4
ROAD (N)	392435.06	0772256.01	1A	320		16	16	16	208		378L	16
TREE	392434.94	0772256.70	1A	327		23	23	23	253		411L	21
TREE	392430.89	0772300.07	1A	361		57	57	57	736		347L	41
OL ON BUILDING	392430.88	0772303.93	1A	357		53	53	53	934		576L	31
TREE	392428.93	0772301.80	1A	355		51	51	51	975		321L	28
OL ON LOCALIZER	392426.66	0772258.92	1A	322		18	18	18	1002		OR	-6
POLE	392427.31	0772303.02	1A	362		58	58	58	1162		287L	30
VENT ON BUILDING	392428.73	0772307.29	1A	350		46	46	46	1270		636L	15
POLE	392418.71	0772257.18	1A	367		63	63	63	1525		626R	24
TREE	392420.00	0772302.58	1A	387		83	83	83	1701		219R	39
TREE	392416.51	0772259.13	1A	378		74	74	74	1795		654R	27
TREE	392417.84	0772302.23	1A	375		71	71	71	1850		382R	22
TREE	392422.73	0772311.71	1A	381		77	77	77	1957		505L	25
TREE	392420.08	0772310.59	1A	397		93	93	93	2104		264L	37

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AIRPORT ELEVATION 304

23 PIR 283/297 392513.435N 07722 7.450W 0402927

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	392435.06	0772256.01	1A	320		37	23	16	-5428		378R	16
GROUND	392433.59	0772253.77	1A	308		25	11	4	-5426		148R	4
GROUND	392429.73	0772247.66	1A	310		27	13	6	-5413		471L	6
OL VOR	392443.70	0772231.60	1A	335		52	38	31	-3519		512L	35
ANTENNA ON POLE	392444.33	0772231.92	1A	341		58	44	37	-3487		451L	42
OL ON LTD WSK & WIND TEE	392452.31	0772239.17	1A	318		35	21	14	-3242		505R	20
GROUND	392458.01	0772221.86	1A	294		11	-3	-10	-1921		153L	2
POLE	392457.94	0772216.27	1A	316		33	19	12	-1642		492L	25
SIGN	392504.91	0772221.68	1A	293		10	-4	-11	-1381		289R	3
OL ON GLIDE SLOPE	392504.12	0772212.01	1A	327		44	30	23	-949		340L	39
OL ON LIGHTED WINDSOCK	392509.68	0772215.37	1A	304		21	7	0	-693		226R	18
TREE	392526.76	0772159.19	1A	315		32	18	11	1446		383R	7
TREE	392524.42	0772144.78	1A	365		82	68	61	2000		632L	46
TREE	392529.52	0772145.22	1A	369		86	72	65	2371		270L	43
TREE	392532.39	0772148.48	1A	357		74	60	53	2425		113R	29
TREE	392537.24	0772151.47	1A	381		98	84	77	2646		610R	49
TREE	392530.62	0772137.16	1A	383		100	86	79	2865		678L	47
TREE	392553.21	0772138.68	1A	413		130	116	109	4527		896R	43
TREE	392553.01	0772133.37	1A	417		134	120	113	4782		567R	42
OL SILO	392547.93	0772123.88	1A	436		153	139	132	4875		334L	60
TREE	392557.77	0772138.46	1A	424		141	127	120	4889		1183R	47
TREE	392552.01	0772124.27	1A	423		140	126	119	5168		42L	41
TREE	392600.62	0772049.29	1A	514		231	217	210	7613		1563L	83
TREE	392613.18	0772045.97	1A	508		225	211	204	8749		937L	54
TREE	392625.27	0772045.38	1A	495		212	198	191	9709		177L	22
TREE	392625.01	0772015.49	1A	521		238	224	217	11212		1977L	13



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AIRPORT ELEVATION 304

12 SUPLC 295/295 392523.807N 0772248.423W 2955754

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	392509.68	0772215.37	1A	304		9	9	0	-2958		149R	20
OL ON LIGHTED WINDSOCK	392521.03	0772245.41	1A	312		17	17	8	-336		149R	19
TREE	392531.87	0772258.90	1A	330		35	35	26	1096		373L	9
TREE	392532.52	0772301.28	1A	329		34	34	25	1293		351L	2
TREE	392533.24	0772310.31	1A	356		61	61	52	1962		106L	9

30 SUPLC 282/291 392508.226N 07722 7.180W 1155820

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	392521.03	0772245.41	1A	312		30	21	8	-3264		149L	19
OL ON LIGHTED WINDSOCK	392509.68	0772215.37	1A	304		22	13	0	-642		149L	20
TREE	392504.85	0772202.97	1A	290		8	-1	-14	447		162L	1
TREE	392505.34	0772149.15	1A	362		80	71	58	1401		357R	45
TREE	392504.59	0772143.93	1A	385		103	94	81	1802		469R	56
TREE	392502.11	0772144.29	1A	372		90	81	68	1886		230R	40
TREE	392459.00	0772144.94	1A	351		69	60	47	1978		75L	17
TREE	392445.70	0772118.48	1A	468		186	177	164	4434		375L	61
TREE	392443.24	0772108.66	1A	496		214	205	192	5237		261L	66
OL ON POLE	392444.64	0772105.79	1A	520		238	229	216	5377		35L	86
TREE	392451.45	0772100.59	1A	524		242	233	220	5442		763R	88
TREE	392437.40	0772005.50	2C	528		246	237	224	9952		1380R	-41

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AIRPORT ELEVATION 304

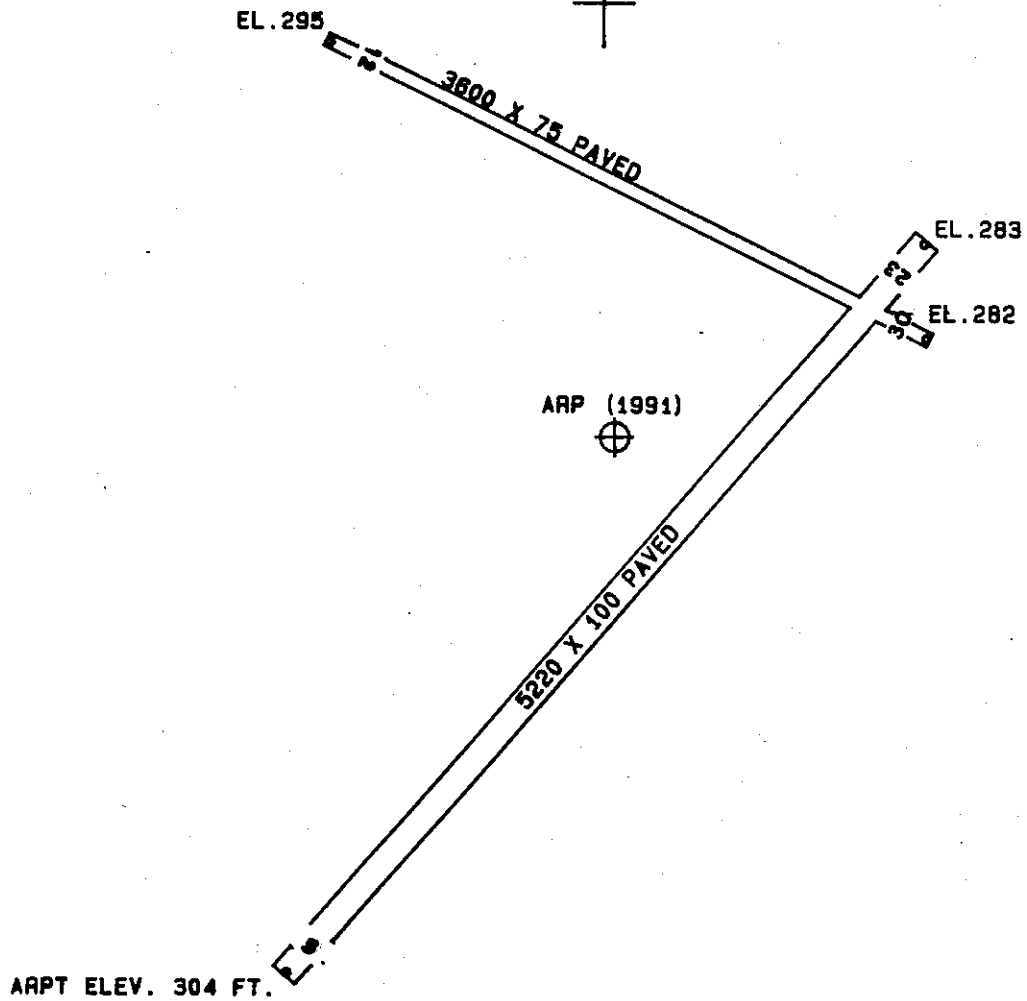
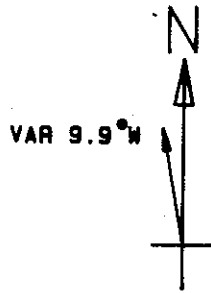
ARP 392502.879N 0772228.535W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
POLE	392502.05	0772210.76	1A	327		23	103	20	1398
ROD ON BUILDING	392502.80	0772208.17	1A	321		17	100	12	1598
AIRPORT BEACON	392456.83	0772247.86	1A	331		27	257	55	1636
TREE	392504.70	0772206.09	1A	297		-7	93	55	1771
BUILDING	392520.82	0772231.22	1A	297		-7	3	16	1827
TREE	392526.76	0772242.15	1A	341		37	346	2	2642
OL ON HANGAR	392441.71	0772251.16	1A	311		7	229	34	2783
ANTENNA	392442.17	0772256.35	1A	377		73	236	5	3026
TREE	392452.35	0772148.50	1A	362		58	118	38	3318
VENT ON BUILDING	392436.90	0772257.84	1A	340		36	231	5	3493
OL ON FLOODLIGHT	392429.54	0772242.21	1A	348		44	207	33	3540
OL ON BUILDING	392435.63	0772258.67	1A	344		40	230	31	3633
TREE	392520.42	0772147.46	1A	334		30	71	3	3680
TREE	392521.41	0772144.37	1A	364		60	71	29	3941
ANTENNA	392435.81	0772305.47	1A	402		98	236	32	3987
OL ON FLOODLIGHT	392425.22	0772246.06	1A	349		45	209	45	4051
TREE	392536.08	0772156.68	1A	333		29	46	33	4187
TREE	392540.95	0772153.27	1A	394		90	45	36	4743
POLE	392418.14	0772255.36	1A	369		65	214	51	4993
TREE	392440.76	0772126.64	1B	436		132	124	38	5349
TREE	392411.30	0772302.19	1A	405		101	216	45	5849
ELEVATOR	392521.53	0772112.12	1B	473		169	82	26	6287
TREE	392558.04	0772146.69	1A	434		130	40	22	6476
ELEVATOR	392529.76	0772106.89	1B	471		167	76	54	6961
TREE	392455.71	0772058.89	1B	540		236	105	47	7073
TREE	392408.83	0772128.86	1B	464		160	149	19	7200
ANTENNA	392418.08	0772346.15	1B	455		151	243	15	7593
TREE	392513.80	0772049.78	1B	599		295	91	47	7829
ANTENNA	392504.76	0772410.78	1B	461		157	281	16	8026
TREE	392351.93	0772138.44	1B	488		184	161	11	8185
TREE	392542.32	0772046.84	1B	551		247	73	19	8923
ANTENNA ON OL TANK	392523.73	0772421.35	1B	490		186	293	19	9101
TREE	392339.84	0772136.70	1B	521		217	164	3	9335

AIRPORT ELEVATION 304

ARP 392502.879N 0772228.535W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
CROSS ON DOME	392456.72	0772428.72	1B	453		149	276 8	9453
TREE	392558.67	0772049.43	1A	504		200	63 55	9610
ROD ON OL TANK	392436.18	0772431.81	1B	479		175	264 19	10046
TREE	392315.11	0772140.93	1B	528		224	170 59	11527
TREE	392547.88	0772009.63	1B	551		247	77 13	11813
TREE	392305.74	0772201.94	1B	518		214	179 54	12034
TREE	392557.35	0772011.79	1B	558		254	72 42	12064
TREE	392525.54	0771951.88	2C	588		284	89 19	12506
TREE	392614.05	0772013.46	2C	521		217	65 42	12814
TREE	392357.10	0772004.28	2C	580		276	130 20	13134
TREE	392405.59	0771955.09	2C	598		294	125 35	13367
TREE	392425.62	0771935.34	2C	764		460	115 23	14107
TREE	392548.45	0771934.11	2C	656		352	81 16	14444
GROUND	392556.73	0771928.39	2C	620		316	78 48	15150



TOUCHDOWN ZONE RUNWAY ELEVATION	
5	304
23	297
12	295
30	291

FREDERICK MUNICIPAL AIRPORT  
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 (NOT TO SCALE)