

OBSTRUCTION DATA SHEET

ODS 5145
MENOMINEE - MARINETTE TWIN COUNTY AIRPORT
MENOMINEE, MICHIGAN

DIGITIZED FROM

OC 5145
SURVEYED AUGUST 1990
6TH 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:

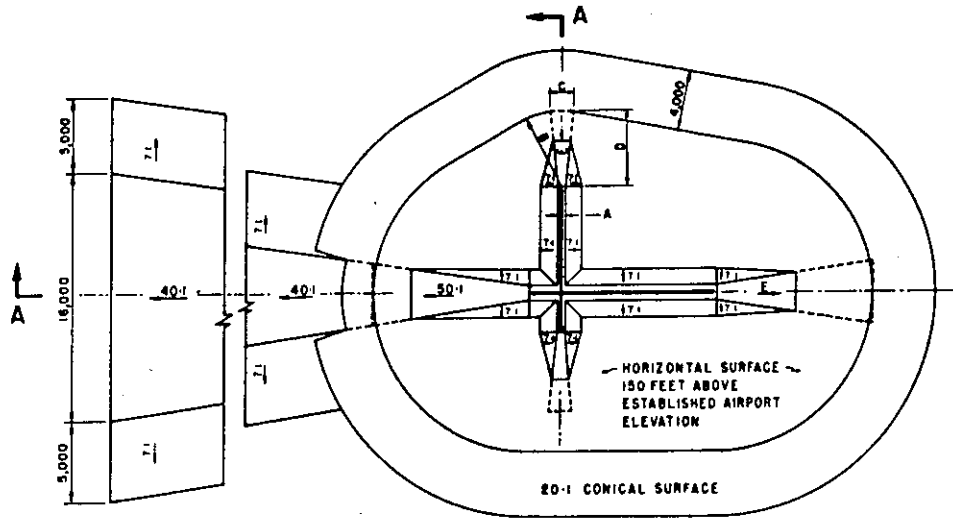
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the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

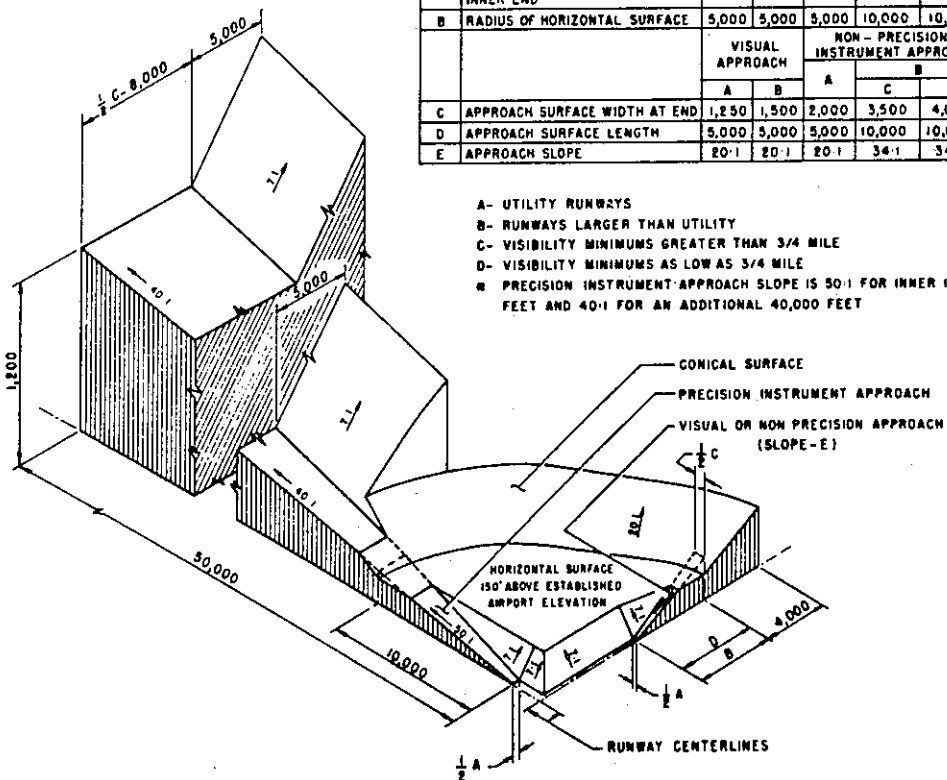
A(V) Utility runway - visual approach only
 A(NP) Utility runway - nonprecision instrument approach
 B(V) Nonutility runway - visual approach only
 C Nonutility runway - nonprecision instrument approach with
 visibility minimums greater than 3/4 mile
 D Nonutility runway - nonprecision instrument approach 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	5,000	3,000	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	
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

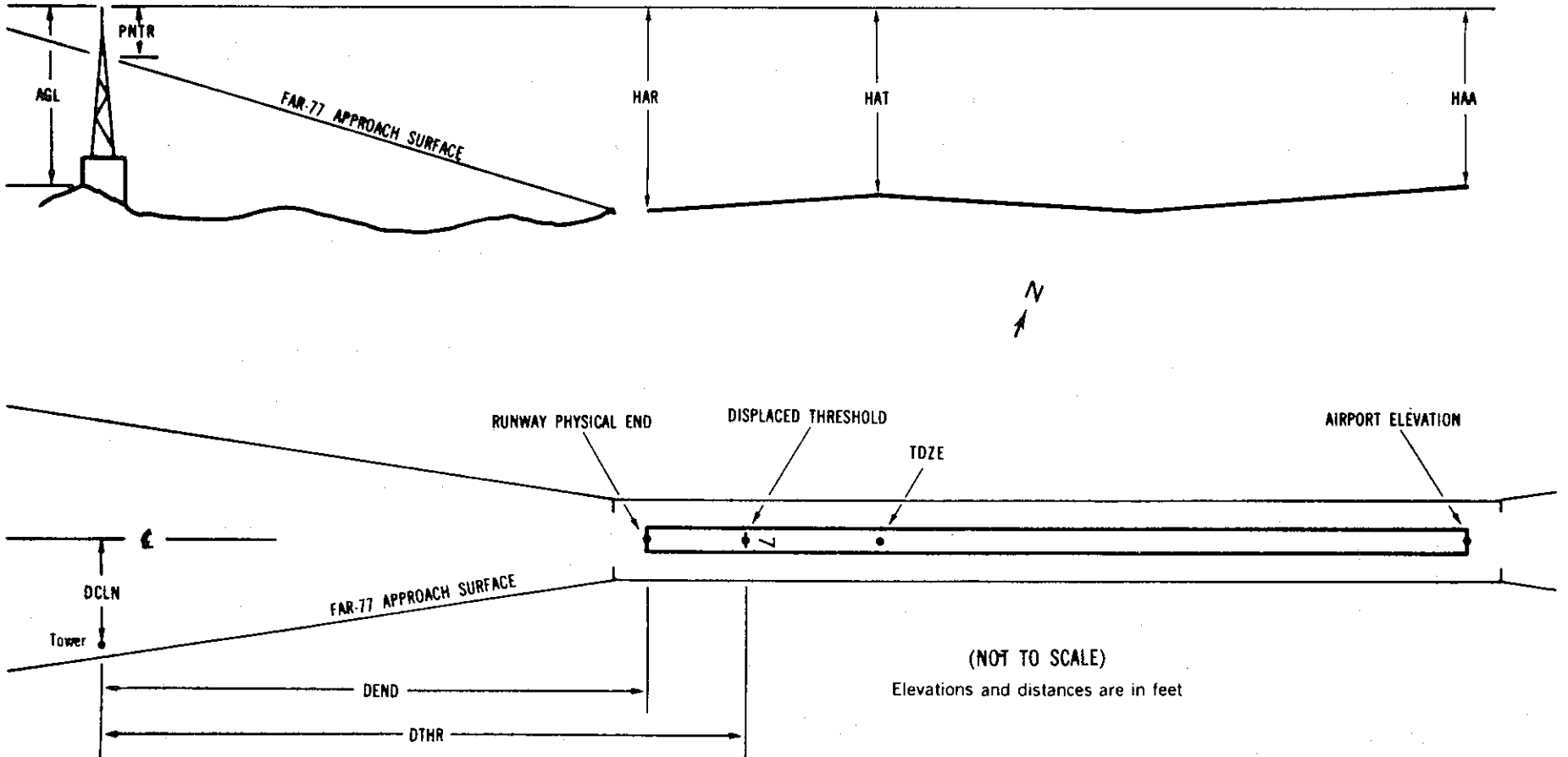
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

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 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).

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AIRPORT ELEVATION 625

3 PIR 614/624 450723.645N 0873839.517W 2105312

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	450818.67	0873801.16	1A	631		17	7	6	-6195		501L	9
TREE	450816.99	0873802.74	1A	638		24	14	13	-5990		511L	16
BUSH	450809.05	0873806.94	1A	629		15	5	4	-5145		356L	7
GROUND	450807.74	0873808.18	1A	623		9	-1	-2	-4986		364L	1
DIRT PILE	450758.56	0873817.83	1A	638		24	14	13	-3833		481L	14
GROUND	450749.24	0873811.58	1A	627		13	3	2	-3253		389R	2
BUSH	450726.97	0873830.96	1A	618		4	-6	-7	-604		354R	2
TREE	450717.45	0873838.55	1A	626		12	2	1	503		382R	6
BUILDING	450718.18	0873850.57	1A	628		14	4	3	882		396L	1
TREE	450712.72	0873839.05	1A	648		34	24	23	933		597R	19
TREE	450711.74	0873841.95	1A	670		56	46	45	1125		469R	38
TREE	450707.95	0873843.04	1A	660		46	36	35	1494		599R	20
TREE	450710.95	0873901.63	1A	670		56	46	45	1918		701L	22
TREE	450708.23	0873903.05	1A	666		52	42	41	2207		647L	12
TREE	450703.44	0873852.72	1A	651		37	27	26	2242		238R	-4
TREE	450653.44	0873903.64	1A	681		67	57	56	3513		86R	1
TREE	450652.71	0873916.50	1A	708		94	84	83	4050		668L	17
TREE	450650.02	0873911.30	1A	696		82	72	71	4093		208L	4
TREE	450651.32	0873916.92	1A	697		83	73	72	4187		621L	3

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AIRPORT ELEVATION 625

21 C 622/625 450814.475N 0873756.558W 0305342

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	450726.97	0873830.96	1A	618		-4	-7	-7	-5395		354L	2
GROUND	450749.24	0873811.58	1A	627		5	2	2	-2746		389L	2
DIRT PILE	450758.56	0873817.83	1A	638		16	13	13	-2166		481R	14
GROUND	450807.74	0873808.18	1A	623		1	-2	-2	-1013		364R	1
BUSH	450809.05	0873806.94	1A	629		7	4	4	-854		356R	7
TREE	450816.99	0873802.74	1A	638		16	13	13	-9		511R	16
BUSH	450818.67	0873801.16	1A	631		9	6	6	195		501R	9
OL ON LOCALIZER	450822.93	0873749.41	1A	626		4	1	1	998		0L	-19
ANTENNA ON BUILDING	450824.78	0873751.77	1A	628		6	3	3	1072		241R	-20
TREE	450823.87	0873739.63	1A	648		26	23	23	1440		553L	-10
TREE	450826.89	0873739.88	1A	652		30	27	27	1693		380L	-14
TREE	450828.30	0873733.45	1A	675		53	50	50	2052		702L	-1
TREE	450833.27	0873731.74	1A	685		63	60	60	2547		549L	-6
TREE	450841.66	0873739.55	1A	690		68	65	65	2989		368R	-14
TREE	450843.09	0873727.62	1A	696		74	71	71	3552		292L	-25

14 SUPLC 621/621 450740.165N 0873841.698W 3194945

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	450741.21	0873847.96	1A	670		49	49	45	370		275R	44
TREE	450749.05	0873845.75	1A	674		53	53	49	875		358L	33
TREE	450749.06	0873848.22	1A	677		56	56	52	991		224L	33
TREE	450748.53	0873852.97	1A	682		61	61	57	1169		71R	33
TREE	450751.77	0873848.53	1A	686		65	65	61	1214		384L	35
TREE	450750.50	0873853.75	1A	680		59	59	55	1357		15L	25
TREE	450749.25	0873859.63	1A	679		58	58	54	1532		389R	19
TREE	450756.05	0873854.30	1A	686		65	65	61	1812		348L	18
TREE	450754.99	0873858.27	1A	690		69	69	65	1914		60L	19
TREE	450759.14	0873856.24	1A	689		68	68	64	2141		443L	11
TREE	450758.25	0873906.80	1A	687		66	66	62	2560		194R	-3

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AIRPORT ELEVATION 625

32 SUPLC 605/608 450701.686N 0873755.824W 1395018

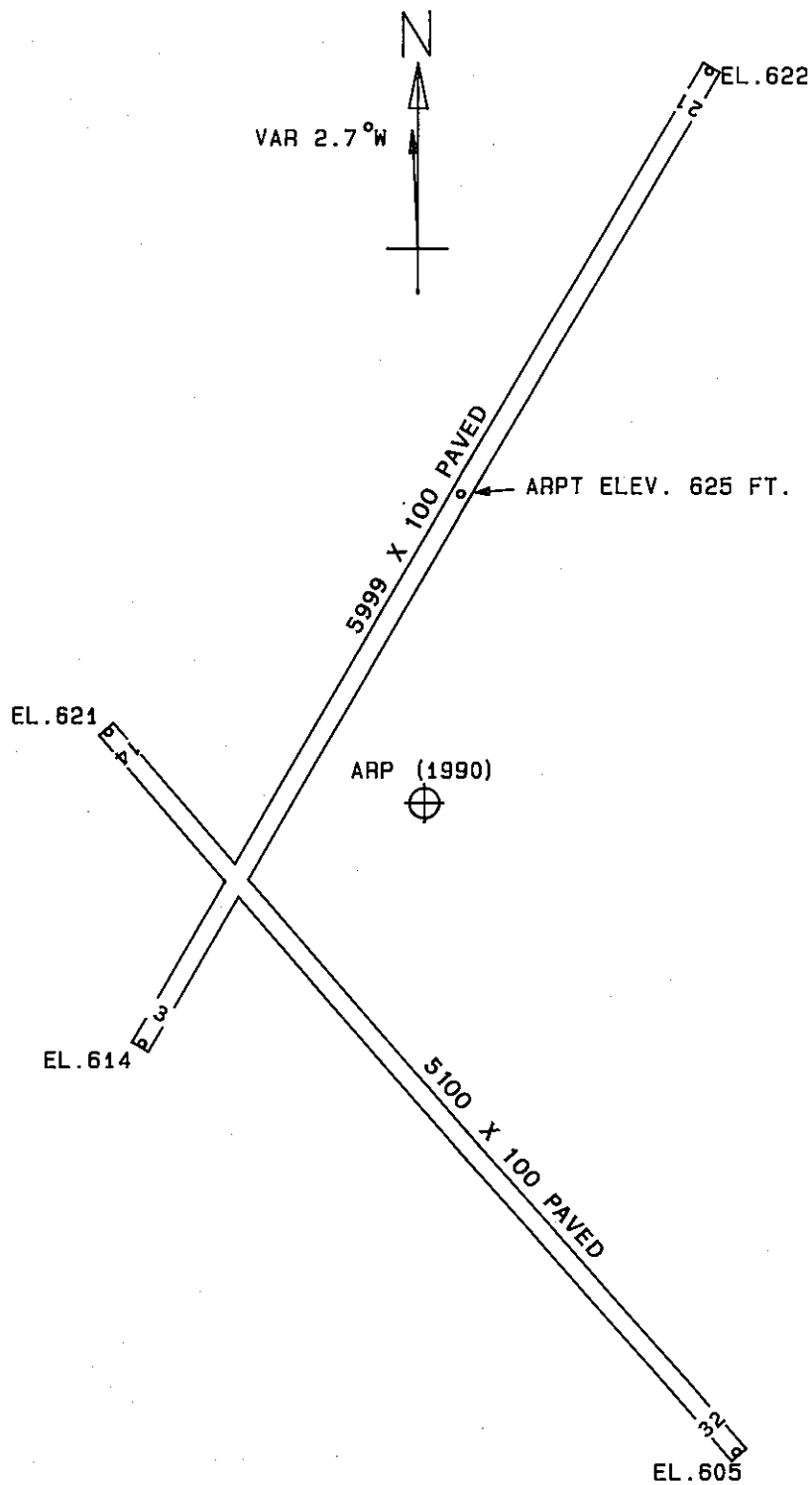
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	450655.00	0873752.94	1A	635		30	27	10	651		278L	17
POLE	450654.90	0873751.32	1A	633		28	25	8	734		196L	12
TREE	450653.73	0873752.39	1A	644		39	36	19	774		331L	22
TREE	450654.73	0873745.75	1A	644		39	36	19	1004		98R	15
POLE	450655.32	0873743.43	1A	637		32	29	12	1066		264R	7
TREE	450652.20	0873747.75	1A	659		54	51	34	1108		177L	27
TREE	450651.96	0873740.39	1A	670		65	62	45	1466		211R	28
TREE	450647.28	0873746.65	1A	662		57	54	37	1540		438L	18
TREE	450646.90	0873741.31	1A	665		60	57	40	1816		171L	12
TREE	450650.15	0873734.58	1A	687		82	79	62	1875		411R	33
TREE	450646.42	0873736.06	1A	670		65	62	45	2096		86R	9
TREE	450645.32	0873732.74	1A	667		62	59	42	2335		196R	-1
TREE	450641.55	0873738.36	1A	668		63	60	43	2366		358L	-1
ANTENNA	450626.58	0873727.47	1B	695		90	87	70	4029		739L	-23
ANTENNA ON BUILDING	450629.46	0873659.36	1B	735		130	127	110	5106		990R	-14

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AIRPORT ELEVATION 625

ARP 450736.133N 0873818.371W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
OL ON GLIDE SLOPE	450734.05	0873839.66	1A	661		36	264	51	1541
TREE	450738.03	0873846.93	1A	686		61	278	3	2057
BUSH	450714.77	0873816.59	1A	616		-9	179	19	2167
TREE	450750.27	0873845.38	1A	681		56	309	10	2408
TREE	450759.80	0873821.85	1A	671		46	356	46	2410
TREE	450725.60	0873851.42	1A	658		33	248	28	2599
TREE	450723.58	0873855.02	1A	674		49	246	53	2919
TREE	450759.58	0873752.47	1A	662		37	40	44	3015
TREE	450705.28	0873805.59	1A	639		14	166	21	3256
TREE	450705.12	0873838.35	1A	671		46	207	13	3452
TREE	450701.68	0873842.16	1A	677		52	208	45	3884
TREE	450712.87	0873903.22	1A	685		60	236	28	3987
POLE	450701.27	0873746.78	1A	632		7	150	1	4195
OL ON WATER TANK	450755.52	0873725.07	1B	735		110	65	30	4296
TREE	450821.97	0873801.37	1A	651		26	17	24	4800
TREE	450650.40	0873755.69	1A	665		40	163	21	4909
TREE	450650.73	0873753.03	1A	667		42	161	8	4944
TREE	450654.54	0873738.79	1A	656		31	148	44	5080
TREE	450647.59	0873750.49	1A	676		51	160	34	5308
ANTENNA	450600.31	0873800.10	1B	764		139	175	0	9793
OL ON MAST	450601.74	0873729.90	1A	896	309	271	162	43	10172
OL ON RADIO MAST	450626.18	0873623.33	2C	770		145	133	21	10875



TOUCHDOWN ZONE RUNWAY ELEVATION	
3	624
21	625
14	621
32	608

MENOMINEE - MARINETTE TWIN COUNTY AIRPORT
 MENOMINEE, MICHIGAN
 (NOT TO SCALE)