

# OBSTRUCTION DATA SHEET

ODS 781  
MARQUETTE COUNTY AIRPORT  
MARQUETTE, MICHIGAN

DIGITIZED FROM

OC 781  
SURVEYED AUGUST 1990  
8TH 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:

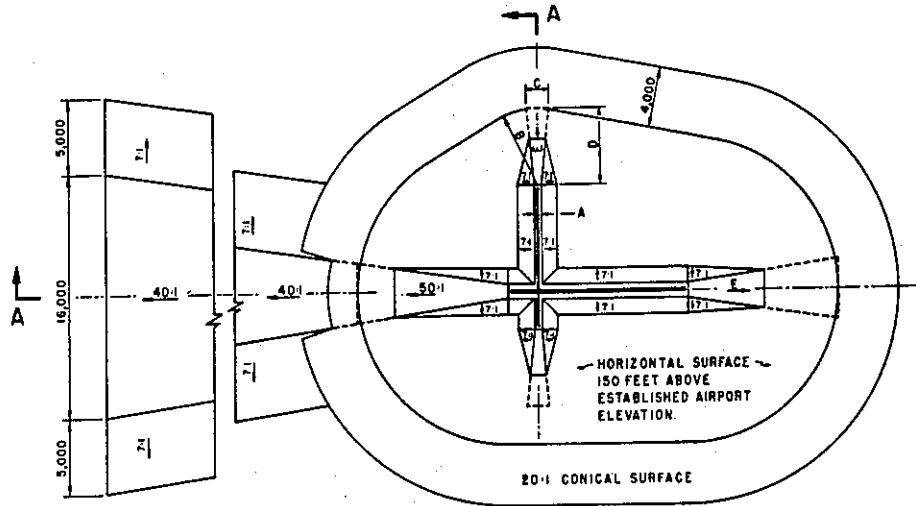
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the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

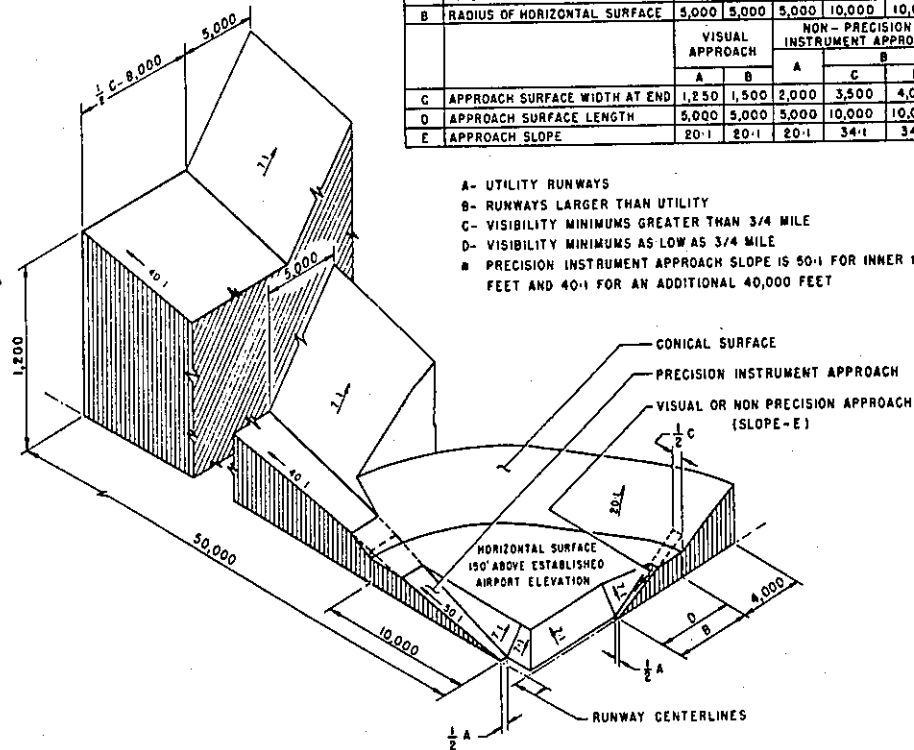
A(V) ..... Utility runway - visual approach only  
 A(NP) .... Utility runway - nonprecision instrument approach  
 B(V) ..... Nonutility runway - visual approach only  
 C ..... Nonutility runway - nonprecision instrument approach with  
 visibility minimums greater than 3/4 mile  
 D ..... Nonutility 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	B	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	B	C	D
G	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
O	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

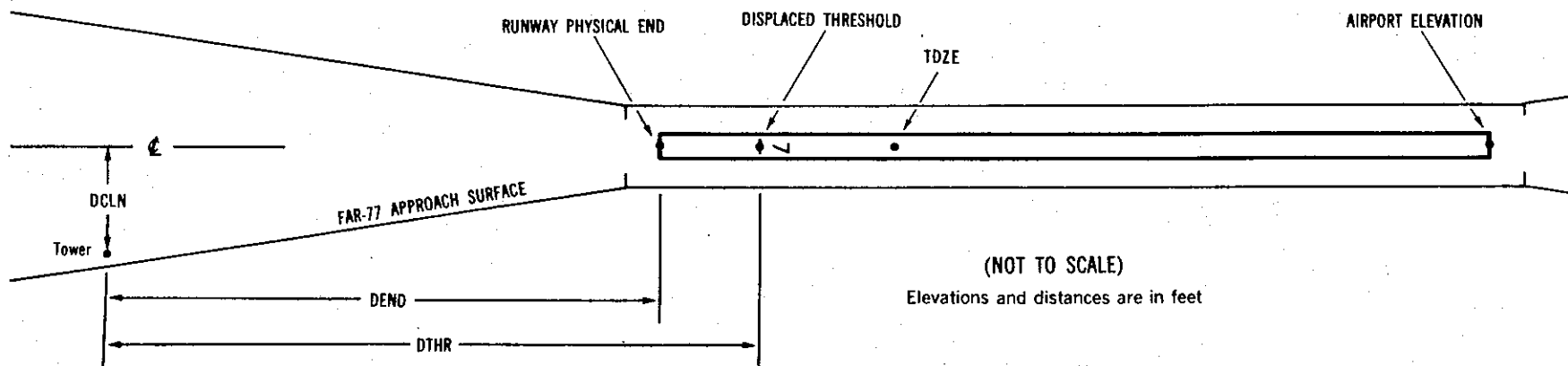
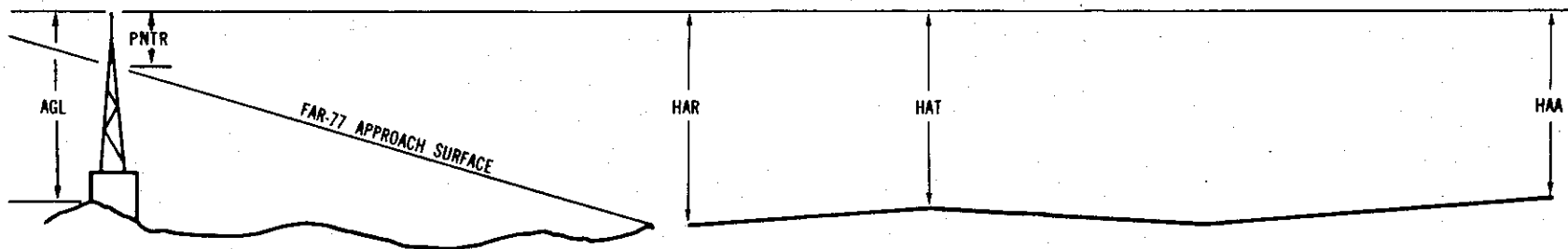
# ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X <sup>1</sup>	X <sup>2</sup>	XXXX/XXXX <sup>3</sup>	XXXXXX.XXX <sup>4</sup>	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

\*\*\*\*\*



(NOT TO SCALE)  
Elevations and distances are in feet

## 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).

OC0781

AIRPORT ELEVATION 1419

1 A(V) 1412/1419 463149.972N 0873335.649W 1925219

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
POST	463146.75	0873335.31	1A	1414		2	-5	-5	313		96R	-4
GROUND	463144.76	0873339.70	1A	1431		19	12	12	577		159L	1
BUSH	463140.84	0873341.63	1A	1456		44	37	37	995		202L	4
POLE	463140.00	0873337.31	1A	1447		35	28	28	1011		112R	-6
TREE	463129.69	0873341.34	1A	1493		81	74	74	2091		70R	-14

19 A(V) 1419/1419 463218.839N 0873326.089W 0125226

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	463224.51	0873325.45	1A	1437		18	18	18	570		85R	-1
BUSH	463225.84	0873325.77	1A	1452		33	33	33	697		136R	8
TREE	463226.32	0873322.66	1A	1455		36	36	36	792		65L	6
TREE	463227.93	0873322.46	1A	1467		48	48	48	954		42L	10
BUSH	463254.57	0873321.34	1B	1580		161	161	161	3603		483R	-9
TREE	463256.00	0873317.63	1A	1586		167	167	167	3802		262R	-13

OC0781

AIRPORT ELEVATION 1419

8 PIR 1403/1406 463154.642N 0873431.804W 2565119

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	463206.23	0873348.67	1A	1444		41	38	25	-3204		457L	39
GROUND	463200.97	0873409.18	1A	1404		1	-2	-15	-1686		264L	1
ANTENNA ON OL GLIDE SLOPE	463200.88	0873418.21	1A	1449		46	43	30	-1069		400L	47
TREE	463157.35	0873455.46	1A	1435		32	29	16	1548		643L	5
POLE	463148.63	0873454.64	1A	1420		17	14	1	1694		230R	-13
TREE	463145.14	0873455.85	1A	1446		43	40	27	1856		555R	10
TREE	463151.83	0873458.35	1A	1427		24	21	8	1872		145L	-9
TREE	463145.26	0873500.70	1A	1447		44	41	28	2184		466R	4
OL ON VOR/DME	463143.57	0873500.75	1A	1459		56	53	40	2226		631R	15
TREE	463144.35	0873507.24	1A	1468		65	62	49	2650		452R	16
TREE	463144.03	0873515.58	1A	1475		72	69	56	3225		351R	11
TREE	463148.92	0873521.72	1A	1460		57	54	41	3531		229L	-10
TREE	463124.00	0873617.12	1A	1546		143	140	127	7877		1347R	-11

26 C 1418/1418 463209.221N 08733 1.278W 0765224

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ANTENNA ON OL GLIDE SLOPE	463200.88	0873418.21	1A	1449		31	31	30	-5430		400R	47
GROUND	463200.97	0873409.18	1A	1404		-14	-14	-15	-4813		264R	1
BUSH	463206.23	0873348.67	1A	1444		26	26	25	-3295		457R	39
BUSH	463216.72	0873250.68	1A	1447		29	29	28	894		572R	9
TREE	463207.69	0873244.75	1A	1448		30	30	29	1090		414L	4
TREE	463218.45	0873245.32	1A	1473		55	55	54	1299		657R	23
BUSH	463216.52	0873243.96	1A	1455		37	37	36	1347		445R	3
TREE	463207.03	0873240.36	1A	1453		35	35	34	1374		549L	1
TREE	463218.83	0873241.56	1A	1471		53	53	52	1564		634R	13
TREE	463218.80	0873239.37	1A	1468		50	50	49	1712		597R	6
BUSH	463212.35	0873226.55	1A	1481		63	63	62	2437		242L	-3
TREE	463214.73	0873223.43	1A	1490		72	72	71	2703		57L	-2



OC0781

AIRPORT ELEVATION 1419

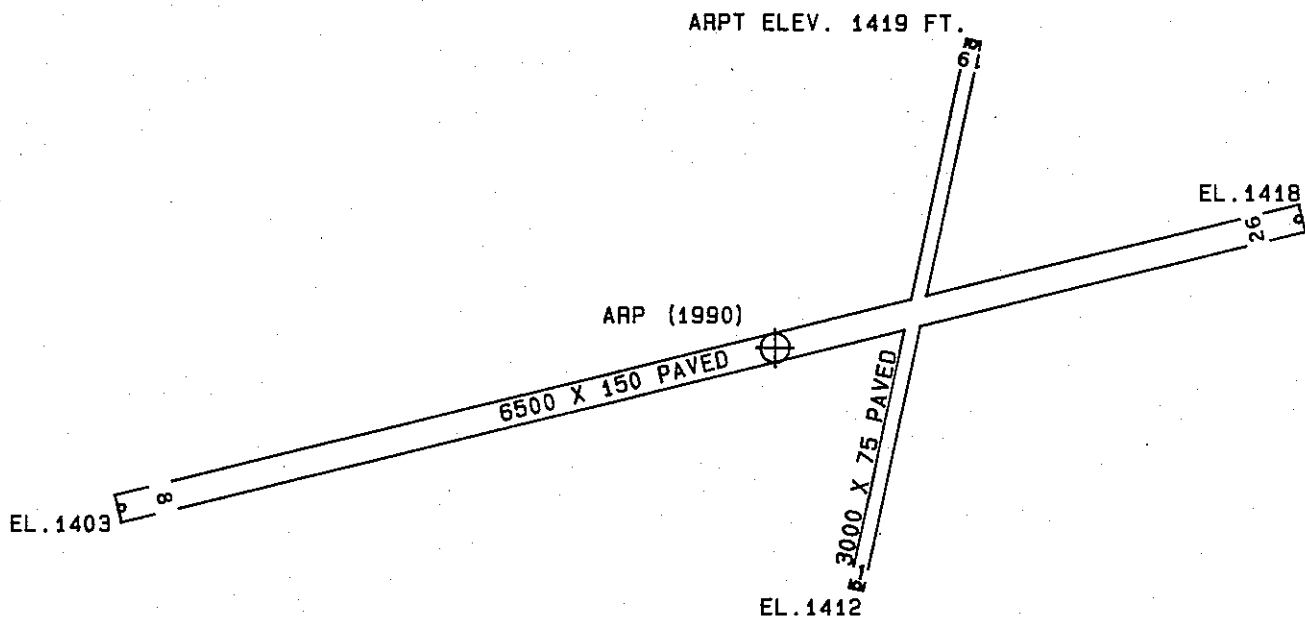
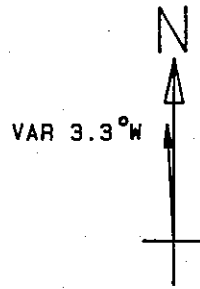
ARP 463202.714N 0873341.593W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
OL ON LIGHTED WINDSOCK	463159.05	0873326.81	1A	1437		18	113 4	1098
OL POLE	463205.48	0873400.01	1A	1486		67	285 36	1318
ROD ON OL DF ANTENNA	463157.63	0873323.44	1A	1459		40	115 22	1369
OL ON POLE	463205.80	0873402.68	1A	1498		79	285 16	1507
HANGAR	463154.30	0873323.69	1A	1453		34	127 33	1514
TREE	463151.66	0873357.17	1A	1496		77	227 31	1562
GROUND	463146.74	0873328.88	1A	1465		46	154 31	1846
BUSH	463221.16	0873328.20	1A	1434		15	29 55	2090
ROD ON OL AIRPORT BEACON	463141.48	0873347.36	1A	1493		74	193 55	2189
TREE	463151.21	0873408.32	1A	1467		48	241 21	2202
TREE	463141.10	0873335.34	1A	1464		45	172 0	2233
BUSH	463140.68	0873343.64	1A	1473		54	186 58	2236
TREE	463224.35	0873330.22	1A	1479		60	23 15	2331
ANTENNA ON OL RADAR DOME	463153.67	0873307.32	1A	1498		79	114 13	2566
ANT ON OL MICROWAVE MAST	463144.46	0873313.45	1B	1538		119	136 32	2701
BUSH	463225.02	0873319.92	1A	1463		44	37 8	2721
TREE	463149.35	0873420.20	1A	1473		54	246 40	3020
TREE	463204.61	0873426.26	1A	1460		41	276 50	3129
FENCE	463204.35	0873254.71	1A	1423		4	90 24	3282
TREE	463201.28	0873254.01	1A	1468		49	95 48	3330
TREE	463148.03	0873428.60	1A	1455		36	248 57	3608
OL ON POLE	463218.92	0873252.50	1A	1519		100	67 44	3805
OL ON POLE	463218.71	0873250.23	1A	1515		96	69 1	3940
POLE	463205.49	0873243.64	1A	1443		24	89 20	4062
TREE	463202.05	0873441.01	1A	1467		48	272 22	4155
TREE	463201.02	0873240.72	1A	1495		76	95 36	4260
TREE	463219.19	0873245.17	1A	1512		93	70 22	4283
TREE	463242.96	0873406.47	1B	1569		150	340 12	4433
TREE	463140.96	0873445.08	1A	1479		60	246 54	4956
TREE	463200.23	0873453.42	1A	1459		40	270 27	5028
TREE	463244.79	0873255.35	1B	1577		158	40 28	5350
TREE	463228.26	0873449.34	1B	1569		150	301 58	5397
TREE	463256.84	0873346.16	1B	1665		246	359 58	5493

AIRPORT ELEVATION 1419

ARP 463202.714N 0873341.593W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
ANTENNA ON OL WATER TANK	463135.31	0873231.64	1B	1565		146	122 52	5624
TREE	463253.63	0873303.55	1B	1604		185	30 34	5803
TREE	463256.39	0873411.57	1B	1668		249	342 14	5828
TREE	463250.04	0873236.75	1B	1612		193	46 41	6598
TREE	463246.42	0873222.71	1B	1599		180	54 32	7072
TREE	463300.57	0873441.76	1B	1667		248	327 39	7214
TREE	463257.70	0873504.62	1B	1698		279	317 8	8045
TREE	463100.24	0873453.87	1B	1577		158	221 55	8099
TREE	463300.99	0873218.44	1B	1645		226	47 51	8285
TREE	463056.48	0873523.83	1B	1621		202	230 7	9805
TREE	463307.75	0873544.39	1B	1680		261	310 49	10821
TREE	463304.53	0873557.49	1B	1661		242	306 42	11379
ANTENNA ON OL ANTENNA	463211.05	0873045.05	1A	1570	245	151	89 22	12372
ANTENNA ON OL MICROWAVE TR	463413.83	0873356.56	2A	1769	212	350	358 48	13324



TOUCHDOWN ZONE RUNWAY ELEVATION	
1	1419
19	1419
8	1406
26	1418

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MARQUETTE, MICHIGAN  
(NOT TO SCALE)