

OBSTRUCTION DATA SHEET

ODS 648
TRI - CITY INTERNATIONAL AIRPORT
SAGINAW, MICHIGAN

DIGITIZED FROM

OC 648
SURVEYED AUGUST 1991
9TH 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:

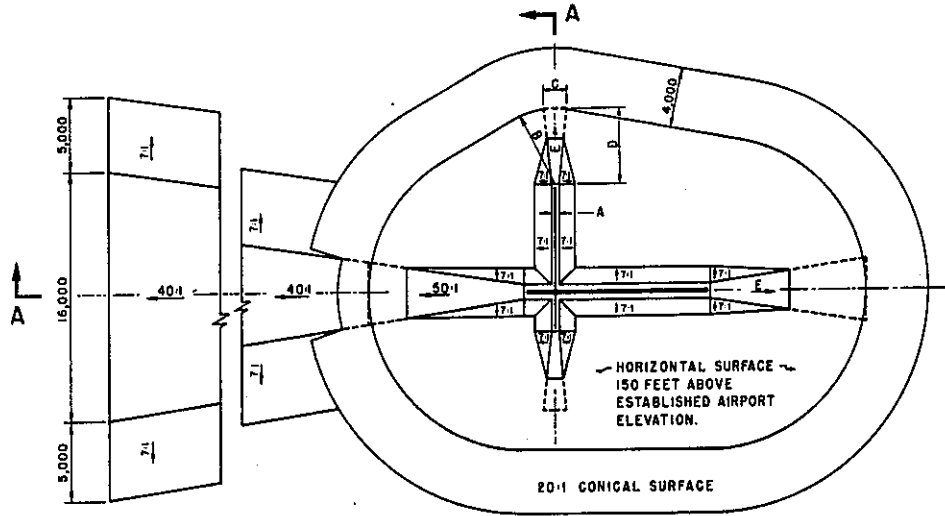
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the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

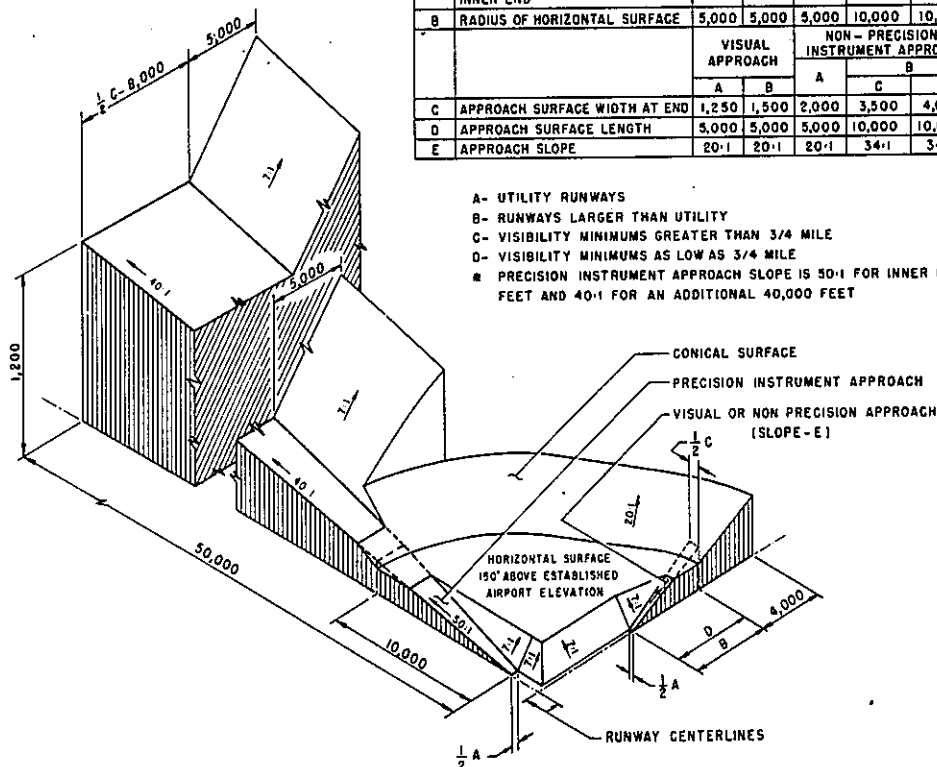
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

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	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

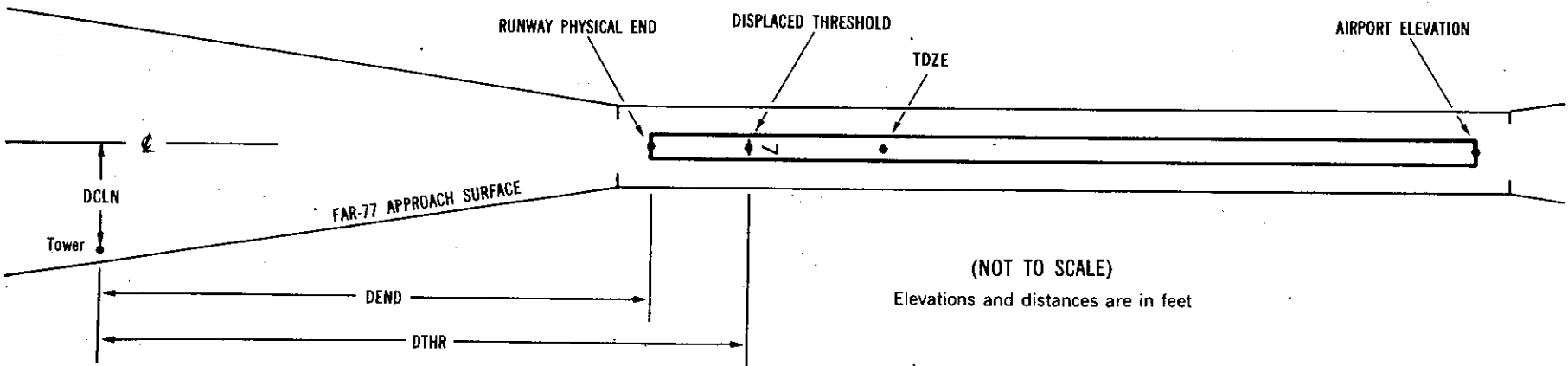
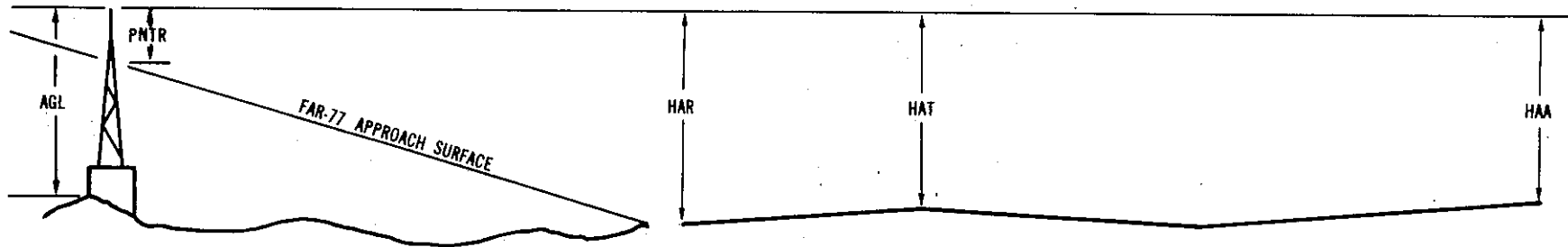
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

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

- 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).

OC0648

AIRPORT ELEVATION 668

5 PIR 666/666 433136.443N 0840521.378W 2253636

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	433230.43	0840400.32	1A	654		-12	-12	-14	-8091		270R	4
OL ON GLIDE SLOPE	433222.03	0840409.31	1A	681		15	15	13	-7023		415R	27
OL ON LIGHTED WINDSOCK	433221.63	0840412.97	1A	659		-7	-7	-9	-6802		255R	5
OL ON GLIDE SLOPE	433142.25	0840505.46	1A	699		33	33	31	-1249		400R	33
OL ON LIGHTED WINDSOCK	433145.09	0840514.18	1A	673		7	7	5	-991		255L	7
ANTENNA ON BUILDING	433128.11	0840528.02	1A	683		17	17	15	940		261R	2
OL ON LOCALIZER	433129.91	0840530.55	1A	676		10	10	8	946		OR	-5
ROAD (N)	433124.92	0840537.60	1A	687		21	21	19	1670		3L	-8
TREE	433128.31	0840546.90	1A	697		31	31	29	1920		727L	-3

23 PIR 650/661 433231.717N 08404 3.751W 0453730

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	433145.09	0840514.18	1A	673		23	12	5	-7010		255R	7
OL ON GLIDE SLOPE	433142.25	0840505.46	1A	699		49	38	31	-6752		400L	33
OL ON LIGHTED WINDSOCK	433221.63	0840412.97	1A	659		9	-2	-9	-1200		255L	5
OL ON GLIDE SLOPE	433222.03	0840409.31	1A	681		31	20	13	-979		415L	27
BUSH	433230.43	0840400.32	1A	654		4	-7	-14	89		270L	4
ANTENNA ON BUILDING	433240.80	0840356.49	1A	660		10	-1	-8	1026		283R	-7
RADAR REFLECTOR	433238.79	0840353.65	1A	655		5	-6	-13	1033		8L	-12
TREE	433252.68	0840349.90	1A	676		26	15	8	2213		803R	-14
TREE	433259.04	0840302.70	1A	712		62	51	44	5149		1167L	-37
TREE	433317.15	0840319.56	1A	717		67	56	49	5543		1012R	-40
TRANSMISSION TOWER	433321.19	0840242.18	1A	753		103	92	85	7797		620L	-49

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AIRPORT ELEVATION 668

14 C 668/668 433213.939N 0840522.453W 3153633

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	433134.08	0840433.68	1A	668		0	0	0	-5398		255R	6
OL ON LIGHTED WINDSOCK	433208.64	0840510.49	1A	675		7	7	7	-1000		255L	7
ROAD (N)	433223.09	0840534.99	1A	682		14	14	14	1308		12R	-19
TREE	433227.52	0840541.77	1A	700		32	32	32	1978		55R	-20
TREE	433235.07	0840603.19	1A	767		99	99	99	3629		647R	-2
TREE	433242.96	0840601.16	1A	759		91	91	91	4095		19L	-24

32 C 660/665 433128.769N 0840421.690W 1353715

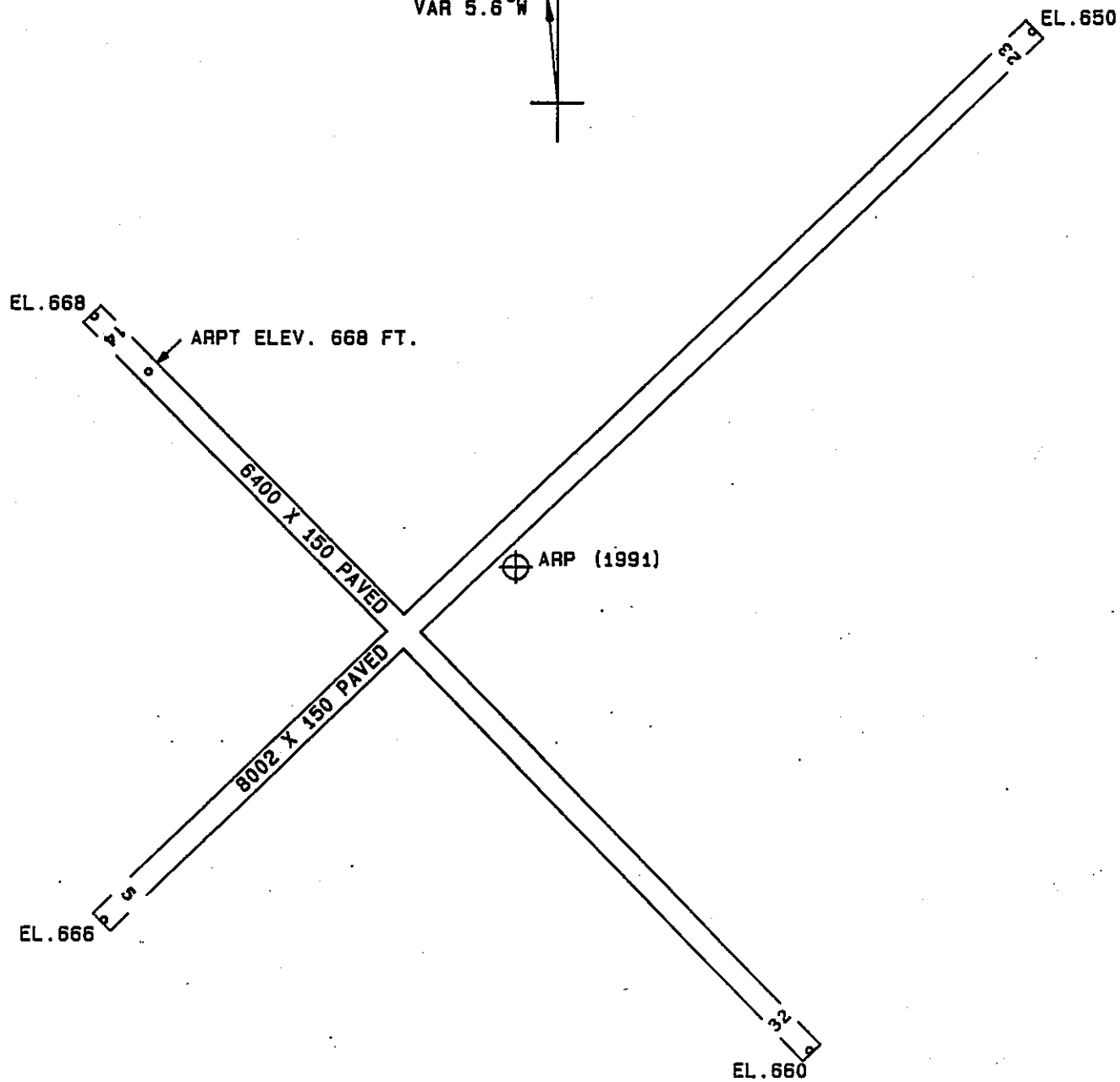
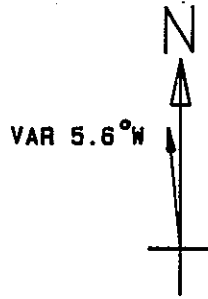
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	433208.64	0840510.49	1A	675		15	10	7	-5400		255R	7
OL ON LIGHTED WINDSOCK	433134.08	0840433.68	1A	668		8	3	0	-1002		255L	6
ROAD (N)	433120.99	0840411.27	1A	666		6	1	-2	1100		2L	-20
TREE	433118.75	0840413.49	1A	675		15	10	7	1147		277L	-13

OC0648

AIRPORT ELEVATION 668

ARP 433158.426N 0840446.791W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
OL VORTAC	433153.82	0840438.39	1A	698		30	132 35	775
OL ON LIGHTED WINDSOCK	433204.77	0840456.41	1A	692		24	317 48	957
ANEMOMETER	433208.93	0840455.77	1A	685		17	333 43	1252
OL ANTENNA	433215.10	0840456.48	1A	734		66	342 41	1833
FLOODLIGHT	433156.17	0840514.24	1A	708		40	269 9	2035
FLOODLIGHT	433153.08	0840514.12	1A	709		41	260 33	2085
TREE	433220.70	0840437.47	1A	726		58	22 32	2358
ANTENNA ON ATCT	433135.39	0840456.48	1A	741		73	202 37	2440
TREE	433221.93	0840431.83	1A	704		36	30 27	2622
FLOODLIGHT	433202.40	0840522.72	1A	711		43	284 15	2678
ANTENNA ON HANGAR	433148.08	0840522.20	1A	729		61	253 43	2812
OL AIRPORT BEACON	433154.61	0840524.69	1A	723		55	267 44	2818
TREE	433213.30	0840413.67	1A	704		36	63 54	2867
GROUND	433141.27	0840525.22	1A	669		1	244 4	3321
TREE	433219.39	0840406.55	1A	712		44	59 59	3646
TREE	433226.86	0840530.74	1A	691		23	317 15	4332
POLE	433122.22	0840526.11	1A	698		30	223 55	4673
TREE	433240.73	0840413.22	1A	726		58	35 36	4946
TREE	433233.84	0840537.91	1A	721		53	319 12	5200
BUILDING	433130.49	0840546.06	1A	692		24	242 40	5203
TREE	433129.04	0840552.57	1A	725		57	244 3	5687
TREE	433244.87	0840358.91	1A	669		1	42 28	5878



TOUCHDOWN ZONE RUNWAY ELEVATION	
5	666
23	661
14	668
32	665

TRI - CITY INTERNATIONAL AIRPORT
 SAGINAW, MICHIGAN
 (NOT TO SCALE)