OBSTRUCTION DATA SHEET

ODS 161
FRESNO - CHANDLER DOWNTOWN AIRPORT
FRESNO, CALIFORNIA

DIGITIZED FROM

OC 161
SURVEYED JANUARY 1990
7TH EDITION

PREPARED AND DISTRIBUTED BY
THE NATIONAL OCEAN SERVICE
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FOR THE FEDERAL AVIATION ADMINISTRATION

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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).

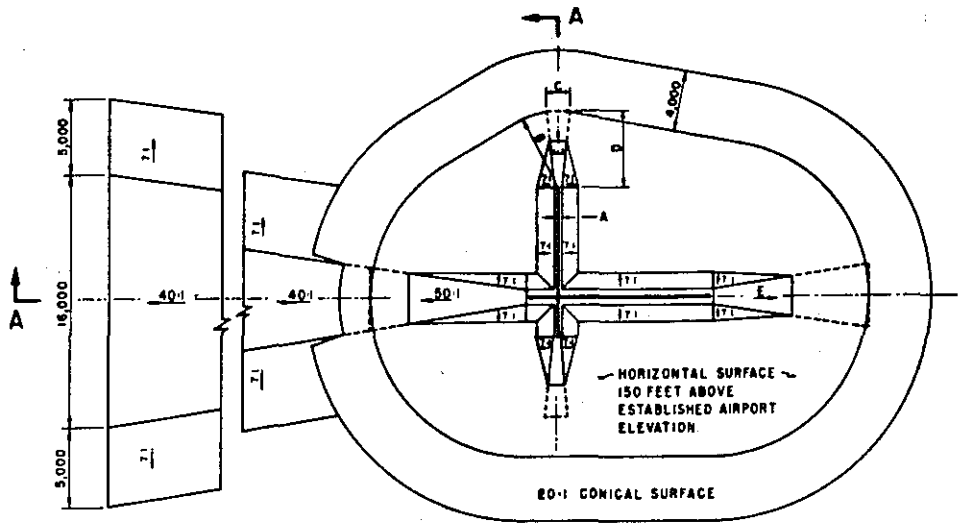
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

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)

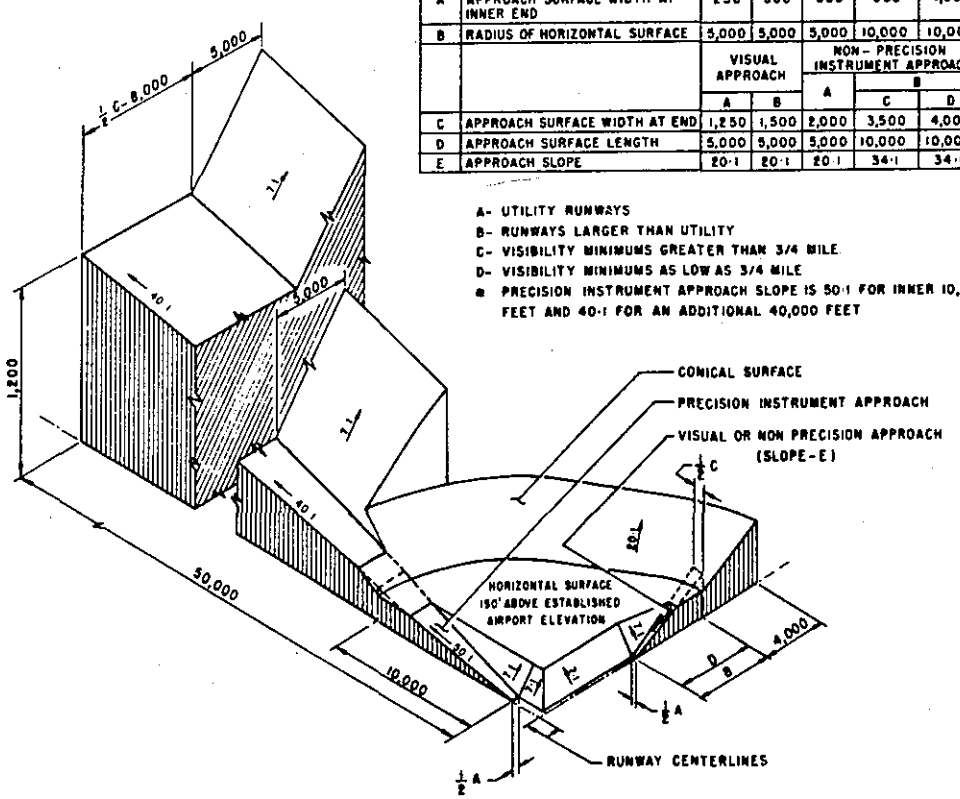
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

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
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
				A	B		
		A	B		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] XXXXXXX.XXX[4] XXXXXXX[5] XXXX/XXXX[6] XXXXXX.XXX[7] XXXXXXX.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]
XXXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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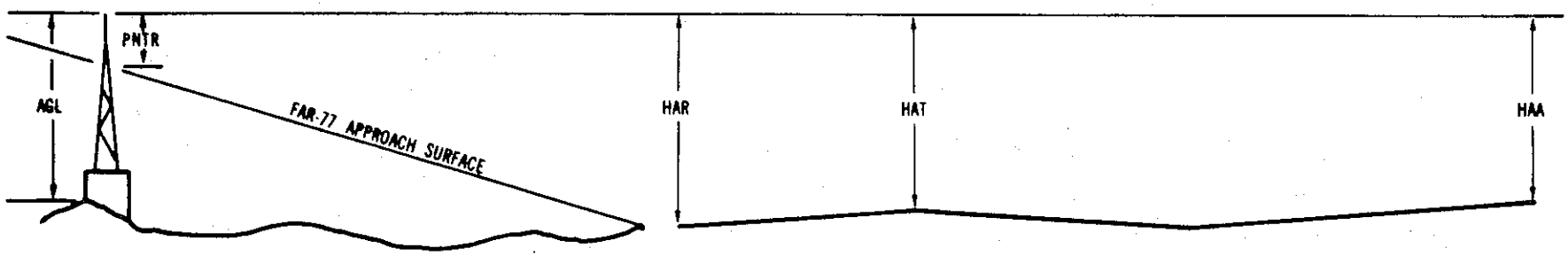

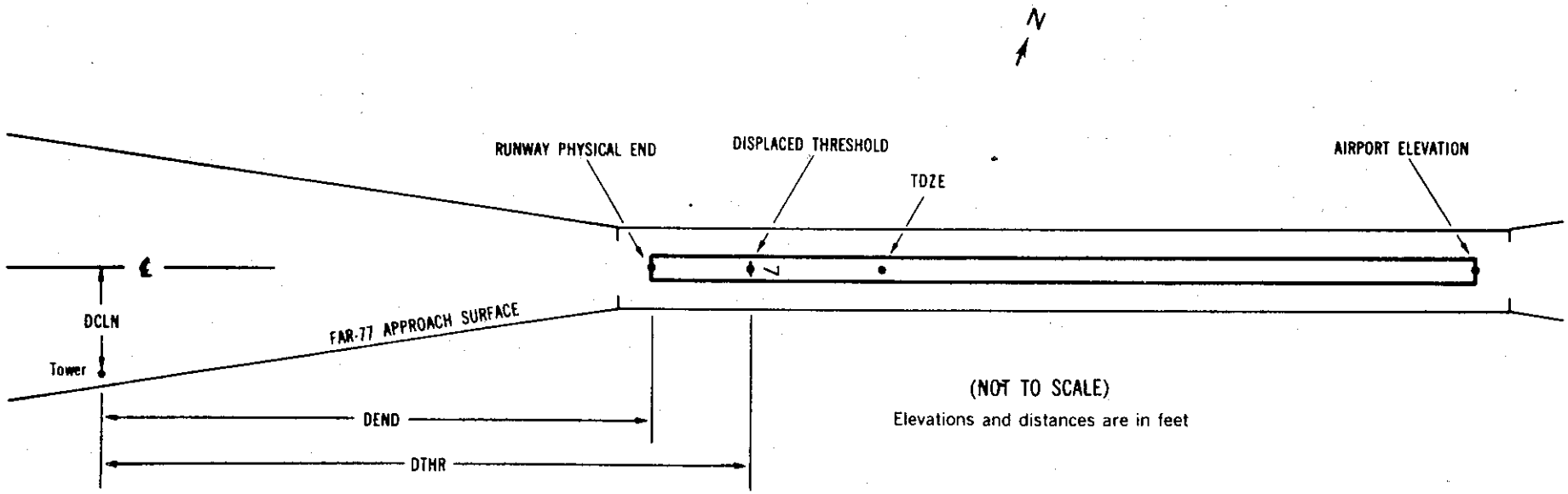

(NOT TO SCALE)

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 ±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).

OC0161

AIRPORT ELEVATION 278

12L C 277/ 364406.041N 1194921.047W 3053952 277/278 364404.939N 1194919.139W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	364409.03	1194921.39	1A	291		14	13	13	199	390	230L	14
STACK ON BUILDING	364410.11	1194922.43	1A	303		26	25	25	331	523	269L	22
ROAD (N)	364409.05	1194926.98	1A	291		14	13	13	569	761	35R	3
OL LIGHT STANDARD	364408.65	1194931.38	1A	295		18	17	17	837	1028	276R	-1
POLE	364415.22	1194931.98	1A	315		38	37	37	1265	1456	235L	7
TREE	364416.93	1194932.40	1A	323		46	45	45	1393	1584	356L	11

30R C 278/ 364348.710N 1194851.046W 1254010 278/278 364349.822N 1194852.972W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	364409.03	1194921.39	1A	291		13	13	13	-3205	-3012	230R	14
BUSH	364343.51	1194848.30	1A	294		16	16	16	488	681	297L	8
OL LIGHT STANDARD	364347.22	1194843.70	1A	308		30	30	30	574	767	226R	19
TREE	364347.52	1194842.11	1A	320		42	42	42	661	854	327R	28
LIGHT STANDARD	364342.22	1194843.78	1A	310		32	32	32	863	1056	188L	12
TREE	364342.94	1194842.33	1A	314		36	36	36	917	1110	60L	15
TREE	364339.22	1194842.67	1A	340		62	62	62	1114	1307	382L	35
OL ON POLE	364343.50	1194836.71	1A	345		67	67	67	1256	1449	253R	36
TREE	364338.59	1194834.72	1A	357		79	79	79	1677	1870	57L	36
TREE	364335.93	1194836.26	1A	345		67	67	67	1732	1925	347L	22
TREE	364339.28	1194832.18	1A	365		87	87	87	1804	1997	121R	40
TREE	364339.33	1194826.93	1A	368		90	90	90	2148	2341	375R	33
TREE	364334.91	1194826.94	1A	351		73	73	73	2408	2601	11R	8
TREE	364338.19	1194822.05	1A	365		87	87	87	2539	2732	512R	18
TREE	364336.64	1194823.23	1A	367		89	89	89	2551	2744	329R	20
TREE	364335.53	1194821.11	1A	365		87	87	87	2757	2950	339R	12

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AIRPORT ELEVATION 278

12R C 276/ 364405.201N 1194925.913W 3053953 276/277 364403.873N 1194923.614W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	364343.84	1194853.54	1A	292		16	15	14	-3400	-3170	218R	15
FLOODLIGHT POLE	364346.95	1194859.74	1A	309		33	32	31	-2807	-2576	257R	32
ROAD (N)	364409.05	1194926.98	1A	291		15	14	13	297	527	265L	12
ROAD (N)	364405.25	1194931.87	1A	289		13	12	11	397	628	279R	7
OL LIGHT STANDARD	364408.65	1194931.38	1A	295		19	18	17	565	795	24L	8
TREE	364408.69	1194934.29	1A	301		25	24	23	760	990	111R	9
POLE	364408.75	1194937.77	1A	313		37	36	35	993	1224	271R	14
TREE	364413.52	1194946.83	1A	349		73	72	71	1874	2105	309R	24

30L C 277/ 364346.741N 1194853.960W 1254012 277/277 364348.467N 1194856.946W

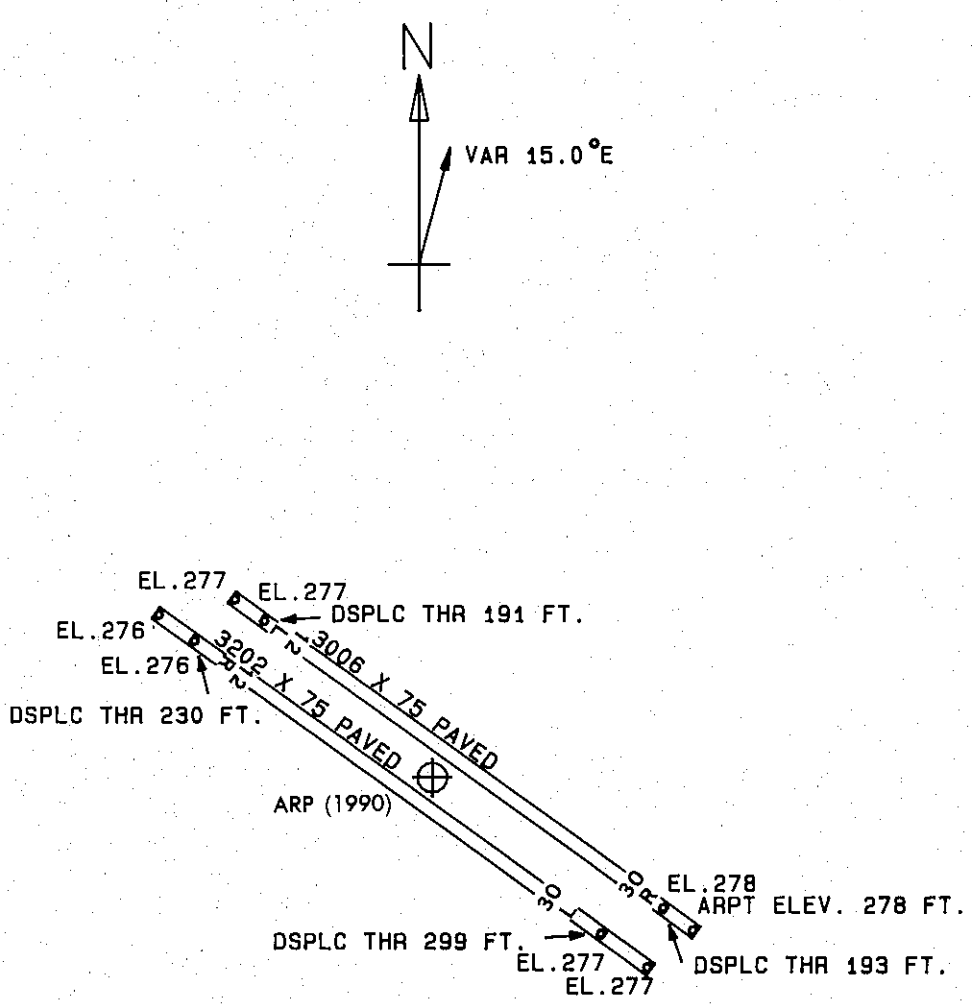
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
FLOODLIGHT POLE	364346.95	1194859.74	1A	309		32	32	31	-395	-96	257L	32
ROAD (N)	364343.84	1194853.54	1A	292		15	15	14	199	498	218L	15
TREE	364342.13	1194850.06	1A	325		48	48	47	530	829	193L	38
BUSH	364343.51	1194848.30	1A	294		17	17	16	565	864	3R	6
POLE	364341.03	1194849.53	1A	318		41	41	40	630	929	259L	28
LIGHT STANDARD	364342.22	1194843.78	1A	310		33	33	32	940	1239	112R	11
TREE	364342.94	1194842.33	1A	314		37	37	36	994	1293	240R	14
TREE	364339.70	1194844.27	1A	338		61	61	60	1056	1355	118L	36
TREE	364339.22	1194842.67	1A	340		63	63	62	1191	1490	82L	34
TREE	364338.59	1194834.72	1A	357		80	80	79	1753	2052	243R	34
TREE	364335.93	1194836.26	1A	345		68	68	67	1808	2108	47L	21
TREE	364339.28	1194832.18	1A	365		88	88	87	1880	2180	421R	39
TREE	364328.92	1194835.31	1A	369		92	92	91	2284	2584	579L	31
TREE	364334.91	1194826.94	1A	351		74	74	73	2485	2784	311R	7
TREE	364336.64	1194823.23	1A	367		90	90	89	2628	2927	629R	19
TREE	364335.53	1194821.11	1A	365		88	88	87	2833	3132	639R	11

OC0161

AIRPORT ELEVATION 278

ARP 364356.651N 1194908.052W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
ANT & APBN ON OL BUILDING	364354.05	1194918.49	1A	352		74	237 46	889
OL ON LIGHTED WINDSOCK	364405.32	1194911.59	1A	307		29	326 47	923
WINDSOCK ON SIGN	364357.03	1194919.76	1A	299		21	257 17	954
ANTENNA ON HANGAR	364346.55	1194909.77	1A	341		63	172 47	1031
ROD ON OL RTR TOWER	364406.51	1194913.67	1A	316		38	320 21	1097
TREE	364356.77	1194851.98	1A	341		63	74 28	1308
TREE	364343.37	1194856.15	1A	337		59	129 10	1656
OL ON LIGHTED WINDSOCK	364352.31	1194848.18	1A	301		23	90 11	1676
TREE	364409.81	1194920.65	1A	308		30	307 22	1680
OL ON POLE	364342.82	1194854.60	1A	340		62	126 56	1777
ANTENNA	364341.81	1194852.61	1A	312		34	125 3	1957
OL ON POLE	364403.58	1194932.04	1A	313		35	274 45	2075
TREE	364412.68	1194924.35	1A	329		51	305 42	2094
TREE	364350.43	1194841.88	1A	344		66	91 27	2222
TREE	364405.83	1194936.65	1A	310		32	276 45	2506
TREE	364346.75	1194835.91	1A	351		73	95 56	2802
TREE	364408.58	1194940.61	1A	331		53	279 29	2912
TREE	364408.33	1194949.21	1A	378		100	274 25	3552
ROD ON OL RADIO TOWER	364412.81	1194801.71	1A	636	352	358	58 10	5642
ANTENNA ON OL BUILDING	364448.13	1194828.57	1B	431		153	16 41	6118
ANT ON OL TR ON BLDG(SW1)	364416.32	1194738.42	1A	546	256	268	59 45	7563
ANTENNA ON RADIO TOWER	364247.02	1195001.20	1A	470	200	192	196 34	8265
ANT ON OL RADIO TR ON BLDG	364405.68	1194723.48	1A	646	360	368	68 52	8562
TANK	364335.64	1194717.77	1B	422		144	88 18	9226
OL RADIO TOWER ON BUILDING	364406.81	1194709.59	1A	620	330	342	68 54	9698
OL ON RADIO TOWER	364234.11	1195011.75	1A	469	209	191	196 51	9827
OL RADIO TOWER	364428.62	1195112.05	1A	518	239	240	272 46	10598



TOUCHDOWN ZONE RUNWAY	ELEVATION
12L	278
30R	278
12R	277
30L	277

FRESNO - CHANDLER DOWNTOWN AIRPORT

FRESNO, CALIFORNIA

(NOT TO SCALE)