

OBSTRUCTION DATA SHEET

**ODS 5647
A.L.MANGHAM JR. REGIONAL AIRPORT
NACOGDOCHES, TEXAS**

DIGITIZED FROM

**OC 5647
SURVEYED 19 DECEMBER 1992
1ST EDITION**

**HORIZONTAL DATUM NAD83
VERTICAL DATUM NGVD29**



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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 No. 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 the OC depict a representation of objects that existed at the time of the OC field survey.

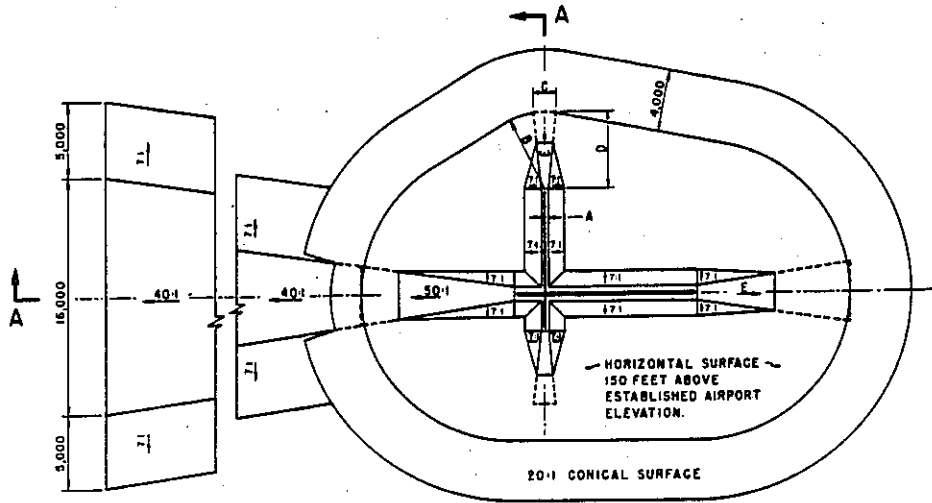
ODS information is arranged as follows:

1. Objects located in an FAR-77 approach or primary and listed with the associated runway (reference runway).
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:

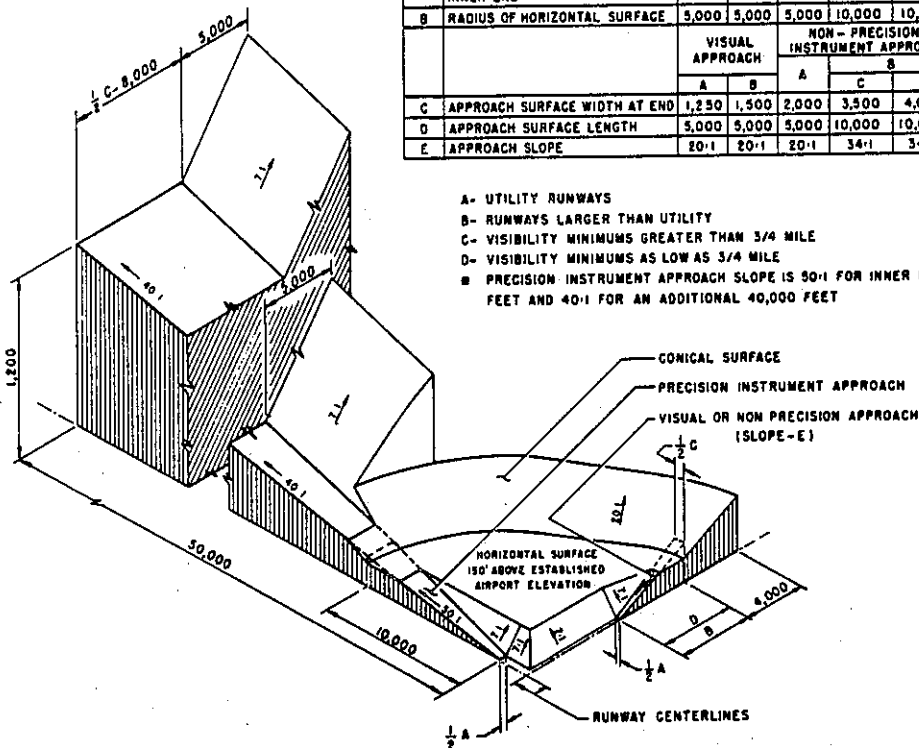
A(V) Utility runway - visual approach only
A(NP) Utility runway - nonprecision instrument approach
B(V) Nonutility runway - visual approach only
C Nonutility runway - nonprecision instrument
 approach with visibility minimums greater than
 3/4 mile
D Nonutility runway- nonprecision instrument approach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



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	300	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		
D	APPROACH SURFACE LENGTH	1,250	1,500	2,000	3,500	4,000	16,000
E	APPROACH SLOPE	50:1	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
- E- 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

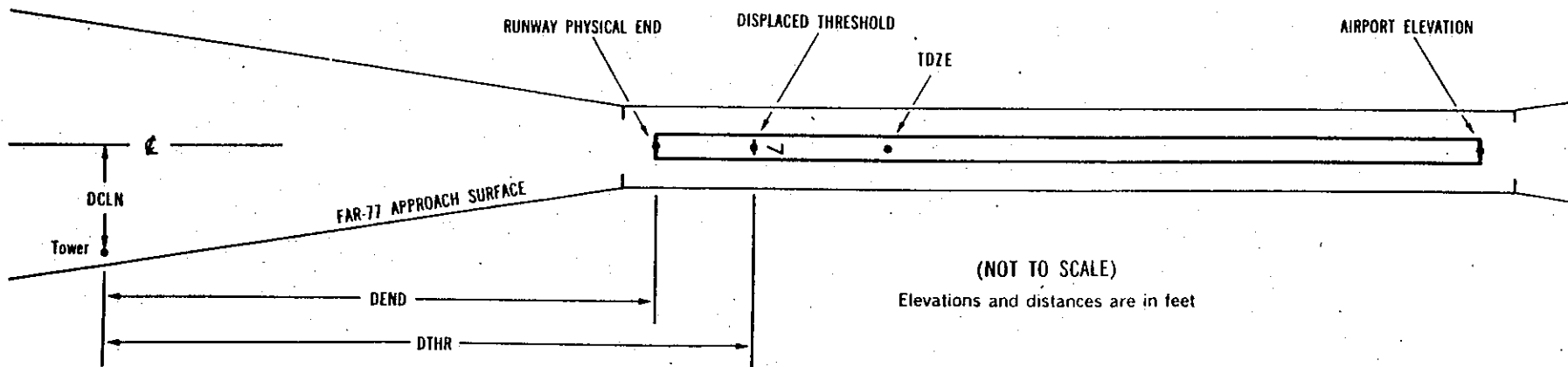
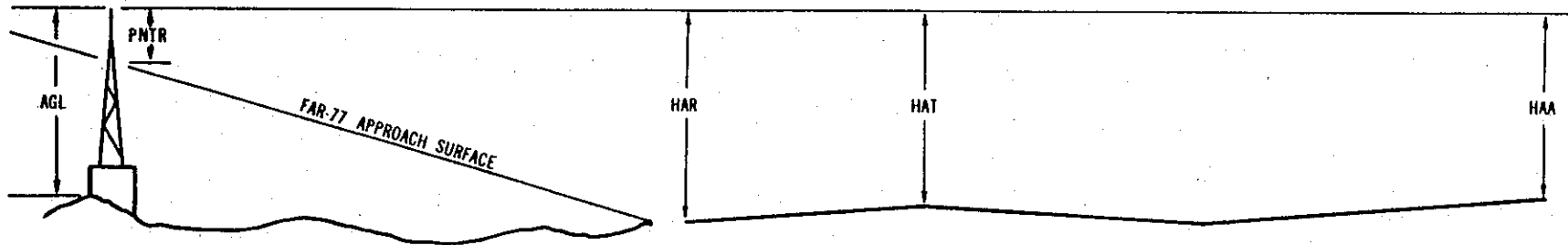
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

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	XXXXXX.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 areas 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 Elevation at approach end of reference runway/touchdown zone elevation
- 4 Latitude and longitude at approach end of reference runway
- 5 Geodetic azimuth of reference runway reckoned from north
- 6 Elevation at reference runway displaced threshold/touchdown zone elevation
- 7 Latitude and longitude at reference runway displaced threshold
- 8 Accuracy codes: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Elevation above mean sea level (MSL) 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). AGL's are provided only for manmade objects appearing on the OC and equal to or greater than 200 feet AGL. AGL accuracy is 10 feet.
- 11 HAA - Height above airport
 HAR - Height above approach end of reference runway
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point nearest to object (perpendicular) to approach end of runway
 DTHR - Distance along reference runway centerline from point nearest to object (perpendicular) to displaced 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 that object is in primary on roll-out side of zero distance point.
- 13 PTNR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

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AIRPORT ELEVATION 355

15 ANP 339/ 354 313458.200 -944240.647 1535111.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	313427.19	-944219.71	1A	391		52	37	36	-3612		245L	36
TREE	313511.94	-944245.67	1A	402		63	48	47	1438		221L	1
TREE	313516.35	-944245.36	1A	438		99	84	83	1827		443L	18

33 AV 355/ 355 313426.135 -944222.261 3335120.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	313427.19	-944219.71	1A	391		36	36	36	2		245R	36
TREE	313422.69	-944223.05	1A	409		54	54	54	282		214L	50
TREE	313423.35	-944217.26	1A	406		51	51	51	444		265R	39
TREE	313420.68	-944216.15	1A	424		69	69	69	728		232R	43
TREE	313419.35	-944215.65	1A	423		68	68	68	868		211R	35
TREE	313415.51	-944211.97	1A	419		64	64	64	1357		326R	6
TREE	313410.97	-944215.96	1A	425		70	70	70	1616		186L	-1

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AIRPORT ELEVATION 355

36 PIR 327/ 343 313415.313 -944238.710 042931.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	313504.51	-944236.88	1A	342		15	-1	-13	-4969		232L	4
TREE	313503.73	-944229.48	1A	368		41	25	13	-4941		413R	30
BUSH	313446.12	-944238.42	1A	356		29	13	1	-3106		219L	13
GROUND	313425.33	-944241.76	1A	344		17	1	-11	-989		342L	10
TREE	313410.04	-944233.31	1A	384		57	41	29	494		508R	52
TREE	313409.97	-944245.57	1A	376		49	33	21	584		550L	42
TREE	313406.32	-944246.23	1A	411		84	68	56	957		578L	69
TREE	313402.75	-944233.17	1A	382		55	39	27	1228		578R	35
TREE	313355.79	-944237.72	1A	390		63	47	35	1960		240R	28
TREE	313353.41	-944248.12	1A	437		110	94	82	2271		639L	69
TREE	313352.77	-944240.85	1A	415		88	72	60	2286		6L	47
TREE	313351.92	-944244.49	1A	442		115	99	87	2396		313L	72
TREE	313351.50	-944247.77	1A	444		117	101	89	2461		593L	72
TREE	313335.50	-944243.36	1A	445		118	102	90	4043		86L	42
TREE	313331.47	-944245.10	1A	431		104	88	76	4461		204L	19
TREE	313327.58	-944242.66	1A	433		106	90	78	4836		37R	14

OC5647

AIRPORT ELEVATION 355

18 SUPLC 337/ 343 313504.653 -944234.182 1842934.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	313425.33	-944241.76	1A	344		7	1	-11	-4013		342R	10
BUSH	313446.12	-944238.42	1A	356		19	13	1	-1896		219R	13
TREE	313503.73	-944229.48	1A	368		31	25	13	-61		413L	30
TREE	313504.51	-944236.88	1A	342		5	-1	-13	-33		232R	4
TREE	313506.30	-944228.34	1A	388		51	45	33	206		491L	51
TREE	313508.74	-944239.46	1A	383		46	40	28	376		487R	41
OL ON LOC	313511.17	-944233.58	1A	355		18	12	0	661		OR	4
OL ON DME	313511.53	-944230.55	1A	364		27	21	9	717		259L	12
TREE	313511.44	-944227.67	1A	434		97	91	79	728		508L	81
TREE	313512.87	-944239.39	1A	399		62	56	44	792		514R	44
TREE	313516.14	-944227.32	1A	443		106	100	88	1204		501L	76
FENCE	313524.34	-944238.08	1A	406		69	63	51	1957		492R	17
TREE	313530.82	-944239.55	1A	438		101	95	83	2600		670R	30
TREE	313534.27	-944227.81	1A	458		121	115	103	3028		315L	38
TREE	313535.58	-944226.97	1A	468		131	125	113	3165		377L	44
TREE	313537.62	-944223.22	1A	483		146	140	128	3396		684L	52
TREE	313539.83	-944233.01	1A	470		133	127	115	3552		177R	34
TREE	313540.74	-944231.16	1A	467		130	124	112	3657		25R	28
TREE	313547.69	-944231.19	1A	470		133	127	115	4357		82R	11

AIRPORT ELEVATION 355

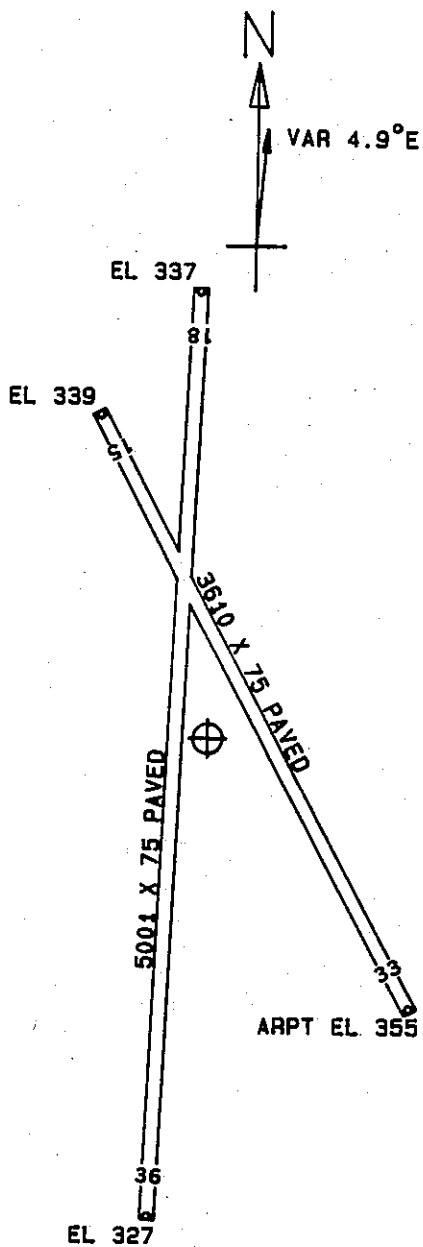
ARP 313440.899 -944234.353

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
TREE	313441.40	-944226.88	1A	400		45	8039	649
TREE	313436.96	-944242.61	1A	404		49	23559	818
TREE	313447.04	-944241.76	1A	402		47	30912	892
TREE	313437.71	-944224.67	1A	415		60	10609	898
OL ON LTD WSK	313449.68	-944229.41	1A	375		20	2049	985
ROD ON OL TWR	313451.40	-944229.02	1A	381		26	1836	1158
TREE	313430.87	-944243.45	1A	419		64	21256	1284
TREE	313429.38	-944220.12	1A	413		58	12829	1695
TREE	313425.01	-944244.72	1A	425		70	20417	1839
TREE	313422.86	-944230.03	1A	415		60	16330	1861
TREE	313423.08	-944225.43	1A	404		49	15154	1960
TREE	313501.37	-944228.45	1A	403		48	857	2131
TREE	313421.54	-944244.18	1A	414		59	19835	2133
TREE	313501.66	-944246.89	1A	374		19	32745	2362
TREE	313419.38	-944246.10	1A	420		65	20008	2401
TREE	313503.47	-944248.11	1A	377		22	32732	2574
TREE	313414.47	-944232.98	1A	397		42	17233	2674
TREE	313415.64	-944244.62	1A	394		39	19417	2703
TREE	313507.30	-944241.28	1A	385		30	34226	2735
TREE	313507.56	-944240.43	1A	401		46	34403	2746
TREE	313418.72	-944213.20	1A	427		72	13552	2894
TREE	313413.32	-944245.87	1A	403		48	19446	2960
TREE	313412.75	-944219.59	1A	408		53	15054	3118
TREE	313409.22	-944229.82	1A	420		65	16806	3225
TREE	313409.67	-944248.88	1A	413		58	19649	3398
TREE	313407.28	-944232.34	1A	392		37	17210	3402
TREE	313514.50	-944242.82	1A	442		87	34255	3475
TREE	313516.50	-944242.20	1A	447		92	34424	3662
TREE	313406.47	-944248.27	1A	417		62	19411	3682
TREE	313519.16	-944243.29	1A	462		107	34347	3944
TREE	313525.06	-944241.84	1A	463		108	34650	4510

AIRPORT ELEVATION 355

ARP 313440.899 -944234.353

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
TREE	313526.62	-944222.93	1A	487		132	710	4725
TREE	313354.00	-944251.57	1A	431		76	19233	4969
TREE	313534.22	-944135.25	1B	544		189	3835	7429
TREE	313543.67	-944113.82	1B	522		167	4246	9423
TRMSN TWR	313611.85	-944334.16	1B	518		163	32543	10549
TREE	313554.67	-944105.06	1B	529		174	4106	10736
ANT ON OL TWR	313458.46	-943959.57	2A	766	441	411	7732	13510



**TOUCHDOWN ZONE
RUNWAY ELEVATION**

15	354
33	355
36	343
18	343

A.L. MANGHAM JR. REGIONAL AIRPORT
 NACOGDOCHES, TEXAS
 (NOT TO SCALE)
 (ALL ELEVATIONS IN FEET)