

**FEDERAL AVIATION ADMINISTRATION**  
**FLIGHT STANDARDS SERVICE**  
**ILS STANDARD INSTRUMENT APPROACH PROCEDURE**

**TITLE 14 CFR PART 97.29**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.  
Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

<u>AIRPORT</u> ELLINGTON	<u>AIRPORT ID</u> KEFD	<u>PROCEDURE NAME</u> ILS Z OR LOC Z RWY 17R	<u>ORIGINAL/AMENDMENT</u> 7	<u>CITY</u> HOUSTON	<u>STATE</u> TX	
<u>AIRPORT ELEVATION</u> 33	<u>TDZE</u> 32	<u>SUPERSEDED</u> ILS OR LOC RWY 17R	<u>ORIGINAL/AMENDMENT</u> 6B	<u>DATED</u> 09/15/2016	<u>MAG VAR</u> 5E	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> I-LPV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 15 AUGUST 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

**TERMINAL ROUTES**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
ETIME INT/EFD 11.00 DME CCW	IAF	ARUXE/EFD 11.00 DME/RADAR					11.00 DME ARC (EFD LR-004)		2000
ARUXE/EFD 11.00 DME/RADAR	IF	TRAPS/EFD 5.83 DME/RADAR					173.84	5.17 (I-LPV)	1700

**MISSED APPROACH**

**MAP:**

ILS: DA  
LOC: IYJIV/1.37 DME FIX

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 700 THEN CLIMBING LEFT TURN TO 3100 ON VUH VOR/DME R-320 TO WATFO INT/VUH 9.33 DME AND HOLD.  
(TACAN AIRCRAFT CLIMB TO 700 THEN CLIMBING LEFT TURN TO 3100 ON EFD TACAN R-136 TO WATFO/EFD 15.98 DME AND HOLD SE, LT, 316.00 INBOUND).

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

- PT      SIDE OF COURSE      OUTBOUND      FT WITHIN      MILES OF (IAF)
- PROFILE STARTS AT ARUXE
- FAC: 173.84      FAF: TRAPS/EFD 5.83 DME/RADAR      DIST FAF TO MAP:      DIST FAF TO THLD: 5.08
- MIN ALT: ARUXE/EFD 11.00 DME/RADAR 2000, TRAPS/EFD 5.83 DME/RADAR 1700, FIJSI/EFD 4.25 DME 1180\*
- DIST TO THLD FROM OM:      MM:      IM:      150 HAT:      GS ANT: 997
- MIN GS INCPT: 1700      GS ALT AT FAF : TRAPS/EFD 5.83 DME/RADAR 1700      OM:      MM:      IM:
- GP ANGLE: 3.00      34:1:      20:1:      TCH: 51.6
- MSA FROM: MHF VOR/DME 3100

**EQUIPMENT REQUIREMENTS NOTES:**

DME REQUIRED.  
RADAR REQUIRED FOR PROCEDURE ENTRY.



**NOTES:**

CHART NOTE: CIRCLING NA WEST OF RWY 17R-35L.  
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: DME FROM EFD TACAN. SIMULTANEOUS RECEPTION OF I-LPV AND EFD DME REQUIRED.  
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 17R.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 17R CATS C/D/E VISIBILITY TO 1 3/8 SM.

**ADDITIONAL FLIGHT DATA:**

CHART CIRCLING ICON.  
CHART EFD R-116 AT ETIME.  
CHART VDP AT 2.01 DME\*  
DISTANCE VDP TO THLD 1.25 NM  
\* LOC ONLY  
CHART FAS OBST: 170 TOWER 293908N/0950942W.  
HOLD SE, LT, 319.82 INBOUND

**MINIMUMS:**

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

**ALTERNATE:** NA ☐ ILS: STANDARD; LOC: STANDARD - CAT E 800-2 1/4

<b>CATEGORY:</b>	<b>A</b>			<b>B</b>			<b>C</b>			<b>D</b>			<b>E</b>		
<b>FINAL TYPE</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>	<b>DA/MDA</b>	<b>VIS</b>	<b>HAT/HAA</b>
S-ILS 17R	232	4000	200	232	4000	200	232	4000	200	232	4000	200	232	4000	200
S-LOC 17R	480	4000	448	480	4000	448	480	5500	448	480	5500	448	480	5500	448
CIRCLING	500	1	467	500	1	467	580	1 1/2	547	640	2	607	700	2 1/4	667

CHANGES - REASONS

1. AMENDED CHART NOTE FROM "CHART NOTE: FOR INOP MALSF, INCREASE S-LOC 17R CAT A VISIBILITY TO RVR 6000, CAT B TO 1 1/2 MILES AND CATS E TO 3 MILES" TO "CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 17R CATS C/D/E VISIBILITY TO 1 3/8 SM" - UPDATED VISCHECK RESULTS.
2. REMOVED "CHART NOTE FIGSI FIX MINIMUMS: FOR INOP MALSF, INCREASE S-LOC RWY 17R CATS A AND B VISIBILTY TO RVR 5500 AND CATS C, D, AND E TO RVR 6000" - REMOVED FIGSI FIX MINIMUMS LINE OF MINIMA.
3. AMENDED MSA CENTER FROM HUB VOR/DME AT 25NM TO MHF VOR/DME AT 25NM - VORMON CANCELLATION PROJECT.
4. AMENDED MISSED APPROACH FROM "CLIMB TO 700 THEN CLIMBING LEFT TURN TO 3100 ON HUB VOR/DME R-129 TO WATFO INT AND HOLD" TO "CLIMB TO 700 THEN CLIMBING LEFT TURN TO 3100 ON VUH VOR/DME R-320 TO WATFO INT/VUH 9.33 DME AND HOLD" - VOR MON CANCELLATION PROJECT. PUBLISHED ALTERNATE IS NOW THE PRIMARY.
5. REMOVED ALT MISSED APPROACH - AN ALTERNATE MISSED WAS NOT REQUESTED FOR THIS PROCEDURE.
6. AMENDED TCH FROM 51.5 TO 51.6 - UPDATED TO MATCH ACTIVE AIRNAV DATA.
7. AMENDED ADDITIONAL FLIGHT DATA INFORMATION FROM "CHART VDP AT 1.94 DME\*" TO CHART VDP AT 2.01 DME\*" - CALCULATED USING UPDATED S-LOC 17R MDA.
8. UPDATED ADDITIONAL FLIGHT DATA INFORMATION FROM "DISTANCE VDP TO THLD 1.16 NM" TO "DISTANCE VDP TO THLD 1.25 NM" - CALCULATED USING UPDATED S-LOC 17R MDA.
9. AMENDED ILS AND LOC ALTERNATE MINIMUMS FROM "ILS: CAT A, B 1100-2, CAT C, D, E 1100-3" AND "LOC: CAT A, B-1100-2, CAT C, D, E 1100-3" TO "ILS: STANDARD, LOC: STANDARD - CAT E 800 -2 1/4" - 8260-19H, 2-4-6, A.
10. ADDED "DME REQUIRED" TO EQUIPMENT REQUIREMENT NOTE - 8260.19H 8-6-8.
11. ADDED "CHART NOTE: DME FROM EFD TACAN. SIMULTANEOUS RECEPTION OF I-LPV AND EFD DME REQUIRED" - 8260.19H, 8-6-9K.
12. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - 8260.19H, 8-6-10T.
13. AMENDED CAT C CIRCLING MDA/HAA FROM 500/467 TO 580/547 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
14. AMENDED CAT D CIRCLING MDA/HAA FROM 600/567 TO 640/607 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
15. AMENDED CAT E CIRCLING MDA/HAA FROM 660/627 TO 700/667 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
16. AMENDED PROCEDURE NAME FROM "ILS OR LOC RWY 17R" TO "ILS Z OR LOC Z RWY 17R" - 8260.3D, 1-6-2B.
17. DELETED "CHART PLANVIEW NOTE: RADAR REQUIRED - REPLACED BY EQUIPMENT REQUIREMENTS NOTES.
18. ADDED "EQUIPMENT REQUIREMENTS NOTES: RADAR REQUIRED FOR PROCEDURE ENTRY" - 8260.19H, 8-6-8.
19. AMENDED S-LOC MDA/HAT FROM "440/408" TO "480/448" AND CATS C/D/E VISIBILITY FROM RVR 5000 TO RVR 5500 - NEW CONTROLLING OBSTACLE IDENTIFIED.
20. AMENDED FAS OBSTACLE FROM 171 MSL TOWER TO 170 MSL TOWER - NEW CONTROLLING OBSTACLE IDENTIFIED.
21. AMENDED MINIMUM CROSSING ALTITUDE AT FIGSI FROM 1120 TO 1180 - PROVIDE STABILIZED DESCENT.
22. REMOVED DISTANCE FAF TO MAP - TIMING TABLE NOT APPROPRIATE, PROCEDURE REQUIRES DME.
23. AMENDED LOC MISSED APPROACH FIX FROM 4.48 NM AFTER TRAPS/EFD 5.83 DME/RADAR OR AT IYJIV/1.37 DME FIX TO IYJIV 1.37 DME FIX - TIMING TABLE NOT APPROPRIATE, PROCEDURE REQUIRES DME.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: HOU APP CON, EFD ATCT, AMGR, ST AV DIR.

FLIGHT CHECKED BY	<i>Digitally signed by</i>	OFFICE	DATE	
THOMAS CONKLIN	DAVID DANNER	FICO	5/22/19	
	May 24, 2019			
DEVELOPED BY	<i>Digitally signed by</i>	OFFICE	DATE	
DAVID DANNER (KELLY CARLSON)	DAVID DANNER	AJV-A421	11/28/2018	
	May 24, 2019			
APPROVED BY	<i>Digitally signed by</i>	OFFICE	DATE	TITLE
MARLON ROBINSON	DAVID DANNER	AJV-A420		MANAGER
	May 24, 2019			

