

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION							ILS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29										Bearings, headings, courses, 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 in feet RVR.						
TERMINAL ROUTES														MISSED APPROACH									
FROM				TO				COURSE AND DISTANCE				ALTITUDE		ILS: DA LOC: 5.55 NM AFTER PYKLA LOM/RADAR									
DLH VORTAC				PYKLA LOM/RADAR				287.71 / 6.79				3300		CLIMB TO 3000 THEN CLIMBING LEFT TURN TO 4500 ON HEADING 320 AND ON DLH VORTAC R-017 TO CHERL INT/DLH 15.00 DME AND HOLD. ALTERNATE MA (DO NOT CHART): CLIMB TO 2700 THEN CLIMBING LEFT TURN TO 3300 DIRECT PYKLA LOM/RADAR AND HOLD. ADDITIONAL FLIGHT DATA: HOLD N, RT, 197.00 INBOUND. CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD W PYKLA LOM/RADAR, RT, 093.26 INBOUND. FAS OBST: 1699 AAO 465057N/0921801W. CHART CIRCLING ICON. CHART: ASR. CHART IN PLANVIEW: (CFBSJ) AT 465054.60N-0922708.08W. CHART PLANVIEW NOTE: ADF OR RADAR REQUIRED.									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)														MAG VAR: 1W EPOCH YEAR: 2020									
2. HOLD W PYKLA LOM, RT, 093.26 INBOUND, 3300 FT. IN LIEU OF PT (IAF)																							
3. FAC: 093.26 FAF: PYKLA LOM/RADAR DIST FAF TO MAP: 5.55 THLD: 5.55																							
4. MIN. ALT: PYKLA LOM 3300																							
5. DIST TO THLD FROM OM: 5.55 MM: - IM: 1059 150 HAT: 1736 100 HAT: 782 GS ANT: 1154																							
6. MIN GS INCPT: 3300 GS ALT AT: _____ OM: 3284 MM: - IM: 1542																							
7. GS ANGLE: 3.00 TCH: 59.0																							
8. MSA FROM: PYKLA LOM 3100																							
MINIMUMS																							
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A			ILS: STANDARD				LOC: STANDARD @									
CATEGORY =====>		A			B			C			D			E									
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA								
S-ILS 09	1628	1800	200	1628	1800	200	1628	1800	200	1628	1800	200	1628	1800	200								
S-LOC 09	1960	2400	532	1960	2400	532	1960	5500	532	1960	5500	532	1960	5500	532								
CIRCLING	1960	1	532	1960	1	532	1960	1 1/2	532	2400	3	972	2400	3	972								
NOTES: SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 9: CAT A, B, C, D, RA 144, @ CAT D, E 1000-3 RVR 1400, HAT 150, DA 1578 MSL. CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 9: CAT A, B, C, D, RA 101, RVR 1200, HAT 100, DA 1528 MSL. (CONTINUED ON PAGE 2)																							
CITY AND STATE DULUTH, MN				ELEVATION: 1428 TDZE: 1428 AIRPORT NAME: DULUTH INTL				FACILITY IDENTIFIER: I-DLH		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: ILS OR LOC RWY 9, AMDT 22B; ILS RWY 9 (SA CAT I), ILS RWY 9 (CAT II)						SUP: AMDT: 22A DATED 07/24/2014							

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES SEE CHANGES	REQUIRED EFFECTIVE DATE ROUTINE	
COORDINATED WITH: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> ATA <input checked="" type="checkbox"/> AAT <input type="checkbox"/> ALPA <input checked="" type="checkbox"/> APA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> NBAA <input checked="" type="checkbox"/> OTHER (specify) <input checked="" type="checkbox"/> </div> <div style="border-bottom: 1px solid black; flex-grow: 1;"> ZMP ARTCC, DLH APP CON, DLH AMGR </div> </div>			
FLIGHT CHECKED BY <i>Digitally signed by</i>			
NAME: PROCESSED IAW FLIGHT INSPECTION TEAM (AJW-333) MEMO, MAY 30, 2017, SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED		FIFO AJW-333	DATE: 05/30/2017
DEVELOPED BY <i>Digitally signed by</i>			
NAME: SYLVAN DRAKES		FIFO AJV-5433	DATE: 09/13/2017
APPROVED BY			
NAME: PATRICK J. MULQUEEN		FIFO AJV-5430	DATE:
<i>Digitally signed by</i> ADOLFO D URRUTIA		MANAGER	
CHANGES: <div style="text-align: right; margin-right: 100px;">Dec 20, 2017</div> <ol style="list-style-type: none"> 1. UPDATED MAGNETIC COURSES: FINAL FROM 092.26 TO 093.2 AND PT COURSE INBOUND FROM 092.26 TO 093.26. 2. REMOVED OR AS DIRECTED BY ATC FROM THE MISSED APPROACH INSTRUCTIONS. 3. CHANGED THRE TO TDZE 1428 AND INCORPORATED CHANGE IN PROCEDURE. 4. UPDATED INOPERATIVE ALSF NOTE: CHANGED ALSF TO ALS AND CHANGED MILE TO SM; CHANGED CAT II AND SA CAT I ILS HATH TO HAT. <p>MB: 465044.84N / 0922118.32W, LOC: 465027.58N / 0921000.11W, NDB: 465044.59N / 0922117.77W, GS: 465036.34N / 0921256.22W, MB: 465033.25N / 0921328.27W, THIRD PARTY</p>			
REASONS: <ol style="list-style-type: none"> 1. APT MAGVAR UPDATED FROM 0E 2020 TO 1W 2020; I-DLH MAGVAR UPDATED FROM 0E 2015 TO 1W 2020; I-JUD MAGVAR UPDATED FROM 2E 1985 TO 1W 2020. 2. NO LONGER REQUIRED. 3. NOTAM FDC 4/2616 INCLUDED ON CURRENT CHART. 4. PER 8260.19G CRITERIA AND DATABASE UPDATE. <p>PDF EDIT: 9/12/2017</p> <ol style="list-style-type: none"> 1. UPDATED FLIGHT CHECKED BY SIGNATURE BLOCK TO READ: PROCESSED IAW FLIGHT INSPECTION TEAM (AJW-333) MEMO, MAY 30, 2017, SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED. 2. CHANGED 8260-9 FINAL FROM: ILS PYKLA LOM/RADAR TO RW09 TO GS INTCP TO RW09. 3. REMOVED # FROM ILS: STANDARD IN THE MINIMUMS AND # CAT D, E 1000-3 FROM THE NOTES SECTIONS OF THE 8260-3. 			

**ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29**

Bearings, headings, courses, 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 in feet RVR.

NOTES, (CONT.):

CHART NOTE: CIRCLING NA FOR CAT E SE OF RWY 3-27.

CHART NOTE: ADF OR RADAR REQUIRED.

SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 9 CAT E VISIBILITY TO RVR 4000 AND S-LOC 9 CAT C/D/E VISIBILITY TO 1 1/2 SM.

QUALITY
16
CHECKED

CITY AND STATE

DULUTH, MN

ELEVATION: 1428**TDZE: 1428**

AIRPORT NAME:

DULUTH INTL

FACILITY
IDENTIFIER:
I-DLH

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

**ILS OR LOC RWY 9, AMDT 22B; ILS RWY 9 (SA CAT I), ILS
RWY 9 (CAT II)**

SUP:

AMDT: **22A**DATED: **07/24/2014**

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <div><input type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>	ALPA <div><input type="checkbox"/></div>	APA <div><input type="checkbox"/></div>	AOPA <div><input type="checkbox"/></div>
NBAA <div><input type="checkbox"/></div>		OTHER (specify) <div><input type="checkbox"/></div> <div></div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD																			
PART - A OBSTRUCTION DATA																			
1. APP SEGMENT		FROM		TO		OBSTRUCTION		COORDINATES		ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.						
FEEDER		DLH VORTAC		PYKLA LOM/RADAR		1. AAO		464827.00N/0922012.00W		1729 (2C)	1000	AT571	3300						
						2. TERRAIN		464827.00N/0922012.00W		1529 (1500)		AS1500	3000						
FINAL: ILS		GP INTCP		RW09							ASC		1628/200						
FINAL: ILS CAT II		GP INTCP		RW09							ASC		1528/100						
FINAL: ILS SA CAT I		GP INTCP		RW09							ASC		1578/150						
FINAL: LOC		PYKLA LOM/RADAR		5.55 NM AFTER		3. AAO		465057.23N/0921800.93W		1699 (2C)	250		1960						
				PYKLA LOM/RADAR															
2. HOLD-IN-LIEU-OF-PT		PYKLA LOM		P-8		4. TOWER (27-002098)		465010.00N/0924209.00W		1828 (4D)	1000	AT472	3300						
						5. TERRAIN		465000.00N/0924257.00W		1595 (1600)		AS1500	3100						
3. MISSED APPROACH	MAP:		DA / DA / DA /		CHERL INT/DLH						ASC		4500						
			5.55 NM AFTER		15.00 DME		6. AAO		465953.90N/0915650.51W		1799 (2C)	1000	2800						
	ELEV:		1458/1358/1710				7. TERRAIN		465953.90N/0915650.51W		1599 (1600)		AS1500	3100					
4. CIRCLING AREA		DISTANCE		HT. ABV. ARPT.															
CATEGORY A		1.3 NM		REQUIRED	350	ACTUAL	532	10. TOWER (27-022662)		465132.68N/0920917.23W		1576 (1A)	300	SI	1960				
CATEGORY B		1.5 NM			450		532	11. TOWER (27-022618)		464953.96N/0920833.40W		1581 (1A)	300	SI	1960				
CATEGORY C		1.7 NM			450		532	12. TOWER (27-022608)		465116.84N/0921654.94W		1628 (1A)	300	SI	1960				
CATEGORY D		2.3 NM			550		972	8. TOWER (27-001743)		464739.00N/0920705.00W		2049 (4D)	300	AC50	2400				
CATEGORY E		4.5 NM			550		972	8. TOWER (27-001743)		464739.00N/0920705.00W		2049 (4D)	300	AC50	2400				
5. MINIMUM SAFE ALTITUDES													PRIMARY NAVAIID: PYKLA LOM						
SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A		SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A	
360-360		TWR (27-000141)		108/10.3		2049 (5D)		3100										16	
																		CHECKED	
CITY AND STATE				ELEVATION: 1428				FACILITY				PROCEDURE AND AMENDMENT NO:				REGION			
DULUTH, MN				AIRPORT NAME: DULUTH INTL				I-DLH				ILS OR LOC RWY 9, AMDT 22B; ILS RWY 9 (SA CAT I) , ILS RWY 9 (CAT II)				AGL			

PART B - SUPPLEMENTAL DATA										PART C - REMARKS:																											
1. COMMUNICATIONS WITH:					2. WEATHER SERVICE					3. ALTIMETER SETTING					VDP NOT ESTABLISHED - FINAL FACILITY DOES NOT HAVE DME.																						
DLH APP CON ZMP ARTCC							N W S		OTHER: ASOS			SOURCE:KDLH					PRECIPITOUS TERRAIN EVALUATION COMPLETED.																				
							F A A					DISTANCE:																									
							A / C					HOURS REMOTE OPERATION:																									
SATISFACTORY ON:																				ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.																	
X		V H F		X		U H F				H F		LOCATION: KDLH					ADJUSTMENT: 0					CAT A: 1.31NM CAT B: 1.86NM CAT C: 2.92NM CAT D: 3.82NM CAT E: 4.78NM															
4. MONITOR STATUS		PRIMARY NAVAID: I-DLH																		NO ADDITIONAL AIRSPACE REQUIRED.																	
		MONITOR POINT: MOCC																																			
		HRS OPTN:		CAT 1		24																															
				CAT 3																																	
5. APPROACH & RUNWAY LIGHTING		X		ALSF-2 09																																	
				(S) SALS																																	
		X		MALSR 27																																	
		X		HIRL 03, 09, 21, 27																																	
				MIRL																																	
		X		REIL 03, 21																																	
		X		TDZ 09																																	
		X		C/L 09, 27																																	
		X		OTHER (SPECIFY) PAPI-4L 03, 09, 21, 27																		CIRCLING CONTROLLING OBSTACLES UPDATED: CAT A ANT (KDLHT000564), 465132 68N-0920917 23W, 1576 MSL (1A) CHANGED FROM ANT TO TOWER, OBS ID CHANGED FROM (KDLHT000564) TO (27-022662) AND NUMBERED SEQUENCE REMAIN CAT A #10. CAT B ANT (KDLHT000953), 464953.96N-0920833.40W, 1581 MSL (1A) CHANGED FROM ANT TO TOWER, OBS ID CHANGED FROM (KDLHT000953) TO (27-022618) AND NUMBERED SEQUENCE REMAIN CAT B #11. CAT C ANT (KDLHT000933) 465116.84N-0921654 94W, 1628 MSL (1A) CHANGED FROM ANT TO TOWER, OBS ID CHANGED FROM (KDLHT000933) TO (27-022608)AND NUMBERED SEQUENCE REMAINED CAT C #12. CAT D TOWER (27-001743) 464739.00N-0920705.00W 2049 MSL (4D) NUMBERED SEQUENCE REMAINED CAT D #8. CAT E AAO 465406.00N-09212527.00W, 1716 MSL (2C) CHANGED TO TOWER (27-001743) 464739.00N-0920705.00W 2049 MSL (4D) AND NUMBERED SEQUENCE REMAIN CHANGED FROM CAT E #13 CAT E #8.															
6. RUNWAY MARKINGS		BASIC																		100 FT VEGETATION APPLIED PER FPT.																	
		ALL WEATHER PIR-G 09, 27																		KDLH ASOS ON WMSCR.																	
		INSTRUMENT NPI-G 03, 21																		REDUNDANT WEATHER REPORTING SOURCE ON APT.																	
7. RUNWAY VISUAL RANGE		APPROACH 09, 27																		VGSI DATA: 3.00/70.3.																	
		MIDFIELD																		MISSED APPROACH OBSTACLES CONT.																	
		ROLL OUT																		ALTERNATE:																	
8. GLIDE PATH		GP ANGLE: 3.00								ELEV RWY THRESHOLD:1427.8										8. TOWER (27-001743) 464739.00N/0920705.00W 2049 (4D) 1000 3100																	
		DISTANCE FROM RWY: 1154								ELEV GP ANTENNA: 1414.9										9. TERRAIN 465618.00N/0921500.00W 1536 (1500) AS1500 3000																	
		THRESHOLD CROSSING HEIGHT:59.0																																			
9. FINAL APPROACH COURSE AIMING				X		RUNWAY THRESHOLD														FT. FROM THRESHOLD																	
				X		ON CENTERLINE														FT. FROM CENTERLINE																	
10. WAIVERS: NONE																																					
PART D - PREPARED BY: SYLVAN DRAKES										DATE: 09/13/2017																											
TITLE: AERONAUTICAL INFORMATION SPECIALIST										OFFICE: AJV-5433																											

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