

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 ID</u> ASH	<u>PROCEDURE NAME</u> ILS OR LOC RWY 14	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> NASHUA	<u>STATE</u> NH
<u>AIRPORT ELEVATION</u> 200	<u>TDZE</u> 200	<u>SUPERSEDED</u> ILS OR LOC RWY 14	<u>ORIGINAL/AMENDMENT</u> 2A	<u>DATED</u> 04/20/2023
<u>FACILITY</u> I-ASH	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 16W
				<u>EPOCH YEAR</u> 1995
				<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>
MUGGY INT	IF/IAF	LODTI INT					138.69	4.29 (I-ASH)	2500
LODTI INT		NORIY INT					138.69	3.58 (I-ASH)	1600

MISSED APPROACH

MAP:
ILS: DA
LOC: 4.25 NM AFTER NORIY INT

MISSED APPROACH INSTRUCTIONS:
CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 2000 ON GDM VOR/DME R-082 TO PELAN INT/GDM R-082/34.61 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- | | | | | | | |
|----|--|----------------|-----------------|----------------|------------------|-------|
| 1. | PT | SIDE OF COURSE | OUTBOUND | FT WITHIN | MILES OF | (IAF) |
| 2. | HOLD NW MUGGY, LT, 138.69 INBOUND, 3800 FT. IN LIEU OF PT (IAF), MAX 4600. | | | | | |
| 3. | FAC: | 138.69 | FAF: | NORIY INT | DIST FAF TO MAP: | 4.25 |
| 4. | MIN ALT: MUGGY INT 3800, LODTI INT 2500, NORIY INT 1600 | | | | | |
| 5. | DIST TO THLD FROM OM: | MM: | IM: | 150 HAT: | GS ANT: | 962 |
| 6. | MIN GS INCPT: | 1600 | GS ALT AT PFAF: | NORIY INT 1600 | OM: | MM: |
| 7. | GS ANGLE: | 3.00 | 34:1: | 20:1: | TCH: | 47.0 |
| 8. | MSA FROM: GDM VOR/DME 060-330 3300, 330-060 4400 (30NM) | | | | | |



EQUIPMENT REQUIREMENTS NOTES:

RADAR REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT MUGGY ON T316 EASTBOUND.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC CAT C/D VISIBILITY TO 1 3/4 SM.

ADDITIONAL FLIGHT DATA:

HOLD E, RT, 262.45 INBOUND.
FAS OBST: 552 AAO 424915N/0713703W.
712 AAO 425054N/0713745W.
CHART CIRCLING ICON.

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE, NA WHEN CONTROL TOWER CLOSED; LOC: STANDARD - CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE, NA WHEN CONTROL TOWER CLOSED.

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
S-ILS 14	400	1/2	200	400	1/2	200	400	1/2	200	400	1/2	200			
S-LOC 14	820	1/2	620	820	1/2	620	820	1 3/8	620	820	1 3/8	620			
CIRCLING	840	1	640	860	1	660	920	2	720	980	2 1/2	780			

CHANGES - REASONS

- INCORPORATED CHANGE FROM P-NOTAM FOR AMDT 2A INTO FORM - IAW 8260.19I PARA 8-3-4.C (3).
- TERMINAL ROUTES: CHANGED MUGGY TO LODTI DISTANCE FROM 4.67 TO 4.29 AND LODTI TO NORIY DISTANCE FROM 3.20 TO 3.58 – LODTI POSITION MOVED TO MEET SATISFACTORY INTERSECTION CRITERIA.
- MISSED APPROACH INSTRUCTIONS: CHANGED FROM "CLIMB TO 1000 THEN CLIMBING RIGHT TURN TO 4000 ON HEADING 310 AND GDM R-071 TO JOHNS INT/GDM 19.75 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000" TO "CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 2000 ON GDM VOR/DME R-082 TO PELAN INT/GDM R-082/34.6 DME AND HOLD" – HOLDING CHANGED FROM JOHNS TO PELAN PER ATC REQUEST, PREVIOUS PATTERN WAS OVERFLYING NAVAID.
- PROFILE: LINE 4 REMOVED "CIBES INT 740*" – CIBES REMOVED FROM PROCEDURE DUE TO NO SUITABLE NAVAIDS FOR FIX MAKE UP AS MHT REMOVED DUE TO VOR MON.
- PROFILE: LINE 8. MSA FROM: CHANGED FROM "MHT VOR/DME 046-136 2600, 136-226 2000, 226-046 3500" TO "GDM VOR/DME 060-330 3300, 330-060 4400 (30NM)" – MHT REMOVED DUE TO VOR MON.
- EQUIPMENT REQUIREMENTS NOTES: ADDED NOTE "RADAR REQUIRED FOR PROCEDURE ENTRY." – RADAR REQUIRED; PROCEDURE NOT TIED TO GROUND-BASED ENROUTE STRUCTURE.
- NOTES: UPDATED CHART NOTE FROM "FOR INOP ALS, INCREASE CIBES FIX MINIMUMS S-LOC 14 C/D VISIBILITY TO 1 SM" TO "FOR INOPERATIVE ALS, INCREASE S-LOC CAT C/D VISIBILITY TO 1 3/4 SM." – CIBES STEPDOWN REMOVED DUE TO NO FIX MAKE UP NAVAIDS (MHT REMOVED), AND UPDATED TARGETS EVALUATION.
- ADDITIONAL FLIGHT DATA: DELETED PROFILE NOTE "LOC ONLY" AND ASTERISK AT PROFILE LINE 4 – CIBES DELETED AND NO LONGER NEEDED IAW 8260.19I, 1-1-5.F (12).
- ADDITIONAL FLIGHT DATA: CHANGED "HOLD W, RT, 071.34 INBOUND" TO HOLD E, RT, 262.45 INBOUND" – HOLDING CHANGED FROM JOHNS TO PELAN, PREVIOUS PATTERN WAS OVERFLYING NAVAID.
- ADDITIONAL FLIGHT DATA: CHANGED "CHART FAS OBST: 317 TOWER (33-000172) 424803N/0713313W" TO "FAS OBST 552 AAO 424915N/0713703W" – NEW CONTROLLING OBSTACLE/TARGETS EVALUATION.
- ADDITIONAL FLIGHT DATA: ADDED "552 AAO 424915N/0713703W." – NEW TARGET

COORDINATED WITH:

A4A

☐

ALPA

☒

AOPA

☒

APA

☐

HAI

☐

NBAA

☒

OTHER:

ZBW, BOS APP CON, ASH ATCT, AMGR

FLIGHT CHECKED BY

DAVIN C O'BRIEN

Digitally signed by

CASIMIR L TABAKA

Jun 17, 2024

OFFICE

FPO

DATE

06/05/2024

DEVELOPED BY

CASIMIR L. TABAKA (CHRISTOPHER D. WILKINSON)

Digitally signed by

CASIMIR L TABAKA

Dec 13, 2023

OFFICE

AJV-A432

DATE

09/08/2023

APPROVED BY

CASIMIR L. TABAKA

Digitally signed by

CASIMIR L TABAKA

Dec 13, 2023

OFFICE

AJV-A432

DATE

TITLE

MANAGER

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD**

<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
ASH	ILS OR LOC RWY 14	3	NASHUA	NH	200	I-ASH

PART A: OBSTRUCTION DATA SEGMENTS

INTERMEDIATE

FROM MUGGY INT **TO** LODTI INT

<u>RNP</u>	<u>DISTANCE</u> 4.29	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	425542.00N/0714533.00W	1434	215	8	4B	500					2000
TERRAIN	425554.00N/0714151.00W	1040 (1000)								AS1500	2500

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

SEGMENT OBSTACLE ACCURACY CODE: 4B (215/8) DERIVED FROM MITRE 3ARCSEC DEM.

INTERMEDIATE: STEPDOWN

FROM LODTI INT **TO** NORIY INT

<u>RNP</u>	<u>DISTANCE</u> 3.58	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	424924.00N/0714357.00W	1099	215	8	4B	500				SA-1	1600
TERRAIN	425212.00N/0713936.00W	587 (600)								AS1000	1600

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

SEGMENT OBSTACLE ACCURACY CODE: 4B (215/8) DERIVED FROM MITRE 3ARCSEC DEM.



FINAL: ILS

FROM

NORIY INT

TO

RW14

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LOC

FROM

NORIY INT

TO

4.25 NM AFTER NORIY INT

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

SEGMENT OBSTACLE ACCURACY CODE: 4B (215/8) DERIVED FROM MITRE 3ARCSEC DEM.



HOLD-IN-LIEU OF PT

FROM

MUGGY

TO

P-5

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u> P-5	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	425309.00N/0715157.00W	2458	215	8	4B	1000					3500
TERRAIN	425309.00N/0715157.00W	2257 (2300)								AS1500	3800

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

SEGMENT OBSTACLE ACCURACY CODE: 4B (215/8) DERIVED FROM MITRE 3ARCSEC DEM.

MISSED APPROACH: ILS

FROM

DA

TO

PELAN INT/GDM R-082/34.61 DME

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u> 235						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				2000
TOWER (33-032898)	424407.00N/0712334.00W	804	250	50	4D	1000					1900
TERRAIN	424451.00N/0712130.00W	570 (600)								AS1000	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSSED APPROACH: LOC

FROM
4.25 NM AFTER NORIY INT

TO
PELAN INT/GDM R-082/34.61 DME

RNP	DISTANCE	PAT	MAP	HAT	HMAS						
					570						
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				2000
TOWER (33-032898)	424407.00N/0712334.00W	804	250	50	4D	1000					1900
TERRAIN	424451.00N/0712130.00W	570 (600)								AS1000	1600

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

CIRCLING ☐ ALL CATS ☒ CAT A ☒ CAT B ☒ CAT C ☒ CAT D ☐ CAT E ☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
TREE	424609.00N/0713215.00W	1.30	640	540	215	8	4B	300			840
CATEGORY B											
TREE	424557.00N/0713251.00W	1.81	660	543	215	8	4B	300			860
CATEGORY C											
TREE	424703.00N/0713457.00W	2.85	720	619	215	8	4B	300			920
CATEGORY D											
AAO	424600.00N/0713551.00W	3.72	780	676	215	8	4B	300			980

CIRCLING REMARKS:

SEGMENT OBSTACLE ACCURACY CODE: 4B (215/8) DERIVED FROM MITRE 3ARCSEC DEM.



MSA

CENTER

GDM VOR/DME

RADIUS

30

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
060-330	AAO	424642.00N/0724327.00W			2235	250	10	4B	1000			3300
330-060	AAO	425142.00N/0720630.00W			3363	250	10	4B	1000			4400

MSA REMARKS:

OBSTACLE ACCURACY CODE: 215/8 DERIVED FROM MITRE 3ARCSEC DEM.

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

BOS APP CON, ASH TOWER

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
AWOS-3PT	ASH	24	ASH	0	Y	0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS	MHT	24	MHT	9.67	Y	32

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KASH 200, KMHT 266
RA = 31.1.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
I-ASH	ATCT	OPEN CLOSED	1 3

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW32 - REIL (PCL), HIRL (PCL), PAPI-4L	NPI-G	
RW14 - MALSR (PCL), HIRL (PCL), PAPI-4R (PCL)	PIR-G	

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	200.4	47.0	195.5	962	3.00	45.0

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	X	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	X	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - FINAL FACILITY DOES NOT HAVE DME.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100 FOOT VEGETATION USED PER FPT.

CONTINGENCY REMOTE ALTIMETER NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MANCHESTER ALTIMETER SETTING AND INCREASE DA TO 432 FEET; INCREASE ALL MDAS 40 FEET AND INCREASE CIRCLING VISIBILITY CAT C/D 1/4 SM.

ALTERNATE MISSED APPROACH INSTRUCTIONS NOT REQUESTED FOR THIS PROCEDURE.

ORDER 8260.3 CHAPTER 2 APPLIED TO 712 AAO 425054.00N/0713745.00W.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.31
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	0.93
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	122.69
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	300
DISTANCE FROM	FAF	TO 1500FT POINT	2.78
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.16
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	122.69
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1000

THRESHOLD COORDINATES (IF STR-IN)

424712.70N/0713124.60W

ARP COORDINATES

424656.69N/0713050.74W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 14 DISTANCE 0.49 NM

FAF COORDINATES

424930.28N/0713616.06W

FIX NAME COORDINATES

REMARKS

PART E: PREPARED BY

NAME

CASIMIR L. TABAKA (CHRISTOPHER D. WILKINSON)

OFFICE

AJV-A432

DATE

09/08/2023

TITLE

AERONAUTICAL INFORMATION SPECIALIST

AIRPORT ID
ASH

PROCEDURE NAME
ILS OR LOC RWY 14

AMDT NO.
3

CITY
NASHUA

STATE
NH

AIRPORT ELEVATION
200

FACILITY
I-ASH

