

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.33**

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.

<b>AIRPORT ID</b> LNN	<b>PROCEDURE NAME</b> RNAV (GPS) RWY 23	<b>ORIGINAL/AMENDMENT</b> 1	<b>CITY</b> WILLOUGHBY	<b>STATE</b> OH
<b>AIRPORT ELEVATION</b> 626	<b>TDZE</b> 623	<b>SUPERSEDED</b> RNAV (GPS) RWY 23	<b>DATED</b> 09/08/2022	<b>MAG VAR</b> 8W
<b>FACILITY</b> RNAV	<b>COORDINATES OF FACILITIES</b>	<b>ACTUAL EFFECTIVE DATE</b>	<b>REQUIRED EFFECTIVE DATE</b> ROUTINE	<b>EPOCH YEAR</b> 1995
				<b>CANCEL/SUSPEND</b>

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
FAILS		HUDUG		TF	FB	1.00	061.97	5.26	2300
UROCE	IAF	HILEK	NOPT	TF	FB	1.00	322.78	6.50	2300
HUDUG	IAF	HILEK	NOPT	TF	FB	1.00	142.64	6.50	2300
HILEK	IF/IAF	ULUCA		TF	FB	1.00	232.71	6.79	2000
ULUCA	FAF	RW23	MAP	TF	FO	0.30	232.64	3.57	
RW23	MAP	1400 MSL		CA			232.64		1400
1400 MSL		NEVTE		DF	FO	1.00			2300

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW23

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 1400 THEN CLIMBING RIGHT TURN TO 2300 DIRECT NEVTE AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD NE HILEK, RT, 232.71 INBOUND, 2300 IN LIEU OF PT (IAF), MAX 6000.
- FAC: 232.64 FAF: ULUCA DIST FAF TO MAP: 3.57 DIST FAF TO THLD: 3.57
- MIN ALT: HILEK 2300, ULUCA 2000
- DIST TO THLD FROM OM: MM: IM: 150 HAT: 357 HAT: 0.82 GS ANT: IM:
- MIN GP INCPT: 2000 GP ALT AT PFAF: ULUCA 2000 OM: MM:
- GP ANGLE: 3.50 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 53.6
- MSA FROM: RW23 3100



**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**NOTES:**

CHART NOTE: RWY 23 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
 CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.

**ADDITIONAL FLIGHT DATA:**

HOLD W, RT, 098.36 INBOUND.  
 CHART FAS OBST: 768 ANTENNA (39-086420) 414229N/0812132W.  
 CHART VDP AT 0.96 NM TO RW23.  
 WAAS CHANNEL # 82410  
 REFERENCE PATH ID: W23A  
 LTP HAE: 154.4 M

**MINIMUMS:**

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

**ALTERNATE:** NA  STANDARD - CAT C 900-2 3/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

CATEGORY:	A			B			C			D			E			
	FINAL TYPE	DA/MDA	VIS	HAT/HAA												
LPV DA	980	1	357	980	1	357	980	1	357		NA					
LNAV/VNAV DA	1015	1 1/8	392	1015	1 1/8	392	1015	1 1/8	392		NA					
LNAV MDA	1080	1	457	1080	1	457	1080	1 3/8	457		NA					
CIRCLING	1080	1	454	1200	1	574	1520	2 3/4	894		NA					

**CHANGES - REASONS**

- WHOLE PROCEDURE: REMOVED CXR VOR/DME AND YACUT. - CXR VOR/DME DECOM AND YACUT NO LONGER REQUIRED.
- TERMINAL ROUTES: CHANGED FAILS-HUDUG FEEDER COURSE/DIST FROM 077.02/5.70 TO 061.97/5.26. - MOVED HUDUG TO FACILITATE TURN.
- TERMINAL ROUTES: CHANGED UROCE-HILEK IAF COURSE/DIST FROM 322.76/5.00 TO 322.78/6.50. - MOVED UROCE TO FACILITATE TURN.
- TERMINAL ROUTES: CHANGED HUDUG-HILEK IAF COURSE/DIST FROM 142.66/5.00 TO 142.64/6.50. - MOVED HUDUG TO FACILITATE TURN.
- TERMINAL ROUTES: CHANGED HILEK-ULUCA IF DIST FROM 6.20 TO 6.79. - MOVED FAF ULUCA.
- TERMINAL ROUTES: CHANGED ULUCA-RW23 FAF DIST FROM 4.45 TO 3.57. - MOVED FAF ULUCA.
- TERMINAL ROUTES: CHANGED CA LEG FROM 1026 MSL TO 1400. - MA REDESIGN.
- PROFILE LINE 3: CHANGED DIST FAF TO MAP/THLD FROM 4.16 TO 3.57. - MOVED FAF ULUCA.
- PROFILE LINE 7: CHANGED GP ANGLE FROM 3.00 TO 3.50 AND TCH FROM 40.0 TO 53.6. - AVOID VGS PENETRATIONS AND MATCH VGSI AS CLOSE AS POSSIBLE.
- ADDITIONAL FLIGHT DATA: CHANGED FAS OBST FROM 839 AAO TO 768 ANTENNA. - NEW EVAL COMPLETED WITH NEW FAF LOCATION.
- ADDITIONAL FLIGHT DATA: CHANGED VDP FROM 1.24 TO 0.96. - IAW 8260.3G.
- ADDITIONAL FLIGHT DATA: REMOVED \*LNAV ONLY. - IAW 8260.19J.
- MINS: LPV CHANGED FROM 1031/408/1 1/2SM TO 980/357/1SM AND LNAV/VNAV FROM 1142/519/1 3/4SM TO 1015/392/1 1/8SM. - NEW EVAL WITH NEW CONTROLLING OBSTS AND IAW 8260.3G.
- MINS: LNAV CHANGED FROM 1200/577 TO 1080/457 AND CAT C VIS FROM 1 5/8SM TO 1 3/8SM. - NEW EVAL WITH NEW CONTROLLING OBSTS AND IAW 8260.3G.
- MINS: CIRC CAT A CHANGED FROM 1200/574 TO 1080/454. - NEW STRAIGHT-IN MINS AND IAW 8260.3G.
- MA INSTRUCTIONS: CHANGED FROM "CLIMB TO 2300 DIRECT YACUT AND ON TRACK 290.11 TO NEVTE AND HOLD" TO "CLIMB TO 1400 THEN CLIMBING RIGHT TURN TO 2300 DIRECT NEVTE AND HOLD". - MA REDESIGN.
- FAS DATA: CRC CHANGED FROM DC5B423C TO 5C49E2E9. - LTP COORDS CHANGED FROM 414124.8985N/0812304.2555W TO 414124.8975N/0812304.2750W, FPAP CHANGED FROM 414021.4200N/0812427.7400W TO 414021.4175N/0812427.7565W, AND GPA CHANGED FROM 3.00 TO 3.50.



AIRPORT ID  
LNN

PROCEDURE NAME  
RNAV (GPS) RWY 23

ORIGINAL/AMENDMENT  
1

CITY  
WILLOUGHBY

STATE  
OH

COORDINATED WITH:

A4A  ALPA  AOPA  APA  HAI  NBAA

OTHER: ZOB, AMGR, CLE APP CON

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

RAKE MCGRAW (ANDRE TUCKER)

OFFICE

AJV-A431

DATE

09/02/2025

APPROVED BY

RAKE MCGRAW

OFFICE

AJV-A422

DATE

12/18/2025

TITLE

MANAGER

FAS DATA BLOCK INFORMATION

DATA FIELD

DATA

OPERATION TYPE  
SBAS SERVICE PROVIDER IDENTIFIER  
AIRPORT IDENTIFIER  
RUNWAY  
APPROACH PERFORMANCE DESIGNATOR  
ROUTE INDICATOR  
REFERENCE PATH DATA SELECTOR  
REFERENCE PATH IDENTIFIER (APPROACH ID)  
LTP/FTP LATITUDE  
LTP/FTP LONGITUDE  
LTP/FTP ELLIPSOIDAL HEIGHT  
FPAP LATITUDE  
FPAP LONGITUDE  
THRESHOLD CROSSING HEIGHT (TCH)  
TCH UNITS SELECTOR (METERS OR FEET USED)  
GLIDEPATH ANGLE (GPA)  
COURSE WIDTH AT THRESHOLD  
LENGTH OFFSET  
HORIZONTAL ALERT LIMIT (HAL)  
VERTICAL ALERT LIMIT (VAL)

0  
0  
KLNN  
RW23  
0  
0  
W23A  
414124.8975N  
0812304.2750W  
+01544  
414021.4175N  
0812427.7565W  
00053.6  
F  
03.50  
106.75  
1216  
40.0  
50.0

CRC REMAINDER

5C49E2E9

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE  
LTP ORTHOMETRIC HEIGHT  
FPAP ORTHOMETRIC HEIGHT

K5  
+01888  
+01888



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

<u>AIRPORT ID</u> LNN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>AMDT NO.</u> 1	<u>CITY</u> WILLOUGHBY	<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 626	<u>FACILITY</u> RNAV
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**PART A: OBSTRUCTION DATA SEGMENTS**

**FEEDER**

<u>FROM</u> FAILS	<u>TO</u> HUDUG
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<u>RNP</u> 1.00	<u>DISTANCE</u> 5.26	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
SHIP	415148.89N/0812222.53W	771	215	8	4B	1000				AT529	2300
WATER	415148.89N/0812222.53W	571 (600)								AS1500	2100

**COMPUTATIONS**

<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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**SEGMENT REMARKS:**

**INITIAL**

<u>FROM</u> UROCE	<u>TO</u> HILEK
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<u>RNP</u> 1.00	<u>DISTANCE</u> 6.50	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	414206.00N/0810806.00W	1175	215	8	4B	1000				AT125	2300
TERRAIN	414303.00N/0810851.00W	866 (900)								AS1000	1900

**COMPUTATIONS**

<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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**SEGMENT REMARKS:**



**AIRPORT ID**  
LNN

**PROCEDURE NAME**  
RNAV (GPS) RWY 23

**AMDT NO.**  
1

**CITY**  
WILLOUGHBY

**STATE**  
OH

**AIRPORT ELEVATION**  
626

**FACILITY**  
RNAV

**INITIAL**

**FROM**  
HUDUG

**TO**  
HILEK

**RNP**  
1.00

**DISTANCE**  
6.50

**PAT**

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
SHIP	415103.00N/0811624.00W	771	215	8	4B	1000				AT529	2300
WATER	415104.49N/0811626.02W	570 (600)								AS1500	2100

**COMPUTATIONS**

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

**SEGMENT REMARKS:**

**INTERMEDIATE**

**FROM**  
HILEK (IF/IAF)

**TO**  
ULUCA

**RNP**  
1.00

**DISTANCE**  
6.79

**PAT**

**MAP**

**HAT**

**HMAS**

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
TOWER (39-000146)	414538.95N/0811326.73W	979	50	20	2C	500				AT521	2000
TERRAIN	414424.00N/0811321.00W	669 (700)								AS1000	1700

**COMPUTATIONS**

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

**SEGMENT REMARKS:**



AIRPORT ID  
LNN

PROCEDURE NAME  
RNAV (GPS) RWY 23

AMDT NO.  
1

CITY  
WILLOUGHBY

STATE  
OH

AIRPORT ELEVATION  
626

FACILITY  
RNAV

**FINAL: LPV**

**FROM**  
ULUCA

**TO**  
RW23

RNP  
0.30

DISTANCE  
3.57

PAT

MAP  
DA

HAT  
357

HMAS

<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>
TREE (39-087210)	414145.36N/0812227.63W	736	20	3	1A		ASC			MA107	980

**COMPUTATIONS**

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

**SEGMENT REMARKS:**

**FINAL: LNAV/VNAV**

**FROM**  
ULUCA

**TO**  
RW23

RNP  
0.30

DISTANCE  
3.57

PAT

MAP  
DA

HAT  
392

HMAS

<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>
TREE	414139.00N/0812142.00W	727	215	8	4B		23.06:1			AC8	1015

**COMPUTATIONS**

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

**SEGMENT REMARKS:**

**FINAL: LNAV**

**FROM**  
ULUCA

**TO**  
RW23

RNP  
0.30

DISTANCE  
3.57

PAT

MAP  
RW23

HAT  
457

HMAS



<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>
ANTENNA (39-086420)	414229.30N/0812131.67W	768	20	3	1A	250				MA62	1080

**COMPUTATIONS**

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

**SEGMENT REMARKS:**



**AIRPORT ID**  
LNN

**PROCEDURE NAME**  
RNAV (GPS) RWY 23

**AMDT NO.**  
1

**CITY**  
WILLOUGHBY

**STATE**  
OH

**AIRPORT ELEVATION**  
626

**FACILITY**  
RNAV

**MISSED APPROACH: LNAV/VNAV**

**FROM**  
DA **TO**  
NEVTE

**RNP**  
0.30-1.00

**DISTANCE**

**PAT**

**MAP**

**HAT**

**HMAS**  
865

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
							ASC				2300
STACK (39-000556)	414014.01N/0812634.03W	1212	20	10	1B	1000					2300
WATER	413727.00N/0812612.00W	692 (700)								AS1500	2200

**COMPUTATIONS**

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

**SEGMENT REMARKS:**

**MISSED APPROACH: LNAV**

**FROM**  
RW23 **TO**  
NEVTE

**RNP**  
0.30-1.00

**DISTANCE**

**PAT**

**MAP**

**HAT**

**HMAS**  
980

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>CG</b>	<b>CGTA</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
STACK (39-000556)	414014.01N/0812634.03W	1212	20	10	1B		ASC				2300
STACK (39-000556)	414014.01N/0812634.03W	1212	20	10	1B	1000					2300
WATER	413727.00N/0812612.00W	692 (700)								AS1500	2200

**COMPUTATIONS**

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

**SEGMENT REMARKS:**



**AIRPORT ID**  
LNN

**PROCEDURE NAME**  
RNAV (GPS) RWY 23

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1

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**STATE**  
OH

**AIRPORT ELEVATION**  
626

**FACILITY**  
RNAV

**CIRCLING**     ALL CATS     CAT A     CAT B     CAT C     CAT D     CAT E     NOT AUTHORIZED

<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>RADIUS</b>	<b>HAA</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
CATEGORY A											
TREE	413951.00N/0812245.00W	1.30	454	757	215	8	4B	300		SI	1080
CATEGORY B											
POLE (39-002633)	413918.85N/0812221.85W	1.83	574	837	500	50	5D	300		AC50	1200
CATEGORY C											
STACK (39-000556)	414014.01N/0812634.03W	2.87	894	1212	20	10	1B	300			1520

**CIRCLING REMARKS:**

**MSA**

**CENTER**

RW23

**RADIUS**

25

<b>SECTOR</b>	<b>OBSTRUCTION</b>	<b>COORDINATES</b>	<b>BEARING</b>	<b>DISTANCE</b>	<b>ELEV MSL</b>	<b>HORZ</b>	<b>VERT</b>	<b>AC</b>	<b>ROC</b>	<b>OCS</b>	<b>ADJUSTMENTS</b>	<b>MIN ALT</b>
360-360	TOWER (39-000134)	412147.65N/0814257.40W	225	24.7	2049	250	50	4D	1000			3100

**MSA REMARKS:**

**NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:**



**AIRPORT ID**  
LNN

**PROCEDURE NAME**  
RNAV (GPS) RWY 23

**AMDT NO.**  
1

**CITY**  
WILLOUGHBY

**STATE**  
OH

**AIRPORT ELEVATION**  
626

**FACILITY**  
RNAV

**PART B: SUPPLEMENTAL DATA**

**COMMUNICATIONS WITH**

CLE APP CON

**WX SERVICE**  
AWOS-3PT

**LOCATION**  
LNN

**HRS OPERATION**  
24

**ALTIMETER SOURCE**  
LNN

**DISTANCE**

**WMSCR**  
Y

**ADJUSTMENTS**  
0

**BACK-UP WX SERVICE**  
ASOS

**LOCATION**  
BKL

**HRS OPERATION**  
24

**ALTIMETER SOURCE**  
BKL

**DISTANCE**  
16.57

**WMSCR**  
Y

**ADJUSTMENTS**  
45

**WX REMARKS:**

RASS PRESSURE PATTERNS THE SAME  
KLNN 626, KBKL 580  
RA = 44.60.

**PRIMARY NAVAID**

**MONITOR POINT**

**HRS OPERATION**

**CAT**

<b>APPROACH AND RUNWAY LIGHTING SYSTEM</b>	<b>RUNWAY MARKINGS</b>	<b>RUNWAY VISUAL RANGE</b>
RW05 - MIRL (PCL), REIL (PCL), PAPI-4R	NPI-G	
RW10 - MIRL (PCL), REIL (PCL), PAPI-2L	NPI-G	
RW23 - REIL (PCL), MIRL (PCL), PAPI-4L	NPI-G	
RW28 - REIL (PCL), MIRL (PCL), PAPI-2L	NPI-G	

**GLIDESLOPE ANGLE**  
3.50

**ELEV RWY THRESHOLD**  
619.5

**TCH**  
53.6

**ELEV GS ANTENNA**

**DISTANCE FROM RWY**

**VGSI ANGLE**  
4.00

**TCH**  
53.6

**FINAL APPROACH COURSE AIMING**

RUNWAY THRESHOLD  
ON CENTERLINE

FT FROM THRESHOLD  
FT FROM CENTERLINE

DISPLACED THRESHOLD DISTANCE

**CRITICAL TEMPERATURES**

**CRITICAL LOW**  
-16C

**CRITICAL HIGH**  
+54C

**ACT**  
-16C

**APT ISA**  
+13.76C

**CRITICAL TEMPERATURE REMARKS:**

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.  
CRITICAL LOW TEMPERATURE BASED ON EFFECTIVE GPA.  
DESCENT RATE (FPM): STANDARD TEMP 963 HIGH TEMP 1173.

**"VISUAL PORTION OF FINAL" PENETRATIONS**

FINAL TYPE	LPV, LNAV/VNAV, LNAV		
34:1			<b>QUALITY 10 CHECKED</b>
700 TREE (39-085663) 414136.5000N/0812240.9600W (25.26)		736 TREE (39-087210) 414145.3600N/0812227.6300W (21.6)	
694 TREE (39-028936) 414136.7200N/0812242.1200W (20.61)		733 TREE (39-085239) 414146.7500N/0812229.4400W (18.49)	

<u>AIRPORT ID</u> LNN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>AMDT NO.</u> 1	<u>CITY</u> WILLOUGHBY	<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 626	<u>FACILITY</u> RNAV
721 TREE (39-084801) 414146.7500N/0812236.4700W (17.5)			729 TREE (39-084819) 414144.2800N/0812227.5100W (16.7)			
710 TREE (39-084901) 414143.1700N/0812237.9200W (16.36)			686 TREE (39-085083) 414135.4100N/0812242.3000W (15.67)			
728 TREE (39-028941) 414144.7000N/0812227.6300W (15)			681 TREE (39-087133) 414140.0700N/0812251.3400W (14.96)			
710 TREE (39-084780) 414146.9600N/0812241.8900W (14.55)			729 TREE (39-086908) 414152.0100N/0812235.4900W (12.82)			
670 TREE (39-086151) 414135.6800N/0812250.8500W (12.5)			719 TREE (39-086882) 414147.1700N/0812234.7700W (11.95)			
724 TREE (39-086821) 414146.7500N/0812230.4500W (11.07)			732 TREE (39-028942) 414151.8700N/0812231.5800W (9.99)			
688 TREE (39-086140) 414139.7700N/0812243.0500W (9.61)			711 TREE (39-087274) 414145.8700N/0812236.4600W (9.35)			
709 TREE (39-084802) 414149.6000N/0812242.0300W (8.17)			703 TREE (39-028940) 414146.7400N/0812241.9000W (8.03)			
671 TREE (39-086534) 414135.6700N/0812246.9900W (7.47)			728 TREE (39-086811) 414146.8800N/0812225.7700W (7.46)			
724 TREE (39-085845) 414152.8600N/0812236.3700W (7.39)			674 TREE (39-087022) 414140.0500N/0812250.8100W (7.17)			
728 TREE (39-084793) 414152.0200N/0812232.3400W (6.86)			721 TREE (39-085835) 414152.1100N/0812236.8900W (6.8)			
701 TREE (39-028939) 414143.5200N/0812238.0300W (6.79)			724 TREE (39-085349) 414152.5600N/0812235.4300W (6.56)			
723 TREE (39-086894) 414146.6000N/0812228.0000W (6.55)			693 TREE (39-089219) 414145.0900N/0812245.0000W (6.38)			
707 TREE (39-086172) 414146.7900N/0812238.2100W (6.14)			710 TREE (39-087527) 414150.7500N/0812241.5800W (6.03)			
731 TREE (39-085777) 414152.0200N/0812229.7200W (5.76)			709 TREE (39-088601) 414145.3300N/0812234.0500W (4.72)			
717 TREE (39-088442) 414147.1600N/0812231.3900W (4.67)			710 TREE (39-086492) 414150.8700N/0812240.6200W (4.27)			
704 TREE (39-089260) 414141.7600N/0812232.0000W (4.07)			633 FENCE (39-024211) 414126.9400N/0812257.0600W (3.75)			
679 TREE (39-085965) 414137.0100N/0812240.8300W (2.98)			679 ELECTRICAL_SYSTEM (39-086426) 414136.9000N/0812240.6000W (2.85)			
676 TREE (39-088024) 414139.3200N/0812245.5900W (2.54)			672 TREE (39-085333) 414136.3900N/0812244.0400W (2.32)			
704 TREE (39-087101) 414147.9500N/0812238.6400W (1.36)			682 TREE (39-086510) 414139.9400N/0812241.8100W (1.3)			
677 TRANSMISSION_LINE (39-024217) 414136.9100N/0812240.5300W (0.72)			677 POLE (39-068005) 414136.9100N/0812240.5300W (0.72)			
729 TREE (39-086571) 414150.0900N/0812225.1000W (0.61)			737 TREE (39-028944) 414156.7500N/0812228.9100W (0.46)			
720 TREE (39-085923) 414153.1900N/0812234.8100W (0.25)						

**PENETRATIONS REMARKS:**

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or

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

**PENETRATIONS REMARKS:**



**PART C: GENERAL REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FOR CONTINGENCY BACKUP ALTIMETER USE ONLY: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BKL ALTIMETER SETTING AND INCREASE LPV DA TO 1025 FEET AND ALL VISIBILITIES 1/8 SM. INCREASE LNAV/VNAV DA TO 1060 FEET AND ALL VISIBILITIES 1/8 SM. INCREASE ALL MDAS 60 FEET ; AND CIRCLING VISIBILITY CAT C 1/4 SM. VDP AND BARO-VNAV NA WHEN USING BLK ALTIMETER SETTING.

100 FT VEGETATION USED PER FPT.

AIRWAYS AT FAILS HAVE BEEN CANCELED, HOWEVER FEEDERS RETAINED AT FPT REQUEST.

TAA NOT USED PER ATC REQUEST.

CAT D MINIMA NOT CONSTRUCTED PER FPT REQUEST.  
ORDER 8260.3 CHAPTER 2 APPLIED TO 830 AAO 414306.00N/0811915.00W.

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**

<b>DISTANCE FROM</b>	THLD	<b>TO 1000FT POINT</b>	2.49
<b>WIDTH OF</b>	FINAL	<b>SEGMENT AT 1000FT POINT</b>	1.20
<b>TRUE COURSE OF</b>	FINAL	<b>SEGMENT CONTAINING 1000FT POINT</b>	224.64
<b>HIGH TERRAIN IN</b>	FINAL	<b>SEGMENT CONTAINING 1000FT POINT</b>	600
<b>DISTANCE FROM</b>	THLD	<b>TO 1500FT POINT</b>	9.96
<b>WIDTH OF</b>	INTERMEDIATE	<b>SEGMENT AT 1500FT POINT</b>	4.00
<b>TRUE COURSE OF</b>	INTERMEDIATE	<b>SEGMENT CONTAINING 1500FT POINT</b>	224.71
<b>HIGH TERRAIN IN</b>	INTERMEDIATE	<b>SEGMENT CONTAINING 1500FT POINT</b>	700

<b>THRESHOLD COORDINATES (IF STR-IN)</b>	414124.90N/0812304.28W
<b>ARP COORDINATES</b>	414102.50N/0812323.10W
<b>RUNWAY APCH END AND DIST FURTHEST FROM ARP</b>	RUNWAY 23 DISTANCE 0.44 NM
<b>FAF COORDINATES</b>	414357.45N/0811943.38W
<b>FIX NAME COORDINATES</b>	IF HILEK 414847.29N/0811320.58W

**REMARKS**

**PART E: PREPARED BY**

<b>NAME</b>	<b>OFFICE</b>	<b>DATE</b>	<b>TITLE</b>
RAKE MCGRAW (ANDRE TUCKER)	AJV-A431	09/02/2025	AERONAUTICAL INFORMATION SPECIALIST

