

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>
LWD	RNAV (GPS) RWY 18	1A	LAMONI	IA	1131	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM
088/30 CW 268/30

TO
TOQIC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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>
TOWER (19-063650)	410905.57N/0940242.34W	2181	250	50	4D	1000					3200
TERRAIN	410900.00N/0942221.00W	1354 (1400)								AS1500	2900

COMPUTATIONS

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

SEGMENT REMARKS:

LEFT BASE AREA

FROM
268/30 CW 358/30

TO
VUGHO

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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>
TOWER (19-001493)	404852.00N/0935016.00W	1623	500	50	5D	1000				AT577	3200
TERRAIN	404809.00N/0935000.00W	1154 (1200)								AS1500	2700

COMPUTATIONS

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

SEGMENT REMARKS:

RIGHT BASE AREA

FROM

358/30 CW 088/30

TO

XERMY

<u>RNP</u>	<u>DISTANCE</u>	<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>
WINDMILL (19-028097)	404554.41N/0942832.75W	1698	250	50	4D	1000				AT502	3200
TERRAIN	404818.00N/0943757.00W	1302 (1300)								AS1500	2800

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

VUGHO

TO

TOQIC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>			<u>HMAS</u>	
1.00	6.46										
<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>
TOWER (19-001493)	404852.00N/0935016.00W	1623	500	50	5D	1000				AT577	3200
TERRAIN	404809.00N/0935000.00W	1154 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

XERMY

TO

TOQIC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	6.46										
<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>
TOWER (19-000985)	404908.00N/0940200.00W	1485	500	50	5D	1000				AT715	3200
TERRAIN	404757.00N/0940221.00W	1213 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

TOQIC (IF/IAF)

TO

QUTMU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	4.91										
<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>
TOWER (19-001127)	404530.90N/0935019.81W	1544	250	50	4D	500				AT756	2800
TERRAIN	404636.00N/0935621.00W	1154 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LPV

FROM

QUTMU

TO

RW18

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	5.09		DA				250				
<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 (19-056134)	403820.03N/0935403.21W	1178	20	3	1A		34:1				1381

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV/VNAV

FROM

QUTMU

TO

RW18

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	5.09		DA				250				
<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				1381

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV

FROM

QUTMU

TO

RW18

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	5.09		RW18				369				
<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	404130.00N/0935436.00W	1250	215	8	4B	250					1500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

HOLD-IN-LIEU OF PT

FROM

TOQIC

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>
TOWER (19-001493)	404852.00N/0935016.00W	1623	500	50	5D	1000					2700
TERRAIN	405803.00N/0935730.00W	1207 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LPV

FROM

DA

TO

TOQIC

<u>RNP</u> 0.30	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u> 1193			
<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				3000
TOWER (19-001127)	404530.90N/0935019.81W	1544	250	50	4D	1000					2600
TERRAIN	403912.00N/0935715.00W	1167 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LNAV/VNAV

FROM
DA

TO
TOQIC

<u>RNP</u> 0.30	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u> 1220				
<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				3000
TOWER (19-001127)	404530.90N/0935019.81W	1544	250	50	4D	1000					2600
TERRAIN	403912.00N/0935715.00W	1167 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LNAV

FROM
RW18

TO
TOQIC

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u> 1400				
<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				3000
TOWER (19-001127)	404530.90N/0935019.81W	1544	250	50	4D	1000					2600
TERRAIN	403912.00N/0935715.00W	1167 (1200)								AS1500	2700

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											
SIGN (19-056003)	403722.03N/0935346.38W	1.30	389	1207	20	3	1A	300			1520
CATEGORY B											
TOWER (19-001268)	403842.50N/0935150.84W	1.85	589	1414	20	3	1A	300			1720
CATEGORY C											
TOWER (19-001268)	403842.50N/0935150.84W	2.90	589	1414	20	3	1A	300			1720
CATEGORY D											
TOWER (19-001268)	403842.50N/0935150.84W	3.79	589	1414	20	3	1A	300			1720

CIRCLING REMARKS:

MSA/ESA

CENTER

RADIUS

REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZMP ARTCC, FOD FSS

WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	WMSCR	ADJUSTMENTS
ASOS	LWD	24	LWD		Y	0
BACK-UP WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	WMSCR	ADJUSTMENTS
AWOS-3	I75	24	I75	26.97	Y	66

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KLWD 1131, KI75 1104
RA = 65.8.
RASS PRESSURE PATTERNS THE SAME
KLWD 1131, KI75 1104.
RA = 65.9

PRIMARY NAVAID	MONITOR POINT	HRS OPERATION	CAT
QUALITY 20 CHECKED			
APPROACH AND RUNWAY LIGHTING SYSTEM		RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW18 - MIRL (PCL)		NPI-F	
RW36 - MIRL (PCL)		NPI-F	

GLIDESLOPE ANGLE

3.00

ELEV RWY THRESHOLD

1128.7

TCH

50.0

ELEV GS ANTENNA

DISTANCE FROM RWY

VGSI ANGLE

TCH

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD

X

FT FROM THRESHOLD

DISPLACED THRESHOLD DISTANCE

ON CENTERLINE

X

FT FROM CENTERLINE

CRITICAL TEMPERATURES

CRITICAL LOW

-21C

CRITICAL HIGH

+54C

ACT

-22C

APT ISA

+12.76C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2016-2020).
CRITICAL LOW TEMPERATURE BASED ON EFFECTIVE GPA.
DESCENT RATE (FPM): STANDARD TEMP 970 HIGH TEMP 1280.

"VISUAL PORTION OF FINAL" PENETRATIONS

FINAL TYPE	LPV AND LNAV/VNAV	
34:1		
1141 TREE (19-056112) 403818.05N/0935404.43W (4.21)	1142 TREE (19-056098) 403818.48N/0935409.72W (4.19)	
1141 TREE (19-056032) 403818.33N/0935409.75W (3.64)	1140 TREE (19-056105) 403818.01N/0935409.89W (3.6)	
1140 TREE (19-056117) 403818.93N/0935409.63W (0.85)	1148 TREE (19-056029) 403821.58N/0935404.07W (0.69)	
<u>PENETRATIONS REMARKS:</u>		

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.

CONTINGENCY NOTES:
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE I75 ALTIMETER SETTING AND INCREASE LPV DA TO 1447 FEET; INCREASE LNAV RNAV DA TO 1447 FEET; INCREASE ALL MDAS 80 FEET AND LNAV VISIBILITY CAT C/D 3/8 SM, AND CIRCLING VISIBILITY CAT C 1/4 SM.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING I75 ALTIMETER SETTING.

100' TREES PER FPT.
ORDER 8260.3 CHAPTER 2 APPLIED TO 1273 AAO 404306.00N/0935424.00W.

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	2.89
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	181.23
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1100
DISTANCE FROM	THLD	TO 1500FT POINT	4.69
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.76
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	181.23
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1100

THRESHOLD COORDINATES (IF STR-IN)	403813.41N/0935407.54W
ARP COORDINATES	403756.61N/0935408.01W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 18 DISTANCE 0.28 NM
FAF COORDINATES	404318.99N/0935358.96W
FIX NAME COORDINATES	IF/IAF TOQIC 404813.72N/0935350.69W

REMARKS

TAA 30 MILE RADIUS:
TAA STRAIGHT-IN: TOQIC (404813.72N/0935350.69W) 088 CW 268
VUGHO (404805.15N/0934520.42W) 268/30 CW 358/30
XERMY (9404821.66N/0940221.00W) CW 358 CW 088

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
RAYMOND JOHNSON	AJV-A422	12/03/2025	AERONAUTICAL INFORMATION SPECIALIST