

U.S. Department
of Transportation

800 Independence Ave., S.W.
Washington, D.C. 20591

**Federal Aviation
Administration**

Transmittal Letter 19-06

JANUARY 25, 2019

**PREPARED BY AERONAUTICAL INFORMATION SERVICES, AJV-A41
(AVAILABLE ON THE WEB AT [HTTP://NFDC.FAA.GOV](http://NFDC.FAA.GOV))**

**The enclosed Standard Instrument Approach Procedures, Departure
Procedures/Takeoff Minimums and Fix Actions are effective as indicated.**

**The following are corrected copies of procedures originally published in TL 19-03 on
December 14, 2018, and in TL 19-04 on December 28, 2018, and in TL 19-05 on January 11,
2019.**

Vernon, AL, Lamar County, RNAV (GPS) RWY 17, Orig-A
Half Moon Bay, CA, Half Moon Bay, RNAV (GPS) RWY 12, Amdt 1
Long Beach, CA, Long Beach /Daugherty Field/, ILS OR LOC RWY 30, Amdt 35
Long Beach, CA, Long Beach /Daugherty Field/, RNAV (GPS) Z RWY 30, Amdt 4
Long Beach, CA, Long Beach /Daugherty Field/, RNAV (RNP) Y RWY 30, Amdt 3
Napa, CA, Napa County, ILS OR LOC Z RWY 36L, Orig-D
San Diego, CA, Montgomery-Gibbs Executive, ILS OR LOC RWY 28R, Amdt 4C
Crestview, FL, Bob Sikes, ILS OR LOC RWY 17, Amdt 1
Winter Haven, FL, Winter Haven Rgnl, RNAV (GPS) RWY 11, Orig-A
Butler, GA, Butler Muni, RNAV (GPS) RWY 1, Amdt 2
Maurice, IA, Sioux County Rgnl, RNAV (GPS) RWY 17, Orig
Spencer, IA, Spencer Muni, VOR RWY 30, Amdt 3C
Bloomington, IN, Monroe County, RNAV (GPS) RWY 6, Orig-C
Fairmont, MN, Fairmont Muni, ILS OR LOC RWY 31, Amdt 1
Fairmont, MN, Fairmont Muni, RNAV (GPS) RWY 13, Orig-A
New York, NY, John F Kennedy Intl, RNAV (GPS) Y RWY 13R, Orig
Lakeview, OR, Lake County, RNAV (GPS) RWY 17, Amdt 1
Lakeview, OR, Lake County, RNAV (GPS) RWY 35, Amdt 1
Pottstown, PA, Pottstown Muni, RNAV (GPS) RWY 26, Orig-A
Wellsboro, PA, Wellsboro Johnston, RNAV (GPS) RWY 10, Amdt 1
Spartanburg, SC, Spartanburg Downtown Memorial/Simpson Field, RNAV (GPS) RWY 23,
Amdt 1

**The following procedure, previously published in TL 19-03, on December 14, 2018, has
been rescinded in its entirety.**

College Station, TX, Easterwood Field, RNAV (GPS) RWY 29, Amdt 1B

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.

<u>AIRPORT</u> LAMAR COUNTY	<u>AIRPORT ID</u> M55	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> VERNON	<u>STATE</u> AL	
<u>AIRPORT ELEVATION</u> 463	<u>TDZE</u> 463	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 07/29/2010	<u>MAG VAR</u> 2W	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TAA **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 078/30 CW 258/30	NOPT	HOOTS	IF/IAF	2600
2. 258/30 CW 348/30		JUPSI	IAF	2600
3. 348/30 CW 078/30		WIDUR	IAF	2600

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>
WIDUR	IAF	HOOTS	NOPT	TF	FB	1.00	077.52	5.00	2600
JUPSI	IAF	HOOTS	NOPT	TF	FB	1.00	257.62	5.00	2600
HOOTS	IF/IAF	HARNN		TF	FB	1.00	167.57	6.10	2100
HARNN	FAF	MUFFN/1.70 NM TO RW17		TF	FB	0.30	167.59	3.25	
MUFFN/1.70 NM TO RW17		RW17	MAP	TF	FO	0.30	167.59	1.70	
RW17	MAP	863 MSL		CA			167.59		
863 MSL		HOOTS		DF	FO	1.00			2600

MISSED APPROACH

MAP:

LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 2600 DIRECT HOOTS AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD N HOOTS, RT, 167.57 INBOUND, 2600 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 167.59

FAF: HARNN

DIST FAF TO MAP: 4.95

DIST FAF TO THLD: 4.95

4. MIN ALT: HOOTS 2600, HARNN 2100, MUFFN/1.70 NM TO RW17 1040

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:MM:IM:

6. MIN GP INCPT:GP ALT AT FAF :OM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS NOT CLEARTCH:

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: USE COLUMBUS AFB ALTIMETER SETTING.
CHART NOTE: PROCEDURE NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

CHART COLUMBUS AFB ATIS
HARNN TO RW17: 3.04/40.
CHART COLUMBUS 1 MOA
CHART FAS OBST: 579 TREE 335045N/0880739W.

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	960	1	497	960	1	497	960	1 3/8	497	960	1 1/2	497			
CIRCLING	1100	1	637	1100	1	637	1100	1 3/4	637	1100	2	637			



CHANGES - REASONS

- 1. DELETED CHART NOTE: DME/DME RNP-0.3 NA - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
- 2. ADDED PBN REQUIREMENTS NOTE: RNP APCH - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
- 3. CHANGED INTERMEDIATE RNP VALUE FROM "0.50" TO "1.00" - UPDATED TO 8260.58A CHANGE 1 TABLE 1-2-1.
- 4. CHANGED FAS OBST FROM "599 TREE 335068N/0880717W" TO "579 TREE 335045N/0880739W" - NEW CONTROLLING OBSTACLE.
- 5. DELETED CHART NOTE: USE COLUMBUS AFB ALTIMETER SETTING; WHEN NOT RECEIVED, USE GOLDEN TRIANGLE RGNL ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET, LNAV CAT D VISIBILITY 1/4 MILE. - NOTE MOVED TO BACK OF -9 AS CONTINGENCY NOTE.
- 6. DELETED PROFILE VIEW NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT - VGSI EQUIPMENT HAS BEEN DESTROYED.
- 7. ADDED CHART NOTE: PROCEDURE NA AT NIGHT - DUE TO LACK OF SURVEY DATA, 20:1 AND 34:1 SURFACE STATUS CAN NOT BE DETERMINED. IAW NOTAM IFDC 8/9667.
- 8. CHANGED CHART NOTE FROM "VISIBILITY REDUCTION BY HELICOPTERS NA" TO "RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED" - IAW 8260.19H 8-6-11 (K(3)) MINIMUMS.
- 9. ADDED 20:1 IS NOT CLEAR, TO LINE 7 - IAW 8260.19H 8-6-7 (G(3)) FOR DOCUMENTING CLEAR SLOPES FOR RNAV PROCEDURE.
- 10. ADDED MAXIMUM ALTITUDE "6000" TO IF/IAF (HOOTS) - NEW REPORTS FORMAT NOW INCLUDES MAXIMUM ALTITUDES AT THE HOLD-IN-LIEU FIX.
- 11. CHANGED LNAV CAT C VISIBILITY FROM "1 1/4 SM" TO "1 3/8 SM" - PER VIS-CHECK TOOL.

NOTAM IFDC 8/9667 INCORPORATED INTO THIS AMENDMENT.

PDF EDIT 9-18-18: JAMES LAFFERTY, THE STATEMENT "ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED" REMOVED DUE TO PROCEDURE USING OLD CIRCLING DIMENSIONS.

01/11/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/26/18.
CHANGED MINIMUM ALTITUDE AT SDF (MUFFN) FROM "1100" BACK TO "1040". ACCURACY CODE OF OBSTRUCTION HAS BEEN UPDATED FROM A 4D TO 1A. ADDITIONALLY, BACKUP RASS WAS REMOVED AND ADDED TO THE CONTINGENCY NOTE ON THE BACK OF THE -9 DUE TO CRITERIA STATING "DESCENT ANGLE/GRADIENT IS CALCULATED USING VALUES BASED ON PRIMARY ALTIMETER ONLY".

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: CBM APP CON, ZME, ARPT MGR

FLIGHT CHECKED BY

KARL REINHARD KUEHNER

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

OFFICE
FIOG

DATE
11/17/2018

DEVELOPED BY

JAMES LAFFERTY

Digitally signed by
JAMES LAFFERTY
Jan 11, 2019

OFFICE
AJV-5433

DATE
09/18/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

OFFICE
AJV-5430

DATE

TITLE
MANAGER



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.

<u>AIRPORT</u> HALF MOON BAY	<u>AIRPORT ID</u> KHAJ	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 12	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> HALF MOON BAY	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 66	<u>TDZE</u> 59	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 12	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 09/28/2006	<u>MAG VAR</u> 15E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.

<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>
GOBBS	IAF	FUJCE		TF	FB	1.00	167.38	7.15	3000
FUJCE	IF	JEVXY		TF	FB	1.00	121.83	6.23	1700
JEVXY	FAF	RW12	MAP	TF	FO	0.30	121.89	4.87	
RW12	MAP	700 MSL		CA			121.89		
700 MSL		SEEMS		DF	FO	1.00			4000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW12

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 4000 DIRECT SEEMS AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT FUJCE

3. FAC: 121.89

FAF: JEVXY

DIST FAF TO MAP: 4.87

DIST FAF TO THLD: 4.87

4. MIN ALT: FUJCE 3000, JEVXY 1700

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

301 HAT: 0.80

GS ANT:

6. MIN GP INCPT: 1700

GP ALT AT FAF : JEVXY 1700

OM:

MM:

IM:

7. GP ANGLE: 3.10

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH: 40.0

8. MSA FROM: RW12 4500

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA EAST OF RWY 12-30.
CHART NOTE: RWY 12 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

CHART FAS OBST:519 TREE 373121.71N/1222926.87W
CHART CIRCLING ICON.
CHART VDP AT 1.04 NM TO RW12*
*LNAV ONLY
WAAS CHANNEL #99742
REFERENCE PATH ID: W12A
HOLD NW, RT, 144.00 INBOUND
LTP HAE: -15.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	360	7/8	301	360	7/8	301	360	7/8	301	360	7/8	301			
LNAV/VNAV DA	652	1 3/4	593	652	1 3/4	593	652	1 3/4	593	652	1 3/4	593			
LNAV MDA	660	1	601	660	1	601	660	1 3/4	601	660	1 3/4	601			
CIRCLING	660	1	594	660	1	594	660	1 3/4	594	660	2	594			





FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KHAF
RUNWAY	RW12
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W12A
LTP/FTP LATITUDE	373100.9915N
LTP/FTP LONGITUDE	1223019.0000W
LTP/FTP ELLIPSOIDAL HEIGHT	-00151
FPAP LATITUDE	372955.8165N
FPAP LONGITUDE	1222902.5410W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.10
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1456
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	7DCDB64B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00179
FPAP ORTHOMETRIC HEIGHT	+00179



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> LONG BEACH /DAUGHERTY FIELD/	<u>AIRPORT ID</u> KLGB	<u>PROCEDURE NAME</u> ILS OR LOC RWY 30	<u>ORIGINAL/AMENDMENT</u> 35	<u>CITY</u> LONG BEACH	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 60	<u>TDZE</u> 38	<u>SUPERSEDED</u> ILS OR LOC RWY 30	<u>ORIGINAL/AMENDMENT</u> 34	<u>DATED</u> 07/19/2018	<u>MAG VAR</u> 14E
<u>FACILITY</u> I-LGB	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-04.

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
SLI VORTAC		GUNEY INT					196.42	1.99	2000
EZKEL	IAF	LUCIG	NOPT	TF	FB	1.00	017.00	4.87	3000
MIDDS INT/ELB 9.75 DME	IAF	LUCIG INT/ELB 13.79 DME	NOPT				255.00 & 300.73	2.58 (HDG) & 1.99 (I-LGB)	3000
LUCIG INT/ELB 13.79 DME	IF	GUNEY INT					300.73	4.94 (I-LGB)	1600

MISSED APPROACH

MAP:

ILS: DA
LOC: 4.74 NM AFTER GUNEY INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 800 THEN CLIMBING LEFT TURN TO 3000 ON HEADING 200 AND LAX VORTAC R-145 TO PADDR INT/LAX 21.76 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD SE GUNEY, LT, 300.73 INBOUND, 1600 FT. IN LIEU OF PT (IAF), MAX 4500.
- FAC: 300.73 FAF: GUNEY INT DIST FAF TO MAP: DIST FAF TO THLD: 4.74
- MIN ALT: GUNEY INT 1600
- DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 1090
- MIN GS INCPT: 1600 GS ALT AT FAF : GUNEY INT 1600 OM: MM: IM:
- GP ANGLE: 3.00 34:1: 20:1: TCH: 58.4
- MSA FROM: SLI VORTAC 050-140 6900, 140-230 2800, 230-320 4400, 320-050 7700



EQUIPMENT REQUIREMENTS NOTES:

EQUIPMENT REQUIREMENTS NOTE: FROM EZKEL: RNAV 1-GPS REQUIRED.

NOTES:

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON SLI VORTAC AIRWAY RADIALS 202 CW 251.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 30 CATS C/D VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 4000 AT MIDDS
CHART MANDATORY 4000 AT EZKEL
CHART CIRCLING ICON.
CHART FAS OBST: 255 STACK 334543N/1180542W.
HOLD SE, LT, 325.00 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN CONTROL TOWER CLOSED.; LOC: STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2, 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 30	258	1800	220	258	1800	220	258	1800	220	258	1800	220			
S-LOC 30	520	2400	482	520	2400	482	520	5000	482	520	5000	482			
CIRCLING	840	1	780	840	1	780	840	2 1/4	780	840	2 1/2	780			

CHANGES - REASONS

ADDED TO CHART 4000 AT EZKEL-PER FPT
ADD RNAV INITIAL AND INTERMEDIATE LEGS FROM EZKEL TO LUCIG AND FROM LUCIG TO GUNEY-PER FPT
CHANGE MIDDS-MAXUE-GUNEY LEG TO MIDDS 255R DR LOC INTERCEPT-PER FPT
CHANGE LUCIG MAKEUP TO I-LGB AND ELB VOR-PER FPT
INCREASED VEGETATION FROM 80FT TO 100FT-PER FPT.

01/24/2019: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/13/2018.
1. CHANGED TERMINAL ROUTES EZKEL TO LUCIG COURSE FROM 017.87 TO 017.00.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLA, SOCAL APP CON, LGB ATCT, AMGR

FLIGHT CHECKED BY

THOMAS E MOLOKIE

Digitally signed by

ROBERT G HAMILTON

Jan 24, 2019

OFFICE

FICO

DATE

12/9/18

DEVELOPED BY

LONNIE EVERHART (BRANDON MAULDIN)

Digitally signed by

ROBERT G HAMILTON

Jan 24, 2019

OFFICE

AJV-5400

DATE

08/22/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by

ROBERT G HAMILTON

Jan 24, 2019

OFFICE

AJV-5400

DATE

TITLE

MANAGER



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.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
LONG BEACH /DAUGHERTY FIELD/	KLGB	RNAV (GPS) Z RWY 30	4	LONG BEACH	CA	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
60	38	RNAV (GPS) Z RWY 30	3A	09/13/2018	14E	1980
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		28 FEBRUARY 2019	ROUTINE			

TERMINAL ROUTES **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-04.**

<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>
EZKEL	IAF	LUCIG		TF	FB	1.00	017.00 	4.87	3000
MIDDS	IAF	LUCIG		TF	FB	1.00	274.85	4.21	3000
DRTTY	IAF	LUCIG		TF	FB	1.00	301.02	6.93	3000
LUCIG	IF	GUNEY		TF	FB	1.00	300.80	4.94	1600
GUNEY	FAF	RW30	MAP	TF	FO	0.30	300.76	4.74	
RW30	MAP	800 MSL		CA			300.76		800
800 MSL		PADDR		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW30

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 800 THEN CLIMBING LEFT TURN TO 3000 DIRECT PADDR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT LUCIG

3. FAC: 300.76

FAF: GUNEY

DIST FAF TO MAP: 4.74

DIST FAF TO THLD: 4.74

4. MIN ALT: LUCIG 3000, GUNEY 1600

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

222 HAT: 0.54

GS ANT:

6. MIN GP INCPT: 1600

GP ALT AT FAF : GUNEY 1600

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 58.4

8. MSA FROM: RW30 7700

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 4°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C AND D VISIBILITY TO 1 3/8SM.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 3000 AT DRTTY
CHART MANDATORY 4000 AT MIDDS.
CHART MANDATORY 4000 AT EZKEL
CHART CIRCLING ICON.
CHART VDP AT 2.24 NM TO RW30*
*LNAV ONLY
WAAS CHANNEL #99521
REFERENCE PATH ID: W30A
CHART FAS OBST: 255 STACK 334543N/1180542W.
HOLD SE, LT, 326.00 INBOUND
LTP HAE: -26.2 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	261	1800	223	261	1800	223	261	1800	223	261	1800	223			
LNAV/VNAV DA	568	5500	530	568	5500	530	568	5500	530	568	5500	530			
LNAV MDA	520	2400	482	520	2400	482	520	5000	482	520	5000	482			
CIRCLING	840	1	780	840	1	780	840	1 3/8	780	840	1 3/8	780			



CHANGES - REASONS

- 1. CHANGED INITIAL FROM ALBAS TO EZKEL-PER FPT.
- 2. LNAV/VNAV DA/HATCHANGED FROM 664/626 TO 568/530-NEW MA OBSTACLE.
- 3. LNAV MDA/HAT CHANGED FROM 820/782 TO 520/482-NEW MA OBSTACLE.
- 4. CIRCLING CAT A,B,C AND D MDA/HAA CHANGED FROM 880/820 TO 840/780-NEW OBSTACLE.
- 5. INCREASED VEGETATION FROM 80FT TO 100FT-PER FPT.
- 6. CHANGED CHART MANDATORY 4000 AT ALBAS TO MANDATORY 4000 AT ZEKEL-PER FPT.

12/11/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/13/2018.
1. CHANGED DISTANCE OF EZKEL TO LUCIG FROM 6.86 TO 4.87.

01/24/2019: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/13/2018.
1. CHANGED TERMINAL ROUTES EZKEL TO LUCIG COURSE FROM 017.87 TO 017.00.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** LA ARTCC, SOCAL TRACON, KLGB ATCT

<u>FLIGHT CHECKED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>
THOMAS EDWARD MOLOKIE	ROBERT G HAMILTON	FIOG	12/09/2018
	Jan 24, 2019		

<u>DEVELOPED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>
LONNIE EVERHART (BRANDON MAULDIN)	ROBERT G HAMILTON	AJV-5400	08/13/2018
	Jan 24, 2019		

<u>APPROVED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
LONNIE EVERHART	ROBERT G HAMILTON	AJV-5400		MANAGER
	Jan 24, 2019			



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLGB
RUNWAY	RW30
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W30A
LTP/FTP LATITUDE	334838.6435N
LTP/FTP LONGITUDE	1180834.1570W
LTP/FTP ELLIPSOIDAL HEIGHT	-00262
FPAP LATITUDE	334941.4385N
FPAP LONGITUDE	1180950.1425W
THRESHOLD CROSSING HEIGHT (TCH)	00058.4
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	143.75
LENGTH OFFSET	0312
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
 CRC REMAINDER	 65C725FF

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00095
FPAP ORTHOMETRIC HEIGHT	+00095



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (RNP) 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.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
LONG BEACH /DAUGHERTY FIELD/	KLGB	RNAV (RNP) Y RWY 30	3	LONG BEACH	CA	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
60	38	RNAV (RNP) Y RWY 30	2	11/10/2016	14E	1980
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		28 FEBRUARY 2019	ROUTINE			

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-04.

<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>
EZKEL	IAF	LUCIG		TF	FB	1.00	017.00 	4.87	3000
DRTTY	IAF	LUCIG		TF	FB	1.00	301.02	6.93	3000
MIDDS	IAF	LUCIG		TF	FB	1.00	274.85	4.21	3000
LUCIG	IF	GUNEY		TF	FB	1.00	300.79	4.94	1600
GUNEY	PFAF	RW30	MAP	TF	FO	0.30	300.76	4.74	
RW30	MAP	800 MSL		CA			300.76		800
800 MSL		PADDR		DF	FO	1.00			3000

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 800 THEN CLIMBING LEFT TURN TO 3000 DIRECT PADDR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT LUCIG

3. FAC: 300.76

FAF: GUNEY

DIST FAF TO MAP:

DIST FAF TO THLD:

4. MIN ALT: LUCIG 3000, GUNEY 1600

5. DIST TO THLD FROM OM: 4.74

MM:

IM:

150 HAT:

346 HAT: 0.92

GS ANT:

6. MIN GP INCPT: 1600

GP ALT AT FAF : GUNEY 1600

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 58.4

8. MSA FROM: RW30 7700

PBN REQUIREMENTS NOTE:

RNP AR APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 4°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MIDDS ON V23-165-597 SOUTHEAST BOUND
CHART SPEED ICON IN PLANVIEW AT LUCIG: MAX 180 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 3000 AT DRTTY.
CHART MANDATORY 4000 AT EZKEL.
CHART MANDATORY 4000 AT MIDDS.
HOLD SE, LT, 326.00 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - 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
AUTHORIZATION REQUIRED															
RNP 0.30 DA	384	3000	346	384	3000	346	384	3000	346	384	3000	346			



CHANGES - REASONS

- 1. CHANGED INITIAL FIX FROM ALBAS TO EZKEL - ATC REQUEST.
- 2. INCREASED VEGETATION HEIGHT FROM 80FT TO 100FT - ATC REQUEST.
- 3. CHANGED CHART MANDATORY 4000 AT ALBAS TO MANDATORY 4000 AT EZKEL - ATC REQUEST.
- 4. REMOVED PLANVIEW NA NOTE AT ALBAS - EZKEL NOT ON AIRWAY.
- 5. REMOVED PLANVIEW NA NOTE AT DRTTY - NOT REQUIRED FOR RNAV PROCEDURES.

12/11/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/14/2018.
1. CHANGED DISTANCE OF EZKEL TO LUCIG FROM 6.86 TO 4.87.

01/24/2019: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/13/2018.
1. CHANGED TERMINAL ROUTES EZKEL TO LUCIG COURSE FROM 017.87 TO 017.00.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, SOCAL APP CON, AMGR, LGB ATCT.

<u>FLIGHT CHECKED BY</u> THOMAS EDWARD MOLOKIE	<i>Digitally signed by</i> ROBERT G HAMILTON Jan 24, 2019	<u>OFFICE</u> FIOG	<u>DATE</u> 12/09/2018	
<u>DEVELOPED BY</u> LONNIE EVERHART (BRANDON MAULDIN)	<i>Digitally signed by</i> ROBERT G HAMILTON Jan 24, 2019	<u>OFFICE</u> AJV-5400	<u>DATE</u> 08/14/2018	
<u>APPROVED BY</u> LONNIE EVERHART	<i>Digitally signed by</i> ROBERT G HAMILTON Jan 24, 2019	<u>OFFICE</u> AJV-5400	<u>DATE</u>	<u>TITLE</u> MANAGER



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> NAPA COUNTY	<u>AIRPORT ID</u> KAPC	<u>PROCEDURE NAME</u> ILS OR LOC Z RWY 36L	<u>ORIGINAL/AMENDMENT</u> ORIG-D	<u>CITY</u> NAPA	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 36	<u>TDZE</u> 24	<u>SUPERSEDED</u> ILS OR LOC RWY 36L	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>DATED</u> 09/13/2018	<u>MAG VAR</u> 15E
<u>FACILITY</u> I-APC	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> 02/28/2019	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.

<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>
SGD VORTAC		FESAV INT/I-APC 12.53 DME					162.31	9.00	2600
REBAS/SAU 8.35 DME	IAF	FESAV INT/I-APC 12.53 DME	NOPT				321.00 & 005.74	1.85 (HDG) & 3.86 (I-APC)	2600
FESAV INT/I-APC 12.53 DME	IF/IAF	CIKPI INT/I-APC 6.52 DME					005.74	6.01 (I-APC)	1800

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.45 NM AFTER CIKPI OR AT I-APC 1.07 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 500 THEN CLIMBING LEFT TURN TO 3200 DIRECT SGD VORTAC THEN ON SGD R-230 TO BURDE INT/SGD 11.31 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 500 THEN CLIMBING LEFT TURN TO 3000 ON SAU VORTAC R-003 TO DYKEE/13.00 DME AND HOLD.

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD S FESAV, RT, 005.74 INBOUND, 2600 FT. IN LIEU OF PT (IAF), MAX 4500.
3. FAC: 005.74 FAF: CIKPI INT/I-APC 6.52 DME DIST FAF TO MAP: 5.45 DIST FAF TO THLD: 5.45
4. MIN ALT: FESAV INT/I-APC 12.53 DME 2600, CIKPI INT/I-APC 6.52 DME 1800, ROOSE INT/I-APC 3.10 DME 680* ←
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 983
6. MIN GS INCPT: 1800 GS ALT AT FAF : CIKPI INT/I-APC 6.52 DME 1800 OM: MM: IM:
7. GP ANGLE: 3.00 34:1: 20:1: TCH: 50.0
8. MSA FROM: SGD VORTAC 090-180 5100, 180-270 3800, 270-090 4300

EQUIPMENT REQUIREMENTS NOTES:

QUALITY
35
CHECKED

NOTES:

CHART NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 530.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 36L CATS C/D VISIBILITY TO 1 7/8 SM AND ROOSE FIX MINIMUMS S-LOC 36L CATS C/D VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW: CCR VOR/DME R-250 AT FESAV.
CHART IN PLANVIEW: DYKEE INT/SAU 13.00 DME
CHART VDP AT 2.31 DME*
DISTANCE VDP TO THLD 1.24 NM
* LOC ONLY
CHART FAS OBST: 65 GRD 381207N/1221721W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD S DYKEE INT/SAU 13.00 DME, RT, 003.00 INBOUND.
HOLD NE, RT, 230.00 INBOUND

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN CONTROL TOWER CLOSED.; LOC: STANDARD - CAT C 900-2 3/4, CAT D 1200-3, 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 36L	224	3/4	200	224	3/4	200	224	3/4	200	224	3/4	200			
S-LOC 36L	680	3/4	656	680	3/4	656	680	1 3/4	656	680	1 3/4	656			
CIRCLING	700	1	664	820	1	784	920	2 3/4	884	1180	3	1144			
ROOSE FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)															
S-LOC 36L	460	3/4	436	460	3/4	436	460	1	436	460	1	436			
CIRCLING	700	1	664	820	1	784	920	2 3/4	884	1180	3	1144			

CHANGES - REASONS

1. UPDATED PROCEDURE NAME FROM ILS OR LOC RWY 36L TO ILS OR LOC Z RWY 36L; A TEMP PROCEDURE, LOC Y RWY 36L DEVELOPED TO ACCOMMODATE RWY CONSTRUCTION THE ILS LOC Z RWY 36L WILL BE NA DURING THE CONSTRUCTION PERIOD - NAMED IAW .3D 1-6-2D.
2. REMOVED CNF FIX FROM INITIAL REBAS - FESAV DR SEGMENT - NO LONGER REQUIRED TO BE CHARTED.
3. UPDATED S-ILS 36L DA FROM 217 TO 224 - TDZE CHANGED.
4. MOVED BACK-UP ALTIMETER ADJUSTMENTS AND NOTES TO FAA FORM 8260-9 - FOR CONTINGENCY USE, ASOS ON WMSCR.
5. AMENDED S-LOC 36L HAT FROM 663 TO 656 AND ROOSE FIX MINIMUMS S-LOC 36L HAT FROM 443 TO 436 - COMPUTED USING AMENDED TDZE.
6. UPDATED INOPERATIVE MALS NOTE - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-110(3)(D).
7. INCORPORATED CHANGES FROM ORIG-A, ORIG-B, AND ORIG-C - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-3-4C(2).

PDF EDITS:
1. TERMINAL ROUTES REBAS - FESAV ADDED (HGD).

01/23/2019 THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/03/2019.
1. LINE 4, ADDED ASTERICK FOR LOC ONLY TO ROOSE INT/I-APC 3.10 DME 680*.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZOA, NORCAL TRACON, APC ATCT, APT MGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

DATE

Digitally signed by
ROBERT G HAMILTON
Jan 24, 2019

DEVELOPED BY

HEIDI SNIDER

Digitally signed by
HEIDI SNIDER
Dec 17, 2018

OFFICE

AJV-5422

DATE

11/08/2018

APPROVED BY

JULIE MORGAN

OFFICE

AJV-5420

DATE

TITLE
MANAGER

Digitally signed by
ROBERT G HAMILTON
Jan 24, 2019

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> MONTGOMERY-GIBBS EXECUTIVE	<u>AIRPORT ID</u> KMYF	<u>PROCEDURE NAME</u> ILS OR LOC RWY 28R	<u>ORIGINAL/AMENDMENT</u> 4C	<u>CITY</u> SAN DIEGO	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 427	<u>TDZE</u> 423	<u>SUPERSEDED</u> ILS OR LOC RWY 28R	<u>ORIGINAL/AMENDMENT</u> 4B	<u>DATED</u> 09/15/2016	<u>MAG VAR</u> 14E
<u>FACILITY</u> I-MYF	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

TERMINAL ROUTES **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-04.**

<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>
BARET INT/MZB 27.72 DME		OGOTE INT/MZB 23.45 DME					255.85	4.27 (MZB R-076)	6100
OGOTE INT/MZB 23.45 DME		BAKEL INT/MZB 19.28 DME					255.85	4.17 (MZB R-076)	5900
BAKEL INT/MZB 19.28 DME	IAF	MIBBY INT/I-MYF 14.51 DME/RADAR					196.00	4.21 (JLI R-196)	4200
MIBBY INT/I-MYF 14.51 DME/RADAR	IF	NESTY/I-MYF 11.22 DME/RADAR					280.99	3.29 (I-MYF)	3600
NESTY/I-MYF 11.22 DME/RADAR		PENYY/I-MYF 6.97 DME/RADAR					280.99	4.25 (I-MYF)	2500

MISSED APPROACH

MAP:

ILS: DA
 LOC: 6.29 NM AFTER PENYY/I-MYF 6.97 DME/RADAR OR AT I-MYF 0.68 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 3000 ON HEADING 270 AND MZB VORTAC R-326 TO CARIF INT/MZB 16.28 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 3000 ON HEADING 270 AND OCN VORTAC R-145 TO CARIF INT/OCN 12.84 DME AND HOLD.



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT MIBBY
3. FAC: 280.99 FAF: PENYY/I-MYF 6.97 DME/RADAR DIST FAF TO MAP: 6.29 DIST FAF TO THLD: 6.29
4. MIN ALT: MIBBY INT/I-MYF 14.51 DME/RADAR 4200, NESTY/I-MYF 11.22 DME/RADAR 3600, PENYY/I-MYF 6.97 DME/RADAR 2500, PALOS/I-MYF 3.58 DME/RADAR 1380*
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 762
6. MIN GS INCPT: 2500 GS ALT AT FAF : PENYY/I-MYF 6.97 DME/RADAR 2500 OM: MM: IM:
7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 40.7
8. MSA FROM: MZB VORTAC 040-160 5400, 160-310 2100, 310-040 4400

EQUIPMENT REQUIREMENTS NOTES:

DME OR RADAR REQUIRED.

NOTES:

CHART NOTE: RWY 28R HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
*LOC ONLY

ADDITIONAL FLIGHT DATA:

CHART: JLI VORTAC 29.60 DME AT MIBBY
CHART IN PLANVIEW: CARIF INT/OCN 12.84 DME
CHART VDP AT 1.80 DME*
DISTANCE VDP TO THLD 1.12 NM
* LOC ONLY
CHART FAS OBST: 554 POLE 324757N/1170621W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SE CARIF INT/OCN 12.84 DME, LT, 325.48 INBOUND.
HOLD SE, LT, 325.59 INBOUND

MINIMUMS:

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

ALTERNATE: NA ILS: STANDARD; LOC: STANDARD

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 28R	673	3/4	250	673	3/4	250		NA			NA				
S-LOC 28R	820	3/4	397	820	3/4	397		NA			NA				
CIRCLING	920	1	493	920	1	493		NA			NA				



CHANGES - REASONS

1. VDP DIST CHANGED FROM 1.10 NM TO 1.2 NM - IAW 8260.3D CALCULATIONS.
2. FOR CONTINGENCY PURPOSES MOVED BACKUP ALTIMETER NOTES TO 8260-9 PART C - IAW 8260.19H PARA, 8-6-9 F (3).
3. UPDATED NOTE FROM "34:1 IS CLEAR" TO "34:1 IS NOT CLEAR" AND ADDED "20:1 IS CLEAR" - IAW 8260.19H PARA 8-6-7 G (3).
4. RAISED S-ILS DA/HAT AND VIS ALL CATS FROM 623/200 AND VIS 1/2 SM TO 673/250 AND VIS 3/4 SM - NEW CONTROLLING OBSTACLE.
5. RAISED CIRCLING CMDA/HAA ALL CATS FROM 880/453 TO 920/493 - NEW CONTROLLING OBSTACLE.
6. RAISED S-LOC MDA/HAT AND VIS ALL CATS FROM 800/377 AND VIS 1/2 SM TO 820/397 AND VIS 3/4 SM - NEW CONTROLLING OBSTACLE.
7. ADDED CHART NOTE: RWY 28R HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - IAW 8260.19 PARA 8-6-11 K (3).
8. UPDATED CHART FAS OBST FROM "549 TRMSN TWR 324800N/1170620W" TO "554 POLE 324757N/1170621W" - NEW CONTROLLING OBSTACLE.
9. MOVED ALTERNATE WEATHER INFORMATION NOTES TO 8260-9 PART C - IAW 8260.19H PARA, 8-6-9 F (3).
10. ADDED ALTERNATE MA HOLDING TO ADDITIONAL FLIGHT DATA - IAW 8260.19H PARA 8-6-6.

1/7/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 9/10/18.

1. ADDED PALOS/I-MYF 3.58 DME/RADAR 1380* TO LINE FOUR OF FORM 8260-3.
2. REMOVED CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** SAN DIEGO APCH, MYF TOWER

FLIGHT CHECKED BY

CHARLES DAVID CUNNINGHAM

Digitally signed by

WARDELL HENNING

OFFICE

FIOG

DATE

11/15/2018

Jan 18, 2019

DEVELOPED BY

ADOLFO URRUTIA (ANTHONY KACZKA)

Digitally signed by

WARDELL HENNING

OFFICE

AJV-5432

DATE

08/21/2018

Jan 18, 2019

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

OFFICE

AJV-5430

DATE

Jan 18, 2019

TITLE

MANAGER



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> BOB SIKES	<u>AIRPORT ID</u> KCEW	<u>PROCEDURE NAME</u> ILS OR LOC RWY 17	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> CRESTVIEW	<u>STATE</u> FL
<u>AIRPORT ELEVATION</u> 214	<u>TDZE</u> 213	<u>SUPERSEDED</u> ILS OR LOC RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>DATED</u> 07/25/2013	<u>MAG VAR</u> 4W
<u>FACILITY</u> I-CEW	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.

<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>
CEW VORTAC		KOBRA LOM					081.72	7.53	2000
ROMEK INT/CEW 21.53 DME		KOBRA LOM					164.68	21.11	2000

MISSED APPROACH

MAP:

ILS: DA
LOC: 3.84 NM AFTER KOBRA LOM

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1000 THEN CLIMBING RIGHT TURN TO 2000 DIRECT KOBRA LOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT R SIDE OF COURSE 354.99 OUTBOUND 2000 FT WITHIN 10 MILES OF KOBRA LOM (IAF)
2.
3. FAC: 174.99 FAF: KOBRA LOM DIST FAF TO MAP: 3.84 DIST FAF TO THLD: 3.84
4. MIN ALT: KOBRA LOM 1600
5. DIST TO THLD FROM OM: 3.84 MM: IM: 150 HAT: GS ANT: 1329
6. MIN GS INCPT: 1600 GS ALT AT FAF : OM: 1498 MM: IM:
7. GP ANGLE: 3.00 34:1: 20:1: TCH: 49.9
8. MSA FROM: CE LOM 090-270 1800, 270-090 2300

EQUIPMENT REQUIREMENTS NOTES:

ADF REQUIRED.



NOTES:

CHART NOTE: CIRCLING NA FOR CAT D W OF RWY 17-35.

CHART NOTE: AUTOPILOT COUPLED APPROACH NA.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE EGLIN AFB ALTIMETER SETTING AND INCREASE S-ILS 17 DA TO 472 AND ALL MDA 60 FEET, INCREASE S-LOC 17 CAT C/D AND CIRCLING CAT D VISIBILITY 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART KVPS, KEGI IN PLANVIEW

CHART CIRCLING ICON.

CHART R-2915A, R-2914A, R-2918

CHART FAS OBST: 367 POLE 305004N/0863208W.

474 AAO 305109N/0863142W.

HOLD N, LT, 174.99 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☒

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 17	413	3/4	200	413	3/4	200	413	3/4	200	413	3/4	200			
S-LOC 17	620	1	407	620	1	407	620	1 1/8	407	620	1 1/8	407			
CIRCLING	700	1	486	700	1	486	820	1 3/4	606	840	2	626			

CHANGES - REASONS

1. UPDATED CIRCLING CONTROLLING OBS FOR ALL CATS - NEW CIRCLING RADII APPLIED.
2. UPDATED INBOUND COURSE FROM 171.00 TO 174.99 - AIRPORT MAGVAR UPDATE.
3. UPDATED HOLDING COURSE FROM 171.00 TO 174.99 - AIRPORT MAGVAR UPDATE.
4. RAISED CAT C CMDA/HAA FROM 700/487 TO 820/607 - NEW CIRCLING RADII OBS TOWER (12-004043) 520 MSL (2C).
5. RAISED CAT D CMDA/HAA FROM 820/607 TO 840/627 - NEW CIRCLING RADII OBS TOWER (12-004639) 478 MSL (5D).
6. RESTRICTED CAT D CIRCLING WEST OF RWY 17/35 - OBS TOWER (12-000273) 673 MSL (5D) WOULD RAISE MDA TO 1040.

01/07/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/27/18.

1. UPDATED FACILITY FROM "CEW" TO "I-CEW".

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZJX, ELGIN APP CON, (USAF), AMGR

FLIGHT CHECKED BY

MARC J HINCH

Digitally signed by **OFFICE**

WARDELL HENNING FICO

DATE

12/19/18

Jan 09, 2019

DEVELOPED BY

WARDELL HENNING (CHARLES CTR THIBODEAUX)

Digitally signed by

WARDELL HENNING

OFFICE

AJV-5430

DATE

10/11/2018

Jan 09, 2019

APPROVED BY

WARDELL HENNING

Digitally signed by

WARDELL HENNING

OFFICE

AJV-5430

DATE

**TITLE
MANAGER**



Jan 09, 2019

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.

<u>AIRPORT</u> WINTER HAVEN RGNL	<u>AIRPORT ID</u> KGIF	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 11	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> WINTER HAVEN	<u>STATE</u> FL
<u>AIRPORT ELEVATION</u> 145	<u>TDZE</u> 145	<u>SUPERSEDED</u> RNAV (GPS) RWY 11	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 11/23/2006	<u>MAG VAR</u> 4W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TAA [THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.](#)

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 017/30 CW 197/30	NOPT	017/20 CW 197/20		2600
2. 017/20 CW 197/20		HOVOM	IF/IAF	1900
3. 197/30 CW 287/30		197/9 CW 287/9		2100
4. 197/9 CW 287/9		NURIY	IAF	1900
5. 287/30 CW 017/30		287/9 CW 017/9		2600
6. 287/9 CW 017/9		RIYDO	IAF	1900

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>
NURIY	IAF	HOVOM	NOPT	TF	FB	1.00	197.07	5.00	1900
RIYDO	IAF	HOVOM	NOPT	TF	FB	1.00	017.05	5.00	1900
HOVOM	IF/IAF	JOSIR		TF	FB	1.00	107.06	6.10	1800
JOSIR	FAF	OVIKE/2.50 NM TO RW11		TF	FB	0.30	107.12	2.49	
OVIKE/2.50 NM TO RW11		RW11	MAP	TF	FO	0.30	107.12	2.50	
RW11	MAP	395 MSL		CA			107.12		
395 MSL		RAVYO		DF	FO	1.00			2600



MISSED APPROACH

MAP:
LPV: DA
LNAV/VNAV: DA
LNAV: RW11

MISSED APPROACH INSTRUCTIONS:
CLIMB TO 2600 DIRECT RAVYO AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)				
2.	HOLD W HOVOM, RT, 107.06 INBOUND, 1900 FT. IN LIEU OF PT (IAF), MAX 6000.							
3. FAC:	107.12	FAF: JOSIR	DIST FAF TO MAP: 4.99	DIST FAF TO THLD: 4.99				
4. MIN ALT:	HOVOM 1900, JOSIR 1800, OVIKE/2.50 NM TO RW11 980*							
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	250 HAT: 0.65	GS ANT:			
6. MIN GP INCPT: 1800	GP ALT AT FAF : JOSIR 1800			OM:	MM:	IM:		
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 45.0					
8. MSA FROM:								

PBN REQUIREMENTS NOTE:

RNP APPROACH

NOTES:

CHART NOTE: RWY 11 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
CHART NOTE: STRAIGHT-IN MINIMUMS NA AT NIGHT.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BARTOW ALTIMETER SETTING AND INCREASE ALL DA/MDAS 20 FEET.
CHART NOTE: BARO-VNAV NA WHEN USING BARTOW ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1.76 NM TO RW11*
*LNAV ONLY
WAAS CHANNEL #86502
REFERENCE PATH ID: W11A
CHART FAS OBST: 457 TOWER 280352N/0814756W.
HOLD E, RT, 287.26 INBOUND
LTP HAE: 16.9 M



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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
LPV DA	395	1	250	395	1	250	395	1	250	395	1	250			
LNAV/VNAV DA	647	1 3/4	502	647	1 3/4	502	647	1 3/4	502	647	1 3/4	502			
LNAV MDA	760	1	615	760	1	615	760	1 3/4	615	760	2	615			
CIRCLING	760	1 3/4	615	760	1 3/4	615	760	1 3/4	615	820	2 1/4	675			

CHANGES - REASONS

1. CHANGED ALL REFRENCES OF AIRPORT NAME FROM WINTER HAVEN GILBERT TO WINTER HAVEN RGNL - AIRPORT NAME CHANGE.
2. CHANGED CHART NOTE FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C(5F) OR ABOVE 48C(119F) TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C OR ABOVE 48C - UPDATED CHART NOTE IAW 8260-19.
3. CHANGED CHART NOTE FROM VISIBILITY REDUCTION BY HELICOPTERS NA TO RWY 11 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED - UPDATED CHART NOTE IAW 8260 -19.
4. ADDED CA LEG TO MISSED APPRAOCH SEGMENT - IAW 8260.58 REQUIRED FOR RNAV PROCEDURE.
5. CHANGED BARO-VNAV CRITICAL HIGH TEMP FROM 48 DEGREES C TO 54 DEGREES C - UPDATED DATA.
6. UPDATED ALSTG NOTE FROM IF LOCAL ALTIMETER SETTING NOT RECEIVED, USE BARTOW MUNI ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 20 FEET TO WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BARTOW ALTIMETER SETTING AND INCREASE ALL DA/MDAS 20 FEET.
7. DELETED HELICOPTER VISI NOTE - 34:1 AREA IS CLEAR.
8. DELETED DME/DME RNP-0.3 NA NOTE AND ADDED PBN REQUIREMENTS NOTE: RNP APCH.

01/04/18: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 10/29/18.
1. ADDED 1800 TO LINE 6 OF THE 8260-3; FP ALT AT FAF: JOSIR 1800.

COORDINATED WITH:

A4A ☐ **ALPA** ☐ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZJX, TPA APP CON, AIRPORT MGR

FLIGHT CHECKED BY
PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

DEVELOPED BY *Digitally signed by*
WARDELL HENNING **MIKE MELSEN**
Jan 04, 2019

APPROVED BY *Digitally signed by*
PATRICK MULQUEEN **WARDELL HENNING**
Jan 08, 2019

OFFICE *Digitally signed by*
WARDELL HENNING
Jan 08, 2019

OFFICE
AJV-5433

OFFICE
AJV-5430

DATE
09/04/2018

DATE
09/04/2018

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KGIF
RUNWAY	RW11
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W11A
LTP/FTP LATITUDE	280348.8960N
LTP/FTP LONGITUDE	0814537.8485W
LTP/FTP ELLIPSOIDAL HEIGHT	+00169
FPAP LATITUDE	280328.5500N
FPAP LONGITUDE	0814359.7800W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	828B4113
ADDITIONAL PATH POINT RECORD INFORMATION	
ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+00436
FPAP ORTHOMETRIC HEIGHT	+00436



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.

<u>AIRPORT</u> BUTLER MUNI	<u>AIRPORT ID</u> 6A1	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 1	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> BUTLER	<u>STATE</u> GA
<u>AIRPORT ELEVATION</u> 667	<u>TDZE</u> 659	<u>SUPERSEDED</u> RNAV (GPS) RWY 36	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 02/04/2016	<u>MAG VAR</u> 5W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TAA **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 275/30 CW 095/30	NOPT	VOTUC	IF/IAF	3300
2. 095/30 CW 275/30		VOTUC	IF/IAF	3300

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>
VOTUC	IF/IAF	PEYLI		TF	FB	1.00	005.02	6.27	2300
PEYLI	FAF	RW01	MAP	TF	FO	0.30	005.02	4.38	
RW01	MAP	934 MSL		CA			005.02		
934 MSL		JUNKU		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW01

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT JUNKU AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S VOTUC, RT, 005.02 INBOUND, 3300 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 005.02FAF: PEYLI

DIST FAF TO MAP: 4.38

DIST FAF TO THLD: 4.38

4. MIN ALT: VOTUC 3300, PEYLI 2300

5. DIST TO THLD FROM OM:MM:IM:150 HAT:275 HAT: 0.57GS ANT:

6. MIN GP INCPT: 2300GP ALT AT FAF : PEYLI 2300OM:MM:IM:

7. GP ANGLE: 3.4034:1: IS NOT CLEAR20:1: IS NOT CLEARTCH: 60.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 6 AND 24.
CHART NOTE: STRAIGHT-IN RWY 1 NA AT NIGHT, CIRCLING RWY 1 NA AT NIGHT.
CHART NOTE: RWY 1 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C. ←
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #73033
REFERENCE PATH ID: W01A
FAS OBST: 847 AAO 323018N/0841527W.
HOLD N, RT, 185.02 INBOUND
LTP HAE: 174.5 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4

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
LPV DA	934	1	275	934	1	275	934	1	275	934	1	275			
LNAV/VNAV DA	1036	1	377	1036	1	377	1036	1	377	1036	1	377			
LNAV MDA	1140	1	481	1140	1	481	1140	1 3/8	481	1140	1 3/8	481			
CIRCLING	1180	1	513	1180	1	513	1240	1 1/2	573	1360	2 1/4	693			

QUALITY
23
CHECKED

CHANGES - REASONS

- 1. REMOVED PRATZ FEEDER, PHYLL INITIAL, MSA, AND ASSOCIATED AIRWAY NOTES. - ADDED TAA PER FPT REQUEST.
- 2. ALL REFERENCES TO RWY 36 CHANGES TO RWY 01. - MAGVAR UPDATE FROM 3W/95 TO 5W/20
- 3. ALL COURSES REFERENCE TO FINAL APPROACH COURSE CHANGED FROM 003.02 TO 005.02. - MAGVAR UPDATE.
- 4. MISSED HOLDING INBOUND HEADING CHANGED FROM 183.06 TO 185.02. - MAGVAR UPDATE.
- 5. H-I-L/INTERMEDIATE ALTITUDE CHANGED FROM 3000 TO 3300. - TO MATCH ADDED TAA ALTITUDE.
- 6. ADDED 20:1 IS NOTCLEAR. - IAW 8260.19 8-6-7.
- 7. ADDED PBN REQUIREMENTS NOTE: RNP APCH, REMOVED DME/DME RNP-0.3 NA. - IAW 8260.19 8-6-8.
- 8. ADDED CHART NOTE: CIRCLING NA TO RWYS 6 AND 24. - IAW SOP TITLED UNPAVED RUNWAYS DATED 1/4/18. NO RAPT APPROVAL.
- 9. BARO-VNAV CHART NOTE CHANGED FROM -16C (4F) OR ABOVE 54C (130F), TO LNAV/VNAV NA BELOW -16C OR ABOVE 20C.
- 10. CRC REMAINDER CHANGED FROM AE0DBCBD TO 9FECB027. - FAS DATA UPDATED WITH NEW DATA.
- 11. FPAP UPDATED FROM 0841442.6080W TO 0841442.6090W.
- 12. MOVED ALSTG TO BACK OF THE -9 FOR CONTINGENCY PURPOSES
- 13. ADDED ALTERNATE MINIMUMS STANDARD-@ CAT D 800-2 1/4. BOTH ALTIMETER SOURCES ON WMSCR.
- 14. CMDA CAT C VISIBILITY CHANGED FROM 2 TO 1 1/2. NEW INOP TABLE.
- 15. CHART FAS OBST: 789 TREE CHANGED TO FAS OBS: AAO 847 323018N/0841527W. -UPDATED CONTROLLING OBS.
- 16. REMOVED STEPDOWN FIX (YUCUB). WITH NEW CONTROLLING OBS, NO RELIEF GAINED.
- 17. LPV, LNAV/VNAV CAT D ADDED. - IAW 8260.3 2-6-2. CAT D MAX VDA NOW 3.5D.
- 18. MOVED ALSTG TO BACK OF THE -9 FOR CONTINGENCY PURPOSES.

1/2/219: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/28/18.
1. CHANGED 20°C TO 54°C IN UNCOMPENSATED BARO-VNAV SYSTEMS CHART NOTE.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZTL, ATL APP CON, MCN FSS

<u>FLIGHT CHECKED BY</u> JAMES MICHAEL HAWLEY	<i>Digitally signed by</i> DAVID DANNER Jan 08, 2019	<u>OFFICE</u> FIOG	<u>DATE</u> 11/20/2018

<u>DEVELOPED BY</u> LEO PALMER	<i>Digitally signed by</i> LEO PALMER Jan 02, 2019	<u>OFFICE</u> AJV-5421	<u>DATE</u> 07/30/2018

<u>APPROVED BY</u> JULIE MORGAN	<i>Digitally signed by</i> DAVID DANNER Jan 08, 2019	<u>OFFICE</u> AJV-5420	<u>DATE</u>	<u>TITLE</u> MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	6A1
RUNWAY	RW01
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W01A
LTP/FTP LATITUDE	323346.4330N
LTP/FTP LONGITUDE	0841442.6445W
LTP/FTP ELLIPSOIDAL HEIGHT	+01745
FPAP LATITUDE	323515.7120N
FPAP LONGITUDE	0841442.6090W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.40
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1232
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	9FECB027

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+02009
FPAP ORTHOMETRIC HEIGHT	+02009



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.

<u>AIRPORT</u> SIOUX COUNTY RGNL		<u>AIRPORT ID</u> KSXK	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> MAURICE	<u>STATE</u> IA
<u>AIRPORT ELEVATION</u> 1409	<u>TDZE</u> 1409	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 2E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> CONCURRENT WITH AIRSPACE DOCKET #18-ACE-03	<u>CANCEL/SUSPEND</u>		

TAA **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 082/30 CW 262/30	NOPT	HALGA	IF/IAF	4500
2. 262/30 CW 082/30	PT	HALGA	IF/IAF	4500

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>
HALGA	IF/IAF	HADKU		TF	FB	1.00	172.49	8.00	3300
HADKU	FAF	HAMUP/2.36 NM TO RW17		TF	FB	0.30	172.51	3.45	
HAMUP/2.36 NM TO RW17		RW17	MAP	TF	FO	0.30	172.51	2.36	
RW17	MAP	1609 MSL		CA			172.51		
1609 MSL		SKYLE		DF	FO	1.00			4500

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4500 DIRECT SKYLE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD N HALGA, RT, 172.49 INBOUND, 4500 FT. IN LIEU OF PT (IAF), MAX 8000.

3. FAC: 172.51

FAF: HADKU

DIST FAF TO MAP: 5.81

DIST FAF TO THLD: 5.81

4. MIN ALT: HALGA 4500, HADKU 3300, HAMUP/2.36 NM TO RW17 2200*

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

200 HAT: 0.50

GS ANT:

6. MIN GP INCPT: 3300

GP ALT AT FAF : HADKU 3300

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 40.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: BARO-VNAV AND VDP NA WHEN USING LE MARS ALTIMETER SETTING.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 34°C.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED; USE LE MARS ALTIMETER SETTING: INCREASE DA 59 FEET AND ALL MDA 60 FEET. INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 7/8 SM AND LNAV CAT C/ D VISIBILITIES TO 7/8 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 0.91 NM TO RW17*
*LNAV ONLY
WAAS CHANNEL #82242
REFERENCE PATH ID: W17A
CHART FAS OBST: 1474 TREE 425936N/0960926W.
CHART: 1941 TOWER 430534N/0960925W.
HOLD S, RT, 352.53 INBOUND
LTP HAE: 403 M

MINIMUMS:

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

ALTERNATE: NA ☐ NA WHEN LOCAL WEATHER NOT AVAILABLE.; STANDARD - CAT D 800-2 1/4

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
LPV DA	1609	3/4	200	1609	3/4	200	1609	3/4	200	1609	3/4	200			
LNAV/VNAV DA	1659	3/4	250	1659	3/4	250	1659	3/4	250	1659	3/4	250			
LNAV MDA	1740	1	331	1740	1	331	1740	1	331	1740	1	331			
CIRCLING	1820	1	411	2080	1	671	2080	2	671	2080	2 1/4	671			



CHANGES - REASONS

12/20/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 06/01/2018:

1. CHANGED PROCEDURE FROM ROUTINE TO CONCURRENT WITH AIRSPACE.

01/16/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/26/18.

1. REMOVED DUPLICATE HAMUP/2.36 NM TO RW17 2200 FROM LINE 4 IN PROFILE.

COORDINATED WITH:**A4A** ☐ **ALPA** ☐ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP, SUX APP CON, ARPT MGR**FLIGHT CHECKED BY**

GREGORY SCOTT WIEBE

*Digitally signed by***DONALD H LANIER**

Jan 16, 2019

OFFICE

FIOG

DATE

12/09/2018

DEVELOPED BY

LONNIE EVERHART (ANDRE MARSH)

*Digitally signed by***DONALD H LANIER**

Jan 16, 2019

OFFICE

AJV-5400

DATE

06/01/2018

APPROVED BY

LONNIE EVERHART

*Digitally signed by***DONALD H LANIER**

Jan 16, 2019

OFFICE

AJV-5400

DATE**TITLE**

MANAGER

FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSXK
RUNWAY	RW17
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	425936.0150N
LTP/FTP LONGITUDE	0960944.5770W
LTP/FTP ELLIPSOIDAL HEIGHT	+04030
FPAP LATITUDE	425807.3010N
FPAP LONGITUDE	0960932.9770W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1080
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	86B0888C
ADDITIONAL PATH POINT RECORD INFORMATION	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04294
FPAP ORTHOMETRIC HEIGHT	+04294



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23

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> SPENCER MUNI	<u>AIRPORT ID</u> KSPW	<u>PROCEDURE NAME</u> VOR RWY 30	<u>ORIGINAL/AMENDMENT</u> 3C	<u>CITY</u> SPENCER	<u>STATE</u> IA
<u>AIRPORT ELEVATION</u> 1339	<u>TDZE</u> 1338	<u>SUPERSEDED</u> VOR/DME RWY 30	<u>ORIGINAL/AMENDMENT</u> 3B	<u>DATED</u> 11/13/2014	<u>MAG VAR</u> 5E
<u>FACILITY</u> SPW	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1985

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.

<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>
SPW VOR/DME		ZUNMU/SPW 5.30 DME					111.94	5.30	3000

MISSED APPROACH

MAP:

SPW VOR/DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000, THEN LEFT TURN DIRECT SPW VOR/DME, THEN ON SPW VOR/DME R-112 TO ZUNMU/SPW 5.30 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT R SIDE OF COURSE 111.94 OUTBOUND 3000 FT WITHIN 10 MILES OF ZUNMU/SPW 5.30 DME (IAF)
- 2.
3. FAC: 291.94 FAF: ZUNMU/SPW 5.30 DME DIST FAF TO MAP: DIST FAF TO THLD: 5.08
4. MIN ALT: ZUNMU/SPW 5.30 DME 3000
8. MSA FROM: SPW VOR/DME 3100

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED.

NOTES:

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

CHART NOTE: VDP NA WHEN USING ESTHERVILLE ALTIMETER SETTING.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ESTHERVILLE ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET AND INCREASE S-30 CAT C/D VISIBILITY 1/2 SM AND CIRCLING CAT C/D VISIBILITY 1/4 SM.

QUALITY
41
CHECKED

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
ZUNMU TO RW30: 3.01/40.
CHART VDP AT 2.44 DME
DISTANCE VDP TO THLD 2.22 NM
CHART FAS OBST: 1764 TOWER 430647N/0950653W.
FAC CROSSES RWY C/L EXTENDED 3345 FT FROM THLD.
HOLD E, LT, 292.00 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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-30	2080	1	742	2080	1 1/4	742	2080	2	742	2080	2	742			
CIRCLING	2080	1	741	2080	1 1/4	741	2100	2 1/4	761	2100	2 1/2	761			

CHANGES - REASONS

1. REMOVED ARCS AND IAF FROM MILSS AND RITTA - SUPPORT VOR MON PROJECT.
2. ADDED CHART CIRCLING ICON - NEW CIRCLING RADII TO MATCH RNAV (GPS) RWY 30, AMDT 1B.
3. CHANGE PROCEDURE NAME FROM VOR/DME RWY 30 TO VOR RWY 30 - PER 8260.19H.
4. UPDATED VGSI NON-COINCIDENT NOTE - PER 8260.19H.
5. ADDED EQUIPMENT REQUIREMENT NOTE: DME REQUIRED - PER 8260.19H.
6. DELETED CHART TDZE 1338 FROM ADDITIONAL FLIGHT DATA - TDZE 1338 CHARTED ON PREVIOUS AMENDMENT.
7. RAISED CIRCLING CAT C/D MDA/HAA FROM 2080/741 TO 2100/761 - NEW CIRCLING RADII TO MATCH RNAV (GPS) RWY 30, AMDT 1B.
8. CHANGED ALTIMETER ADJUSTMENT NOTE FROM: "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ESTHERVILLE ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET, INCREASE S-30 CAT C/D VISIBILITY 1/2 MILE", TO : "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ESTHERVILLE ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET AND INCREASE S-30 CAT C/D VISIBILITY 1/2 SM AND CIRCLING CAT C/D VISIBILITY 1/4 SM."
9. CHANGED MSA FROM 3200 TO 3100 - TO MATCH PUBLISHED MSA.
10. DELETED INTERMEDIATE SEGMENT - NO LONGER REQUIRED WITH ARCS REMOVED.

01/16/2019: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON: 11/29/2018:

1. CHANGED FAF ON 8260-5 FROM SPW VOR/DME TO ZUNMU/SPW 5.30 DME.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZMP, AMGR, ATA

FLIGHT CHECKED BY

FLIGHT INSPECTION REVIEW NOT REQUIRED - PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, DEC 22, 2017.

DEVELOPED BY

WARDELL HENNING (THERON CYRUS)

APPROVED BY

WARDELL HENNING

Digitally signed by

WARDELL HENNING

Jan 22, 2019

Digitally signed by

WARDELL HENNING

Jan 22, 2019

OFFICE
Digitally signed by

WARDELL HENNING

Jan 22, 2019

OFFICE

AJV-5430

OFFICE

AJV-5430

DATE

DATE

10/11/2018

DATE

TITLE

MANAGER

QUALITY
41
CHECKED

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.

<u>AIRPORT</u> MONROE COUNTY	<u>AIRPORT ID</u> KBMG	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 6	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>CITY</u> BLOOMINGTON	<u>STATE</u> IN
<u>AIRPORT ELEVATION</u> 846	<u>TDZE</u> 840	<u>SUPERSEDED</u> RNAV (GPS) RWY 6	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 04/30/2015	<u>MAG VAR</u> 2W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1990

TERMINAL ROUTES **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.**

<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>
OOM VORTAC		OXDOH		TF	FO	1.00	243.10	10.56	3000
TUZYE	IAF	OXDOH	NOPT	TF	FB	1.00	130.25	5.16	3000
EYTEJ	IAF	OXDOH	NOPT	TF	FB	1.00	333.57	7.74	3000
OXDOH	IF/IAF	MIYOS		TF	FB	1.00	063.52	5.00	2500
MIYOS	FAF	RW06	MAP	TF	FO	0.30	063.56	5.03	
RW06	MAP	1246 MSL		CA			063.56		
1246 MSL		IJPOV		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LNAV: RW06

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT IJPOV AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SW OXDOH, RT, 063.52 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 063.56

FAF: MIYOS

DIST FAF TO MAP: 5.03

DIST FAF TO THLD: 5.03

4. MIN ALT: OXDOH 3000, MIYOS 2500

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS NOT CLEAR

TCH:

8. MSA FROM: RW06 3100

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING TO RWY 24 NA AT NIGHT.
CHART NOTE: RWY 6 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: RWY 06 STRAIGHT-IN AND CIRCLING MINIMUMS NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES.
CHART FAS OBST: 1039 TREE 390809N/0863800W.
CHART 1131 TOWER 390531N/0864158W.
HOLD NE, RT, 243.86 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	1300	1	460	1300	1	460	1300	1 1/4	460	1300	1 1/2	460			
CIRCLING	1380	1	534	1400	1	554	1400	1 1/2	554	1400	2	554			

CHANGES - REASONS

1. INCORPORATED P-NOTAMS 5/7722 AND 3/5109 - 8260.19H, 8-3-4 C.(2)
2. REMOVED VDA MIYOS TO RW06 3.06/35 AND VGSI NON-COINCIDENT NOTE, ADDED PROFILE NOTE "VISUAL SEGMENT - OBSTACLES" - VISUAL SEGMENTS ARE NOT CLEAR.
3. REMOVED DME/DME RNP-0.3 NA AND ADDED PBN REQUIREMENTS NOTE: RNP APCH - 8260.58A TABLE 1-2-1

01/02/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/13/18.
1. CHANGED TERMINAL ROUTE OOD VORTAC TO OOM VORTAC.



COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** BMG ATCT, HUF APP CONTROL, AMGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

DATE

Digitally signed by

ROBERT G HAMILTON

Jan 02, 2019

DEVELOPED BY

JULIE A. MORGAN (STEVEN DOUGHERTY)

Digitally signed by

ROBERT G HAMILTON

Jan 02, 2019

OFFICE

AJV-5420

DATE

10/24/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

ROBERT G HAMILTON

Jan 02, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER

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> FAIRMONT MUNI	<u>AIRPORT ID</u> KFRM	<u>PROCEDURE NAME</u> ILS OR LOC RWY 31	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> FAIRMONT	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1162	<u>TDZE</u> 1162	<u>SUPERSEDED</u> ILS OR LOC RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG-E	<u>DATED</u> 04/28/2016	<u>MAG VAR</u> 4E
<u>FACILITY</u> I-FQJ	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

TAA **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 220/30 CW 040/30	NOPT	NUHZU	IF/IAF	3100
2. 040/30 CW 130/30		HOPUD	IAF	3200
3. 130/30 CW 220/30		ZILUD	IAF	3200

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>
HOPUD	IAF	NUHZU	NOPT	TF	FB	1.00	040.10	8.00	3100
ZILUD	IAF	NUHZU	NOPT	TF	FB	1.00	220.11	8.00	3100
NUHZU/FRM 13.29 DME	IF/IAF	MONTZ LOM/FRM 6.29 DME					310.11	7.00 (I-FQJ)	3100

MISSED APPROACH

MAP:

ILS: DA

LOC: 5.61 NM AFTER MONTZ LOM/FRM 6.29 DME OR AT FRM 0.69 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1800 THEN CLIMBING RIGHT TURN TO 3100 DIRECT NUHZU AND HOLD. 

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD SE NUHZU, LT, 310.11 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 310.11 FAF: MONTZ LOM/FRM 6.29 DME DIST FAF TO MAP: 5.61 DIST FAF TO THLD: 5.61
4. MIN ALT: NUHZU/FRM 13.29 DME 3100, MONTZ LOM/FRM 6.29 DME 3100
5. DIST TO THLD FROM OM: 5.61 MM: 0.47 IM: 150 HAT: GS ANT: 841
6. MIN GS INCPT: 3100 GS ALT AT FAF : OM: 3016 MM: 1355 IM:
7. GP ANGLE: 3.00 34:1: 20:1: TCH: 58.7
8. MSA FROM:

EQUIPMENT REQUIREMENTS NOTES:

ADF OR DME REQUIRED, LOC ONLY

PBN REQUIREMENTS NOTES:

RNAV 1-GPS REQUIRED

NOTES:

CHART NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 1480 MSL.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS-31 ALL CATS VISIBILITY TO 7/8 SM.
CHART NOTE: DME FROM FRM DME.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 2.00 DME*
DISTANCE VDP TO THLD 1.31 NM
* LOC ONLY
FAS OBST: 1370 AAO 433506N/0942106W.

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD - CAT C 900-2 1/4, CAT D 900-2 1/2

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 31	1480	1/2	318	1480	1/2	318	1480	1/2	318	1480	1/2	318			
S-LOC 31	1620	1/2	458	1620	1/2	458	1620	7/8	458	1620	7/8	458			
CIRCLING	1640	1	478	1660	1	498	1980	2 1/4	818	1980	2 1/2	818			



CHANGES - REASONS

1. REMOVED DME ARCS, FRM FEEDER, AND PT FROM PROCEDURE - FRM VOR/DME VOR PORTION DECOMMISSIONED
2. INCREASED INT LENGTH FROM 5.71 TO 7.00 NM AND ADDED INITIALS, TAA, HIL, AND RNAV MISSED APPROACH - REQUIRED FOR PROCEDURE ENTRY
3. DELETED NOTE, S-LOC 31: FOR INOPERATIVE MALSR INCREASE CATS A, B, AND C VISIBILITY TO 1, CAT D VISIBILITY TO 1-1/4 AND ADDED NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS-31 ALL CATS VISIBILITY TO 7/8 SM - PER VIS CHECK CALC
4. REMOVED MSA - TAA ADDED
5. REMOVED PLANVIEW NOTE ADF OR DME REQUIRED - MOVED TO EQUIPMENT REQUIREMENT NOTES
6. ADDED THE BACK-UP ALTIMETER NOTE TO THE 8260-9 PART C GENERAL REMARKS - IAW 8-6-9.F.(3)
7. CHANGED FINAL, INTERMEDIATE, AND HOLDING INBOUND COURSE FROM 310.12 TP 310.11 - NEW SURVEY DATA
8. INCREASED S-LOC 31 MDA FROM 1540 TO 1620 - ADDED AAO TO FINAL
9. LOWERED S-ILS 31 ALL CATS AND S-LOC 31 CATS A/B VISIBILITY FROM 3/4 TO 1/2, INCREASED S-LOC 31 CATS C/D FROM 3/4 TO 7/8 - PER VISCHECK
10. ADDED CHART CIRCLING ICON TO ADDITIONAL FLIGHT DATA - USED NEW CIRCLING CRITERIA
11. INCREASED CIRCLING CAT B MDA FROM 1640 TO 1660, CAT C FROM 1640 TO 1980, CAT D FROM 1720 TO 1980 - LARGER CIRCLING RADII AND NEW OBST DATA
12. CHANGED CIRCLING CAT C VIS FROM 1 1/2 TO 2 1/4, CAT D FROM 2 TO 2 1/2 - PER VISCHECK
13. ADDED "RNAV 1-GPS REQUIRED" TO PBN EQUIPMENT REQUIREMENTS NOTES - NEEDED FOR ENTRY AND RNAV MISSED APPROACH
14. APPROVED ALTERNATE MINS - REQUIRED
15. CHANGED MISSED APPROACH FROM "CLIMB TO 2500 THEN CLIMBING RIGHT TURN TO 3100 DIRECT MONTZ LOM" TO "CLIMB TO 1800 THEN CLIMBING RIGHT TURN TO 3100 DIRECT NUHZU" - CHANGED MISSED APPROACH FROM CONVENTIONAL TO RNAV REQUIRED WHEN USING TAA ON LOC APPROACHES PER .19H PAGE 4-56
16. ADDED VDP - VDP MEETS CURRENT CRITERIA
17. ADDED TAA WITH INITIALS - REQUIRED FOR PROCEDURE ENTRY SINCE FRM VOR IS BEING REMOVED

01/23/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/13/18.
UPDATED MISSED APPROACH ALTITUDE FROM 3200 TO 3100 - TO CORRECT A TYPOGRAPHICAL ERROR.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZMP, AMGR

FLIGHT CHECKED BY

GREGORY SCOTT WIEBE

Digitally signed by
WARDELL HENNING

Jan 24, 2019

OFFICE
FIOG

DATE
12/09/2018

DEVELOPED BY

HERMAN C. ROGERS

Digitally signed by
WARDELL HENNING

Jan 24, 2019

OFFICE
AJV-5432

DATE
10/10/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by
WARDELL HENNING

Jan 24, 2019

OFFICE
AJV-5430

DATE

TITLE
MANAGER



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.

<u>AIRPORT</u> FAIRMONT MUNI	<u>AIRPORT ID</u> KFRM	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> FAIRMONT	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 1162	<u>TDZE</u> 1162	<u>SUPERSEDED</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 05/07/2009	<u>MAG VAR</u> 4E	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES

THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.

<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>
ISLER		HOVUD		TF	FB	1.00	073.89	22.91	3100
WAGIK	IAF	UCEVA	NOPT	TF	FB	1.00	196.54	15.09	3100
HOVUD	IAF	UCEVA	NOPT	TF	FB	1.00	039.91	5.00	3100
UCEVA	IF/IAF	ZEROB		TF	FB	1.00	129.96	6.02	3100
ZEROB	FAF	PEYDI/1.70 NM TO RW13		TF	FB	0.30	130.03	4.15	
PEYDI/1.70 NM TO RW13		RW13	MAP	TF	FO	0.30	130.03	1.70	
RW13	MAP	1460 MSL		CA			130.03		
1460 MSL		SIKTE		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW13

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 DIRECT SIKTE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD NW UCEVA, RT, 129.96 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 8000.
3. FAC: 130.03FAF: ZEROBDIST FAF TO MAP: 5.85DIST FAF TO THLD: 5.85
4. MIN ALT:UCEVA 3100, ZEROB 3100, PEYDI/1.70 NM TO RW13 1740*
5. DIST TO THLD FROM OM:MM:IM:150 HAT:298 HAT: 0.80GS ANT:
6. MIN GP INCPT: 3100GP ALT AT FAF : ZEROB 3100OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 48.2
8. MSA FROM: RW13 3200

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -17°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LNAV ONLY
CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT WAGIK ON V 250 NORTHEAST BOUND.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.11 NM TO RW13*
*LNAV ONLY
WAAS CHANNEL #45812
REFERENCE PATH ID: W13A
CHART FAS OBST: 1309 TREE 433912N/0942631W.
HOLD SE, RT, 310.24 INBOUND
LTP HAE: 324.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 900-2 1/4, CAT D 900-2 1/2



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
LPV DA	1460	1	298	1460	1	298	1460	1	298	1460	1	298			
LNAV/VNAV DA	1695	2	533	1695	2	533	1695	2	533	1695	2	533			
LNAV MDA	1560	1	398	1560	1	398	1560	1	398	1560	1 1/4	398			
CIRCLING	1640	1	478	1660	1	498	1980	2 1/4	818	1980	2 1/2	818			

CHANGES - REASONS

1. REMOVED COZFO TO HOVUD FEEDER - PER ATC AND FPT REQUEST
2. DELETED NOTE, VISIBILITY REDUCTION BY HELICOPTERS NA AND ADDED NOTE, RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - 34:1 VISUAL SURFACE PENETRATED, UPDATED PER 19H FORMAT
3. CHANGED NOTE FROM "FOR UNCOMPENSATED BARO.VNAV SYSTEMS, LNAVNAV NA BELOW ·17C (2F) OR ABOVE 48C (114F)" TO "FOR UNCOMPENSATED BARO.VNAV SYSTEMS, LNAVNAV NA BELOW ·17C OR ABOVE 48C" - UPDATED PER 19H FORMAT
4. DELETED CHART NOTE: DME/DME RNP-0.3 NA -NO LONGER REQUIRED
5. ADDED PBN REQUIREMENTS NOTE, RNP APCH - PER 8260.58A REQUIREMENT
6. MARKED 20:1 AS CLEAR - NO 20:1 PENETRATIONS EXIST
7. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - NEW CIRCLING CRITERIA APPLIED FLIGHT CHECKED WITH ILS OR LOC RWY 31
8. CHANGED CIRCLING CAT B MDA/HAA FROM 1640/478 TO 1640/498, CAT C FROM 1640/478 TO 1980/818, AND CAT D FROM 1720/558 TO 1980/818 - NEW CIRCLING CRITERIA APPLIED
9. CHANGED CIRCLING CAT C VISIBILITY FROM 1 1/2 TO 2 1/4, CAT D FROM 2 TO 2 1/2 - PER VIS CHECK CALC
10. IN FAS DATA, CRC REMAINDER CHANGED FROM 8E2450C1 TO 48890F12 - NEW SURVEY DATA
11. MOVED BACK-UP ALTIMETER SETTING NOTES TO GENERAL REMARKS ON THE 8260-9 - AWOS IS ON WMSCR
12. ADDED VGSI NOT COINCIDENT NOTE - PROCEDURE TCH EXCEEDS VGSI TCH BY 5.2 FEET
13. ADDED PROCEDURE NA NOTE - TURN EXCEED AMOUNT OF TURN LIMITS
14. UPDATED BARO-VNAV TEMPERATURE ABOVE FROM 46C TO 54C - PER TOOLBOX AFS CALCULATOR

01/04/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/13/18.
REMOVED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT ISLER ON V 170 EASTBOUND FROM - FIX ISLER IS NOW A STANDALONE WAYPOINT AND NOT ASSOCIATED WITH V170.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: ZMP, AMGR

FLIGHT CHECKED BY

SCOTT WIEBE

Digitally signed by

WARDELL HENNING

Jan 18, 2019

OFFICE

FICO

DATE

12/9/18

DEVELOPED BY

HERMAN C. ROGERS

Digitally signed by

WARDELL HENNING

Jan 18, 2019

OFFICE

AJV-5432

DATE

10/11/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Jan 18, 2019

OFFICE

AJV-5430

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KFRM
RUNWAY	RW13
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	433857.5405N
LTP/FTP LONGITUDE	0942530.4160W
LTP/FTP ELLIPSOIDAL HEIGHT	+03249
FPAP LATITUDE	433755.5200N
FPAP LONGITUDE	0942402.3200W
THRESHOLD CROSSING HEIGHT (TCH)	00048.2
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1072
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	48890F12

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03530
FPAP ORTHOMETRIC HEIGHT	+03530



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.

<u>AIRPORT</u> JOHN F KENNEDY INTL	<u>AIRPORT ID</u> KJFK	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 13R	 <u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> NEW YORK	<u>STATE</u> NY	
<u>AIRPORT ELEVATION</u> 13	<u>TDZE</u> 13	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u> 13W	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> 02/28/2019	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03 AND AS A CORRECTED COPY IN TL 19-05.

<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>
VERAZ	IAF	PORRT		TF	FB	1.00	054.99	6.19	2000
PORRT	IF	FVONE	PFAF	TF	FB	1.00	116.07	3.28	1200
FVONE	FAF	RW13R	MAP	TF	FO	0.30	131.07	3.56	
RW13R	MAP	500 MSL		CA			131.07		500
500 MSL		ZACHS		DF	FO	1.00			2000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW13R

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 500 THEN CLIMBING RIGHT TURN TO 2000 DIRECT ZACHS AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. PROFILE STARTS AT PORRT
3. **FAC:** 131.07 **PFAF:** FVONE **DIST PFAF TO MAP:** 3.56 **DIST PFAF TO THLD:** 3.56
4. **MIN ALT:** PORRT 2000, FVONE 1200
5. **DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **250 HAT:** 0.61 **GS ANT:**
6. **MIN GP INCPT:** 1200 **GP ALT AT PFAF :** FVONE 1200 **OM:** **MM:** **IM:**
7. **GP ANGLE:** 3.00 **34:1:** IS CLEAR **20:1:** IS CLEAR **TCH:** 55.0
8. **MSA FROM:** RW13R 2900



PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -12C OR ABOVE 44C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

CHART FAS OBSTACLE: 230 ANTENNA 404022N/0735158W.
360 AAO 404134N/0735235W.
CHART CIRCLING ICON.
CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 2.63 DEGREES.
CHART VDP AT 1.22 NM TO RW13R*
*LNAV ONLY
WAAS CHANNEL #72642
REFERENCE PATH ID: W13A
HOLD NW, RT, 134.16 INBOUND
LTP HAE: -28.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	263	4000	250	263	4000	250	263	4000	250	263	4000	250			
LNAV/VNAV DA	309	4500	296	309	4500	296	309	4500	296	309	4500	296			
LNAV MDA	480	5500	467	480	5500	467	480	1 3/8	467	480	1 3/8	467			
CIRCLING	640	1	627	640	1	627	640	1 3/4	627	660	2	647			



CHANGES - REASONS

1. ORIGINAL - PER ATC/FPT

12/28/2018: THIS IS A CORRECTED COPY OF THE FORMS APPROVED ON 11/28/2018.

1. CHANGED FPAP FROM 403740.781N/734618.413W TO 403801.760N/0734654.161W

2. CHANGED CRC REMAINDER FROM 05602829 TO 35BAF147

3. CHANGED COURSE WIDTH AT THRESHHOLD FROM 107.50 TO 106.75

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER:

FLIGHT CHECKED BY

PENDING

Digitally signed by

DAVID DANNER

Jan 08, 2019

Digitally signed by

ROSE BOONE

Dec 28, 2018

DEVELOPED BY

ROSE BOONE

APPROVED BY

JULIE MORGAN

Digitally signed by

DAVID DANNER

Jan 08, 2019

OFFICE

DATE

OFFICE

AJV-5421

DATE

03/27/2018

OFFICE

AJV-5420

DATE

TITLE

MANAGER

1/23/2018: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/08/2018.

1. PROCEDURE NAME CHANGED FROM RNAV (GPS) RWY 13R TO RNAV (GPS) Y RWY 13R.

2. FAS DATA CRC CHANGED FROM 35BAF147 TO 25F93B5D.



FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KJFK
RUNWAY	RW13R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	403843.7810N
LTP/FTP LONGITUDE	0734837.3880W
LTP/FTP ELLIPSOIDAL HEIGHT	-00281
FPAP LATITUDE	403801.7600N
FPAP LONGITUDE	0734654.1610W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	25F93B5D

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00038
FPAP ORTHOMETRIC HEIGHT	+00038



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.

<u>AIRPORT</u> LAKE COUNTY	<u>AIRPORT ID</u> KLKV	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> LAKEVIEW	<u>STATE</u> OR
<u>AIRPORT ELEVATION</u> 4734	<u>TDZE</u> 4734	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 08/21/2014	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2015

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.

<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>
CHOIR	POINT	FASAB		TF	FO	1.00	337.47	53.14	10500
LKV VORTAC	IAF	FASAB	NOPT	TF	FB	1.00	124.42	7.33	9000
FASAB	IF/IAF	ZIKEX		TF	FB	1.00	166.25	4.70	7700
ZIKEX		YOCKU		TF	FB	1.00	166.25	2.30	7000
YOCKU	FAF	BEPVE/2.64 NM TO RW17		TF	FB	0.30	166.25	4.33	
BEPVE/2.64 NM TO RW17		RW17	MAP	TF	FO	0.30	166.25	2.64	
RW17	MAP	4984 MSL		CA			166.26		
4984 MSL		EYIGO		DF	FB	1.00			
EYIGO		CHOIR		TF	FO	1.00	151.93	33.25	11000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 11000 DIRECT EYIGO AND ON TRACK 151.93 TO CHOIR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD N FASAB, RT, 166.25 INBOUND, 9000 FT. IN LIEU OF PT (IAF), MAX 14000.

3. FAC: 166.25 FAF: YOCKU DIST FAF TO MAP: 6.97 DIST FAF TO THLD: 6.97

4. MIN ALT: FASAB 9000, ZIKEX 7700, YOCKU 7000, BEPVE/2.64 NM TO RW17 5620*

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 250 HAT: 0.64 GS ANT: MM: IM:

6. MIN GP INCPT: 7000 GP ALT AT FAF : YOCKU 7000 OM:

7. GP ANGLE: 3.00 34:1: IS CLEAR 20:1: IS CLEAR TCH: 45.0

8. MSA FROM: RW17 9700

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA EAST OF RWY 17-35.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24°C OR ABOVE 50°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LKV VORTAC ON V122 SOUTHWEST BOUND.

ADDITIONAL FLIGHT DATA:



CHART CIRCLING ICON
CHART VDP AT 1.00 NM TO RW17*
*LNAV ONLY
WAAS CHANNEL #93532
REFERENCE PATH ID: W17A
CHART FAS OBST: 4849 TREE 421141N/1202442W.
HOLD NW, LT, 153.44 INBOUND
LTP HAE: 1421.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2

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
LPV DA	4984	1	250	4984	1	250	4984	1	250	4984	1	250			
LNAV/VNAV DA	5139	1 1/8	405	5139	1 1/8	405	5139	1 1/8	405	5139	1 1/8	405			
LNAV MDA	5100	1	366	5100	1	366	5100	1	366	5100	1	366			
CIRCLING	5160	1	426	5220	1	486	5460	2	726	5500	2 1/2	766			



TITLE
MANAGER

QUALITY
24
CHECKER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLKV
RUNWAY	RW17
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	421006.2385N
LTP/FTP LONGITUDE	1202356.5230W
LTP/FTP ELLIPSOIDAL HEIGHT	+14216
FPAP LATITUDE	420837.1100N
FPAP LONGITUDE	1202357.0600W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1128
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	AB311F29

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+14430
FPAP ORTHOMETRIC HEIGHT	+14430



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.

<u>AIRPORT</u> LAKE COUNTY	<u>AIRPORT ID</u> CLKV	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> LAKEVIEW	<u>STATE</u> OR
<u>AIRPORT ELEVATION</u> 4734	<u>TDZE</u> 4729	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 08/21/2014	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2015

TERMINAL ROUTES

THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03.

<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>
LKV VORTAC	POINT	NUSME		TF	FO	1.00	154.42	36.57	9800
CHOIR	IAF	NUSME	NOPT	TF	FB	1.00	332.06	22.87	9800
NUSME	IF/IAF	WIPUL		TF	FB	1.00	331.95	7.23	7500
WIPUL		EYIGO		TF	FB	1.00	331.92	3.15	6500
EYIGO	FAF	SABPO/1.22 NM TO RW35		TF	FB	0.30	346.25	4.21	
SABPO/1.22 NM TO RW35		RW35	MAP	TF	FB	0.30	346.25	1.22	
RW35	MAP	5200 MSL		CA					5200
5200 MSL		NUSME		DF	FB	1.00			
NUSME		CHOIR		TF	FO	1.00	151.98	22.87	11000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

(DO NOT EXCEED 235 KIAS UNTIL NUSME) CLIMB TO 5200 THEN CLIMBING LEFT TURN TO 11000 DIRECT NUSME AND ON TRACK 151.98 TO CHOIR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE NUSME, RT, 331.95 INBOUND, 9800 FT. IN LIEU OF PT (IAF), MAX 14000.

3. FAC: 346.25FAF: EYIGO

DIST FAF TO MAP: 5.43

DIST FAF TO THLD: 5.43

4. MIN ALT: NUSME 9800, WIPUL 7500, EYIGO 6500, SABPO/1.22 NM TO RW35 5160*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.65GS ANT:

6. MIN GP INCPT: 6500GP ALT AT FAF : EYIGO 6500OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 45.0

8. MSA FROM: RW35 9700

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24°C OR ABOVE 50°C.
CHART NOTE: CIRCLING NA EAST OF RWY 17-35.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON
*LNAV ONLY
WAAS CHANNEL #99332
REFERENCE PATH ID: W35A
FAS OBST: 4824 TREE 420853N/1202443W.
HOLD NW, LT, 153.44 INBOUND
LTP HAE: 1418.9 M

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2

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
LPV DA	4979	1	250	4979	1	250	4979	1	250	4979	1	250			
LNAV/VNAV DA	5121	1 1/8	392	5121	1 1/8	392	5121	1 1/8	392	5121	1 1/8	392			
CIRCLING	5160	1	426	5220	1	486	5320	2	586	5480	2 1/2	746			
LNAV MDA	5080	1	351	5080	1	351	5080	1	351	5080	1	351			



CHANGES - REASONS

1. CHANGE CRC REMAINDER FROM 9A7E8BAC TO 0EDC7B5A - PER TCH CHANGE FROM 55 TO 45.
2. REMOVED DME/DME RNP-0.3 NA NOTE, REPLACED WITH PBN REQ NOTE - PER CRITERIA.
3. CAT D MINS ADDED - PER ATC REQUEST/CHECKLIST.
4. ADDED CHART CIRCLING ICON, CIRC MINS CHANGED FROM CAT A HAA 427 TO 426, B FROM 5200/467 TO 5220/486, C FROM 5200/467 TO 5460/726, CAT C VIS FROM 1 1/2 TO 2 - PER CHG 21 CRITERIA LARGER CIRC AREAS/LATEST OBS EVAL/APT ELEV FROM 4733 TO 4734.
5. DESIGN TCH FROM 55 TO 45 - TO ALIGN WITH UPDATED VGSI DATA.
6. ADDED CIRC RESTRICTION EAST OF 17-35 - TERRAIN CAUSES SIGNIFICANT INCREASES IN CAT C/D MDA/FPT CONCURS.
7. CHANGED PFAF EYIGO - SDF SABPO LENGTH FROM 4.20 TO 4.21, SDF SABPO - MAP LENGTH FROM 1.20 TO 1.22 - TO ALIGN WITH UPDATED VGSI/TO SATISFY ALLOWABLE DESCENT GRADIENTS.
8. UPDATED BARO VNAV NOTE, REMOVE REFERENCE TO FAHRENHEIT'S, MAX TEMP FROM 54 TO 50 - PER 19H CRITERIA/LATEST CALCS.
9. CHANGED LPV VIS FROM 3/4 ALL CATS TO 1, LNAV/VNAV FROM 1 1/4 ALL CATS TO 1 1/8, CIRC C FROM 1 1/2 TO 2 - PER LATEST VIS CALCS/MDA CHANGES.
10. ADDED MAX HOLDING 14000 AT NUSME - PER 8260-2 DATA.
11. UPDATED DISTANCE 250 HAT TO THLD FROM 0.61 TO 0.65 - PER PFAF RELOCATION.
12. UPDATED MISSED APPROACH 235 KIAS RESTRICTION FORMAT BY REMOVING NOTE AND ADDING AS PREFIX TO MISSED APPROACH INSTRUCTIONS - IAW 8260.19H PARA 8-6-6D(11).
13. REMOVED ALTIMETER SETTING NOTE - MOVED TO BACK OF -9.

1/9/19. THIS IS A CORRECTED COPY OF THE FORMS DEVELOPED ON 10/10/18.
REMOVED EYIGO TO RWY35: 3.00/45 FROM ADDITIONAL FLIGHT DATA.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZSE, AMGR, WST FPT

FLIGHT CHECKED BY
THOMAS EDWARD MOLOKIE

OFFICE
FIOG

DATE
11/26/2018

Digitally signed by
ALLAN WILL
Jan 18, 2019

DEVELOPED BY
PHILLIP BRANDENBURG

Digitally signed by
PHILLIP BRANDENBURG
Jan 09, 2019

OFFICE
AJV-5423

DATE
10/10/2018

APPROVED BY
JULIE MORGAN

OFFICE
AJV-5420

DATE

Digitally signed by
ALLAN WILL
Jan 18, 2019
TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLKV
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	420913.7170N
LTP/FTP LONGITUDE	1202356.8340W
LTP/FTP ELLIPSOIDAL HEIGHT	+14189
FPAP LATITUDE	421042.8500N
FPAP LONGITUDE	1202356.3000W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1128
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
 CRC REMAINDER	 0EDC7B5A

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+14402
FPAP ORTHOMETRIC HEIGHT	+14402



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.

<u>AIRPORT</u> POTTSTOWN MUNI	<u>AIRPORT ID</u> N47	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 26	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> POTTSTOWN	<u>STATE</u> PA	
<u>AIRPORT ELEVATION</u> 256	<u>TDZE</u> 256	<u>SUPERSEDED</u> RNAV (GPS) RWY 26	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 07/31/2008	<u>MAG VAR</u> 12W	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-03 AND AS A CORRECTED COPY IN TL 19-04.

<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>
PTW VORTAC		RUSDE		TF	FO 	1.00	053.49	9.41	3000
SPUDS	IAF	RUSDE	NOPT	TF	FB	1.00	188.65	6.70	3000
ZUVIV	IAF	RUSDE	NOPT	TF	FB	1.00	255.39	6.30	3000
RUSDE	IF/IAF	NUGAE		TF	FB	1.00	259.28	6.10	2200
NUGAE	FAF	RW26	MAP	TF	FO	0.30	259.20	5.95	
RW26	MAP	656 MSL		CA			259.20		
656 MSL		RUSDE		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LNAV: RW26

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 3000 DIRECT RUSDE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD E RUSDE, RT, 259.28 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC:

259.20

FAF: NUGAE

DIST FAF TO MAP: 5.95

DIST FAF TO THLD: 5.95

4. MIN ALT: RUSDE 3000, NUGAE 2200

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1

IS NOT CLEAR

20:1

IS NOT CLEAR

TCH:

8. MSA FROM: RW26 2900

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: RWY 26 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: USE HERITAGE FIELD ALTIMETER SETTING.
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PTW VORTAC AIRWAY RADIALS 354 CW 095.

ADDITIONAL FLIGHT DATA:

CHART HERITAGE FIELD ASOS, 119.425
NUGAE TO RW26: 3.05/30.
FAS OBST: 759 AAO 401643N/0753816W.

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	1040	1	784	1040	1 1/4	784	1040	2 1/4	784		NA				
CIRCLING	1040	1	784	1040	1 1/4	784	1080	2 1/2	824		NA				



CHANGES - REASONS

- 1. MOVED BACKUP ALTIMETER DATA FROM NOTES TO GENERAL REMARKS. - FOR CONTINGENCY PURPOSES.
 - 2. ADDED RNP ACH TO PBN EQUIPMENT REQUIREMENT NOTES. - FAAO 8260-19H PARAGRAPH 8-6-8 B(1).
 - 3. DELETED DME/DME RNP-0.3 NA NOTE. - FAAO 8260.19H PARAGRAPH 1-1-5 F(14).
 - 4. ADDED CHART NOTE: PROCEDURE NA AT NIGHT. - 20:1 PENETRATIONS.
 - 5. REPLACED NOTE VISIBILITY REDUCTION BY HELICOPTERS NA WITH RWY 26 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. - FAAO 8260.19H PARAGRAPH 8-6-11 K(3).
 - 6. ADDED CA LEG TO MISSED APPROACH. - FOR CODING PURPOSES.
 - 7. ADDED RWY 26 TO HELICOPTER VISIBILITY NOTE. - FAAO 8269.19H PARAGRAPH 8-6-11 K(3).
 - 8. ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PTW VORTAC AIRWAY RADIALS 354 CW 095. - NAMED RADIALS REQUIRE A GREATER THAN 90 DEGREE TURN.
- 12/17/18: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/01/18.
- 1. CHANGED PROCEDURE NA FOR ARRIVAL ON PTW VORTAC AIRWAY RADIALS 354 CW 095 FROM CHART NOTE TO CHART PLANVIEW NOTE.

- 01/24/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/01/18.
- 1. CHANGED FIX RUSDE FROM FB TO FO IN THE FEEDER SEGMENT FROM PTW VORTAC TO RUSDE.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: PHL APP CON, AMGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

DATE

DEVELOPED BY

Digitally signed by

LIAM DONAHUE

LIAM DONAHUE

Jan 24, 2019

Digitally signed by

DONALD H LANIER

Jan 24, 2019

OFFICE

AJV-5431

DATE

09/10/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

DONALD H LANIER

Jan 24, 2019

OFFICE

AJV-5430

DATE

TITLE
MANAGER



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.

<u>AIRPORT</u> WELLSBORO JOHNSTON	<u>AIRPORT ID</u> N38	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 10	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> WELLSBORO	<u>STATE</u> PA
<u>AIRPORT ELEVATION</u> 1892	<u>TDZE</u> 1892	<u>SUPERSEDED</u> RNAV (GPS) RWY 10	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 01/08/2015	<u>MAG VAR</u> 11W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TAA **THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 009/30 CW 189/30	NOPT	ODPOJ	IF/IAF	4900
2. 189/30 CW 009/30		ODPOJ	IF/IAF	4900

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>
ODPOJ	IF/IAF	ZEGOK		TF	FB	1.00	098.72	5.00	3400
ZEGOK	FAF	RW10	MAP	TF	FO	0.30	098.80	4.93	
RW10	MAP	2292 MSL		CA			098.80		
2292 MSL		ITEHO		DF	FB				
ITEHO		WUDUL		TF	FO	1.00	020.77	9.24	4500

MISSED APPROACH

MAP:

LP: RW10
LNAV: RW10

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4500 DIRECT ITEHO AND ON TRACK 020.77 TO WUDUL AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD W ODPOJ, RT, 098.72 INBOUND, 4900 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 098.80

FAF: ZEGOK

DIST FAF TO MAP: 4.93

DIST FAF TO THLD: 4.93

4. MIN ALT: ODPOJ 4900, ZEGOK 3400

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS NOT CLEAR

TCH:

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 11 AND 29.
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART NOTE: RWY 10 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
ZEGOK TO RW10: 3.00/40.
CHART DUKE MOA
WAAS CHANNEL #58130
REFERENCE PATH ID: W10A
HOLD SW, RT, 047.37 INBOUND
LTP HAE: 543.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 900-2, CAT C 900-2 1/2

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
LP MDA	2760	1	868	2760	1 1/4	868	2760	2 1/2	868		NA				
LNAV MDA	2760	1	868	2760	1 1/4	868	2760	2 1/2	868		NA				
CIRCLING	2760	1 1/4	868	2760	1 1/4	868	2760	2 1/2	868		NA				



CHANGES - REASONS

1. UPDATED H-I-L FROM HOLD W ODPOJ, RT, 098.73 INBOUND, 4400 FT. IN LIEU OF PT (IAF) TO HOLD W ODPOJ, RT, 098.72 INBOUND, 4900 FT. IN LIEU OF PT (IAF), MAX 6000-UPDATED DOCUMENTATION CRITERIA IAW 8-6-7 B2(B).
2. UPDATED LP ALL CATS MDA/HAT FROM 2940/1048 TO 2760/868; UPDATED LP CAT A VIS FROM 1 1/4 TO 1SM, LP CAT B VIS FROM 1 1/2SM TO 1 1/4SM AND LP CAT C VIS FROM 3SM TO 2 1/2SM - AIRPORT NOW HAS ITS OWN PRIMARY ALTIMETER, NEW SURVEY INFORMATION.
3. UPDATED LNAV ALL CATS MDA/HAT FROM 3000/1108 TO 2760/868; UPDATED LNAV CAT A VIS FROM 1 1/4 TO 1SM, LNAV CAT B VIS FROM 1 1/2SM TO 1 1/4SM AND LNAV CAT C VIS FROM 3SM TO 2 1/2SM -AIRPORT NOW HAS ITS OWN PRIMARY ALTIMETER, NEW SURVEY INFORMATION.
4. UPDATED CIRCLING ALL CATS MDA/HAA FROM 3000/1108 TO 2760/868; UPDATED CIRCLING CAT A VIS FROM 1 1/4 TO 1SM, CIRCLING CAT B VIS FROM 1 1/2SM TO 1 1/4SM AND CIRCLING CAT C VIS FROM 3SM TO 2 1/2SM -AIRPORT NOW HAS ITS OWN PRIMARY ALTIMETER, NEW SURVEY INFORMATION.
5. DELETED CHART NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT ADDED CHART NOTE: PROCEDURE NA AT NIGHT-20:1 NOT CLEAR-IAW 8260-19H 8-6-11 O(2)(A) AND 8-6-11.O(14).
6. ADDED 20:1 NOT CLEAR TO LINE 7-IWA 8260.19H 8-6-7 G(3).
7. ADDED PBN EQUIPMENT REQUIREMENT NOTE RNP APCH-NEW CRITERIA NOTE IAW 8260.19H H8-6-8 B (1).
8. DELETED CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA AND ADDED CHART NOTE: RWY 10 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED--20:1 NOT CLEAR IAW 8260.19H 8-6-11 K(3).
9. ADDED CHART NOTE: CIRCLING NA TO RWYS 11 AND 29-TURF RUNWAYS IAW 8260-19H 8-6-11 O(5)(E).
10. MOVED CONTINGENCY ALTIMETER NOTE TO BACK OF -9-AIRPORT NOW HAS ITS OWN PRIMARY ALTIMETER- IAW 8260-19H 8-6-9 F(3).
11. DELETED NOTE: DME/DME RNP-0.3 NA-NO LONGER NEEDED IAW 8260.19H 1-1-5 F (14).
12. UPDATED RNP ON INTERMEDIATE ROUTE FROM 0.5 TO 1.0-NEW CRITERIA IAW 8260-19H 4-6-10 F.
13. UPDATED FAS DATA LTP LATITUDE /LONGITUDE FROM 414349.7080W TO 414339.7070N TO 0772411.1420W TO 0772411.1400W; FPAP LATITUDE/LONGITUDE FROM 414343.0100N/0772212.2300W TO 414343.0015N/0772212.2255W; CRC REMAINDER FROM E728B1C6 TO 7CB909DE-UPDATED SURVEY INFORMATION.
- 14.CHART CIRCLING ICON-UPDATED CIRCLING CRITERIA.
15. RAISED TAA ALTITUDES FROM 4400 TO 4900 - PRECIPITOUS TERRAIN ELIMINATES MOUNTAINOUS ROC REDUCTION

1/17/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 1/7/19:
CHANGED AIRPORT ID FROM KN38 TO N38 ON ALL FORM HEADERS.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ELM APP CON, ZNY, ZOB

Digitally signed by

FLIGHT CHECKED BY
DURLEY JAN FELDER
DAVID DANNER
Jan 17, 2019

OFFICE
FIOG
DATE
12/18/2018

DEVELOPED BY
JOHN HAZELTON
DAVID DANNER

Digitally signed by
Jan 17, 2019

OFFICE
AJV-5421
DATE
09/25/2018

APPROVED BY
JULIE MORGAN
DAVID DANNER
Jan 17, 2019

Digitally signed by

OFFICE
AJV-5420
DATE
TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	N38
RUNWAY	RW10
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W10A
LTP/FTP LATITUDE	414339.7070N
LTP/FTP LONGITUDE	0772411.1400W
LTP/FTP ELLIPSOIDAL HEIGHT	+05436
FPAP LATITUDE	414343.0015N
FPAP LONGITUDE	0772212.2255W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1656
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0
CRC REMAINDER	7CB909DE
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+05759
FPAP ORTHOMETRIC HEIGHT	+05759



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.

<u>AIRPORT</u> SPARTANBURG DOWNTOWN MEMORIAL/SIMPSON FIELD	<u>AIRPORT ID</u> KSPA	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> SPARTANBURG	<u>STATE</u> SC
<u>AIRPORT ELEVATION</u> 802	<u>TDZE</u> 801	<u>SUPERSEDED</u> RNAV (GPS) RWY 23	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 05/25/2017	<u>MAG VAR</u> 5W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

TAA THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-05.

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 157/30 CW 297/30	NOPT	157/6 CW 297/6		5100
2. 157/6 CW 297/6		MUCEE	IF/IAF	2800
3. 297/30 CW 047/30		PECCH ←	IAF	2800
4. 047/30 CW 157/30		HITNI	IAF	6600

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>
PECCH ←	IAF	MUCEE	NOPT	TF	FB	1.00	296.63	6.50	2800
HITNI	IAF	MUCEE	NOPT	TF	FB	1.00	156.67	8.65	2800
MUCEE	IF/IAF	LEORR		TF	FB	1.00	226.67	6.70	2100
LEORR	FAF	RW23	MAP	TF	FO	0.30	226.62	3.98	
RW23	MAP	1001 MSL		CA			226.59		
1001 MSL		FREST		DF	FO	1.00			2500

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW23

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2500 DIRECT FREST AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

QUALITY
23
CHECKED

PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NE MUCEE, RT, 226.67 INBOUND, 2800 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 226.62FAF: LEORRDIST FAF TO MAP: 3.98DIST FAF TO THLD: 3.98

4. MIN ALT: MUCEE 2800, LEORR 2100

5. DIST TO THLD FROM OM:MM:IM:150 HAT:200 HAT: 0.49GS ANT:

6. MIN GP INCPT: 2100GP ALT AT FAF : LEORR 2100OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 45.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

CHART 1115 TOWER 345847N/0815447W
CHART CIRCLING ICON.
CHART VDP AT 1.59 NM TO RW23*
*LNAV ONLY
WAAS CHANNEL #65926
REFERENCE PATH ID: W23A
CHART FAS OBST: 1075 BUILDING 345660N/0815542W.
HOLD SW, RT, 046.51 INBOUND
LTP HAE: 208.4 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1001	3/4	200	1001	3/4	200	1001	3/4	200	1001	3/4	200			
LNAV/VNAV DA	1090	7/8	289	1090	7/8	289	1090	7/8	289	1090	7/8	289			
LNAV MDA	1340	1	539	1340	1	539	1340	1 1/2	539	1340	1 1/2	539			
CIRCLING	1340	1	538	1340	1	538	1380	1 1/2	578	1420	2	618			



CHANGES - REASONS

1. CHANGED AIRPORT ELEVATION: 801 AND THRE: 789 TO AIRPORT ELEVATION: 802 AND TDZE: 801 - NEW SURVEY DATA AND RWY 23 EXTENSION OF 650 FT.
2. CHANGED IAF NAME/LOCATION FROM LAIRY 350008.07N/0813832.22W TO GIFTT 350056.198N/0814057.964W - AIRPORT/FPT REQUEST TO DECONFLICT FROM ADJACENT AIRSPACE.
3. CHANGED TAA SECTOR ALTITUDE 047/30 CW 157/30 TO HITNI FROM 6700 TO 6600 - NEW OBSTACLE ASSESSMENT.
4. CHANGED TERMINAL ROUTE FROM LAIRY TO MUCEE COURSE AND DISTANCE 296.76/8.65 TO GIFTT TO MUCEE COURSE AND DISTANCE 296.63/6.50 - AIRPORT/FPT REQUEST TO DECONFLICT FROM ADJACENT AIRSPACE.
5. CHANGED TERMINAL ROUTES FROM HITNI TO MUCEE COURSE FROM 156.62 TO 156.67 - PROCEDURE RE-BUILT AND UPDATED.
6. CHANGED TERMINAL ROUTES FROM MUCEE TO LEORR DISTANCE FROM 6.85 TO 6.70 - LEORR FIX MOVED 0.15 NM NE.
7. CHANGED TERMINAL ROUTES FROM LEORR TO RW23 MAP DISTANCE FROM 3.94 TO 3.98 - LEORR FIX MOVED 0.15 NM NE.
8. CHANGED TERMINAL ROUTES CA ALTITUDE FROM 989 TO 1001 AND RWY23 TO CA ALTITUDE COURSE FROM 226.62 TO 226.59 - NEW OBSTACLE ASSESSMENT AND NEW SURVEY.
9. CHANGED DIST FAF TO MAP: FROM 3.94 TO 3.98 AND THLD: FROM 3.94 TO 3.98 - NEW SURVEY/RUNWAY EXTENSION.
10. CHANGED LINE 5 DIST FROM DIST TO THLD FROM 200 HATH: 0.45 TO DIST TO THLD FROM 200 HAT: 0.49 - NEW SURVEY/RUNWAY EXTENSION.
11. CHANGED TCH FROM 57.0 TO 45.0 - NEW SURVEY DATA/VGSI TCH.
12. ADDED 20:1 IS CLEAR - PER .19H REQUIRING IDENTIFICATION OF ASSESSMENT SLOPES.
13. DELETED ADDITIONAL FLIGHT DATA NOTE "CHART FAS OBST: 903 ANT 345516N/0815614W - NEW OBSTACLE ASSESSMENT AND PROCEDURE EVALUATION.
14. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "CHART FAS OBST: 1075 ANT ON BLDG 345700N/0815542W" TO "CHART FAS OBST: 1075 BUILDING 345660N/0815542W" - NEW OBSTACLE ASSESSMENT AND PROCEDURE EVALUATION.
15. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "CHART VDP AT 1.55 MILES TO RW23*" TO CHART VDP AT 1.59 NM TO RW23*" - NEW SURVEY/RUNWAY EXTENSION AND PROICEDURE EVALUATION.
16. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "LTP HAE: 209.2 M" TO "LTP HAE: 208.4 M" - NEW SURVEY DATA AND PROCEDURE ASSESSMENT.
17. CHANGED MINIMUMS LPV DA FROM 989 TO 1001 - CHANGED FROM PRVIOUS NOTAM ACTION DUE TO CHANGE FROM THRE TO TDZE IAW AFS-400 MEMO DTD JAN 8, 2014.
18. CHANGED MINIMUMS LNAV/VNAV DA/HAT FROM 1084/295 TO 1090/289 - NEW OBSTACLE ASSESSMENT AND PROCEDURE EVALUATED FROM TDZE IAW AFS-400 MEMO DTD JAN 8, 2014.
19. CHANGED MINIMUMS LNAV HAT ALL CATS FROM 551 TO 539 AND CHANGED VISIBILITY CATS C/D FROM 1 5/8 TO 1 1/2 - NEW OBSTACLE ASSESSMENT AND PROCEDURE EVALUATION.
20. CHANGED MINIMUMS CIRCLING: HAA CATS A/B FROM 551 TO 538; CAT C FROM 1340 MDA, 1 5/8 SM VISIBILITY, 539 HAA TO 1380 MDA, 1 1/2 SM VISIBILITY, HAA 578; CAT D FROM 1380 MDA 579 HAA TO 1420 MDA 618 HAA - NEW OBSTACLE ASSESSMENT AND PROCEDURE EVALUATION.
21. ADDED ADDITIONAL FLIGHT DATA NOTE: "CHART CIRCLING ICON" - NEW CIRCLING CRITERIA APPLIED.
22. CHANGED CHART NOTE: "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16 (4F) OR ABOVE 38C (100F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16 OR ABOVE 54C" - IAW .19H DOCUMENTATION OF CRITICAL TEMPERATURES.
23. DELETED CHART NOTE "DME/DME RNP-0.3" AND REPLACED WITH "RNP APCH" - IAW .19H DOCUMENTATION OF EQUIPMENT NOTES.
24. REMOVED BACK UP ALTIMETER NOTES: "CHART NOTE: VDP AND BARO-VNAV NA WHEN USING GREER ALTIMETER SETTING" ; "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GREER ALTIMETER SETTING AND INCREASE ALL DA 53 FEET AND ALL MDA 60 FEET; INCREASE LNAV/VNAV ALL CATS VISIBILITY 1/4 MILE AND LNAV CAT C AND D AND CIRCLING CAT C VISIBILITY 1/8 MILE" - PER .19H 8-6-9 F(3) NOT REQUIRED WHEN ASOS NON-FED TRANSMITS TO WMSCR. DATA PLACED ON BACK OF -9 FOR NOTAM CONTINGENCY.
25. CHANGED FAS DATA LTP/FTP LATITUDE FROM 345515.8800N TO 345520.7030N AND LTP/FTP LONGITUDE FROM 0815702.6485W TO 0815657.4510W - RWY 23 SURFACE LENGTH EXTENDED 650 FEET.
26. CHANGED FAS DATA ELLIPSOIDAL HEIGHT FROM +02092 TO +02084 - NEW SURVEY DATA.
27. CHANGED FAS DATA FPAP LATITUDE FROM 345409.1300N TO 345413.9495N AND FPAP LONGITUDE FROM 0815814.5600W TO 0815809.3595W - NEW SURVEY DATA.
28. CHANGED FAS DATA TCH FROM 00057.0 TO 00045.0 - NEW VGSI TCH.
29. CHANGED FAS DATA LENGTH OFFSET FROM 1168 TO 0968 - NEW SURVEY DATA.
30. CHANGED FAS DATA CRC REMAINDER FROM 49E16512 TO 8CD1F920 - NEW SURVEY DATA.
31. CHANGED FAS DATA LTP/FPAP ORTHOMETRIC HEIGHTS FROM +02405 TO +02398 - NEW SURVEY DATA.
- 12/21/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 7/3/2018:
1. AIRPORT NAME CHANGED FROM SPARTANBURG DOWNTOWN MEMORIAL TO SPARTANBURG DOWNTOWN MEMORIAL/SIMPSON FIELD.
- 1/17/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/21/18:
- CHANGED ALL REFERENCES OF FIX GIFTT TO PECCH.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZTL, AMRG, GSP APP CON

Digitally signed by

FLIGHT CHECKED BY
KEVIN JOHN RIESE

DAVID DANNER
Jan 17, 2019

OFFICE
FIOG

DATE
12/18/2018

DEVELOPED BY
DEZ SILAGYI (DARREN HOOPER)

Digitally signed by
DAVID DANNER
Jan 17, 2019

OFFICE
AJV-5421

DATE
07/03/2018

APPROVED BY
JULIE MORGAN

Digitally signed by
DAVID DANNER
Jan 17, 2019

OFFICE
AJV-5420

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSPA
RUNWAY	RW23
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W23A
LTP/FTP LATITUDE	345520.7030N
LTP/FTP LONGITUDE	0815657.4510W
LTP/FTP ELLIPSOIDAL HEIGHT	+02084
FPAP LATITUDE	345413.9495N
FPAP LONGITUDE	0815809.3595W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0968
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	8CD1F920

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+02398
FPAP ORTHOMETRIC HEIGHT	+02398



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. [31235](#); Amdt. No. [3837](#)]

**Standard Instrument Approach Procedures, and Takeoff Minimums
and Obstacle Departure Procedures; Miscellaneous Amendments**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This rule establishes, amends, suspends, or removes Standard Instrument Approach Procedures (SIAPs) and associated Takeoff Minimums and Obstacle Departure Procedures (ODPs) for operations at certain airports. These regulatory actions are needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, adding new obstacles, or changing air traffic requirements. These changes are designed to provide safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The compliance date for each SIAP, associated Takeoff Minimums, and ODP is specified in the amendatory provisions.

The incorporation by reference of certain publications

listed in the regulations is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Availability of matters incorporated by reference in the amendment is as follows:

For Examination

1. U.S. Department of Transportation, Docket Ops-M30, 1200 New Jersey Avenue SE, West Bldg., Ground Floor, Washington, D.C., 20590-0001.

2. The FAA Air Traffic Organization Service Area in which the affected airport is located;

3. The office of Aeronautical Navigation Products, 6500 South MacArthur Blvd., Oklahoma City, OK 73169 or,

4. The National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Availability

All SIAPs and Takeoff Minimums and ODPs are available online free of charge. Visit the National Flight Data Center at nfdc.faa.gov to register. Additionally, individual SIAP and Takeoff Minimums and ODP copies may be obtained from the FAA Air Traffic Organization Service Area in which the affected airport is located.

FOR FURTHER INFORMATION CONTACT: Thomas J. Nichols, Flight Procedures and Airspace Group, Flight Technologies and Procedures Division, Flight Standards Service, Federal Aviation Administration. Mailing Address: FAA Mike Monroney Aeronautical Center, Flight Procedures and Airspace Group, 6500 South MacArthur Blvd, Registry Bldg 29 Room 104, Oklahoma City, OK 73125. Telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION: This rule amends Title 14 of the Code of Federal Regulations, Part 97 (14 CFR part 97), by establishing, amending, suspending, or removes SIAPS, Takeoff Minimums and/or ODPS. The complete regulatory description of each SIAP and its associated Takeoff Minimums or ODP for an identified airport is listed on FAA form documents which are incorporated by reference in this amendment under 5 U.S.C. 552(a), 1 CFR part 51, and 14 CFR part 97.20. The applicable FAA forms are FAA Forms 8260-3, 8260-4, 8260-5, 8260-15A, and 8260-15B when required by an entry on 8260-15A.

The large number of SIAPs, Takeoff Minimums and ODPs, their complex nature, and the need for a special format make publication in the **Federal Register** expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, Takeoff Minimums or ODPs, but instead refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each

SIAP, Takeoff Minimums and ODP listed on FAA form documents is unnecessary. This amendment provides the affected CFR sections and specifies the types of SIAPs, Takeoff Minimums and ODPs with their applicable effective dates. This amendment also identifies the airport and its location, the procedure, and the amendment number.

Availability and Summary of Material Incorporated by Reference

The material incorporated by reference is publicly available as listed in the ADDRESSES section.

The material incorporated by reference describes SIAPS, Takeoff Minimums and/or ODPS as identified in the amendatory language for part 97 of this final rule.

The Rule

This amendment to 14 CFR part 97 is effective upon publication of each separate SIAP, Takeoff Minimums and ODP as Amended in the transmittal. Some SIAP and Takeoff Minimums and textual ODP amendments may have been issued previously by the FAA in a Flight Data Center (FDC) Notice to Airmen (NOTAM) as an emergency action of immediate flight safety relating directly to published aeronautical charts.

The circumstances that created the need for some SIAP and Takeoff Minimums and ODP amendments may require making them effective in less than 30 days. For the remaining SIAPs and Takeoff Minimums and ODPs, an effective date at least 30 days after publication is provided.

Further, the SIAPs and Takeoff Minimums and ODPs contained in this amendment are based on the criteria contained in the U.S. Standard for Terminal Instrument Procedures (TERPS). In developing these SIAPs and Takeoff Minimums and ODPs, the TERPS criteria were applied to the conditions existing or anticipated at the affected airports. Because of the close and immediate relationship between these SIAPs, Takeoff Minimums and ODPs, and safety in air commerce, I find that notice and public procedure under 5 U.S.C. 553(b) are impracticable and contrary to the public interest and, where applicable, under 5 U.S.C 553(d), good cause exists for making some SIAPs effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore--(1) is not a "significant regulatory action" under Executive Order 12866;(2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26,1979) ; and (3)does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR part 97:

Air Traffic Control, Airports, Incorporation by reference, Navigation (Air).

Issued in Washington, DC on **JANUARY 25, 2019.**

Rick Domingo
Executive Director, Flight Standards Service

ADOPTION OF THE AMENDMENT

Accordingly, pursuant to the authority delegated to me, Title 14, Code of Federal Regulations, Part 97 (14 CFR part 97) is amended by establishing, amending, suspending, or removing Standard Instrument Approach Procedures and/or Takeoff Minimums and Obstacle Departure Procedures effective at 0901 UTC on the dates specified, as follows:

Part 97—Standard Instrument Approach Procedures

1. The authority citation for part 97 continues to read as follows:

AUTHORITY: 49 U.S.C. 106(f), 106(g), 40103, 40106, 40113, 40114, 40120, 44502, 44514, 44701, 44719, 44721-44722.

2. Part 97 is amended to read as follows:

Effective 28 February 2019

Anchorage, AK, Ted Stevens Anchorage Intl, RNAV (RNP) RWY 33, Amdt 1A
 Burbank, CA, Bob Hope, ILS Y OR LOC Y RWY 8, Amdt 6A
 Burbank, CA, Bob Hope, ILS Z OR LOC Z RWY 8, Amdt 39A
 Burbank, CA, Bob Hope, RNAV (GPS)-A, Orig-A
 Burbank, CA, Bob Hope, RNAV (GPS) Z RWY 8, Amdt 2A
 Burbank, CA, Bob Hope, RNAV (RNP) Y RWY 8, Amdt 2A
 Burbank, CA, Bob Hope, VOR RWY 8, Amdt 12A
 Inyokern, CA, Inyokern, RNAV (GPS) RWY 2, Amdt 1
 Inyokern, CA, Inyokern, RNAV (GPS) Z RWY 2, Orig-A, CANCELED
 Los Banos, CA, Los Banos Muni, RNAV (GPS) RWY 14, Orig-C
 Los Banos, CA, Los Banos Muni, RNAV (GPS) RWY 32, Amdt 1
 Los Banos, CA, Los Banos Muni, VOR RWY 32, Amdt 5A
 Tulare, CA, Mefford Field, RNAV (GPS) RWY 13, Amdt 1
 Tulare, CA, Mefford Field, VOR RWY 13, Amdt 2
 Wilmington, DE, New Castle, ILS OR LOC RWY 1, Amdt 24
 Stuart, FL, Witham Field, RNAV (GPS) RWY 12, Amdt 2
 Albia, IA, Albia Muni, RNAV (GPS) RWY 13, Orig-B
 Storm Lake, IA, Storm Lake Muni, RNAV (GPS) RWY 35, Amdt 1B
 Sandpoint, ID, Sandpoint, RNAV (GPS) Y RWY 20, Orig
 Sandpoint, ID, Sandpoint, RNAV (GPS) Z RWY 20, Orig
 St Francis, KS, Cheyenne County Muni, RNAV (GPS) RWY 14, Orig
 Louisville, KY, Bowman Field, RNAV (GPS) RWY 33, Orig-B
 Louisville, KY, Bowman Field, VOR RWY 24, Amdt 9A, CANCELED
 Boyne City, MI, Boyne City Muni, RNAV (GPS) RWY 27, Orig-C
 Fairmont, MN, Fairmont Muni, RNAV (GPS) RWY 31, Orig-A
 Minneapolis, MN, Minneapolis-St Paul Intl/Wold-Chamberlain, LOC RWY 4, Amdt 2
 Minneapolis, MN, Minneapolis-St Paul Intl/Wold-Chamberlain, RNAV (GPS) RWY 4, Amdt 3
 Rochester, MN, Rochester Intl, ILS OR LOC RWY 13, Amdt 9
 Rochester, MN, Rochester Intl, RNAV (GPS) RWY 2, Amdt 3B
 Rochester, MN, Rochester Intl, RNAV (GPS) RWY 13, Amdt 1B
 Rochester, MN, Rochester Intl, RNAV (GPS) RWY 20, Amdt 2B
 Windom, MN, Windom Muni, RNAV (GPS) RWY 17, Amdt 1
 Windom, MN, Windom Muni, RNAV (GPS) RWY 35, Amdt 1
 Conrad, MT, Conrad, NDB OR GPS RWY 24, Amdt 4C, CANCELED
 Conrad, MT, Conrad, RNAV (GPS) RWY 6, Orig
 Conrad, MT, Conrad, RNAV (GPS) RWY 24, Orig
 Conrad, MT, Conrad, Takeoff Minimums and Obstacle DP, Amdt 1
 Jacksonville, NC, Albert J Ellis, NDB RWY 5, Amdt 8D
 Valentine, NE, Miller Field, RNAV (GPS) RWY 14, Amdt 2A
 Valentine, NE, Miller Field, RNAV (GPS) RWY 21, Orig-A
 Valentine, NE, Miller Field, Takeoff Minimums and Obstacle DP, Amdt 3

Morristown, NJ, Morristown Muni, RNAV (GPS) RWY 5, Amdt 5
 Sand Springs, OK, William R Pogue Muni, NDB RWY 35, Amdt 2F, CANCELED
 Sand Springs, OK, William R Pogue Muni, RNAV (GPS) RWY 17, Orig-A
 Sand Springs, OK, William R Pogue Muni, RNAV (GPS) RWY 35, Orig-A
 Sand Springs, OK, William R Pogue Muni, VOR/DME-A, Amdt 3A, CANCELED
 Tulsa, OK, Richard Lloyd Jones JR, ILS OR LOC RWY 1L, Amdt 3
 Pittsburgh, PA, Pittsburgh Intl, ILS OR LOC RWY 28R, ILS RWY 28R SA CAT I, ILS RWY 28R SA CAT II, Amdt 10A
 Shelbyville, TN, Bomar Field-Shelbyville Muni, VOR RWY 36, Amdt 17
 College Station, TX, Easterwood Field, VOR OR TACAN RWY 11, Amdt 19E
 Dallas, TX, McKinney National, ILS OR LOC RWY 18, Amdt 6
 El Paso, TX, El Paso Intl, RNAV (GPS) RWY 26R, Amdt 1
 San Angelo, TX, San Angelo Rgnl/Mathis Field, ILS Y OR LOC Y RWY 3, Amdt 22
 San Angelo, TX, San Angelo Rgnl/Mathis Field, NDB RWY 3, Amdt 15
 San Angelo, TX, San Angelo Rgnl/Mathis Field, RADAR 1, Amdt 1B
 San Angelo, TX, San Angelo Rgnl/Mathis Field, RNAV (GPS) RWY 3, Amdt 2
 San Angelo, TX, San Angelo Rgnl/Mathis Field, RNAV (GPS) RWY 18, Amdt 1
 San Angelo, TX, San Angelo Rgnl/Mathis Field, RNAV (GPS) RWY 21, Amdt 2
 Ogden, UT, Ogden-Hinckley, ILS OR LOC RWY 3, Amdt 5
 Ogden, UT, Ogden-Hinckley, RNAV (GPS) RWY 3, Amdt 1
 Ogden, UT, Ogden-Hinckley, RNAV (GPS) Y RWY 3, Orig-A, CANCELED
 Port Angeles, WA, Port Angeles CGAS, COPTER NDB 242, Amdt 1A
 Seattle, WA, Seattle-Tacoma Intl, ILS OR LOC RWY 16C, ILS RWY 16C SA CAT I, ILS RWY 16C CAT II, ILS RWY 16C CAT III, Amdt 17
 Seattle, WA, Seattle-Tacoma Intl, ILS OR LOC RWY 16L, ILS RWY 16L SA CAT I, ILS RWY 16L CAT II, ILS RWY 16L CAT III, Amdt 8
 Seattle, WA, Seattle-Tacoma Intl, ILS OR LOC RWY 16R, ILS RWY 16R SA CAT I, ILS RWY 16R CAT II, ILS RWY 16R CAT III, Amdt 5
 Seattle, WA, Seattle-Tacoma Intl, ILS OR LOC RWY 34R, ILS RWY 34R SA CAT I, ILS RWY 34R SA CAT II, Amdt 3
 Appleton, WI, Appleton Intl, ILS OR LOC RWY 30, Amdt 4
 Wisconsin Rapids, WI, Alexander Field South Wood County, RNAV (GPS) RWY 20, Amdt 2

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (RNP) 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.

<u>AIRPORT</u> TED STEVENS ANCHORAGE INTL	<u>AIRPORT ID</u> PANC	<u>PROCEDURE NAME</u> RNAV (RNP) RWY 33	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> ANCHORAGE	<u>STATE</u> AK
<u>AIRPORT ELEVATION</u> 151	<u>TDZE</u> 121	<u>SUPERSEDED</u> RNAV (RNP) RWY 33	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 01/03/2019	<u>MAG VAR</u> 16E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
HOPER	IAF	TAVUE		TF	FB	1.00	299.04	3.20	6800
TAVUE		SULNE		TF	FB	1.00	298.97	3.90	5500
SULNE		JULIN		RF	FB	1.00	(3.24 NM RADIUS CCW (CFWDD))	4.43	4000
JULIN		JEMOT		RF	FB	1.00	(2.33 NM RADIUS CCW (CFCZD))	3.02	3000
ZIREN	IAF	JEMOT		TF	FB	1.00	146.17	6.00	3000
JEMOT		CAMLO		RF	FB	1.00	(2.22 NM RADIUS CCW (CFGNX))	3.06	2200
WOLAK	IAF	CAMLO		TF	FB	1.00	067.25	6.00	2200
CAMLO		HURKI		RF	FB	1.00	(2.11 NM RADIUS CCW (CFQGG))	3.63	2200
HURKI	IF	FOXON	PFAF	TF	FB	1.00	328.95	3.33	1200
FOXON	PFAF	RW33	MAP	TF	FO	0.30	328.91	3.20	
RW33	MAP	463 MSL		CA			328.91		
463 MSL		MURRS		DF	FB	1.00			
MURRS		BGQ VORTAC		TF	FO	1.00	353.27	17.21	4000



MISSED APPROACH**MAP:**

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 ON THE RNAV MISSED APPROACH ROUTE TO BGQ VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:**PROFILE:**

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)				
2. PROFILE STARTS AT HURKI								
3. FAC:	328.91	PFAF: FOXON	DIST PFAF TO MAP:	DIST PFAF TO THLD:				
4. MIN ALT: HURKI 2200, FOXON 1200								
5. DIST TO THLD FROM OM:	3.20	MM:	IM:	150 HAT:	342 HAT: 0.89	GS ANT:		
6. MIN GP INCPT:	1200	GP ALT AT PFAF : FOXON 1200			OM:	MM:	IM:	
7. GP ANGLE:	3.00	34:1:	IS NOT CLEAR	20:1:	IS NOT CLEAR	TCH:	60.0	
8. MSA FROM: RW33 8800								

PBN REQUIREMENTS NOTE:RNP AR APCH
RF REQUIRED**NOTES:**

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -17°C OR ABOVE 54°C.

CHART PLANVIEW NOTE: RADAR REQUIRED

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT HOPER ON V320-440.

CHART PLANVIEW NOTE AT SULNE: MAX 210 KIAS UNTIL HURKI.

CHART PLANVIEW NOTE AT JEMOT: MAX 210 KIAS UNTIL HURKI.

CHART PLANVIEW NOTE AT CAMLO: MAX 210 KIAS UNTIL HURKI.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 3000 AT ZIREN

CHART AT/ABOVE 8000 AT HOPER

HOLD N, RT, 168.00 INBOUND



MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
AUTHORIZATION REQUIRED															
RNP 0.11 DA	463	1	342	463	1	342	463	1	342	463	1	342			
RNP 0.20 DA	525	1 1/8	404	525	1 1/8	404	525	1 1/8	404	525	1 1/8	404			
RNP 0.30 DA	687	1 5/8	566	687	1 5/8	566	687	1 5/8	566	687	1 5/8	566			

CHANGES - REASONS

1. ADDITIONAL FLIGHT DATA: REMOVED "WAAS CHANNEL #50442" - RNP PROCEDURES DO NOT CHART WAAS INFO.
2. TERMINAL ROUTES: MISSED APPROACH START CLIMB ALTITUDE CHANGED FROM 342 MSL TO 463 MSL - ENTERED INCORRECTLY ON PREVIOUS AMDT.
3. PROFILE LINE 3: "FAF" CHANGED TO "PFAF: FOXON" - CRITERIA CHANGE.

PDF EDITS:

1. ADDED "STANDARD" TO ALTERNATE MINIMUMS DUE TO SIAP LIMITATION.
2. ADDED "HURKI 2200" AFTER LINE 4. MIN ALT DUE TO SIAP LIMITATION.

COORDINATED WITH:A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZAN, AMGR, ALASKA DOT, ANC APP CON, ATA**FLIGHT CHECKED BY**PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED**DEVELOPED BY**

COLTON CROWDER

APPROVED BY

LONNIE EVERHART

Digitally signed by

COLTON CROWDER

Dec 26, 2018

OFFICE**OFFICE**

AJV-A412

OFFICE

AJV-A41

DATE**DATE**

12/26/2018

DATE

Digitally signed by

MARK D ADAMS

Jan 08, 2019

Digitally signed by

MARK D ADAMS

Jan 08, 2019

TITLE
MANAGERQUALITY
16
CHECKED

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> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> ILS Y OR LOC Y RWY 8	<u>ORIGINAL/AMENDMENT</u> 6A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u> 727	<u>SUPERSEDED</u> ILS Y OR LOC Y RWY 8	<u>ORIGINAL/AMENDMENT</u> 6	<u>DATED</u> 11/10/2016	<u>MAG VAR</u> 12E
<u>FACILITY</u> I-BUR	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
LAX VORTAC		SILEX INT/VNY 6.12 DME					315.89	18.38	4600
SMO VOR/DME		SILEX INT/VNY 6.12 DME					311.01	13.79	4400
VNY VOR/DME		SILEX INT/VNY 6.12 DME					242.37	6.12	4400
VTU VOR/DME	IAF	TOAKS INT/VTU 14.47 DME	NOPT				053.65	14.47 (VNY LR-248)	4600
TOAKS INT/VTU 14.47 DME	IAF	SILEX INT/VNY 6.12 DME	NOPT				078.93	8.31 (I-BUR)	3700
MIKEI	IAF	SILEX	NOPT	TF	FB	1.00	101.84	9.78	3700
SILEX INT/VNY 6.12 DME	IF/IAF	BUDDE OM/INT					078.93	6.00 (I-BUR)	3000*

MISSED APPROACH

MAP:

ILS: DA
 LOC: 5.17 NM AFTER BUDDE OM/INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1800 THEN CLIMBING RIGHT TURN TO 4600 ON HEADING 210 AND VTU VOR/DME R-086 TO VTU VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1800 THEN CLIMBING RIGHT TURN TO 4000 ON HEADING 210 AND SMO VOR/DME R-311 TO SILEX INT/VNY 6.12 DME AND HOLD.



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD W SILEX, RT, 078.93 INBOUND, 4000 FT. IN LIEU OF PT (IAF), MAX 5200.

3. FAC: 078.93

FAF: BUDDE OM/INT

DIST FAF TO MAP: 5.17

DIST FAF TO THLD: 6.07

4. MIN ALT: SILEX INT/VNY 6.12 DME 3700, BUDDE OM/INT 3000*

5. DIST TO THLD FROM OM: 6.07

MM:

IM:

150 HAT:

GS ANT: 1226

6. MIN GS INCPT: 3000

GS ALT AT FAF :

OM: 2753

MM:

IM:

7. GP ANGLE: 3.00

34:1:

20:1:

TCH: 60.0

8. MSA FROM: VNY VOR/DME 005-095 9300, 095-185 4400, 185-275 4700, 275-005 7300

EQUIPMENT REQUIREMENTS NOTES:

PBN REQUIREMENTS NOTE: FROM MIKEI: RNAV 1-GPS REQUIRED.

NOTES:

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LOC ONLY
CHART NOTE: LOCALIZER UNUSABLE WITHIN 0.9 NM TO THLD.
CHART NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD.
CHART NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D.
CHART NOTE: CIRCLING NA FOR CATS A/B/C NORTHEAST OF RWY 15 AND 26.
CHART NOTE: CIRCLING NA FOR CAT D EAST OF RWY 15-33.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 8.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 8 CATS A/B VISIBILITY TO 1 1/4 SM.
CHART NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW RVR 5000 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 3000* AT BUDDE OM.
CHART IN PLANVIEW AND PROFILE VIEW: (CFBXN) AT 341153.35N/1182314.00W
CHART KVNY IN PLAN AND PROFILE VIEWS.
CHART IN PLANVIEW: MANDATORY 7000 AT MIKEI.
CHART CIRCLING ICON.
CHART FAS OBST: 901 TREE 341234N/1182750W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SW SILEX INT/VNY 6.12 DME, RT, 062.37 INBOUND.
HOLD NW, LT, 130.63 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: CAT A, B, C, D 900-2 1/2; LOC: CAT A, B 900-2, CAT C 1500-3, CAT D 1600-3

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 08	1555	2 1/2	828	1555	2 1/2	828	1555	2 1/2	828	1555	2 1/2	828			
S-LOC 08	1620	5000	893	1620	5000	893	1620	2	893	1620	2	893			
CIRCLING	1620	1 1/4	842	1640	1 1/4	862	2240	3	1462	2320	3	1542			

QUALITY
13
CHECKED

CHANGES - REASONS

1. DELETED NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 1027 - FLIGHT INSPECTION RESULTS.
2. DELETED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED. REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - REPLACED BY UPDATED NOTE.
3. ADDED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - FORMATTED WITH A COMMA VICE PERIOD IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(2)(H).
4. DELETED NOTE: CIRCLING RWY 26 NA AT NIGHT - REPLACED BY UPDATED NOTE.
5. ADDED NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D - RWY 33 CAT D NIGHT RESTRICTION ADDED PER FLIGHT INSPECTION RESULTS.
6. DELETED NOTE: FOR INOP ALS, INCREASE S-ILS 8 ALL CATS VISIBILITY TO 3 SM AND S-LOC 8 CATS A/B VISIBILITY TO RVR 5000 - REPLACED BY UPDATED NOTE.
7. ADDED NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 8 - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(3)(A).
8. ADDED NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 8 CATS A/B VISIBILITY TO 1 1/4 SM - COMPUTED IN ACCORDANCE WITH FAAO 8260.3D, TABLE 3-3-3 AND TABLE 3-3-4.
9. DELETED CHART IN PLANVIEW ADJACENT TO MIKEI: RADAR REQUIRED FROM ADDITIONAL FLIGHT DATA - NO LONGER REQUIRED BY CRITERIA.
10. DELETED PLANVIEW NOTE ADJACENT MIKEI: RNAV 1-GPS REQUIRED - REPLACED BY PBN REQUIREMENTS NOTE.
11. ADDED PBN REQUIREMENTS NOTE: FROM MIKEI: RNAV 1-GPS REQUIRED - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-8.
12. AMENDED S-ILS 8 ALTERNATE MINIMUMS FROM CAT A 900-2, CAT B 900-2, CAT C 1500-3, CAT D 1600-3 TO CAT A, B, C, D 900-2 1/2 - COMPUTED IN ACCORDANCE WITH FAAO 8260.3D, PARA 3-4-1A(2).

12/10/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 09/12/2018:

1. AMENDED NOTE LOCALIZER UNUSABLE WITHIN 0.5 NM TO THLD TO READ LOCALIZER UNUSABLE WITHIN 0.9 NM TO THLD - FLIGHT INSPECTION RESULTS.
2. AMENDED S-LOC 8 MISSED APPROACH POINT FROM 5.41 NM AFTER BUDDE OM/INT TO 5.17 NM AFTER BUDDE OM/INT - RECOMPUTED USING UPDATED LOCALIZER RESTRICTION.
3. AMENDED (CFBXN) LAT/LONG FROM 341153.12N/1182256.63W TO 341153.35N/1182314.00W IN ADDITIONAL FLIGHT DATA - RECOMPUTED TO DESIGNATE UPDATED S-LOC 8 MISSED APPROACH POINT (0.9 NM FROM RWY THLD).
4. AMENDED FAF TO THLD DISTANCE FROM 5.41 TO 5.17 - RECOMPUTED USING UPDATED S-LOC 8 MISSED APPROACH POINT.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

GARY JOHN VEER

*Digitally signed by***ROBERT G HAMILTON**

Dec 28, 2018

OFFICE

FIOG

DATE

12/02/2018

DEVELOPED BY

PETER R. GUIMOND

*Digitally signed by***PETER R GUIMOND**

Sep 12, 2018

OFFICE

AJV-5422

DATE

09/12/2018

APPROVED BY

JULIE MORGAN

*Digitally signed by***ROBERT G HAMILTON**

Dec 28, 2018

OFFICE

AJV-5420

DATE**TITLE**

MANAGER



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> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> ILS Z OR LOC Z RWY 8	<u>ORIGINAL/AMENDMENT</u> 39A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u> 727	<u>SUPERSEDED</u> ILS Z OR LOC Z RWY 8	<u>ORIGINAL/AMENDMENT</u> 39	<u>DATED</u> 11/10/2016	<u>MAG VAR</u> 12E
<u>FACILITY</u> I-BUR	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
LAX VORTAC		SILEX INT/VNY 6.12 DME					315.89	18.38	4600
SMO VOR/DME		SILEX INT/VNY 6.12 DME					311.01	13.79	4400
VNY VOR/DME		SILEX INT/VNY 6.12 DME					242.37	6.12	4400
VTU VOR/DME	IAF	TOAKS INT/VTU 14.47 DME	NOPT				053.65	14.47 (VNY LR-248)	4600
TOAKS INT/VTU 14.47 DME	IAF	SILEX INT/VNY 6.12 DME	NOPT				078.93	8.31 (I-BUR)	3700
MIKEI	IAF	SILEX	NOPT	TF	FB	1.00	101.84	9.78	3700
SILEX INT/VNY 6.12 DME	IF/IAF	BUDDE OM/INT					078.93	6.00 (I-BUR)	3000*

MISSED APPROACH

MAP:

ILS: DA
 LOC: 5.17 NM AFTER BUDDE OM/INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1300 THEN CLIMBING RIGHT TURN TO 4600 ON HEADING 210 AND VTU VOR/DME R-086 TO VTU VOR/DME AND HOLD. #MISSED APPROACH REQUIRES A MINIMUM CLIMB OF 340 FT PER NM TO 2520 (IF UNABLE TO MEET CLIMB GRADIENT, SEE ILS Y OR LOC Y RWY 8).

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1300 THEN CLIMBING RIGHT TURN TO 4000 ON HEADING 210 AND SMO VOR/DME R-311 TO SILEX INT/VNY 6.12 DME AND HOLD. #MISSED APPROACH REQUIRES MINIMUM CLIMB OF 340 FEET PER NM TO 2520 (IF UNABLE TO MEET CLIMB GRADIENT, SEE ILS Y OR LOC Y RWY 8).



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD W SILEX, RT, 078.93 INBOUND, 4000 FT. IN LIEU OF PT (IAF), MAX 5200.
3. FAC: 078.93FAF: BUDDE OM/INTDIST FAF TO MAP: 5.17DIST FAF TO THLD: 6.07
4. MIN ALT: SILEX INT/VNY 6.12 DME 3700, BUDDE OM/INT 3000*
5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT: 1226
6. MIN GS INCPT: 3000GS ALT AT FAF :OM: 2753MM:IM:
7. GP ANGLE: 3.0034:1:20:1:TCH: 60.0
8. MSA FROM: VNY VOR/DME 005-095 9300, 095-185 4400, 185-275 4700, 275-005 7300

EQUIPMENT REQUIREMENTS NOTES:

PBN REQUIREMENTS NOTE: FROM MIKEI: RNAV 1-GPS REQUIRED.

NOTES:

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LOC ONLY
CHART NOTE: LOCALIZER UNUSABLE WITHIN 0.9 NM TO THLD.
CHART NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD.
CHART NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D.
CHART NOTE: CIRCLING NA FOR CATS A/B/C NORTHEAST OF RWY 15 AND 26.
CHART NOTE: CIRCLING NA FOR CAT D EAST OF RWY 15-33.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 8.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 8 CATS A/B VISIBILITY TO RVR 6000 AND S-LOC 8 CATS C/D VISIBILITY TO 1 1/4 SM.
CHART NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW RVR 5000 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW AND PROFILE VIEW: (CFBXN) AT 341153.35N/1182314.00W
CHART MANDATORY 3000* AT BUDDE OM.
CHART KVNY IN PLAN AND PROFILE VIEWS.
CHART IN PLANVIEW: MANDATORY 7000 AT MIKEI
CHART CIRCLING ICON.
CHART FAS OBST: 901 TREE 341234N/1182750W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SW SILEX INT/VNY 6.12 DME, RT, 062.37 INBOUND.
HOLD NW, LT, 130.63 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD - CAT B 900-2, CAT C 1500-3, CAT D 1600-3

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 08#	1075	5000	348	1075	5000	348	1075	5000	348	1075	5000	348			
S-LOC 08#	1160	5000	433	1160	5000	433	1160	5000	433	1160	5000	433			
CIRCLING	1280	1 1/8	502	1640	1 1/4	862	2240	3	1462	2320	3	1542			



CHANGES - REASONS

1. INCREASED CAT A CIRCLING MDA/HAA FROM 1240/462 TO 1280/502 - NEW CONTROLLING OBSTACLE IDENTIFIED. NEW OBSTACLE SURVEY ADDED SINCE LAST AMENDMENT.
2. DELETED NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 1027 - FLIGHT INSPECTION RESULTS.
3. DELETED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED. REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - REPLACED BY UPDATED NOTE.
4. ADDED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON R ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - FORMATTED WITH A COMMA VICE PERIOD IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(2)(H).
5. DELETED NOTE: CIRCLING RWY 26 NA AT NIGHT - REPLACED BY UPDATED NOTE.
6. ADDED NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D - RWY 33 CAT D NIGHT RESTRICTION ADDED PER FLIGHT INSPECTION RESULTS.
7. ADDED ATTENTION SYMBOLS ADJACENT TO S-ILS 8 AND S-LOC 8 MINIMUMS TO DENOTE THAT MISSED APPROACH CLIMB GRADIENT NEEDED - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-8-8F.
8. DELETED CHART IN PLANVIEW ADJACENT TO MIKEI: RADAR REQUIRED FROM ADDITIONAL FLIGHT DATA - NO LONGER REQUIRED BY CRITERIA.
9. DELETED PLANVIEW NOTE ADJACENT MIKEI: RNAV 1-GPS REQUIRED - REPLACED BY PBN REQUIREMENTS NOTE.
10. ADDED PBN REQUIREMENTS NOTE: FROM MIKEI: RNAV 1-GPS REQUIRED - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-8.
11. AMENDED S-ILS 8 ALTERNATE MINIMUMS FROM CAT B 900-2, CAT C 1500-3, CAT D 1600-3 TO ALL CATS STANDARD - COMPUTED IN ACCORDANCE WITH FAAO 8260.3D, PARA 3-4-1A(2).
12. DELETED ALTERNATE MINIMUMS RESTRICTION NA WHEN CONTROL CLOSED - NO LONGER REQUIRED, CONTROL TOWER OPERATES 24 HOURS AND ASOS IS ON WMCSR.

12/10/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 09/12/2018.

1. AMENDED NOTE LOCALIZER UNUSABLE WITHIN 0.5 NM TO THLD TO READ LOCALIZER UNUSABLE WITHIN 0.9 NM TO THLD - FLIGHT CHECK RESULTS.
2. AMENDED S-ILS 08# DA/HAT FROM 1007/280 TO 1075/348 - RECOMPUTED USING GLIDESLOPE ALTITUDE AT 0.9 NM FROM THLD.
3. AMENDED S-LOC 8 MISSED APPROACH POINT FROM 5.41 NM AFTER BUDDE OM/INT TO 5.17 NM AFTER BUDDE OM/INT - RECOMPUTED USING UPDATED LOCALIZER RESTRICTION.
4. AMENDED (CFBXN) LAT/LONG FROM 341153.12N/1182256.63W TO 341153.35N/1182314.00W IN ADDITIONAL FLIGHT DATA - RECOMPUTED TO DESIGNATE UPDATED S-LOC 8 MISSED APPROACH POINT (0.9 NM FROM RWY THLD).
5. AMENDED FAF TO MAP DISTANCE FROM 5.41 TO 5.17 - RECOMPUTED USING UPDATED S-LOC 8 MISSED APPROACH POINT.
6. AMENDED CAT A CIRCLING VISIBILITY FROM 1 TO 1 1/8 - RECOMPUTED USING HIGHEST S-LOC 8 NO-LIGHT MINIMA AT UPDATED MISSED APPROACH POINT.
7. AMENDED NOTE INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 8 ALL CATS AND S-LOC 8 CATS A/B TO READ INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 8 - VISIBILITIES RECOMPUTED USING UPDATED S-LOC 8 MISSED APPROACH POINT.
8. AMENDED NOTE FOR INOPERATIVE ALS, INCREASE S-LOC 8 CATS C/D VISIBILITY TO 1 1/4 SM TO READ FOR INOPERATIVE ALS, INCREASE S-LOC 8 CATS A/B VISIBILITY TO RVR 6000 AND S-LOC 8 CATS C/D VISIBILITY TO 1 1/4 SM - VISIBILITIES RECOMPUTED USING UPDATED S-LOC 8 MISSED APPROACH POINT.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

GARY JOHN VEER

Digitally signed by
ROBERT G HAMILTON
Dec 28, 2018

OFFICE

FIOG

DATE

12/02/2018

DEVELOPED BY

PETER R. GUIMOND

Digitally signed by
PETER R GUIMOND
Sep 12, 2018

OFFICE

AJV-5422

DATE

09/12/2018

APPROVED BY

JULIE MORGAN

Digitally signed by
ROBERT G HAMILTON
Dec 28, 2018

OFFICE

AJV-5420

DATE

TITLE
MANAGER

QUALITY
16
CHECKED

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.

<u>AIRPORT</u> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> RNAV (GPS)-A	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u>	<u>SUPERSEDED</u> RNAV (GPS)-A	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 05/26/2016	<u>MAG VAR</u> 12E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
VAZCU	IAF	CEZKA		TF	FB	1.00	101.82	5.02	5200
SAUGS	IAF	CEZKA		TF	FB	1.00	210.41	8.39	5200
CEZKA	IF	SUMXY		TF	FB	1.00	124.09	8.00	4100
SUMXY	FAF	IGAXY	MAP	TF	FO	0.30	124.09	7.43	
IGAXY	MAP	1178 MSL		CA			124.09		
1178 MSL		COTSI		DF	FB	1.00			
COTSI		VTU VOR/DME		TF	FO	1.00	263.33	29.41	4600

MISSED APPROACH

MAP:

IGAXY

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 4600 DIRECT COTSI AND ON TRACK 263.33 TO VTU VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT CEZKA

3. FAC:

124.09

FAC: SUMXY

DIST FAF TO MAP: 7.43

DIST FAF TO THLD:

4. MIN ALT: CEZKA 5200, SUMXY 4100

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1:

20:1:

TCH:

8. MSA FROM: KBUR 10200

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT VAZCU ON V23 NORTHWEST BOUND.
CHART NOTE: CIRCLING NA FOR CATS A/B/C NORTHEAST OF RWY 15 AND 26.
CHART NOTE: CIRCLING NA FOR CAT D EAST OF RWY 15-33.
CHART NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D.
CHART NOTE: CIRCLING TO RWY 8, 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD.

ADDITIONAL FLIGHT DATA:

FAC CROSSES INTERSECTION OF RWYS 8-26 AND 15-33.
CHART CIRCLING ICON.
FAS OBST: 1449 AAO 341717N/1182737W.
CHART: 1534 TOWER 341703N/1182822W.
HOLD NW, LT, 130.63 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 1100-2, CAT C 1500-3, CAT D 1600-3

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
CIRCLING	1860	1 1/4	1082	1860	1 1/2	1082	2240	3	1462	2320	3	1542			



CHANGES - REASONS

1. AMENDED CATS A/B CIRCLING MDA/HAA FROM 1640/862 TO 1860/1082 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LNAV FINAL. CATS A/B CIRCLING MINIMUMS INCREASED TO MATCH HIGHER STRAIGHT-IN VALUE.
2. AMENDED CAT B CIRCLING VISIBILITY FROM 1 1/4 TO 1 1/2 - COMPUTED USING HIGHER HAA.
3. DELETED CHART FAS OBST: 1183 STACK 341440N/1182334W IN ADDITIONAL FLIGHT DATA - REPLACED BY UPDATED FAS OBST.
4. ADDED FAS OBST: 1449 AAO 341717N/1182737W IN ADDITIONAL FLIGHT DATA - NEW OBSTACLE STUDY.
5. DELETED PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SAUGS ON V459 NORTHWEST BOUND, V165 NORTHBOUND, AND V386 NORTHEAST BOUND - NO LONGER REQUIRED. CHARTED ENROUTE HOLDING AT SAUGS WOULD ALLOW FOR COURSE REVERSAL TO A TURN LESS THAN 90 DEGREES FOR PROCEDURE ENTRY.
6. DELETED PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT VAZCU ON V23 NORTHWEST BOUND AND V386 SOUTHWEST BOUND - REPLACED BY UPDATED NOTE.
7. ADDED PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT VAZCU ON V23 NORTHWEST BOUND - AIRCRAFT ARRIVING ON V386 SOUTHWEST BOUND CAN ENTER PROCEDURE FROM SAUGS (IAF).
8. DELETED NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED - NO LONGER NEEDED, ANNOTATED ON STRAIGHT-IN APPROACHES ONLY.
9. DELETED NOTE: NIGHT LANDING RWY 26 NA - REPLACED BY UPDATED NOTE.
10. DELETED NOTE: NIGHT LANDING RWY 8, 33 OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - REPLACED BY UPDATED NOTE.
11. ADDED NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D - RWY 33 CAT D NIGHT RESTRICTION ADDED PER FLIGHT INSPECTION RESULTS.
12. ADDED NOTE: CIRCLING TO RWY 8, 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(H).
13. DELETED NOTE: DME/DME/IRU RNP-0.3 NA - REPLACED BY PBN REQUIREMENTS NOTE.
14. ADDED PBN REQUIREMENTS NOTE: RNP APCH - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-8.
15. AMENDED CATS A/B ALTERNATE MINIMUMS FROM 900-2 TO 1100-2 - COMPUTED USING HIGHER CAT A/B CIRCLING MDA/HAA.
16. ADDED FAC CROSSES INTERSECTION OF RWYS 8-26 AND 15-33 TO ADDITIONAL FLIGHT DATA - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-10G(3).
17. AMENDED MSA CENTER FROM IGAXY TO KBUR AND MIN ALTITUDE FROM 10100 TO 10200 - NEW CONTROLLING OBSTACLE IDENTIFIED. MSA CENTERED ON KBUR IN ACCORDANCE WITH FAAO 8260.3D, PARA 2-3-2B(2).



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

GARY J VEER

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

FICO

DATE

11/28/18

DEVELOPED BY

PETER R. GUIMOND

Digitally signed by
PETER R GUIMOND
Sep 12, 2018

OFFICE

AJV-5422

DATE

09/12/2018

APPROVED BY

JULIE MORGAN

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



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.

<u>AIRPORT</u> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 8	<u>ORIGINAL/AMENDMENT</u> 2A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u> 727	<u>SUPERSEDED</u> RNAV (GPS) Z RWY 8	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 11/10/2016	<u>MAG VAR</u> 12E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
MIKEI	IAF	SILEX	NOPT	TF	FB	1.00	101.84	9.78	4100
VTU VOR/DME	IAF	TOAKS	NOPT	TF	FB	1.00	056.65	14.47	4600
TOAKS		SILEX		TF	FB	1.00	078.65	8.31	4100
SILEX	IF/IAF	BUBNE		TF	FB	1.00	078.87	5.12	3000
BUBNE	FAF	HIMEN	MAP	TF	FO	0.30	078.85	5.65	
HIMEN	MAP	1178 MSL		CA			078.85		
1178 MSL		COTSI		DF	FB	1.00			
COTSI		VTU VOR/DME		TF	FO	1.00	263.33	29.41	4600

MISSED APPROACH

MAP:
 LP: HIMEN
 LNAV: HIMEN
MISSED APPROACH INSTRUCTIONS:
 CLIMBING RIGHT TURN TO 4600 DIRECT COTSI AND ON TRACK 263.33 TO VTU VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD W SILEX, RT, 078.87 INBOUND, 4100 FT. IN LIEU OF PT (IAF), MAX 8000.

3. FAC: 078.85FAF: BUBNEDIST FAF TO MAP: 5.65DIST FAF TO THLD: 6.95

4. MIN ALT: SILEX 4100, BUBNE 3000

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:

6. MIN GP INCPT:GP ALT AT FAF :OM:MM:IM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS NOT CLEARTCH:

8. MSA FROM: HIMEN 9500

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON VTU VOR/DME AIRWAY RADIALS 015 CW 129.
CHART NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD.
CHART NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D.
CHART NOTE: CIRCLING NA FOR CATS A/B/C NORTHEAST OF RWY 15 AND 26.
CHART NOTE: CIRCLING NA FOR CAT D EAST OF RWY 15-33.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LP CAT A/B VISIBILITY TO 1 1/2 SM AND LP CAT C/D VISIBILITY TO 2 1/2 SM.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT A/B VISIBILITY TO 1 1/2 SM .
CHART NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW RVR 5000 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW: MANDATORY 7000 AT MIKEI.
CHART KVNY IN PLAN AND PROFILE VIEWS.
CHART CIRCLING ICON.
BUBNE TO RW08: 3.00/60.
WAAS CHANNEL #53638
REFERENCE PATH ID: W08A
CHART FAS OBST: 901 TREE 341234N/1182750W, 900 ELECTRICAL_SYSTEM 341208N/1182323W.
HOLD NW, LT, 130.63 INBOUND
LTP HAE: 187.4 M

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 900-2, CAT C 1500-3, CAT D 1600-3

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
LP MDA	1540	6000	813	1540	6000	813	1540	1 7/8	813	1540	1 7/8	813			
LNAV MDA	1660	6000	933	1660	6000	933	1660	2	933	1660	2	933			
CIRCLING	1660	1 1/2	882	1660	1 1/2	882	2240	3	1462	2320	3	1542			



CHANGES - REASONS

1. AMENDED LNAV MDA/HAT FROM 1640/913 TO 1660/933 - NEW CONTROLLING OBSTACLE IDENTIFIED IN MISSED APPROACH SEGMENT WHEN USING MDA OF 1640. AT AN MDA OF 1660, THE OBSTACLE IS OUTSIDE THE MISSED APPROACH OIS.
2. DELETED NOTE: CIRCLING RWY 26 NA AT NIGHT - REPLACED BY UPDATED NOTE.
3. ADDED NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D - RWY 33 CAT D NIGHT RESTRICTION ADDED PER FLIGHT INSPECTION RESULTS.
4. DELETED NOTE: DME/DME RNP-0.3 NA - REPLACED BY PBN REQUIREMENTS NOTE.
5. ADDED PBN REQUIREMENTS NOTE: RNP APCH - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-8.
6. CHANGED LNAV FAS OBST FROM 894 T-L TOWER TO 900 ELECTRICAL SYSTEM IN ADDITIONAL FLIGHT DATA - SAME OBSTACLE WITH UPDATED DATA.
7. AMENDED LTP HAE FROM 187.3 TO 187.4 IN ADDITIONAL FLIGHT DATA - MATCH CURRENT AIRNAV VALUE.
8. ADDED 20:1 IS NOT CLEAR - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-7G(3).
9. AMENDED CAT A CIRCLING CONTROLLING OBSTACLE FROM 927 MSL TREE TO 972 MSL TREE - NEW OBSTACLE SURVEY ADDED SINCE LAST AMENDMENT. NO CHANGE TO PUBLISHED CAT A CIRCLING MDA REQUIRED (OBSTACLE HEIGHT PLUS ROC REMAINS LOWER THAN HIGHER LNAV MDA).
10. FAS DATA: AMENDED LTP LAT/LONG FROM 341152.4795N/1182208.9140W TO 341152.4790N/1182208.9145W - MATCH CURRENT AIRNAV DATA.
11. FAS DATA: AMENDED LTP/FTP ELLIPSOIDAL HEIGHT FROM +01873 TO +01874 - MATCH CURRENT AIRNAV DATA.
12. FAS DATA: AMENDED CRC REMAINDER FROM C85F95BD TO 97C8DB7B - COMPUTED USING UPDATED LTP LAT/LONG AND LTP/FTP ELLIPSOIDAL HEIGHT VALUES.



AIRPORT
BOB HOPE

AIRPORT ID
KBUR

PROCEDURE NAME
RNAV (GPS) Z RWY 8

ORIGINAL/AMENDMENT
2A

CITY
BURBANK

STATE
CA

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

Digitally signed by
JACOB POWERS
Jan 08, 2019

ANTHONY D VALLERA

OFFICE

FICO

DATE

12/18/18

DEVELOPED BY

Digitally signed by
PETER R GUIMOND
Sep 13, 2018

PETER R. GUIMOND

OFFICE

AJV-5422

DATE

09/13/2018

APPROVED BY

Digitally signed by
JACOB POWERS
Jan 08, 2019

JULIE MORGAN

OFFICE

AJV-5420

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KBUR
RUNWAY	RW08
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W08A
LTP/FTP LATITUDE	341152.4790N
LTP/FTP LONGITUDE	1182208.9145W
LTP/FTP ELLIPSOIDAL HEIGHT	+01874
FPAP LATITUDE	341151.0215N
FPAP LONGITUDE	1182021.5105W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0984
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0
 CRC REMAINDER	 97C8DB7B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+02217
FPAP ORTHOMETRIC HEIGHT	+02217



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (RNP) 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.

<u>AIRPORT</u> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> RNAV (RNP) Y RWY 8	<u>ORIGINAL/AMENDMENT</u> 2A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u> 727	<u>SUPERSEDED</u> RNAV (RNP) Y RWY 8	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 11/10/2016	<u>MAG VAR</u> 12E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
MIKEI	IAF	SILEX		TF	FB	1.00	101.84	9.78	4500
SILEX	IF	YEBUN		TF	FB	1.00	078.88	4.88	3000
WABBT	IF	NIBYI		TF	FB	1.00	166.37	4.51	5100
NIBYI		ZEMEP		TF	FB	1.00	164.35	3.00	4200
ZEMEP		HIMVI		RF	FB	1.00	(2.74 NM RADIUS CCW (CFCDJ))	2.78	3400
HIMVI		YEBUN		RF	FB	1.00	(2.74 NM RADIUS CCW (CFCGT))	1.31	3000
YEBUN		WESKI		TF	FB	1.00	078.84	1.18	2700
WESKI	PFAF	RW08	MAP	TF	FO	0.30	078.86	6.01	
RW08	MAP	1200 MSL		CA			078.86		1200
1200 MSL		COTSI		DF	FB	1.00			
COTSI		YOLYY		TF	FO	1.00	263.33	27.41	4600

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1200 THEN CLIMBING RIGHT TURN TO 4600 DIRECT COTSI AND ON TRACK 263.33 TO YOLYY AND HOLD.

#MISSED APPROACH REQUIRES MINIMUM CLIMB OF 317 FEET PER NM TO 2400.

*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 340 FEET PER NM TO 2400.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)		
2. PROFILE STARTS AT YEBUN						
3. FAC:	078.86	PFAF: WESKI	DIST PFAF TO MAP:	DIST PFAF TO THLD:		
4. MIN ALT: YEBUN 3000, WESKI 2700						
5. DIST TO THLD FROM OM:	6.01	MM:	IM:	150 HAT:	341 HAT: 0.88	GS ANT:
6. MIN GP INCPT:	2700	GP ALT AT PFAF : WESKI 2700		OM:	MM:	IM:
7. GP ANGLE:	3.00	34:1: IS NOT CLEAR	20:1: IS NOT CLEAR	TCH: 60.0%		
8. MSA FROM: RW08 9800						

PBN REQUIREMENTS NOTE:

RNP AR APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 1°C OR ABOVE 54°C.
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE ADJACENT TO WABBT: RF REQUIRED.
CHART NOTE: STRAIGHT-IN RWY 8 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO RNP 0.20* AND RNP 0.30.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30# ALL CATS VISIBILITY TO 1 1/4 SM.
CHART SPEED ICON IN PLANVIEW AT ZEMEP: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT WABBT.
CHART MANDATORY 7000 AT MIKEI.
CHART KVNY IN PLAN AND PROFILE VIEWS.
ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER1: F
ROUTE TYPE QUALIFIER2: S
%TCH 787.4 MSL (DO NOT CHART)
HOLD SE, LT, 310.63 INBOUND



MINIMUMS:**TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT****ALTERNATE:** NA ☐ CAT A, B, C, D 800-2 1/2

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
AUTHORIZATION REQUIRED															
RNP 0.20 DA*	1068	5000	341	1068	5000	341	1068	5000	341	1068	5000	341			
RNP 0.30 DA#	1151	5000	424	1151	5000	424	1151	5000	424	1151	5000	424			
RNP 0.30 DA	1485	2 1/2	758	1485	2 1/2	758	1485	2 1/2	758	1485	2 1/2	758			

CHANGES - REASONS

1. AMENDED RNP 0.20* DA/HAT FROM 1055/328 TO 1068/341 - NEW CONTROLLING OBSTACLE IDENTIFIED IN FINAL. NEW OBSTACLE SURVEY ADDED SINCE LAST AMENDMENT.
2. DELETED NOTE: WHEN CIRCLING TO RWY 8 AT NIGHT, OPERATIONAL VGSI REQUIRED. REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - REPLACED BY UPDATED NOTE.
3. ADDED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, OPERATIONAL VGSI REQUIRED, REMAIN ON OR ABOVE VGSI GLIDEPATH UNTIL THRESHOLD - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(2)(H).
4. REMOVED FAHRENHEIT VALUES FROM UNCOMPENSATED BARO-VNAV TEMPERATURE LIMITS NOTE - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-9S.
5. DELETED CHART IN PLANVIEW ADJACENT TO WABBT: RADAR REQUIRED - NO LONGER REQUIRED BY CRITERIA.
6. DELETED NOTE: INOPERATIVE TABLE DOES NOT APPLY TO RNP 0.20* ALL CATS - REPLACED BY UPDATED NOTE.
7. ADDED NOTE: INOPERATIVE TABLE DOES NOT APPLY TO RNP 0.20* AND RNP 0.30 - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(3)(A).
8. DELETED NOTE: FOR INOPERATIVE MALSR, INCREASE RNP 0.30# ALL CATS VISIBILITY TO 1 3/8 SM.
9. ADDED NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30# ALL CATS VISIBILITY TO 1 1/4 SM - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(3)(A).
10. DELETED NOTE: GPS REQUIRED - REPLACED BY PBN REQUIREMENTS NOTE.
11. ADDED PBN REQUIREMENTS NOTE RNP AR APCH - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-8.
12. ADDED 20:1 IS NOT CLEAR - IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-7G(3).
13. AMENDED DISTANCE FROM THLD TO 328 HAT: 0.84 NM TO READ DIST FROM THLD TO 341 HAT: 0.88 NM - COMPUTED USING UPDATED RNP 0.20* HAT VALUE.
14. AMENDED RNP 0.30 AND RNP 0.30# CONTROLLING OBSTACLE FROM 894 TRANSMISSION TOWER TO 900 ELECTRICAL SYSTEM - NEW OBSTACLE STUDY. NO CHANGE TO PUBLISHED MINIMUMS REQUIRED.
15. AMENDED MSA FROM 9900 TO 9800 - ACCURACY CODE ADJUSTMENTS NO LONGER APPLIED IN MSA FOR RNP APPROACHES.
16. ADDED CHART IN PLANVIEW AND PROFILE VIEW: KVNy - ALERT AIRCREWS THAT NEARBY AIRPORT WILL BE OVERFLOWN ON FINAL.



AIRPORT
BOB HOPE

AIRPORT ID
KBUR

PROCEDURE NAME
RNAV (RNP) Y RWY 8

ORIGINAL/AMENDMENT
2A

CITY
BURBANK

STATE
CA

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

FICO

DATE

11/28/18

DEVELOPED BY

Digitally signed by
PETER R GUIMOND
Sep 14, 2018

OFFICE

AJV-5422

DATE

09/14/2018

APPROVED BY

JULIE MORGAN

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23

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> BOB HOPE	<u>AIRPORT ID</u> KBUR	<u>PROCEDURE NAME</u> VOR RWY 8	<u>ORIGINAL/AMENDMENT</u> 12A	<u>CITY</u> BURBANK	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 778	<u>TDZE</u> 727	<u>SUPERSEDED</u> VOR RWY 8	<u>ORIGINAL/AMENDMENT</u> 12	<u>DATED</u> 05/26/2016	<u>MAG VAR</u> 15E
<u>FACILITY</u> VNY	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1975

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>
LAX VORTAC		SUANA INT/VNY 11.40 DME					305.45	22.56	5100
SMO VOR/DME		SUANA INT/VNY 11.40 DME					299.20	18.32	5100
VNY VOR/DME		SUANA INT/VNY 11.40 DME					255.00	11.40	4600
FIM VORTAC	IAF	SUANA INT/VNY 11.40 DME	NOPT				120.00	11.30	4400
GINNA INT/VNY 16.94 DME	IAF	SUANA INT/VNY 11.40 DME	NOPT				075.00	5.54 (VNY R-255)	4400
VTU VOR/DME	IAF	SUANA INT/VNY 11.40 DME	NOPT				053.31	17.60	4600
SUANA INT/VNY 11.40 DME	IF/IAF	CANOG INT/VNY 5.10 DME					075.00	6.30 (VNY R-255)	3700
CANOG INT/VNY 5.10 DME		VNY VOR/DME					075.00	5.10	3100

MISSED APPROACH

MAP:

5.50 NM AFTER VNY VOR/DME OR AT UNCIA/5.50 DME FIX

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 4600 ON HEADING 210 AND VTU VOR/DME R-086 TO VTU VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMBING RIGHT TURN TO 4000 DIRECT VNY VOR/DME THEN ON VNY R-242 TO SILEX INT/VNY 6.12 DME AND HOLD.

PROFILE:

1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. HOLD W SUANA, RT, 075.00 INBOUND, 4400 FT. IN LIEU OF PT (IAF), MAX 6000.
3. **FAC:** 089.06 **FAF:** VNY VOR/DME **DIST FAF TO MAP:** 5.50 **DIST FAF TO THLD:** 6.29
4. **MIN ALT:** SUANA INT/VNY 11.40 DME 4400, CANOG INT/VNY 5.10 DME 3700, VNY VOR/DME 3100
8. **MSA FROM:** VNY VOR/DME 005-095 9300, 095-185 4400, 185-275 4700, 275-005 7300



EQUIPMENT REQUIREMENTS NOTES:**NOTES:**

CHART PROFILE NOTE: VGSi AND DESCENT ANGLES NOT COINCIDENT (VGSi ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSi REQUIRED, REMAIN ON OR ABOVE VGSi GLIDEPATH UNTIL THRESHOLD.
CHART NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D.
CHART NOTE: CIRCLING NA FOR CATS A/B/C NORTHEAST OF RWY 15 AND 26.
CHART NOTE: CIRCLING NA FOR CAT D EAST OF RWY 15-33.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY.
CHART NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW RVR 5000 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART KVNY IN PLAN AND PROFILE VIEWS.
CHART CIRCLING ICON.
VNY VOR/DME TO RW8: 3.46/60.
CHART IN PLANVIEW: SILEX INT/VNY 6.12 DME
CHART FAS OBST: 986 BLDG 341310N/1182658W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SW SILEX INT/VNY 6.12 DME, RT, 062.37 INBOUND.
HOLD NW, LT, 130.63 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 900-2, CAT C 1500-3, CAT D 1600-3

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
S-08	1600	5500	873	1600	1 1/4	873	1600	2 1/2	873	1600	2 1/2	873			
CIRCLING	1600	1 1/4	822	1640	1 1/4	862	2240	3	1462	2320	3	1542			

CHANGES - REASONS

1. DELETED NOTE: NIGHT LANDING RWY 8, 33, OPERATIONAL VGSi REQUIRED. REMAIN ON OR ABOVE VGSi GLIDEPATH UNTIL THRESHOLD - REPLACED BY UPDATED NOTE.
2. ADDED NOTE: STRAIGHT-IN RWY 8 AT NIGHT, CIRCLING TO RWY 33 AT NIGHT, OPERATIONAL VGSi REQUIRED, REMAIN ON OR ABOVE VGSi GLIDEPATH UNTIL THRESHOLD - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11O(2)(H).
3. DELETED NOTE: NIGHT LANDING: RWY 26 NA - REPLACED BY UPDATED NOTE.
4. ADDED NOTE: CIRCLING RWY 26 NA AT NIGHT AND CIRCLING RWY 33 NA AT NIGHT FOR CAT D - RWY 33 CAT D NIGHT RESTRICTION ADDED PER FLIGHT INSPECTION RESULTS.
5. DELETED NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED - REPLACED BY UPDATED NOTE.
6. ADDED NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW RVR 5000 NOT AUTHORIZED - FORMATTED IN ACCORDANCE WITH FAAO 8260.19H, PARA 8-6-11K(3).
7. DELETED PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT FIM VORTAC AIRWAY RADIALS 087 CW 148 - CHARTED ENROUTE HOLDING ENABLES COURSE REVERSAL AT FIM VORTAC FOR PROCEDURE ENTRY FROM ALL DIRECTIONS.
8. AMENDED S-8 CAT B VISIBILITY FROM RVR 6000 TO 1 1/4 - COMPUTED IN ACCORDANCE WITH FAAO 8260.3D, TABLE 3-3-4.



AIRPORT
BOB HOPE

AIRPORT ID
KBUR

PROCEDURE NAME
VOR RWY 8

ORIGINAL/AMENDMENT
12A

CITY
BURBANK

STATE
CA

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLA, SOCAL APP CON, BUR ATCT, AMGR

FLIGHT CHECKED BY

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

FICO

DATE

11/29/18

DEVELOPED BY

Digitally signed by
PETER R GUIMOND
Oct 01, 2018

OFFICE

AJV-5422

DATE

10/01/2018

APPROVED BY

JULIE MORGAN
Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



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.

<u>AIRPORT</u> INYOKERN	<u>AIRPORT ID</u> KIYK	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> INYOKERN	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 2457	<u>TDZE</u> 2442	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 06/27/2013	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1985

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>
LHS VORTAC		MOVIA		TF	FB	2.00	021.29	23.48	11000
MOVIA		CETEG		TF	FB	2.00	016.60	14.00	10000
CETEG		ASUYU		TF	FB	2.00	016.68	5.00	8600
ASUYU	IAF	BACRA		TF	FB	1.00	016.71	10.00	7000
BACRA	IF	DIVAC		TF	FB	1.00	016.77	6.87	5700
DIVAC	FAF	BISAC	MAP	TF	FO	0.30	016.82	4.13	
BISAC	MAP	2857 MSL		CA			16.82		
2857 MSL		MIGPE		DF	FB	1.00			
MIGPE		ASUYU		TF	FO	1.00	196.97		8600

MISSED APPROACH

MAP:

LNAV: BISAC

MISSED APPROACH INSTRUCTIONS:

(DO NOT EXCEED 165 KIAS UNTIL SW BOUND) CLIMBING RIGHT TURN TO 8600 DIRECT MIGPE THEN LEFT TURN ON TRACK 196.97 TO ASUYU AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT ASUYU

3. FAC: 016.82

FAF: DIVAC

DIST FAF TO MAP: 4.13

DIST FAF TO THLD: 9.13

4. MIN ALT: ASUYU 8600, BACRA 7000, DIVAC 5700

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS CLEAR

20:1: IS CLEAR

TCH:

8. MSA FROM: BISAC 10800

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING RWY 10, 33 NA AT NIGHT.
CHART NOTE: CIRCLING NA E OF RWY 15-33.
CHART NOTE: CIRCLING NA AT NIGHT W OF RWYS 2 AND 15.
CHART NOTE: EXCEPT FOR OPERATORS WITH APPROVED WEATHER REPORTING SERVICE, USE MOJAVE ALTIMETER SETTING, IF NOT AVAILABLE, PROCEDURE NA.

ADDITIONAL FLIGHT DATA:

FAS OBST: 3319 AAO 353418N/1175351W.
CHART: FLY VISUAL TO AIRPORT 016.82/5.00 NM
CHART MOJAVE AIR AND SPACE PORT AWOS-3.
DIVAC TO RW02: 3.32/40.
CHART R-2505, R-2506
CHART ARRIVAL HOLDING AT LHS VORTAC: HOLD S, RT, 22.29 INBOUND, 11000.
HOLD S, RT, 016.71 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	4200	3	1758	4200	3	1758	4200	3	1758	4200	3	1758			
CIRCLING	4200	3	1743	4200	3	1743	4780	3	2323	5640	3	3183			



CHANGES - REASONS

1. REMOVED Y SUFFIX FROM PROCEDURE NAME - FPT REQUEST.
2. REMOVED DME/DME RNP-0.3 NA AND ADDED RNP APCH - PER 8260.19.
3. REMOVED CHART NOTE: PROCEDURE NA AT NIGHT - INCORPORATING P-NOTAM 3/7067.
4. ADDED CHART NOTE: CIRCLING RWY 10, 33 NA AT NIGHT - 20:1 PENETRATIONS EXIST.
5. ADDED CHART NOTE: CIRCLING NA E OF RWY 15-33 - FPT REQUEST.
6. ADDED CHART NOTE: CIRCLING NA AT NIGHT W OF RWYS 2 AND 15 - INCORPORATING P-NOTAM 3/7067.
7. CHANGED CHART NOTE FROM EXCEPT FOR OPERATORS WITH APPROVED WEATHER REPORTING SERVICE, USE NAS CHINA LAKE ALTIMETER SETTING, IF NOT AVAILABLE, PROCEDURE NA TO EXCEPT FOR OPERATORS WITH APPROVED WEATHER REPORTING SERVICE, USE MOJAVE ALTIMETER SETTING, IF NOT AVAILABLE, PROCEDURE NA - FPT REQUEST.
8. CHANGED LNAV CAT A/B VISIBILITY FROM 2 SM TO 3 SM - 8260.3C PARAGRAPH 3-3-4.
9. CHANGED CIRCLING CAT A/B VISIBILITY FROM 2 SM TO 3 SM - 8260.3C PARAGRAPH 3-3-4.
10. ADDED CAT D MINIMUMS - FPT REQUEST.
11. CHANGED FAS OBSTACLE FROM 3179 TREE 353449/1175403 TO 3319 AAO 353418N/1175351W - NEW CONTROLLING OBSTACLE.

11/16/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/06/2018.

1. CHANGED ALTITUDE AT DIVAC FROM 5300 TO 5700 - RAISED TO ACCOMPANY ADDITION OF CAT D CIRCLING MINIMUMS WITH MDA OF 5640, FPT REQUEST.
2. CHANGED DISTANCE FROM BACRA TO DIVAC FROM 8.00 NM TO 6.87 NM - DIVAC MOVED 1.13 NM SW.
3. CHANGED DISTANCE FROM DIVAC TO BISAC FROM 3.00 NM TO 4.13 NM - DIVAC MOVED 1.13 NM SW.
4. ADDED: CHART MOJAVE AIR AND SPACE PORT AWOS-3.

COORDINATED WITH:

A4A ☐ **ALPA** ☐ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLA, JOSHUA APP CON, NID ATCT, AMGR

FLIGHT CHECKED BY
THOMAS E MOLOKIE*Digitally signed by***DAVID DANNER**

Dec 31, 2018

OFFICE

FICO

DATE

12/26/2018

DEVELOPED BY

LONNIE EVERHART (ANTHONY CAPPABIANCO)

*Digitally signed by***DAVID DANNER**

Dec 31, 2018

OFFICE

AJV-5400

DATE

07/06/2018

APPROVED BY

LONNIE EVERHART

*Digitally signed by***DAVID DANNER**

Dec 31, 2018

OFFICE

AJV-5400

DATE**TITLE**
MANAGER

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.

<u>AIRPORT</u> INYOKERN	<u>AIRPORT ID</u> KIYK	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> INYOKERN	<u>STATE</u> CA	
<u>AIRPORT ELEVATION</u> 2457	<u>TDZE</u> 2442	<u>SUPERSEDED</u> RNAV (GPS) Z RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 11/25/2004	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u> CANCEL		

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>

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2.

3. FAC: FAF: DIST FAF TO MAP: DIST FAF TO THLD:

4. MIN ALT:

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT:

6. MIN GP INCPT: GP ALT AT FAF : OM: MM: IM:

7. GP ANGLE: 34:1: 20:1: TCH:

8. MSA FROM:

PBN REQUIREMENTS NOTE:

NOTES:



ADDITIONAL FLIGHT DATA:

MINIMUMS:

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

ALTERNATE: NA ☐

<u>CATEGORY:</u>	A			B			C			D			E		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>

CHANGES - REASONS

PDF EDIT: ADDED ROUTINE TO REQUIRED EFFECTIVE DATE.



COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZLA, HI-DESERT TRACON, NID ATCT, AMGR

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

LONNIE EVERHART (ANTHONY CAPPABIANCO)

Digitally signed by
DAVID DANNER
Dec 31, 2018

OFFICE

AJV-5400

DATE

07/02/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by
DAVID DANNER
Dec 31, 2018

OFFICE

AJV-5400

DATE

TITLE



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.

<u>AIRPORT</u> LOS BANOS MUNI	<u>AIRPORT ID</u> KLSN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>CITY</u> LOS BANOS	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 121	<u>TDZE</u> 121	<u>SUPERSEDED</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 02/01/2018	<u>MAG VAR</u> 16E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

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>
PATYY	IAF	FOSDI		TF	FB	1.00	155.92	11.98	3300
FOSDI	IF	EGSOW		TF	FB	1.00	137.16	10.00	1800
EGSOW	FAF	COGIS/1.60 NM TO RW14		TF	FB	0.30	137.22	3.51	
COGIS/1.60 NM TO RW14		RW14	MAP	TF	FO	0.30	137.22	1.60	
RW14	MAP	455 MSL		CA			137.22		
455 MSL		GEZJO		DF	FB	1.00			
GEZJO		PXN VORTAC		TF	FO	1.00	153.55	19.49	6500

MISSED APPROACH

MAP:
 LPV: DA
 LNAV/VNAV: DA
 LNAV: RW14

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 6500 DIRECT GEZJO AND ON TRACK 153.55 TO PXN VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 6500.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT FOSDI

3. FAC: 137.22FAF: EGSOWDIST FAF TO MAP: 5.11DIST FAF TO THLD: 5.11

4. MIN ALT: FOSDI 3300, EGSOW 1800, COGIS/1.60 NM TO RW14 660*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:334 HAT: 0.96GS ANT:

6. MIN GP INCPT: 1800GP ALT AT FAF : EGSOW 1800OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 30.0

8. MSA FROM: RW14 5200

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING MERCED RGNL//MACREADY FIELD ALTIMETER SETTING.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT PATYY ON V111 NORTHBOUND AND V113 NORTHWEST BOUND.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MERCED RGNL/MACREADY FIELD ALTIMETER SETTING AND INCREASE ALL DA/MDA 60 FEET, AND ALL VISIBILITY 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.16 NM TO RW14*
*LNAV ONLY
WAAS CHANNEL #53715
REFERENCE PATH ID: W14A
CHART FAS OBST: 268 TOWER 370408N/1205139W.
CHART 181 POLE 370420N/1205236W.
HOLD SE, RT, 334.88 INBOUND
LTP HAE: 3.6 M

MINIMUMS:

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

ALTERNATE: NA ☒

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
LPV DA	455	1 1/4	334	455	1 1/4	334	455	1 1/4	334	455	1 1/4	334			
LNAV/VNAV DA	519	1 1/2	398	519	1 1/2	398	519	1 1/2	398	519	1 1/2	398			
LNAV MDA	520	1	399	520	1	399	520	1 1/8	399	520	1 1/4	399			
CIRCLING	640	1	519	640	1	519	640	1 1/2	519	880	2 1/2	759			



CHANGES - REASONS

1. REPLACED CHART NOTE "DME/DME RNP-0.3 NA" WITH "PBN REQUIREMENTS NOTE: RNP APCH". - CHANGED PER NAVSPEC REQUIREMENT IAW 8260.19H PARA 8-6-8.
2. REVISED NOTE "FOR UNCOMPENSATED BARO-VNAV SYSTEMS LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 48C (118F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS LNAV/VNAV NA BELOW -15C OR ABOVE 54C". - IAW 8260.19H PARA 8-6-9.S.
3. REVISED CHART NOTE "RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED" TO "RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED". - NO 20:1 SURFACE PENETRATIONS. 34:1 VISUAL SURFACE PENETRATIONS EXIST, IAW 8260.19H PARA 8-6-11.K.(3).
4. DELETED CHART NOTE "CIRCLING RWY 32 NA AT NIGHT". - NO 20:1 SURFACE PENETRATIONS.
5. CIRCLING CAT D MDA 680/HAA 559 CHANGED TO MDA 880/HAA 759 AND CAT D VIS FROM 2 SM TO 2 1/2 SM. - NEW CIRCLING RADII AND CONTROLLER INCREASES VIS IAW 8260.3D TBL 3-3-7.
6. CHARTED CIRCLING ICON. - CIRCLING MEETS CHANGE 21 CIRCLING CRITERIA.
7. CHANGED MISSED APPROACH INSTRUCTIONS FROM "CLIMB TO 6500 DIRECT GEZJO AND ON TRACK 153.55 TO PXN VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 6500" TO "CLIMB TO 6500 DIRECT GEZJO AND ON TRACK 153.85 TO PXN VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 6500". - GEZJO-PXN COURSE/DIST 153.55//19.49 CHANGED TO 153.85/19.16.
8. CRC CHANGED CRC REMAINDER FOR LPV LINE OF MINIMA FROM 9B3A65E8 TO 37959F0D. - TARGETS CALCULATED FPAP/FAS DATA VALUES.
9. ADDED ALPA TO ORGANIZATIONS COORDINATED WITH. - IAW 8260.19H PARA 8-6-13.A.
10. ADDED VDP. ADDED "CHART VDP AT 1.16 NM TO RW 14" AND "*LNAV ONLY" IN ADDITIONAL FLIGHT DATA. - 20:1 PENETRATIONS REMOVED AND IAW 8260.19H PARA 8-6-10.N.(2).

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZOA, NORCAL APP CON, AMGR, CA AERO

FLIGHT CHECKED BY

CHARLES D CUNNINGHAM

Digitally signed by

ROBERT G HAMILTON

Jan 08, 2019

OFFICE

FICO

DATE

12/21/18

DEVELOPED BY

JASON KRETSCHMER

Digitally signed by

JASON KRETSCHMER

Nov 02, 2018

OFFICE

AJV-5422

DATE

11/02/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

ROBERT G HAMILTON

Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLSN
RUNWAY	RW14
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W14A
LTP/FTP LATITUDE	370406.7505N
LTP/FTP LONGITUDE	1205222.0680W
LTP/FTP ELLIPSOIDAL HEIGHT	+00036
FPAP LATITUDE	370247.0825N
FPAP LONGITUDE	1205131.9720W
THRESHOLD CROSSING HEIGHT (TCH)	00030.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1592
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	37959F0D

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00368
FPAP ORTHOMETRIC HEIGHT	+00368



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.

<u>AIRPORT</u> LOS BANOS MUNI	<u>AIRPORT ID</u> KLSN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 32	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> LOS BANOS	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 121	<u>TDZE</u> 121	<u>SUPERSEDED</u> RNAV (GPS) RWY 32	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 06/22/2017	<u>MAG VAR</u> 16E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

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>
PXN VORTAC	IAF	ILESE		TF	FB	1.00	003.26	7.61	3600
MENDO	IAF	ILESE		TF	FB	1.00	274.50	11.90	3600
ILESE	IF	LUMTY		TF	FB	1.00	317.33	8.30	2200
LUMTY		HEBTA		TF	FB	1.00	317.19	1.57	1800
HEBTA	FAF	GEZJO/1.60 NM TO RW32		TF	FB	0.30	317.31	3.55	
GEZJO/1.60 NM TO RW32		RW32	MAP	TF	FO	0.30	317.31	1.60	
RW32	MAP	520 MSL		CA			317.31		
520 MSL		COGIS		DF	FB	1.00			
COGIS		VOLTA		TF	FO	1.00	323.38	11.64	3000

MISSED APPROACH

MAP:

LNAV: RW32

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT COGIS AND ON TRACK 323.38 TO VOLTA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT ILESE

3. FAC:

317.31

FAF: HEBTA

DIST FAF TO MAP: 5.15

DIST FAF TO THLD: 5.15

4. MIN ALT: ILESE 3600, LUMTY 2200, HEBTA 1800, GEZJO/1.60 NM TO RW32 680

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH:

8. MSA FROM: RW32 5200

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 32 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: VDP NA WHEN USING MERCED RGNL/MACREADY FIELD ALTIMETER SETTING.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PXN VORTAC AIRWAY RADIALS 296 CW 328.
WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MERCED RGNL/MACREADY FIELD ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET, AND ALL VISIBILITY 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
HEBTA TO RW32: 3.00/38.
CHART VDP AT 1.13 NM TO RW32
CHART FAS OBST: 258 TREE 370148N/1205133W.
HOLD SE, RT, 329.44 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	520	1	399	520	1	399	520	1 1/8	399	520	1 1/8	399			
CIRCLING	640	1	519	640	1	519	640	1 1/2	519	880	2 1/2	759			



CHANGES - REASONS

1. CHANGED INTERMEDIATE SDF-FINAL FROM "LUMTY-HEBTA COURSE/DISTANCE 317.29/1.70" TO "LUMTY-HEBTA COURSE/DISTANCE 317.19/1.57". - FAF MOVED TO COINCIDE WITH PROC ANGLE.
2. CHANGED FINAL-SDF FROM "HEBTA-GEZJO/1.60 NM TO RWY 32 COURSE/DISTANCE 317.28/3.42" TO "HEBTA-GEZJO/1.60 NM TO RWY 32 COURSE/DISTANCE 317.31/3.55". - FAF MOVED TO COINCIDE WITH PROC ANGLE.
3. MINIMUM ALTITUDE AT LUMTY INCREASED FROM 2100 TO 2200. - NEW CONTROLLER.
4. CHANGED MISSED APPROACH DISTANCE COGIS-VOLTA FROM 11.68 NM TO 11.64 NM.
5. ADDED CHART NOTE "CHART VDP AT 1.13 NM TO RW32". - IAW 8260.19H PARA 8-6-10.N.(2).
6. ADDED CHART NOTE "VDP NA WHEN USING MERCED RGNL/MACREADY FIELD ALTIMETER SETTING". - VDP ESTABLISHED IAW 8260.19H PARA 8-6-9.E.(9).
7. REPLACED CHART NOTE "DME/DME RNP-0.3 NA" WITH "PBN REQUIREMENTS NOTE: RNP APCH". - CHANGED PER NAVSPEC REQUIREMENT IAW 8260.19H PARA 8-6-8.
8. REVISED CHART NOTE "RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED" TO "RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED". - NO 20:1 SURFACE PENETRATIONS. 34:1 VISUAL SURFACE PENETRATIONS EXIST, IAW 8260.19H PARA 8-6-11.K.(3).
9. DELETED CHART NOTE "STRAIGHT-IN RWY 32 NA AT NIGHT". - NO 20:1 SURFACE PENETRATIONS.
10. LNAV CAT D VIS CHANGED FROM 1 1/4 SM TO 1 1/8 SM. - UPDATED IAW 8260.3D TBL 3-3-1.
11. CIRCLING CAT D MDA 680/HAA 559 CHANGED TO MDA 880/HAA 759 AND CAT D VIS FROM 2 SM TO 2 1/2 SM. - NEW CIRCLING RADII AND CONTROLLER INCREASES VIS IAW 8260.3D TBL 3-3-7.
12. CHARTED CIRCLING ICON. - CIRCLING MEETS CHANGE 21 CIRCLING CRITERIA.

COORDINATED WITH:

A4A ☐ALPA ☒AOPA ☒APA ☐HAI ☐NBAA ☒OTHER: ZOA, NORCAL, AMGR, CA AERO

FLIGHT CHECKED BY

CHARLES D CUNNINGHAM

DEVELOPED BY

JASON KRETSCHMER

APPROVED BY

JULIE MORGAN

Digitally signed by
ROBERT G HAMILTON

Jan 08, 2019

Digitally signed by
ROBERT G HAMILTON

Jan 08, 2019

Digitally signed by
JASON KRETSCHMER

Nov 02, 2018

OFFICE

FICO

OFFICE

AJV-5422

OFFICE

AJV-5420

DATE

12/20/2018

DATE

11/02/2018

DATE

TITLE
MANAGER



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23

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> LOS BANOS MUNI	<u>AIRPORT ID</u> KLSN	<u>PROCEDURE NAME</u> VOR RWY 32	<u>ORIGINAL/AMENDMENT</u> 5A	<u>CITY</u> LOS BANOS	<u>STATE</u> CA	
<u>AIRPORT ELEVATION</u> 121	<u>TDZE</u> 121	<u>SUPERSEDED</u> VOR/DME RWY 32	<u>ORIGINAL/AMENDMENT</u> 5	<u>DATED</u> 12/17/2009	<u>MAG VAR</u> 16E	<u>EPOCH YEAR</u> 1980
<u>FACILITY</u> PXN	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
PXN VORTAC	IAF	SALIC/PXN 9.03 DME					332.37	9.03	3600
SALIC/PXN 9.03 DME	IF	KEKME/PXN 12.03 DME					332.37	3.00 (PXN R-332)	2900
KEKME/PXN 12.03 DME		PLANI/PXN 15.03 DME					332.37	3.00 (PXN R-332)	2200

MISSED APPROACH

MAP:

PXN 21.03 DME

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 5000 ON HEADING 295 AND PXN VORTAC R-328 TO VOLTA INT/PXN 34.77 DME AND HOLD. CONTINUE CLIMB-IN-HOLD TO 5000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT SALIC
- 3. FAC:** 332.37 **FAF:** PLANI/PXN 15.03 DME **DIST FAF TO MAP:** **DIST FAF TO THLD:** 6.00
- 4. MIN ALT:** SALIC/PXN 9.03 DME 3600, KEKME/PXN 12.03 DME 2900, PLANI/PXN 15.03 DME 2200, JATEM/PXN 19.03 DME 820
- 8. MSA FROM:** PXN VORTAC 355-110 3900, 110-355 6500

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED.

NOTES:

CHART NOTE: RWY 32 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PXN VORTAC AIRWAY RADIALS 296 CW 339.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MERCED RGNL/MACREADY FIELD ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET, INCREASE CIRCLING CAT D VISIBILITY 1/4 SM.



ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
PLANI TO RW32: 3.20/38.
CHART FAS OBST: 304 TREE 370039N/1205343W.
739 AAO 365651N/1205229W.
HOLD SE, RT, 328.44 INBOUND

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

ALTERNATE: NA ☒

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-32	580	1	459	580	1 1/4	459	580	1 1/2	459	580	1 3/4	459			
CIRCLING	640	1	519	640	1	519	640	1 1/2	519	880	2 1/2	759			

CHANGES - REASONS

1. PROCEDURE NAME CHANGED FROM "VOR/DME RWY 32" TO "VOR RWY 32". - CHANGED NAMING CONVENTION IAW 8260.3D PARA 1-6-2.
2. ADDED EQUIPMENT REQUIREMENTS NOTE: DME REQUIRED. - IAW 8260.19H PARA 8-6-8.
3. ADDED CHART NOTE "RWY 32 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED". - 34:1 VISUAL SURFACE PENETRATIONS EXIST, IAW 8260.19H PARA 8-6-11.K.(3).
4. CHANGED "CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON PXN VORTAC AIRWAY RADIALS 296 CW 328" TO "CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON PXN VORTAC AIRWAY RADIALS 296 CW 339". - NOTE UPDATED IAW 8260.19H PARA 8-2-5.E.
5. CIRCLING CAT D MDA 680/HAA 559 CHANGED TO MDA 880/HAA 759 AND CAT D VIS FROM 2 SM TO 2 1/2 SM. - NEW CIRCLING RADII AND CONTROLLER INCREASES VIS IAW 8260.3D TBL 3-3-7.
6. CHARTED CIRCLING ICON. - CIRCLING MEETS CHANGE 21 CIRCLING CRITERIA.
7. ADDED ALPA TO ORGANIZATIONS COORDINATED WITH. - IAW 8260.19H PARA 8-6-13.A.
8. CHANGED MISSED APPROACH INSTRUCTIONS FROM "CLIMBING LEFT TURN TO 5000 VIA HEADING 295 AND PXN VORTAC R-328 TO VOLTA INT/PXN 34.77 DME AND HOLD" TO "CLIMBING LEFT TURN TO 5000 ON HEADING 295 AND PXN VORTAC R-328 TO VOLTA INT/PXN 34.77 DME AND HOLD. CONTINUE CLIMB-IN-HOLD TO 5000". - CLIMB-IN-HOLD REQUIRED IAW 8260.19H PARA 8-6-6.G.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZOA, NORCAL, AMGR, CA AERO

FLIGHT CHECKED BY		Digitally signed by		OFFICE	DATE
CHARLES D CUNNINGHAM		ROBERT G HAMILTON		FICO	12/20/2018
		Jan 08, 2019			
DEVELOPED BY		Digitally signed by		OFFICE	DATE
JASON KRETSCHMER		JASON KRETSCHMER		AJV-5422	11/02/2018
		Nov 02, 2018			
APPROVED BY		Digitally signed by		OFFICE	DATE
JULIE MORGAN		ROBERT G HAMILTON		AJV-5420	
		Jan 08, 2019			TITLE MANAGER



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.

<u>AIRPORT</u> MEFFORD FIELD	<u>AIRPORT ID</u> KTLR	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> TULARE	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 265	<u>TDZE</u> 265	<u>SUPERSEDED</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 01/08/2015	<u>MAG VAR</u> 12E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
ALTTA	IAF	JIRTA	NOPT	TF	FB	1.00	192.50	15.32	3000
LATON	IAF	JIRTA	NOPT	TF	FB	1.00	114.71	5.66	3000
JIRTA	IF/IAF	NIRFY		TF	FB	1.00	134.88	6.10	2000
NIRFY	FAF	RW13	MAP	TF	FO	0.30	134.93	5.25	
RW13	MAP	666 MSL		CA			134.93		
666 MSL		JIRTA		DF	FO	1.00			

MISSED APPROACH

MAP:

LNAV: RW13

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 3000 DIRECT JIRTA AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NW JIRTA, LT, 134.88 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 10000.

3. FAC: 134.93FAF: NIRFYDIST FAF TO MAP: 5.25DIST FAF TO THLD: 5.25

4. MIN ALT: JIRTA 3000, NIRFY 2000

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:MM:IM:

6. MIN GP INCPT:GP ALT AT FAF :OM:MM:IM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS CLEARTCH:

8. MSA FROM: RW13 8600

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING RWY 31 NA AT NIGHT.
CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ALTTA ON V459 NORTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LATON ON V23 NORTHWEST BOUND.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE VISALIA ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
NIRFY TO RW13: 3.04/41.60.
CHART FOOTHILL 2 MOA
CHART LEMOORE A-E MOA S
CHART PORTERVILLE MOA
CHART VDP AT 1.35 NM TO RW13
FAS OBST: 485 AAO 361306N/1192143W.

MINIMUMS:

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

ALTERNATE: NA ☒

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
LNAV MDA	740	1	475	740	1	475	740	1 3/8	475		NA				
CIRCLING	760	1	495	760	1	495	760	1 1/2	495		NA				



CHANGES - REASONS

- MAGVAR CHANGED FROM 15E/85 TO 12E/20. - AIPRORT MAGVAR IS BEING UPDATED FOR 2020 EPOC YEAR.
- ADDED H-I-L OVER JIRTA . TO ADD CONTINUITY TO PROCEDURE. FIX IS ALSO MISSED APPROACH HOLDING FIX.
- REMOVED DINUB INITIAL, REPLACED WITH ALTTA INITIAL. - FIX MAKE-UP FROM CZQ VOR/DME PLANNED DECOMMISSIONING 4/25/19.
- FAC CHANGED FROM 131.93 TO 134.93. - MAGVAR UPDATE
- REMOVED CHART NOTE: DME/DME RNP-0.3 NA, AND ADDED EQUIPMENT REQUIREMENTS NOTES: RNP APCH. - IAW 8260.19 8-6-8.
- CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA CHANGED TO CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
- REMOVED CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT CHANGED. - NOW COINCIDENT.
- ADD CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ALTTA ON V459 NORTHWEST BOUND. -TURN EXCEEDS 90 DEGREES.
- ADD CHART CIRCLING ICON. - ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.
- VDA/TCH CHANGED FROM NIRFY TO RW13: 3.04/40 TO NIRFY TO RW13: 3.04/41.60. - MATCH VGSI TCH.
- REMOVED MISSED HOLDING IN ADDITIONAL FLIGHT DATA. H-I-L SAME AS MISSED HOLDING.
- ADDED CHART VDP AT 1.35 NM TO RW13. - NO 20:1'S IDENTIFIED, VDP ADDED.
- LNAV CAT C VISIBILITY CHANGED FROM 1 1/2 TO 1 3/8. - IAW 8260.3 NEW VISIBILITY VALUES.
- ADD 20:1 CLEAR. - NO 20:1'S IDENTIFIED.
- CHART FAS OBST: 555 TOWER 361202N/1192304W CHANGED TO FAS OBST: 485 AAO 361306N/1192143W. - NEW CONTROLLING OBS.
- MISSED APPROACH CLEARANCE LIMIT CHANGED FROM VIS VOR/DME TO JIRTA, ATTITUDE CHANGED FROM 2000 TO 3000. - TO ALIGN WITH HOLD-IN-LIEU ALTITUDE.
- LATON TO VIS VOR/DME INITIAL CHANGED TO LATON TO JIRTA. - 3.9 NM INITIAL TOO SHORT TO ACCOMMODATE ATC VECTORS OF 90 DEGREES.
- LOWERED LNAV CATS A-C MDA/HAT FROM 800/535 TO 740/475 - NEW CONTROLLING OBSTACLE.
- LOWERED CIRCLING CATS A-C CMDA/HAA FROM 840/575 TO 760/495 - NEW CONTROLLING OBSTACLE.

1/2/19: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 11/30/18.
1. HOLDING PATTERN MAX HOLDING CHANGED FROM 6000 TO 10000.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOA ARTCC, FRESNO APP/DEP CON, AMGR

FLIGHT CHECKED BY

THOMAS EDWARD MOLOKIE

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

FIOG

DATE

12/26/2018

DEVELOPED BY

LEO PALMER

Digitally signed by

LEO PALMER

Jan 02, 2019

OFFICE

AJV-5421

DATE

10/12/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23

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> MEFFORD FIELD	<u>AIRPORT ID</u> KTLR	<u>PROCEDURE NAME</u> VOR RWY 13	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> TULARE	<u>STATE</u> CA	
<u>AIRPORT ELEVATION</u> 265	<u>TDZE</u> 265	<u>SUPERSEDED</u> VOR/DME RWY 13	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 01/08/2015	<u>MAG VAR</u> 16E	<u>EPOCH YEAR</u> 1975
<u>FACILITY</u> VIS	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
ALTTA INT/VIS 13.40 DME	IAF	ZABED/6.70 DME	NOPT				198.08	6.70 (VIS R-018)	3000
ZABED/6.70 DME		VIS VOR/DME					198.08	6.70	2000
LATON/3.39 DME	IAF	VIS VOR/DME	NOPT				083.13	3.39	2000
VIS VOR/DME	IF/IAF	IPZEH/9.49 DME					133.13	9.49	1900

MISSED APPROACH

MAP:
VIS 14.93 DME

MISSED APPROACH INSTRUCTIONS:
CLIMBING RIGHT TURN TO 2000 DIRECT VIS VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. HOLD NW VIS VOR/DME, LT, 133.13 INBOUND, 2000 FT. IN LIEU OF PT (IF/IAF), MAX 6000.
3. **FAC:** 133.13 **FAF:** IPZEH/9.49 DME **DIST FAF TO MAP:** **DIST FAF TO THLD:** 4.90
4. **MIN ALT:** VIS VOR/DME 2000, IPZEH/9.49 DME 1900
8. **MSA FROM:** VIS VOR/DME 340-160 5600, 160-250 1700, 250-340 2500

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED

NOTES:

CHART NOTE: CIRCLING RWY 31 NA AT NIGHT.
CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ALTTA ON V459 NORTHWEST BOUND.



CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LATON ON V23 NORTHWEST BOUND.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE VISALIA ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET AND INCREASE CAT C VISIBILITIES 1/8 SM.
CHART NOTE: VDP NA WITH VISALIA ALTIMETER SETTING

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
IPZEH TO RW13: 3.06/41.60.
CHART FOOTHILL 2 MOA
CHART LEMOORE A-E MOA
CHART PORTERVILLE MOA
CHART VDP AT 12.80 DME
DISTANCE VDP TO THLD 1.60 NM
CHART FAS OBST: 555 TOWER 361202N/1192304W.

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

ALTERNATE: NA ☒

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-13	820	1	555	820	1	555	820	1 5/8	555		NA				
CIRCLING	820	1	555	820	1	555	820	1 5/8	555		NA				

CHANGES - REASONS

- PROCEDURE NAME CHANGED FROM VOR/DME RWY 13 TO VOR RWY 13. - IAW 8260.3D 1-6-1. DME REQUIRED PUBLISHED AS NOTE.
- REMOVED PROCEDURE TURN, REPLACED WITH H-I-L OVER VIS VOR/DME. - PROCEDURE DESIGN REQUEST.
- REMOVED DINUB FEEDER, REPLACED WITH ALTTA INITIAL. - FIX MAKE-UP FROM CZQ VOR/DME PLANNED DECOMMISSIONING 4/25/19
- FAC CHANGED FROM 133.12 TO 133.13. TO ALIGN STRAIGHT IN. - PER IAPA STRAIGHT-IN REQUIREMENTS.
- ADDED EQUIPMENT REQUIREMENTS NOTES: DME REQUIRED. - IAW 8260.19H 8-6-8.
- CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA CHANGED TO CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. - 34:1 PENETRATIONS.
- ADD CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ALTTA ON V459 NORTHWEST BOUND. - TURN EXCEED 120 DEGREES.
- ADD CHART CIRCLING ICON. - ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.
- VDA CHANGED FROM IPZEH TO RW13: 3.26/40 TO IPZEH TO RW13: 3.06/41.60. -NEW VDA, PROCEDEURE DESIGNED CHANGED TO MATCH VGSI TCH.
- REMOVED MISSED HOLDING IN ADDITIONAL FLIGHT DATA. H-I-L SAME AS MISSED HOLDING.
- ADDED CHART VDP AT 12.80 DME, DISTANCE VDP TO THLD 1.60 NM. - NO 20:1'S IDENTIFIED, VDP ADDED.
- CIRCLING CAT C VISIBILITY CHANGED FROM 2 TO 1 5/8. - IAW 8260.3D TABLE 3-3-1 NO LIGHT FINAL.
- S-13/CIRCLING MDA/HAA CHANGED FROM 920 TO 820 ALL CATS. - APPROVED PER FPT. NO DOCUMENTATION ON REASON FOR XP-115 FROM 1997 FLIGHT CHECK REPORT.
- CHANGED S-13 CAT C VIS FROM 1 7/8 TO 1 5/8. - IAW 8260.3D NEW VISIBILITY VALUES.
- UPDATE PLANVIEW NOTE AT LATON, CHANGED VIA TO ON. - IAW 8260.19H 8-2-5 (E).
- ADDED CHART NOTE: VDP NA WITH VISALIA ALTIMETER SETTING. - NO 20:1'S IDENTIFIED. NEW VDP ADDED.



COORDINATED WITH:

A4A

ALPA

X

AOPA

X

APA

HAI

NBAA

X

OTHER:

ZOA ARTCC, FRESNO APP/DEP CON, AMGR

FLIGHT CHECKED BY

THOMAS E MOLOKIE

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

FICO

DATE

12/26/2018

DEVELOPED BY

LEO PALMER

Digitally signed by

LEO PALMER

Nov 30, 2018

OFFICE

AJV-5421

DATE

10/10/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



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> NEW CASTLE	<u>AIRPORT ID</u> KILG	<u>PROCEDURE NAME</u> ILS OR LOC RWY 1	<u>ORIGINAL/AMENDMENT</u> 24	<u>CITY</u> WILMINGTON	<u>STATE</u> DE	
<u>AIRPORT ELEVATION</u> 80	<u>TDZE</u> 76	<u>SUPERSEDED</u> ILS OR LOC RWY 1	<u>ORIGINAL/AMENDMENT</u> 23B	<u>DATED</u> 09/18/2014	<u>MAG VAR</u> 10W	<u>EPOCH YEAR</u> 1980
<u>FACILITY</u> I-ILG	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
OOD VORTAC		HADIN LOM					267.27	14.79	2000
ODESA INT		HADIN LOM					071.57	11.35	2000
BAINS		HADIN LOM					113.76	14.35	2000
BLARE/RADAR	IAF	ZEMAR INT	NOPT				300.00 & 015.07	3.85 (HDG) & 2.29 (I-ILG)	1900
ZEMAR INT	IF	HADIN LOM					015.077	6.52 (I-ILG)	1900

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.30 NM AFTER HADIN LOM

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 900 THEN CLIMBING LEFT TURN TO 2000 DIRECT HADIN LOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD S HADIN LOM, LT, 015.07 INBOUND, 2000 FT. IN LIEU OF PT (IAF), MAX 7000.
- FAC: 015.07 FAF: HADIN LOM DIST FAF TO MAP: 5.30 DIST FAF TO THLD: 5.30
- MIN ALT: HADIN LOM 1900, CASTL INT 580*
- DIST TO THLD FROM OM: 5.30 MM: IM: 150 HAT: GS ANT: 1000
- MIN GS INCPT: 1900 GS ALT AT FAF : OM: MM: IM:
- GP ANGLE: 3.00 34:1: 20:1: TCH: 52.7
- MSA FROM: IL LOM 090-270 1800, 270-090 2200



EQUIPMENT REQUIREMENTS NOTES:

ADF REQUIRED

NOTES:

*LOC ONLY
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON OOD VORTAC AIRWAY RADIALS 212 CW 290.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ODESA ON V170-214-433-445 SOUTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT BAINS ON V166 WESTBOUND.
*640 WHEN USING PHILADELPHIA INTL ALTIMETER SETTING.
WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PHILADELPHIA ALTIMETER SETTING INCREASE ALL DA TO 330 FEET AND ALL MDA 60 FEET, INCREASE S-LOC 01 CATS C/D VISIBILITY TO 1 1/4 SM AND CIRCLING VISIBILITY CAT C TO 1 5/8 SM, CAT D TO 2 1/2 SM; INCREASE CASTL FIX MINIMUMS S-LOC 01 CATS C/D VISIBILITY TO RVR 5000 AND CIRCLING CAT D TO 2 1/2 SM.
CHART EQUIPMENT REQUIRED NOTE: RADAR REQUIRED TO DEFINE BLARE.
CHART NOTE: FOR INOPERATIVE ALS INCREASE S-LOC 01 CAT C/D TO 1 3/8 SM FOR CASTL FIX MINIMUMS, INCREASE S-LOC 01 CATS C/D VISIBILITY TO 1 1/8 SM.
CHART NOTE: FOR INOPERATIVE ALS WHEN USING PHILADELPHIA INTL ALTIMETER SETTING, INCREASE S-LOC 01 CATS C AND D VISIBILITY TO 1 5/8 SM; CASTL FIX MINIMUMS S-LOC 01 CATS C/D TO 1 3/8 SM.
CHART NOTE: **RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA (NA WHEN USING PHILADELPHIA INTL ALTIMETER SETTING).

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART FAS OBST: 159 TREE 393839N/0753643W.
CHART 280 T-L TWR 393641N/0753618W.

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 1/4, 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 01**	276	2400	200	276	2400	200	276	2400	200	276	2400	200			
S-LOC 01	580	2400	504	580	2400	504	580	5500	504	580	5500	504			
CIRCLING	580	1	500	580	1	500	600	1 1/2	520	800	2 1/4	720			
CASTL FIX MINIMUMS (DUAL VOR RECEIVERS REQUIRED)															
S-LOC 01	480	2400	404	480	2400	404	480	4000	404	480	4000	404			
CIRCLING	540	1	460	560	1	480	600	1 1/2	520	800	2 1/4	720			



CHANGES - REASONS

- 1. AMENDED MISSED APPROACH INSTRUCTIONS FROM CLIMB TO 900 THEN CLIMBING LEFT TURN TO 2000 ON HEADING 220 AND DQO R-271 TO ELUDE/DQO 9.17 DME AND HOLD (NON-DME AIRCRAFT CLIMB TO 900, THEN CLIMBING LEFT TURN TO 2000 DIRECT HADIN LOM AND HOLD) TO CLIMB TO 900 THEN CLIMBING LEFT TURN TO 2000 DIRECT HADIN LOM AND HOLD (ADF REQUIRED) - UPDATING MISSED APPROACH PROCEDURES.
- 2. ADDED MAX 7000 TO LINE 2 OF FORM 8260-3 - UPDATING TO CURRENT CRITERIA.
- 3. REMOVED CNF (KAKTE) FROM PROCEDURE - NO LONGER NECESSARY DR LEG.
- 4. CHANGED CHART NOTE FROM ADF OR DME REQUIRED TO EQUIPMENT REQUIREMENTS NOTE: ADF REQUIRED - DQO VORTAC DME NO LONGER BEING UTILIZED FOR THIS PROCEDURE.
- 5. UPDATED CIRCLING RADII - UPDATED TO CURRENT CRITERIA.
- 6. AMENDED COURSE FROM OOD VORTAC TO HADIN LOM FROM 267.25 TO 267.27 - UPDATED GEODETIC CALCULATION.
- 7. AMENED COURSE AND DISTANCE FROM ODESA TO HADIN LOM FROM 071.59/11.34 TO 071.57/11.35 - UPDATED GEODETIC CALCULATION.
- 8. AMENDED COURSE FROM BAINS TO HADIN FROM 113.77 TO 113.76 - UPDATED GEODETIC CALCULATION.
- 9. AMENDED COURSE FROM ZEMAR TO HADIN LOM FROM 015.07 TO 015.05 - UPDATED GEODETIC CALCULATION.
- 10. AMENDED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PHILADELPHIA INTL ALTIMETER SETTING AND INCREASE ALL DA 54 FT AND ALL MDA 60 FT, AND INCREASE S-LOC 01 CATS C AND D VISIBILITY TO RVR 6000; INCREASE CIRCLING CAT C VISIBILITY 1/8 MILE; INCREASE CASTL FIX MINIMUMS S-LOC 01 CAT C AND D VISIBILITY TO RVR 4000 TO WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PHILADELPHIA ALTIMETER SETTING INCREASE ALL DA TO 336 FEET AND ALL MDA 60 FEET, INCREASE S-L0C 01 CATS C/D VISIBILITY TO 1 1/4 SM AND CIRCLING VISIBILITY CAT C TO 1 5/8 SM, CAT D TO 2 1/2 SM; INCREASE CASTL FIX MINIMUMS S-LOC 01 CATS C/D VISIBILITY TO RVR 5000 AND CIRCLING CAT D TO 2 1/2 SM. -UPDATED VISIBILITY CALCULATIONS.
- 11. ADDED CHART NOTE: FOR INOPERATIVE ALS INCREASE S-LOC 01 CAT C/D TO 1 3/8 SM FOR CASTL FIX MINIMUMS, INCREASE S-LOC 01 CATS C/D VISIBILITY TO 1 1/8 SM.. - UPDATED VISIBILITY CALCULATION.
- 12. AMENDED S-ILS 1 DA FROM 275 TO 276 - UPDATED TDZE INFORMATION.
- 13. AMENDED S-LOC 01 CASTL FIX CIRCLING MINIMUMS CAT B MDA FROM 540 TO 560 - UPDATED CIRCLING RADIUS AND CONTROLLING OBSTACLE.
- 14. AMENDED S-LOC 01 CASTL FIX CIRCLING MINIMUMS CAT D MDA/HAT FROM 640/560 TO 800/720 - UPDATED CIRCLING RADIUS AND CONTROLLING OBSTACLE.
- 15. AMENDED S-LOC 01 HAT FROM 505 TO 504 - UPDATED INFORMATION.
- 16. AMENDED S-LOC 01 CASTL FIX MDA/HAT FROM 420/345 TO 480/404 - NEW MA CONTROLLING OBSTACLE.
- 17. ADDED CHART NOTE CHART NOTE: **RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA, (NA WHEN USING PHILADELPHIA INTL ALTIMETER SETTING). - IAPA NOTE.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZDC, ILG ATCT, PHL APCH CNTL, AMGR

<u>FLIGHT CHECKED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
STEPHEN BAUER	DAVID DANNER	FICO	1/10/19	
	Jan 17, 2019			
<u>DEVELOPED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
DAVID DANNER (KELLY CARLSON)	DAVID DANNER	AJV-5421	10/01/2018	
	Jan 17, 2019			
<u>APPROVED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
JULIE MORGAN	DAVID DANNER	AJV-5420		MANAGER
	Jan 17, 2019			



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.

<u>AIRPORT</u> WITHAM FIELD	<u>AIRPORT ID</u> KSUA	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 12	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> STUART	<u>STATE</u> FL
<u>AIRPORT ELEVATION</u> 16	<u>TDZE</u> 16	<u>SUPERSEDED</u> RNAV (GPS) RWY 12	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 04/27/2017	<u>MAG VAR</u> 6W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2010

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>
ANGEE		HADAT		TF	FB	1.00	249.54	13.15	2000
FFAIR		HADAT		TF	FB	1.00	141.59	7.48	2000
IVETY	IAF	PETNE	NOPT	TF	FB	1.00	026.18	8.00	2000
HADAT	IAF	PETNE	NOPT	TF	FB	1.00	206.22	8.00	2000
SHEDS	IAF	PETNE	NOPT	TF	FB	1.00	116.88	9.54	2000
PETNE	IF/IAF	MAINR		TF	FB	1.00	116.20	6.06	1600
MAINR	FAF	ZEVP/1.84 NM TO RW12		TF	FB	0.30	116.22	2.95	
ZEVP/1.84 NM TO RW12		RW12	MAP	TF	FO	0.30	116.22	1.84	
RW12	MAP	268 MSL		CA			116.22		
268 MSL		LEBAN		DF	FO	1.00			2000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW12

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2000 DIRECT LEBAN AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)											
2.	HOLD NW PETNE, RT, 116.20 INBOUND, 2000 FT. IN LIEU OF PT (IAF), MAX 6000.														
3. FAC:	116.22	FAF: MAINR	DIST FAF TO MAP: 4.79	DIST FAF TO THLD: 4.79											
4. MIN ALT:	PETNE 2000, MAINR 1600, ZEVPU/1.84 NM TO RW12 660*														
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	252 HAT: 0.61	GS ANT:										
6. MIN GP INCPT: 1600	GP ALT AT FAF : MAINR 1600			OM:	MM:	IM:									
7. GP ANGLE: 3.00	34:1	IS NOT CLEAR	20:1	IS CLEAR	TCH: 60.0										
8. MSA FROM:	RW12 2600														

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING RWY 7, 16, 25, 30, 34 NA AT NIGHT.
CHART NOTE: RWY 12 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ANGEE ON V492 NORTHBOUND AND BR62V SOUTHEAST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SHEDS ON V531 NORTHWEST BOUND AND V51 NORTHBOUND.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART W-497B
CHART VDP AT 1.12 NM TO RW12*
*LNAV ONLY
WAAS CHANNEL #70516
REFERENCE PATH ID: W12A
CHART FAS OBST: 157 TOWER 271128N/0801449W.
HOLD SE, RT, 333.00 INBOUND
LTP HAE: -23 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	268	3/4	252	268	3/4	252	268	3/4	252	268	3/4	252			
LNAV/VNAV DA	466	1 3/8	450	466	1 3/8	450	466	1 3/8	450	466	1 3/8	450			
LNAV MDA	420	1	404	420	1	404	420	1 1/8	404	420	1 1/8	404			
CIRCLING	480	1	464	480	1	464	680	1 3/4	664	680	2	664			



CHANGES - REASONS

1. DELETED CHART NOTE "DME/DME RNP-0.3 NA" - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
2. PBN REQUIREMENTS NOTE "RNP APCH" - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
3. CHANGED CHART NOTE FROM "CIRCLING TO RWY 7 NA AT NIGHT" TO "CIRCLING RWY 30 NA AT NIGHT" - 20:1 PENETRATIONS TO RUNWAY 7 ELIMINATED. RWY 30 CONTAINS 20:1 PENETRATIONS.
4. DELETED CHART NOTE "BARO-VNAV NA WHEN USING PALM BEACH INTL ALTIMETER SETTING" - NOTE REMOVED AND PLACED ON BACK OF -9 FORM AS CONTINGENCY NOTE.
5. CHANGED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 4 C (40F) OR ABOVE 54C (130F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C OR ABOVE 54C" - NEW REPORTS FORMAT ELIMINATES REQUIREMENT FOR FAHRENHEIT VALUES. ACT CHANGED FROM "4C" TO "-15C" DUE TO LACK OF EQUIPMENT AT FIELD LOCATION. USED AVERAGE COLD TEMPERATURE FROM STANDARD -30 ISA DEVIATION.
6. DELETED CHART NOTE "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PALM BEACH INTL ALTIMETER SETTING AND INCREASE ALL DA 71 FEET AND ALL MDA 80 FEET AND INCREASE LPV AND LNAV/VNAV ALL CATS AND LNAV CATS C AND D VISIBILITY 1/4 MILE" - NOTE REMOVED AND PLACED ON BACK OF -9 FORM AS CONTINGENCY NOTE.
7. CHANGED CHART NOTE FROM "HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA" TO "RWY 12 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED" - IAW 8260.19H 8-6-11 (K(3)) MINIMUMS.
8. DELETED FEEDER ROUTE FROM PHK VOR/DME - PER ATC/FPT REQUEST, IAF IVETY MOVED TO CREATE AN ENTRY POINT FOR THE PROCEDURE FROM THE SOUTH SIDE.
9. ADDED "20:1 IS CLEAR" TO LINE 7 OF THE -3 FORM - IAW 8260.19H 8-6-7 (G(3)) FOR DOCUMENTING CLEAR SLOPES FOR RNAV PROCEDURE.
10. DELETED PLANVIEW ARRIVAL RESTRICTION NOTE: PROCEDURE NA FOR ARRIVAL ON PHK VOR/DME AIRWAY RADIALS 342 CW 010 - FEEDER ROUTE FROM PHK VOR/DME ELIMINATED FROM PROCEDURE.
11. HOLD-IN-LIEU ADDED AT IF PETNE - SINCE A TAA COULD NOT BE DEVELOPED DUE TO A TURN AT THE FAF, A HOLD-IN-LIEU WAS REQUESTED BY ATC.
12. CRC REMAINDER CHANGED FROM "530B575D" TO "E3708CB9" - TCH CHANGED FROM 40 TO 60 FEET AND LENGTH OFFSET AS WELL. ADDITIONALLY, FPAP AND LTP COORDINATES WERE CHANGED.
13. LPV DA/HAT CHANGED FROM "266/250" TO "268/252" - MISSED APPROACH PENETRATION RAISED THE DA/HAT 2 FEET.
14. CHANGED ADDITIONAL FLIGHT DATA FROM "DISTANCE TO THLD FROM 250 HAT: 0.66NM" TO "DISTANCE TO THLD FROM 252: 0.61NM" - LPV HAT CHANGED DUE TO MISSED APPROACH PENETRATION. DISTANCE PER UPDATED VIS-CHECK WORKSHEET.
15. TCH CHANGED FROM "40.00" TO "60.00" - HIGHER TCH NEEDED TO ELIMINATE VGS OBSTRUCTIONS.
16. ADDED NEW IAF FROM (HADAT) - ATC REQUESTED ADDITIONAL IAF FOR TRAFFIC INBOUND FROM THE NORTH.
17. ADDED ADDITIONAL FEEDERS FROM (FFAIR) AND (ANGEE) - ATC REQUESTED THESE FEEDERS TO TRANSITION AIRCRAFT FROM THE NORTH INTO THE NEW IAF FOR THE PROCEDURE.
18. ADDED PLANVIEW PROCEDURE RESTRICTION NOTICE "PROCEDURE NA FOR ARRIVALS AT ANGEE ON V492 NORTHBOUND AND BR62V SOUTHEAST BOUND" - TURNS FROM THESE AIRWAYS ARE GREATER THAN 90 DEGREES FOR THE DIRECTION OF FLIGHT.
19. MOVED FAF (MAINR) 423 FEET NORTHWEST - TO MAINTAIN DESCENT GRADIENT OF 3.00 DEGREES.
20. MOVED SDF (ZEVPU) 1444 FEET NORTHWEST AND RAISED CROSSING ALTITUDE FROM "580" TO "660"- MINIMUM DISTANCE FOR SDF CHANGED FROM "1.60NM"TO "1.84NM" PER PROCEDURE BUILD. MINIMUM CROSSING ALTITUDE ALSO CHANGED FROM "580" TO "660".
21. ADDED "CHART CIRCLING ICON" NEW CIRCLING CRITERIA APPLIED.
22. ADDED CHART NOTE: CIRCLING RWY 7, 16, 25, 30, 34 NA AT NIGHT - NO SURVEY DATA TO RUNWAYS 7, 16, 25, 34, UNABLE TO VERIFY VISUAL SURFACE CLEAR. FOR RWY 30, 20:1 PENETRATIONS EXIST.
23. ADDED VDP AT 1.12 NM TO RW12 - PROCEDURE QUALIFIES.

PDF EDIT 10/26/18: JAMES LAFFERTY, DELETED LPV MISSED APPROACH PENETRATING OBSTACLE FROM LNAV/VNAV AND LNAV MISSED APPROACH SECTIONS.

COORDINATED WITH:

A4A

ALPA

☒

AOPA

☒

APA

HAI

NBAA

☒

OTHER:

PBI APP CON, SUA ATCT, SUA AMGR, ZMA

FLIGHT CHECKED BY

KEVIN RIESE

DEVELOPED BY

JAMES LAFFERTY

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

JAMES LAFFERTY

Nov 20, 2018

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

OFFICE

FICO

OFFICE

AJV-5433

OFFICE

AJV-5430

DATE

1/10/19

DATE

10/19/2018

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSUA
RUNWAY	RW12
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W12A
LTP/FTP LATITUDE	271053.9275N
LTP/FTP LONGITUDE	0801348.2725W
LTP/FTP ELLIPSOIDAL HEIGHT	-00230
FPAP LATITUDE	271022.9800N
FPAP LONGITUDE	0801214.5500W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1112
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	E3708CB9

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+00045
FPAP ORTHOMETRIC HEIGHT	+00045



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.

<u>AIRPORT</u> ALBIA MUNI	<u>AIRPORT ID</u> K4C8	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>CITY</u> ALBIA	<u>STATE</u> IA
<u>AIRPORT ELEVATION</u> 964	<u>TDZE</u> 964	<u>SUPERSEDED</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 05/28/2015	<u>MAG VAR</u> 2E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 037/30 CW 217/30	NOPT	WIVEV	IF/IAF	3000
2. 217/30 CW 037/30		WIVEV	IF/IAF	3000

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>
WIVEV	IF/IAF	CEPUX		TF	FB	1.00	126.67	6.00	2600
CEPUX	FAF	RW13	MAP	TF	FO	0.30	126.74	5.06	
RW13	MAP	1268 MSL		CA			126.74		
1268 MSL		KIGIQ		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW13

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT KIGIQ AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NW WIVEV, RT, 126.67 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 126.74 FAF: CEPUX DIST FAF TO MAP: 5.06 DIST FAF TO THLD: 5.06

4. MIN ALT: WIVEV 3000, CEPUX 2600

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 304 HAT: 0.88 GS ANT: MM: IM:

6. MIN GP INCPT: 2600 GP ALT AT FAF : CEPUX 2600 OM: MM: IM:

7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 30.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: BARO-VNAV NA.
CHART NOTE: USE OTTUMWA ALTIMETER SETTING, WHEN NOT RECEIVED USE CENTERVILLE ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART OTTUMWA RGNL ASOS
CHART CIRCLING ICON.
WAAS CHANNEL #50533
REFERENCE PATH ID: W13A
CHART FAS OBST: 1293 TOWER 410049N/0924852W.
HOLD SE, RT, 306.93 INBOUND
LTP HAE: 259.9 M

MINIMUMS:

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

ALTERNATE: NA ☒

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
LPV DA	1268	1	304	1268	1	304		NA			NA				
LNAV/VNAV DA	1291	1 1/8	327	1291	1 1/8	327		NA			NA				
LNAV MDA	1600	1	636	1600	1	636		NA			NA				
CIRCLING	1600	1	636	1760	1	796		NA			NA				



CHANGES - REASONS

- 1. TERMINAL ROUTES: DELETED WUZGA SDF - NEW OBSTACLE EVALUATION RESULTED IN REMOVAL OF STEPDOWN FIX.
- 2. TERMINAL ROUTES: CHANGED CA LEG ALTITUDE FROM 1262 TO 1268 - UPDATED TO TDZE.
- 3. LINE 4: DELETED WUZGA/2.20 NM TO RW13 1680* - STEPDOWN FIX (WUZGA) WAS REMOVED.
- 4. MINIMA: INCREASED LPV DA ALL CATS FROM 1262 TO 1268 - INCORPORATED P-NOTAM.
- 5. MINIMA: INCREASED LNAV/VNAV DA ALL CATS FROM 1285 TO 1291 - INCORPORATED P-NOTAM.
- 6. MINIMA: INCREASED LNAV MDA/HAT ALL CATS FROM 1380/422 TO 1600/636 - NEW OBSTACLE EVALUATION.
- 7. MINIMA: INCREASED CIRCLING CAT A MDA/HAA FROM 1440/476 TO 1600/636 - LNAV FINAL MINIMA INCREASE.
- 8. NOTES: DELETED CHART NOTE: DME/DME RNP-0.3 NA AND ADDED PBN EQUIPMENT REQUIREMENTS NOTE: RNP APCH - PER 8260.19H DOCUMENTATION CRITERIA.
- 9. NOTES: CHANGED HELICOPTER NOTE FROM HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA TO RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - 8260.19H, PARA 8-6-11 K(3).
- 10. LINE 7: ADDED 20:1 IS CLEAR - NO 20:1 PENETRATIONS EXIST.
- 11. ADDITIONAL FLIGHT DATA: CHANGED DISTANCE TO THLD FROM 304 HATH: 0.86 NM TO 304 HAT: 0.88 NM - NEW LPV FINAL EVALUATION.
- 12. ADDITIONAL FLIGHT DATA: CHANGED FAS OBST FROM 1069 TREE TO 1293 TOWER - NEW FINAL EVALUATION.



<u>AIRPORT</u> ALBIA MUNI	<u>AIRPORT ID</u> K4C8	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>CITY</u> ALBIA	<u>STATE</u> IA
<u>COORDINATED WITH:</u>					
A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ <u>OTHER:</u> ZAU, AMGR.					
<u>FLIGHT CHECKED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>		
KIM M BROWN	DAVID DANNER	FICO	12/18/18		
	Dec 21, 2018				
<u>DEVELOPED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>		
JAMES ROGERS	DAVID DANNER	AJV-5421	08/02/2018		
	Dec 21, 2018				
<u>APPROVED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>	
JULIE MORGAN	DAVID DANNER	AJV-5420		MANAGER	
	Dec 21, 2018				



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	4C8
RUNWAY	RW13
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	405957.0775N
LTP/FTP LONGITUDE	0924613.7575W
LTP/FTP ELLIPSOIDAL HEIGHT	+02599
FPAP LATITUDE	405901.2045N
FPAP LONGITUDE	0924442.0700W
THRESHOLD CROSSING HEIGHT (TCH)	00030.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1712
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	6FABEDBA

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02921
FPAP ORTHOMETRIC HEIGHT	+02921

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.

<u>AIRPORT</u> STORM LAKE MUNI	<u>AIRPORT ID</u> KSLB	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> STORM LAKE	<u>STATE</u> IA	
<u>AIRPORT ELEVATION</u> 1488	<u>TDZE</u> 1484	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 09/15/2016	<u>MAG VAR</u> 4E	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
CUSHO		VAKWI		TF	FB	1.00	090.28	19.64	3100
MONKS		QIZSU		TF	FB	1.00	237.55	18.13	3100
QIZSU	IAF	REBPE	NOPT	TF	FB	1.00	261.01	5.00	3100
VAKWI	IAF	REBPE	NOPT	TF	FB	1.00	080.85	5.00	3100
REBPE	IF/IAF	OVVAV		TF	FB	1.00	350.93	6.18	3100
OVVAV	FAF	RW35	MAP	TF	FO	0.30	350.92	4.92	
RW35	MAP	1734 MSL		CA	FB				
1734 MSL		COLCA		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 DIRECT COLCA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S REBPE, RT, 350.93 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 350.92FAF: OVVAWDIST FAF TO MAP: 4.92DIST FAF TO THLD: 4.92

4. MIN ALT: REBPE 3100, OVVAW 3100

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.70GS ANT:

6. MIN GP INCPT: 3100GP ALT AT FAF : OVVAW 3100OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 30.0

8. MSA FROM: RW35 3000

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 6 AND 24.
CHART NOTE: CIRCLING RWY 13, 17 NA AT NIGHT.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1.11 NM TO RW35*
*LNAV ONLY
WAAS CHANNEL #86600
REFERENCE PATH ID: W35A
HOLD N, RT, 170.90 INBOUND
LTP HAE: 422.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1734	1	250	1734	1	250		NA			NA				
LNAV/VNAV DA	1869	1 1/2	385	1869	1 1/2	385		NA			NA				
LNAV MDA	1860	1	376	1860	1	376		NA			NA				
CIRCLING	1920	1 1/2	432	1940	1 1/2	452		NA			NA				



CHANGES - REASONS

1. ADDED CHART NOTE CIRCLING RWY 13, 17 NA AT NIGHT-20:1 PENETRATIONS.
2. ADDED CHART NOTE CIRCLING RWY 6 AND 24 NA - TURF RUNWAY.
3. LNAV/VNAV PSEUDO TREE REMOVED, ASC-NEW SURVEY.
4. LNAV MDA/HAT FAS OBST CHANGED FROM 1559 PSEUDO TREE TO 1552 SURVEYED TREE 423448N/0951346W-NEW SURVEY
4. CAT A/B CIRCLING CONTROLLING OBSTACLE CHANGED FROM 1609 PSEUDO TREE TO 1588 SURVEYED TREE AT 423612.40N/0951516.27W- NEW SURVEY.
5. ADDED 20:1 IS CLEAR TO PROFILE - NO 20:1 PENETRATIONS
6. DELETED CHART NOTE: DME/DME RNP-0.3 NA - ADDED "RNP APCH" TO PBN REQUIREMENTS NOTE.
7. FAS DATA CHANGE: ELIPSOIDAL HEIGHT FROM 04227 TO 04226- NEW SURVEY.
8. CRC REMAINDER CHANGED FROM 24CBA8D2 TO 6650629C - ELIPSOIDAL HEIGHT CHANGE.
9. DELETED BACKUP ALTIMETER SETTING AND ASSOCIATED NOTES, ADDED TO BACK OF -9 FOR CONTIGENCY PURPOSES - SLB WEATHER ON WMSCR/AJV POLICY CHANGE.
10. CHANGED VAKWI INITIAL CONTROLLING OBSTACLE FROM 1788 MSL WINDMILL (16-2504) TO 1824 MSL WINDMILL (19-002550)-DATABASE UPDATE.
11. CHANGED INTERMEDIATE SEGMENT CONTROLLING OBSTACLE FROM 1815 MSL WINDMILL (16-2500)TO 1835 MSL WINDMILL (19-002500) - DATABASE UPDATE.
- 12.CHANGED MISSED APPROACH CONTROLLING OBSTACLE FROM 1890 MSL TOWER (16-1761) TO 1793 MSL WINDMILL (19-001658) - NEW CONTROLLING OBSTACLE.
13. CHANGED MSA CONTROLLING OBSTACLE FROM 1905 MSL TOWER (16-0356) TO 1998 MSL WINDMILL (19-027945) - NEW CONTROLLING OBSTACLE.
14. BARO-VNAV UPPER TEMP LIMIT CHANGED FROM 152C TO 54C, DELETED FARENHEIT VALUES - CHART CORRECTION/CHARTING POLICY CHANGE.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: ZMP, AMGR

FLIGHT CHECKED BY

KIM M BROWN

Digitally signed by

WARDELL HENNING

Dec 27, 2018

OFFICE

FICO

DATE

12/18/18

DEVELOPED BY

WARDELL HENNING (MICHAEL NOLAN)

Digitally signed by

WARDELL HENNING

Dec 27, 2018

OFFICE

AJV-5433

DATE

10/30/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Dec 27, 2018

OFFICE

AJV-5433

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSLB
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	423514.6200N
LTP/FTP LONGITUDE	0951425.9600W
LTP/FTP ELLIPSOIDAL HEIGHT	+04226
FPAP LATITUDE	423643.4000N
FPAP LONGITUDE	0951436.6700W
THRESHOLD CROSSING HEIGHT (TCH)	00030.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	6650629C
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04510
FPAP ORTHOMETRIC HEIGHT	+04510



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.

<u>AIRPORT</u> SANDPOINT	<u>AIRPORT ID</u> KSZT	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 20	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> SANDPOINT	<u>STATE</u> ID
<u>AIRPORT ELEVATION</u> 2131	<u>TDZE</u> 2131	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
AGUMY		BILOE		TF	FB	1.00	139.45	21.32	8000
DIANN		BILOE		TF	FB	1.00	083.49	18.20	8000
BILOE	IAF	CAPGO		TF	FB	1.00	064.63	13.28	8000
CESIG	IAF	CAPGO		TF	FB	1.00	001.82	13.36	8000
CAPGO		DOATS		TF	FB	1.00	001.88	13.36	6700
DOATS		ELLRA		TF	FB	1.00	282.91	5.77	5100
ELLRA	IF	FAPIK		TF	FB	1.00	198.25	4.37	3800
FAPIK	FAF	RW20	MAP	TF	FO	0.30	198.21	4.04	
RW20	MAP	2531 MSL		CA			198.21		
2531 MSL		BILOE		DF	FO	1.00			6600

MISSED APPROACH

MAP:

LNAV: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 6600 DIRECT BILOE AND HOLD, CONTINUE CLIMB IN HOLD TO 6600.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT ELLRA

3. FAC: 198.21

FAF: FAPIK

DIST FAF TO MAP: 4.04

DIST FAF TO THLD: 4.04

4. MIN ALT: ELLRA 5100, FAPIK 3800

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH:

8. MSA FROM: RW20 8700

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING NA W OF RWY 02-20.
CHART NOTE: RWY 20 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: VDP NA WITH DEER PARK ALTIMETER SETTING.
CHART NOTE: WHEN LOCAL ALTIMETER NOT RECEIVED, USE DEER PARK ALTIMETER SETTING AND INCREASE ALL MDA 120 FEET.
CHART SPEED ICON IN PLANVIEW AT DOATS: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT ELLRA: MAX 180 KIAS.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 3.05 NM TO RWY 20.
FAS OBST: 2600 AAO 482214N/1163042W.
CHART CIRCLING ICON.
FAPIK TO RW20: 3.77/55.
CHART FAS OBST: 2570 TREE 481954N/1163145W.
HOLD W, RT, 097.00 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 1300-2, CAT C 1300-3, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
LNAV MDA	3400	1 1/4	1269	3400	1 1/2	1269	3400	3	1269		NA				
CIRCLING	3400	1 1/4	1269	3400	1 1/2	1269	3400	3	1269		NA				

CHANGES - REASONS



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZSE, BOI FSS, SFF FSS, ARPT MNGR

FLIGHT CHECKED BY

ANTHONY D VALLERA

Digitally signed by

WARDELL HENNING

Dec 26, 2018

OFFICE

FICO

DATE

12/20/2018

DEVELOPED BY

LONNIE EVERHART (THOR CORNELL)

Digitally signed by

WARDELL HENNING

Dec 26, 2018

OFFICE

AJV-5400

DATE

06/23/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by

WARDELL HENNING

Dec 26, 2018

OFFICE

AJV-5400

DATE

TITLE

MANAGER



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.

<u>AIRPORT</u> SANDPOINT	<u>AIRPORT ID</u> KSZT	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 20	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> SANDPOINT	<u>STATE</u> ID
<u>AIRPORT ELEVATION</u> 2131	<u>TDZE</u> 2131	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
AGUMY		BILOE		TF	FB	1.00	139.45	21.32	8000
DIANN		BILOE		TF	FB	1.00	083.49	18.20	8000
BILOE	IAF	CAPGO		TF	FB	1.00	064.63	13.28	8000
CESIG	IAF	CAPGO		TF	FB	1.00	001.82	13.36	8000
CAPGO		DOATS		TF	FB	1.00	001.88	13.36	6700
DOATS		ELLRA		TF	FB	1.00	282.91	5.77	5100
ELLRA	IF	FAPIK		TF	FB	1.00	198.25	4.37	3800
FAPIK	FAF	GARRT/3.00 NM TO RW20		TF	FB	0.30	198.21	1.04	
GARRT/3.00 NM TO RW20		HAKUP/1.60 NM TO RW20		TF	FB	0.30	198.21	1.40	
HAKUP/1.60 NM TO RW20		RW20	MAP	TF	FO	0.30	198.21	1.60	
RW20	MAP	2520 MSL		CA			198.21		
2520 MSL		BILOE		DF	FO	1.00			6600

MISSED APPROACH

MAP:

LP: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 6600 DIRECT BILOE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 6600.

*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 318 FEET PER NM TO 4500; IF UNABLE TO MEET CLIMB GRADIENT, SEE RNAV (GPS) Y RWY 20.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. PROFILE STARTS AT ELLRA

3. FAC: 198.21 FAF: FAPIK DIST FAF TO MAP: 4.04 DIST FAF TO THLD: 4.04

4. MIN ALT: ELLRA 5100, FAPIK 3800, GARRT/3.00 NM TO RW20 3380, HAKUP/1.60 NM TO RW20 2820

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT:

6. MIN GP INCPT: GP ALT AT FAF : OM: MM: IM:

7. GP ANGLE: 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH:

8. MSA FROM: RW20 8700

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: RWY 20 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, PROCEDURE NA.
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART SPEED ICON IN PLANVIEW AT ELLRA: MAX 180 KIAS.
CHART SPEED ICON IN PLANVIEW AT DOATS: MAX 200 KIAS.

ADDITIONAL FLIGHT DATA:

FAPIK TO RWY 20: 3.77/55.
FAS OBST: 2480 AAO 482112N/1163045W
CHART VDP AT 0.86 NM TO RW20.
WAAS CHANNEL #99542
REFERENCE PATH ID: W20A
CHART FAS OBST: 2270 TREE 481851N/1163252W.
HOLD W, RT, 097.00 INBOUND
LTP HAE: 631.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD. NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
LP MDA*	2520	1	389	2520	1	389	2520	1 1/8	389		NA				

CHANGES - REASONS

12/27/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 06/23/2018:
1. REMOVED IAF DESIGNATION FROM CAPGO AND DESIGNATED CESIG AS IAF.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZSE, BOI FSS, SFF FSS, ARPT MNGR

FLIGHT CHECKED BY

ANTHONY D VALLERA

Digitally signed by
WARDELL HENNING
Jan 03, 2019

OFFICE
FICO

DATE
12.20/2018

DEVELOPED BY

LONNIE EVERHART (THOR CORNELL)

Digitally signed by
WARDELL HENNING
Jan 03, 2019

OFFICE
AJV-5400

DATE
06/23/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by
WARDELL HENNING
Jan 03, 2019

OFFICE
AJV-5400

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSZT
RUNWAY	RW20
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W20A
LTP/FTP LATITUDE	481821.3210N
LTP/FTP LONGITUDE	1163314.8510W
LTP/FTP ELLIPSOIDAL HEIGHT	+06319
FPAP LATITUDE	481705.9465N
FPAP LONGITUDE	1163425.8830W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.77
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1080
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0
CRC REMAINDER	ABAE948B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+06489
FPAP ORTHOMETRIC HEIGHT	+06489



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.

<u>AIRPORT</u> CHEYENNE COUNTY MUNI	<u>AIRPORT ID</u> KSYF	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> ST FRANCIS	<u>STATE</u> KS
<u>AIRPORT ELEVATION</u> 3430	<u>TDZE</u> 3412	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 6E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 229/30 CW 049/30		WITVO	IF/IAF	6800
2. 049/30 CW 229/30	NOPT	WITVO	IF/IAF	6800

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>
WITVO	IF/IAF	ZAKEL		TF	FB	1.00	138.89	7.15	5200
ZAKEL	FAF	ZUDIN/2.57 NM TO RW14		TF	FB	0.30	138.94	2.95	
ZUDIN/2.57 NM TO RW14		RW14	MAP	TF	FO	0.30	138.94	2.57	
RW14	MAP	3662 MSL		CA			138.94		
3662 MSL		DIPME		DF	FO	1.00			6800

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW14

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 6800 DIRECT DIPME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 6800.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NW WITVO, RT, 138.89 INBOUND, 6800 FT. IN LIEU OF PT (IF/IAF), MAX 11000.

3. FAC: 138.94FAF: ZAKELDIST FAF TO MAP: 5.52DIST FAF TO THLD: 5.52

4. MIN ALT: WITVO 6800, ZAKEL 5200, ZUDIN/2.57 NM TO RW14 4240*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.70GS ANT:

6. MIN GP INCPT: 5200GP ALT AT FAF : ZAKEL 5200OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 50.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 9, 27, 18, AND 36.
CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.00 NM TO RW14*
*LNAV ONLY
WAAS CHANNEL #77942
REFERENCE PATH ID: W14A
CHART FAS OBST: 3505 TREE 394657N/1014954W.
HOLD SE, RT, 319.09 INBOUND
LTP HAE: 1010.2 M

MINIMUMS:

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

ALTERNATE: NA

☐

 STANDARD

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
LPV DA	3662	3/4	250	3662	3/4	250	3662	3/4	250		NA				
LNAV/VNAV DA	3662	3/4	250	3662	3/4	250	3662	3/4	250		NA				
LNAV MDA	3760	1	348	3760	1	348	3760	1	348		NA				
CIRCLING	3860	1	430	3880	1	450	3900	1 1/2	470		NA				



CHANGES - REASONS

ORIGINAL PROCEDURE - FPT REQUEST.

12/4 THIS IS AN UPDATED COPY: TERMINAL ROUTES: INTERMEDIATE COURSE CHANGED FROM 138.94 TO 138.89, LNAV FINAL COURSE CHANGED FROM 138.96 TO 138.94 AND DIST CHANGED FROM 2.95 TO 2.57, LNAV STEPDOWN COURSE CHANGE FROM 138.98 TO 138.94 AND DIST CHANGED FROM 2.57 TO 2.95, CA LEG COURSE CHANGED FROM 138.98 TO 138.94, H-I-L COURSE CHANGED FROM 138.94 TO 138.89.

1/24/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/4/18.

1. ZKAEL TO ZUDIN DIST CHANGED FROM 2.57 NM TO 2.95 NM.

2. ZUDIN TO RW14 CHANGED FROM 2.95 NM TO 2.57 NM.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZDV ARTCC, KS STATE AERO, ARPT MGR

FLIGHT CHECKED BY

JAMES LEROY KRENEK

*Digitally signed by***WARDELL HENNING**

Jan 24, 2019

OFFICE

FIOG

DATE

01/05/2019

DEVELOPED BY

WARDELL HENNING (ANTHONY KACZKA)

*Digitally signed by***WARDELL HENNING**

Jan 24, 2019

OFFICE

AJV-5432

DATE

10/05/2018

APPROVED BY

PATRICK MULQUEEN

*Digitally signed by***WARDELL HENNING**

Jan 24, 2019

OFFICE

AJV-5430

DATE**TITLE**

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSYF
RUNWAY	RW14
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W14A
LTP/FTP LATITUDE	394548.0545N
LTP/FTP LONGITUDE	1014759.8305W
LTP/FTP ELLIPSOIDAL HEIGHT	+10102
FPAP LATITUDE	394435.0215N
FPAP LONGITUDE	1014653.5435W
THRESHOLD CROSSING HEIGHT (TCH)	00050.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	1940768B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+10334
FPAP ORTHOMETRIC HEIGHT	+10334



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.

<u>AIRPORT</u> BOWMAN FIELD	<u>AIRPORT ID</u> KLOU	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 33	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>CITY</u> LOUISVILLE	<u>STATE</u> KY
<u>AIRPORT ELEVATION</u> 546	<u>TDZE</u> 546	<u>SUPERSEDED</u> RNAV (GPS) RWY 33	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 07/24/2014	<u>MAG VAR</u> 4W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2010

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 239/30 CW 038/30	NOPT	CAANT	IAF	3000
2. 038/30 CW 148/30		ANDYE	IAF	3000
3. 148/30 CW 239/30		148/16 CW 239/16		3600
4. 148/16 CW 239/16		IFALN	IAF	3000

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>
ANDYE	IAF	CAANT	NOPT	TF	FB	1.00	037.63	5.10	3000
IFALN	IAF	CAANT	NOPT	TF	FB	1.00	239.06	6.00	3000
CAANT	IF/IAF	GDUPP		TF	FB	1.00	327.67	4.90	2300
GDUPP	FAF	PUXOJ/2.00 NM TO RW33		TF	FB	0.30	327.63	3.44	
PUXOJ/2.00 NM TO RW33		RW33	MAP	TF	FO	0.30	327.61	2.00	
RW33	MAP	1000 MSL		CA			327.61		1000
1000 MSL		ZOPOM		DF	FO	1.00			3000



MISSED APPROACH

MAP:
LP: RW33
LNAV: RW33

MISSED APPROACH INSTRUCTIONS:
CLIMB TO 1000 THEN CLIMBING RIGHT TURN TO 3000 DIRECT ZOPOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)				
2.	HOLD SE CAANT, RT, 327.67 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.							
3. FAC:	327.63	FAF: GDUPP	DIST FAF TO MAP: 5.44	DIST FAF TO THLD: 5.44				
4. MIN ALT:	CAANT 3000, GDUPP 2300, PUXOJ/2.00 NM TO RW33 1200							
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	GS ANT:				
6. MIN GP INCPT:	GP ALT AT FAF :			OM:	MM:	IM:		
7. GP ANGLE:	34:1:	IS NOT CLEAR	20:1:	IS CLEAR	TCH:			
8. MSA FROM:								

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING TO RWY 6 NA AT NIGHT.
CHART NOTE: RWY 33 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LOUISVILLE INTL-STANDIFORD FIELD ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART: KSDF AIRPORT.
CHART FAS OBST: 594 TREE 381310N/0853930W
CHART CIRCLING ICON.
GDUPP TO RW33: 3.00/42.
CHART R-3704 A/B
WAAS CHANNEL #99526
REFERENCE PATH ID: W33A
CHART FAS OBST: 683 TOWER 381305N/0854020W.
HOLD NE, RT, 220.68 INBOUND
LTP HAE: 127.3 M



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

ALTERNATE: NA ☐ STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
LP MDA	860	1	333	860	1	333		NA			NA				
LNAV MDA	920	1	393	920	1	393		NA			NA				
CIRCLING	1060	1	514	1080	1	534		NA			NA				

CHANGES - REASONS

DELETE NOTE: DME/DME RNP-0.3 NA - IAW 8260.19H 8-6-8B AND MEMO 264 WAIVER TO FAA ORDER 8260.19H, FLIGHT PROCEDURES AND AIRSPACE. PARAGRAPH 8-6-8B.
ADDED PBN REQUIREMENTS NOTE: RNP APCH - IAW 8260.19H 8-6-8B AND MEMO 264 WAIVER TO FAA ORDER 8260.19H, FLIGHT PROCEDURES AND AIRSPACE. PARAGRAPH 8-6-8B.
DELETE NOTE: WHEN VGSI INOP, CIRCLING TO RWY 6 NA AT NIGHT - IAW 8260.19H 8-6-11 O. (2) (G).
CHART NOTE: CIRCLING RWY 6 NA AT NIGHT - IAW 8260.19H 8-6-11 O. (2) (G).
DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA -IAW 8260.19H 8-6-11 K.
CHART NOTE: RWY 33 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - IAW 8260.19H 8-6-11 K.
CHART NOTE: CHART CIRCLING ICON - IAW 8260.19H 8-6-10 T.
CRC REMAINDER CHANGED FROM 7B8EFCBD TO B6BE1122 - LTP LOCATION MOVED .02 FEET, LTP ELEVATION MOVED BY ONE FOOT (PFAF DID NOT MOVE).
CIRCLING MDA/HAA CAT B CHANGED FROM 1060/514 TO 1080/535 - CONTROLLING OBSTACLE CHANGED FROM 742 BLDG TO 770 STACK.

01/07/19: THIS IS AN UPDATED COPY OF THE FORM APPROVED ON 12/20/18.
1. CHANGED THRE TO TDZE. NO CHANGE IN ELEVATION.

01/08/19: THIS IS AN UPDATED COPY OF THE FORM APPROVED ON 12/20/18.
1. CHANGED CA LEG ALTITUDE FROM 860 TO 1000 (546+400=946).
2. CHANGED MISSED APPROACH INSTRUCTIONS FROM CLIMBING RIGHT TURN TO 3000 DIRECT ZOPOM AND HOLD TO CLIMB TO 1000 THEN CLIMBING RIGHT TURN TO 3000 DIRECT ZOPOM AND HOLD.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZID, SDF APP CON, LOU ATCT, AMGR

FLIGHT CHECKED BY
KEVIN JOHN RIESE

Digitally signed by
DONALD H LANIER
Jan 08, 2019

OFFICE
FIOG
DATE
12/20/2018

DEVELOPED BY
ROBERT GRIM

Digitally signed by
ROBERT GRIM
Jan 08, 2019

OFFICE
AJV-5431
DATE
10/10/2018

APPROVED BY
PATRICK MULQUEEN

Digitally signed by
DONALD H LANIER
Jan 08, 2019

OFFICE
AJV-5430
DATE
TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLOU
RUNWAY	RW33
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W33A
LTP/FTP LATITUDE	381327.1620N
LTP/FTP LONGITUDE	0853942.4120W
LTP/FTP ELLIPSOIDAL HEIGHT	+01273
FPAP LATITUDE	381438.9400N
FPAP LONGITUDE	0854049.5400W
THRESHOLD CROSSING HEIGHT (TCH)	00042.1
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1760
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	B6BE1122

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01606
FPAP ORTHOMETRIC HEIGHT	+01606



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23**

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> BOWMAN FIELD	<u>AIRPORT ID</u> KLOU	<u>PROCEDURE NAME</u> VOR RWY 24	<u>ORIGINAL/AMENDMENT</u> 9A	<u>CITY</u> LOUISVILLE	<u>STATE</u> KY
<u>AIRPORT ELEVATION</u> 546	<u>THRE</u> 545	<u>SUPERSEDED</u> VOR RWY 24	<u>ORIGINAL/AMENDMENT</u> 9	<u>DATED</u> 09/18/2014	<u>MAG VAR</u> <u>EPOCH YEAR</u>
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u> CANCEL	

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)
2.				
3. FAC:	FAF:	DIST FAF TO MAP:	DIST FAF TO THLD:	
4. MIN ALT:				
8. MSA FROM:				

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

ADDITIONAL FLIGHT DATA:

MINIMUMS:

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



ALTERNATE: NA ☐

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

CHANGES - REASONS

COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZID, SDF APP CON, LOU ATCT, AMGR

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

ROBERT GRIM

Digitally signed by

ROBERT GRIM

Oct 11, 2018

OFFICE

AJV-5431

DATE

10/10/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

DONALD H LANIER

Oct 29, 2018

OFFICE

AJV-5430

DATE

TITLE



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.

<u>AIRPORT</u> BOYNE CITY MUNI	<u>AIRPORT ID</u> N98	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 27	<u>ORIGINAL/AMENDMENT</u> ORIG-C	<u>CITY</u> BOYNE CITY	<u>STATE</u> MI	
<u>AIRPORT ELEVATION</u> 660	<u>TDZE</u> 660	<u>SUPERSEDED</u> RNAV (GPS) RWY 27	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 07/23/2015	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 1985
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
WOMOP	IF/IAF	UHOZA		TF	FB	1.00	253.93	7.27	2500
UHOZA	FAF	KIYRE/2.70 NM TO RW27		TF	FB	0.30	277.74	2.95	
KIYRE/2.70 NM TO RW27		RW27	MAP	TF	FO	0.30	277.74	2.70	
RW27	MAP	1060 MSL		CA			277.74		
1060 MSL		YOVUG		DF	FB	1.00			
YOVUG		ADENO INT		TF	FO	1.00	218.43	12.95	3000

MISSED APPROACH

MAP:

LP: RW27

LNAV: RW27

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT YOYUG AND ON TRACK 218.43 TO ADENO INT AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD E WOMOP, RT, 253.93 INBOUND, 3200 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 277.74FAF: UHOZADIST FAF TO MAP: 5.65DIST FAF TO THLD: 5.65

4. MIN ALT: UHOZA 2500, KIYRE/2.70 NM TO RW27 1540

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:MM:IM:

6. MIN GP INCPT:GP ALT AT FAF :OM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS NOT CLEARTCH:

8. MSA FROM: RW27 3500

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT WOMOP ON V233 SOUTHBOUND.
CHART NOTE: RWY 27 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: USE CHARLEVOIX ALTIMETER SETTING, WHEN NOT RECEIVED, USE HARBOR SPRINGS ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CHARLEVOIX AWOS-3
CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES.
WAAS CHANNEL #50326
REFERENCE PATH ID: W27A
CHART FAS OBST: 1167 TREE 451232N/0845645W.
1397 AAO 451241N/0845051W, 1364 AAO 451255N/0845117W.
HOLD SW, RT, 037.76 INBOUND
LTP HAE: 166 M

MINIMUMS:

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

ALTERNATE: NA

X

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
LP MDA	1460	1	800	1460	1 1/4	800		NA			NA				
LNAV MDA	1480	1	820	1480	1 1/4	820		NA			NA				
CIRCLING	1480	1 1/4	820	1500	1 1/4	840		NA			NA				



CHANGES - REASONS

1. DELETED DESCENT ANGLE 3.00/TCH 40 AND VGSI NON-COINCIDENT NOTE AND ADDED "VISUAL SEGMENT - OBSTACLES" - VISUAL SEGMENT UNSAT AS PER FC.
2. DELETE DME/DME RNP-0.3 NA AND REPLACED WITH PBN REQUIREMENT NOTE - 8260.58A TABLE 1-2-1.
3. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA - REPLACE WITH RWY 27 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
4. CRC REMAINDER FROM 8F20681C TO BFE08088 - TCH/GP ANGLE CHANGED FROM 3.00/40 TO 0/0.
5. ADDED CHART NOTE: PROCEDURE NA AT NIGHT, DELETED NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT - PER P-NOTAM FOR AMDT ORIG-B, 20:1 PENS.

THIS CXS 8/4058.

1/17/19. THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 9/24/18

UPDATED REASON FOR CRC CHANGE IN CHANGE 4, TCH/GP ANGLE CHANGED FROM 3.00/40 TO 0/0.

ADDED CHANGE/REASON 5, ADDED CHART NOTE: PROCEDURE NA AT NIGHT, DELETED NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT - PER P-NOTAM FOR AMDT ORIG-B, 20:1 PENS.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP, AIRPORT MANAGER

FLIGHT CHECKED BY

JEFFREY WAYNE HARING

OFFICE

FIOG

DATE

01/10/2019

Digitally signed by

ALLAN WILL

Jan 17, 2019

DEVELOPED BY

PHILLIP BRANDENBURG

Digitally signed by

PHILLIP BRANDENBURG

Jan 17, 2019

OFFICE

AJV-5423

DATE

09/24/2018

Digitally signed by

ALLAN WILL

Jan 17, 2019

APPROVED BY

JULIE MORGAN

OFFICE

AJV-5420

DATE**TITLE**

MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	N98
RUNWAY	RW27
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W27A
LTP/FTP LATITUDE	451230.8165N
LTP/FTP LONGITUDE	0845855.6735W
LTP/FTP ELLIPSOIDAL HEIGHT	+01660
FPAP LATITUDE	451234.9200N
FPAP LONGITUDE	0850101.5700W
THRESHOLD CROSSING HEIGHT (TCH)	00000.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	00.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0
CRC REMAINDER	BFE08088

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02010
FPAP ORTHOMETRIC HEIGHT	+02010



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.

<u>AIRPORT</u> FAIRMONT MUNI	<u>AIRPORT ID</u> KFRM	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> FAIRMONT	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1162	<u>TDZE</u> 1162	<u>SUPERSEDED</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 05/07/2009	<u>MAG VAR</u> 4E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

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>
RUYOR	IAF	SIKTE	NOPT	TF	FB	1.00	040.19	5.00	3100
VOPPU	IAF	SIKTE	NOPT	TF	FB	1.00	220.30	5.00	3100
SIKTE	IF/IAF	NAYIG		TF	FB	1.00	310.24	6.02	3100
NAYIG	FAF	CUYDA/1.60 NM TO RW31		TF	FB	0.30	310.18	4.21	
CUYDA/1.60 NM TO RW31		RW31	MAP	TF	FO	0.30	310.18	1.60	
RW31	MAP	1467 MSL		CA			310.18		
1467 MSL		UCEVA		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW31

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 DIRECT UCEVA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE SIKTE, RT, 310.24 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 8000.

3. FAC: 310.18 FAF: NAYIG DIST FAF TO MAP: 5.81 DIST FAF TO THLD: 5.81

4. MIN ALT: SIKTE 3100, NAYIG 3100, CUYDA/1.60 NM TO RW31 1720*

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 305 HAT: 0.78 GS ANT:

6. MIN GP INCPT: 3100 GP ALT AT FAF : NAYIG 3100 OM: MM: IM:

7. GP ANGLE: 3.00 34:1: IS CLEAR 20:1: IS CLEAR TCH: 58.9

8. MSA FROM: RW31 3200

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -17°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LNAV ONLY
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV ALL CATS VISIBILITY TO 7/8 SM AND LNAV/VNAV ALL CATS VISIBIITY TO 1 1/8 SM AND LNAV CATS C/D VISIBIITY TO 1 1/8 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #90412
REFERENCE PATH ID: W31A
CHART FAS OBST: 1289 TREE 433806N/0942437W.
HOLD NW, RT, 129.96 INBOUND
LTP HAE: 325.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 900-2 1/4, CAT D 900-2 1/2

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
LPV DA	1467	1/2	305	1467	1/2	305	1467	1/2	305	1467	1/2	305			
LNAV/VNAV DA	1581	1	419	1581	1	419	1581	1	419	1581	1	419			
LNAV MDA	1560	1/2	398	1560	1/2	398	1560	5/8	398	1560	1	398			
CIRCLING	1640	1	478	1660	1	498	1980	2 1/4	818	1980	2 1/2	818			



CHANGES - REASONS

1. DELETED ALL FEEDERS - PER ATC AND FPT REQUEST
2. DELETED NOTE, PROCEDURE NA FOR ARRIVALS AT BLEND VIA V170 EASTBOUND, AND ARRIVALS AT GRUVE VIA V219 SOUTHWEST BOUND - NO LONGER NEEDED
3. CHANGED NOTE FROM "FOR UNCOMPENSATED BARO.VNAV SYSTEMS, LNAVNNAV NA BELOW ·17C (2F) OR ABOVE 46C (114F)" TO "FOR UNCOMPENSATED BARO.VNAV SYSTEMS, LNAVNNAV NA BELOW ·17C OR ABOVE 46C" - UPDATED PER 19H FORMAT
4. DELETED CHART NOTE: DME/DME RNP-0.3 NA -NO LONGER REQUIRED
5. ADDED PBN REQUIREMENTS NOTE, RNP APCH - PER 8260.58A REQUIREMENT
6. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - NEW CIRCLING CRITERIA APPLIED
7. CHANGED CIRCLING CAT B MDA/HAA FROM 1640/478 TO 1640/498, CAT C FROM 1640/478 TO 1980/818, AND CAT D FROM 1720/558 TO 1980/818 - NEW CIRCLING CRITERIA APPLIED
8. CHANGED CIRCLING CAT C VISIBILITY FROM 1 1/2 TO 2 1/4, CAT D FROM 2 TO 2 1/2 - PER VIS CHECK CALC
9. DELETED NOTE, "FOR INOPERATIVE MALSR WHEN USING ST. JAMES ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY 1/2 MILE" AND ADDED NOTE TO BACK OF -9, "FOR INOPERATIVE ALS WHEN USING ST. JAMES ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY 1/2 MILE" - PER .19H FORMAT
10. MOVED BACKUP ALTIMETER SETTING NOTES TO GENERAL REMARKS ON THE 8260-9 - AWOS IS ON WMSCR
11. ADD CHART NOTE FOR INOPERTIVE ALS - PER VISCHECK CALCULATOR
12. DELETED NOTE FROM ALTERNATE WEATHER: NA WHEN LOCAL WEATHER NOT AVAILABLE - NO LONGER REQUIRED
13. RAISED LNAV CAT C VISIBILITY FROM 1/2 TO 5/8 SM - PER VISCHECK CALCULATOR
14. UPDATED RWY COORDINATES , FPAP AND COURSE WIDTH AT THRESHOLD, CRC CHANGED FROM 514858EC TO D19B425B - NEW SURVEY .

12/11/2018: THIS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/12/2018.

1. CHANGED FPAP COORDINATES FROM 433819.7230N/0942436.6920W TO 433921.7380N/0942604.8165W.

2. CHANGED CRC REMAINDER FROM D19B425B TO FC456D79.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: ZMP, AMGR

FLIGHT CHECKED BY

JEFFREY W HARING

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

FICO

DATE

1/8/19

DEVELOPED BY

HERMAN C. ROGERS

Digitally signed by

HERMAN C ROGERS

Dec 11, 2018

OFFICE

AJV-5432

DATE

10/12/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5430

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KFRM
RUNWAY	RW31
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W31A
LTP/FTP LATITUDE	433819.7230N
LTP/FTP LONGITUDE	0942436.6920W
LTP/FTP ELLIPSOIDAL HEIGHT	+03256
FPAP LATITUDE	433921.7380N
FPAP LONGITUDE	0942604.8165W
THRESHOLD CROSSING HEIGHT (TCH)	00058.9
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1072
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	FC456D79
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03537
FPAP ORTHOMETRIC HEIGHT	+03537



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

TITLE 14 CFR PART 97.25

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> MINNEAPOLIS-ST PAUL INTL/WOLD- CHAMBERLAIN	<u>AIRPORT ID</u> KMSP	<u>PROCEDURE NAME</u> LOC RWY 4	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> MINNEAPOLIS	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 842	<u>TDZE</u> 832	<u>SUPERSEDED</u> LOC RWY 4	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 04/30/2015	<u>MAG VAR</u> 0E
<u>FACILITY</u> I-APL	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2015

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>
LYDIA INT	IAF	KETAM INT					360.00 & 045.00	5.53 (HDG) & 4.13 (I-APL)	4000
KETAM INT	IF	IGEPY INT					045.00	6.25 (I-APL)	2300

MISSED APPROACH

MAP:

4.44 NM AFTER IGEPY INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 3000 DIRECT GEP VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT KETAM
- FAC:** 045.00 **FAF:** IGEPY INT **DIST FAF TO MAP:** 4.44 **DIST FAF TO THLD:** 4.44
- MIN ALT:** KETAM INT 4000, IGEPY INT 2300
- MSA FROM:** GEP VORTAC 180-270 2600, 270-180 3500

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

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

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LYDIA ON V505 SOUTHBOUND.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-4 CAT C/D/E VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:



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.

<u>AIRPORT</u> MINNEAPOLIS-ST PAUL INTL/WOLD- CHAMBERLAIN	<u>AIRPORT ID</u> KMSP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 4	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> MINNEAPOLIS	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 842	<u>TDZE</u> 832	<u>SUPERSEDED</u> RNAV (GPS) RWY 4	<u>ORIGINAL/AMENDMENT</u> 2C	<u>DATED</u> 11/09/2017	<u>MAG VAR</u> 0E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2015

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>
LYDIA	IAF	KETAM		TF	FB	1.00	018.99	8.95	4000
KETAM	IF	IGEPY		TF	FB	1.00	044.87	6.25	2300
IGEPY	FAF	RW04	MAP	TF	FO	0.30	044.95	4.44	
RW04	MAP	1300 MSL		CA			044.95		1300
1300 MSL		GEP VORTAC		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW04

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1300 THEN CLIMBING LEFT TURN TO 3000 DIRECT GEP VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. PROFILE STARTS AT KETAM
3. **FAC:** 044.95 **FAF:** IGEPY **DIST FAF TO MAP:** 4.44 **DIST FAF TO THLD:** 4.44
4. **MIN ALT:** KETAM 4000, IGEPY 2300
5. **DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **200 HAT:** 0.46 **GS ANT:**
6. **MIN GP INCPT:** 2300 **GP ALT AT FAF :** IGEPY 2300 **OM:** **MM:** **IM:**
7. **GP ANGLE:** 3.00 **34:1:** IS CLEAR **20:1:** IS CLEAR **TCH:** 55.0
8. **MSA FROM:** RW04 3500



PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C OR ABOVE 54C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LYDIA ON V505 SOUTHBOUND AND ON V26 WESTBOUND.
CHART NOTE: **RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV CAT E VISIBILITY TO 1 3/8 SM, LNAV CAT C/D/E VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.23 NM TO RW04*
*LNAV ONLY
WAAS CHANNEL #72931
REFERENCE PATH ID: W04A
FAS OBST: 1040 AAO 445011N/0931812W.
HOLD NW, LT, 117.00 INBOUND
LTP HAE: 226.3 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 900-2 3/4, CAT E 1000-3

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
LPV DA**	1032	2400	200	1032	2400	200	1032	2400	200	1032	2400	200	1032	2400	200
LNAV/VNAV DA	1281	4500	449	1281	4500	449	1281	4500	449	1281	4500	449	1281	4500	449
LNAV MDA	1300	2400	468	1300	2400	468	1300	5000	468	1300	5000	468	1300	5000	468
CIRCLING	1360	1	518	1360	1	518	1460	1 3/4	618	1660	2 3/4	818	1800	3	958

CHANGES - REASONS

1. CHANGED LNAV/VNAV DA VISIBILITY FROM RVR 5000 TO 4500 FOR ALL CATS - NEW INOP TABLE CRITERIA APPLIED
2. CHANGED LNAV MDA CAT C VISIBILITY MINIMUM FROM RVR 4000 TO 5000 AND LNAV CAT D/E VISIBILITY MINIMUMS FROM RVR 4500 TO 5000 - NEW INOP TABLE CRITERIA APPLIED
3. CHANGED LNAV/VNAV DA/HAT FOR ALL CATS FROM 1279/447 TO 1281/449 - CRITICAL TEMPERATURES UPDATED
4. CHANGED LNAV DA/HAT FOR ALL CATS FROM 1260/428 TO 1300/468 - NEW CONTROLLING OBSTACLE
5. CHANGED INOPERATIVE ALS NOTE FROM "FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV CAT E VISIBILITY TO 1 1/2 SM, LNAV CAT E VISIBILITY TO 1 1/4 SM" TO "FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV CAT E VISIBILITY TO 1 3/8 SM, LNAV CAT C/D/E VISIBILITY TO 1 3/8 SM" - NEW INOP TABLE CRITERIA APPLIED
6. INCREASED ALTITUDE AT KETAM FROM 2600FT TO 4000FT - PER ATC REQUEST
7. REMOVED CHART NOTE: DME/DME RNP-0.3 NA - NO LONGER REQUIRED
8. ADDED "RNP APCH" TO PBN REQUIREMENT NOTES - 8260.19H CHAPTER 8-6-8B.(1)
9. MARKED 20:1 AS CLEAR - NO 20:1 PENETRATIONS EXISIT
10. CHANGED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (-4F) OR ABOVE 54C (130F) TO CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C OR ABOVE 54C - 8260.19H CHAPTER 8-6-9.S AND CURRENT 5 YEAR AVERAGE COLD TEMPERATURE



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZMP, MSP ATCT, AMGR

FLIGHT CHECKED BY

JOHN R CLOUGH
Digitally signed by
DAVID DANNER

DEVELOPED BY

Jan 08, 2019
Digitally signed by
LONNIE EVERHART (TAYLOR GIBSON) **DAVID DANNER**
Jan 08, 2019

APPROVED BY

Digitally signed by
LONNIE EVERHART **DAVID DANNER**
Jan 08, 2019

OFFICE

FICO

OFFICE

AJV-5400

OFFICE

AJV-5400

DATE

1/3/19

DATE

06/12/2018

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMSP
RUNWAY	RW04
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W04A
LTP/FTP LATITUDE	445230.9800N
LTP/FTP LONGITUDE	0931402.7275W
LTP/FTP ELLIPSOIDAL HEIGHT	+02263
FPAP LATITUDE	445336.9900N
FPAP LONGITUDE	0931229.8470W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	56195AA2
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02535
FPAP ORTHOMETRIC HEIGHT	+02535



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> ROCHESTER INTL	<u>AIRPORT ID</u> KRST	<u>PROCEDURE NAME</u> ILS OR LOC RWY 13	<u>ORIGINAL/AMENDMENT</u> 9	<u>CITY</u> ROCHESTER	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1317	<u>TDZE</u> 1280	<u>SUPERSEDED</u> ILS OR LOC RWY 13	<u>ORIGINAL/AMENDMENT</u> 8	<u>DATED</u> 01/15/2009	<u>MAG VAR</u> 1E
<u>FACILITY</u> I-MNK	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

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>
RST VOR/DME		ELLIE INT					358.68	10.94	3000
CORDY INT/RST 22.80 DME	IAF	KIBYE INT/RST 16.00 DME	NOPT				130.77	7.68 (I-MNK)	3000
ZOLET/RST 16.00 DME CW	IAF	KIBYE INT/RST 16.00 DME	NOPT				16.00 DME ARC (RST LR-332)		3000
KIBYE INT/RST 16.00 DME	IF	ELLIE INT					131.12	6.71 (I-MNK)	2600

MISSED APPROACH

MAP:

ILS: DA
LOC: 4.01 NM AFTER ELLIE INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2000 THEN CLIMBING RIGHT TURN TO 3000 DIRECT RST VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 2000 THEN CLIMBING LEFT TURN TO 3000 ON HEADING 105.00 AND ODI VORTAC R-260 TO DLANY INT AND HOLD.

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD NW ELLIE, RT, 131.12 INBOUND, 2900 FT. IN LIEU OF PT (IAF), MAX 5800.
- FAC: 131.12 FAF: ELLIE INT DIST FAF TO MAP: 4.01 DIST FAF TO THLD: 4.01
- MIN ALT: ELLIE INT 2600
- DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 969
- MIN GS INCPT: 2600 GS ALT AT FAF : ELLIE INT 2600 OM: MM: IM:
- GP ANGLE: 3.00 34:1: 20:1: TCH: 54.6
- MSA FROM: RST VOR/DME 090-270 3900, 270-090 3300



EQUIPMENT REQUIREMENTS NOTES:

NOTES:

ADDITIONAL FLIGHT DATA:

CHART NOTE: ASR
CHART CIRCLING ICON.
CHART RST R-260 AT ZOLET.
CHART IN PLANVIEW: DLANY INT
FAS OBST: 1420 AAO 435733N/0923445W.
1440 AAO 435807N/0923511W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E DLANY INT, RT, 260.40 INBOUND.
HOLD SW, RT, 025.14 INBOUND

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN CONTROL TOWER CLOSED.; LOC: STANDARD - 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 13	1480	1800	200	1480	1800	200	1480	1800	200	1480	1800	200			
S-LOC 13	1680	2400	400	1680	2400	400	1680	3500	400	1680	3500	400			
CIRCLING	1720	1	403	1780	1	463	1900	1 1/2	583	1900	2	583			

CHANGES - REASONS

1. CHANGED RST TO FAF FEEDER COURSE/DISTANCE FROM 359.76/10.92 TO 358.68/10.94 - ELLIE INT REPLACE ELLIE OM AS NEW FAF.
2. ADDED ELLIE INT TO REPLACE ELLIE OM AS FAF - ELLIE OM DECOMMISSIONING.
3. RAISED S-LOC MDA/HAT FROM 1640/360 TO 1680/400 ALL CATS - (NEW FINAL CONTROLLING OBSTACLE) NEW OBSTACLE EVALUATION.
4. AMEND S-LOC CAT C FROM RVR 2400 TO RVR 3500 AND CAT D FROM RVR 4000 TO RVR 3500 - COMPUTED IN ACCORDANCE WITH FAAO 8260.3D, TABLE 3-3-1.
5. ADDED CHART CIRCLING RADII - NEW CIRCLING CRITERIA APPLIED.
6. RAISED CIRCLING CAT C MDA/HAA FROM 1780/463 TO 1900/583 AND CAT D FROM 1880/563 TO 1900/583 - NEW CIRCLING CRITERIA APPLIED/NEW OBSTACLE EVALUATION.
7. ADDED RST 16.00 DME AT KIBYE INT - ENABLE DME EQUIP AIRCRAFT TO IDENTIFY KIBYE.
8. AMEND PROCEDURE TCH FROM 54.5 TO 54.6 - MATCH CURRENT AIRNAV VALUE.



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZMP, RST APP CON, RST ATCT, STATE AERO, APT MGR

FLIGHT CHECKED BY

JOHN R CLOUGH

Digitally signed by

WARDELL HENNING

Jan 08, 2019

OFFICE

FICO

DATE

1/2/19

DEVELOPED BY

WARDELL HENNING (THERON CYRUS)

Digitally signed by

WARDELL HENNING

Jan 08, 2019

OFFICE

AJV-5430

DATE

10/16/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Jan 08, 2019

OFFICE

AJV-5430

DATE

TITLE

MANAGER

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.

<u>AIRPORT</u> ROCHESTER INTL	<u>AIRPORT ID</u> KRST	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> 3B	<u>CITY</u> ROCHESTER	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1317	<u>TDZE</u> 1317	<u>SUPERSEDED</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> 3A	<u>DATED</u> 05/28/2015	<u>MAG VAR</u> 1E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

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>
EMORE		OMAXE		TF	FB	1.00	256.99	13.40	3600
OMAXE	IAF	NIDLE	NOPT	TF	FB	1.00	295.47	7.10	3600
ZADLA	IAF	NIDLE	NOPT	TF	FB	1.00	115.25	8.50	3600
NIDLE	IF/IAF	LERPE		TF	FB	1.00	025.37	7.14	3000
LERPE	FAF	JORTU/1.80 NM TO RW02		TF	FB	0.30	025.42	3.35	
JORTU/1.80 NM TO RW02		RW02	MAP	TF	FO	0.30	025.42	1.80	
RW02	MAP	1567 MSL		CA			025.42		
1567 MSL		BOCAG		DF	FO	1.00			3400

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW02

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3400 DIRECT BOCAG AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4800.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SW NIDLE, RT, 025.37 INBOUND, 3600 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 025.42FAF: LERPEDIST FAF TO MAP: 5.15DIST FAF TO THLD: 5.15

4. MIN ALT: NIDLE 3600, LERPE 3000, JORTU/1.80 NM TO RW02 1920*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.64GS ANT:

6. MIN GP INCPT: 3000GP ALT AT FAF : LERPE 3000OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 46.5

8. MSA FROM: RW02 3900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT EMORE ON V24 EASTBOUND.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -28C OR ABOVE 54C.

ADDITIONAL FLIGHT DATA:

CHART NOTE: ASR.
CHART CIRCLING ICON.
CHART VDP AT 0.93 NM TO RW02*
*LNAV ONLY
WAAS CHANNEL #69621
REFERENCE PATH ID: W02A
CHART FAS OBST: 1409 TREE 435306N/0923100W.
1559 AAO 434924N/0923436W.
HOLD NE, RT, 205.57 INBOUND
LTP HAE: 370.7 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1567	1	250	1567	1	250	1567	1	250	1567	1	250			
LNAV/VNAV DA	1592	1	275	1592	1	275	1592	1	275	1592	1	275			
LNAV MDA	1660	1	343	1660	1	343	1660	1	343	1660	1	343			
CIRCLING	1720	1	403	1780	1	463	1900	1 1/2	583	1900	2	583			



Jan 08, 2019

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRST
RUNWAY	RW02
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W02A
LTP/FTP LATITUDE	435341.7420N
LTP/FTP LONGITUDE	0923024.9370W
LTP/FTP ELLIPSOIDAL HEIGHT	+03707
FPAP LATITUDE	435501.5100N
FPAP LONGITUDE	0922930.0000W
THRESHOLD CROSSING HEIGHT (TCH)	00046.5
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	B10897EC

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04007
FPAP ORTHOMETRIC HEIGHT	+04007



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.

<u>AIRPORT</u> ROCHESTER INTL	<u>AIRPORT ID</u> KRST	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> ROCHESTER	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1317	<u>TDZE</u> 1280	<u>SUPERSEDED</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 10/12/2017	<u>MAG VAR</u> 1E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

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>
FISIN	IAF	HEBAS		TF	FB	1.00	221.18	15.33	3000
CORDY	IAF	HEBAS		TF	FB	1.00	130.00	8.39	3000
EGUPE	IAF	HEBAS		TF	FB	1.00	040.93	7.90	3000
HEBAS	IF	HUPAP		TF	FB	1.00	131.00	6.04	2600
HUPAP	FAF	RW13	MAP	TF	FO	0.30	131.08	3.97	
RW13	MAP	1530 MSL		CA			131.08		
1530 MSL		POKYI		DF	FB	1.00			
POKYI		RST VOR/DME		TF	FO	1.00	238.74	9.00	2900

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW13

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2900 DIRECT POKYI AND ON TRACK 238.74 TO RST VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT HEBAS

3. FAC: 131.08

FAF: HUPAP

DIST FAF TO MAP: 3.97

DIST FAF TO THLD: 3.97

4. MIN ALT: HEBAS 3000, HUPAP 2600

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

250 HAT: 0.65

GS ANT:

6. MIN GP INCPT: 2600

GP ALT AT FAF : HUPAP 2600

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 53.4

8. MSA FROM: RW13 3900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT FISIN ON V218 NORTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CORDY ON V82-161 NORTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT EGUPE ON V411 NORTHWEST BOUND.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO RVR 5500.

ADDITIONAL FLIGHT DATA:

CHART: ASR
CHART CIRCLING ICON.
CHART VDP AT 1.00 NM TO RW13*
*LNAV ONLY
WAAS CHANNEL #90202
REFERENCE PATH ID: W13A
CHART FAS OBST: 1379 TREE 435536N/0923145W.
HOLD NE, RT, 240.00 INBOUND
LTP HAE: 356.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1530	1800	250	1530	1800	250	1530	1800	250	1530	1800	250			
LNAV/VNAV DA	1679	5000	399	1679	5000	399	1679	5000	399	1679	5000	399			
LNAV MDA	1640	2400	360	1640	2400	360	1640	3000	360	1640	5000	360			
CIRCLING	1720	1	403	1780	1	463	1900	1 1/2	583	1900	2	583			



CHANGES - REASONS

1. ADDED CHART NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT - INCORPORATING FDC NOTAM 8/2390
2. REMOVED CHART NOTE DME/DME RNP-0.3 NA. - NO LONGER REQUIRED.
3. ADDED PBN REQUIREMENTS NOTES: RNP APCH - 8260.19H 8-6-8.
4. REMOVED ADDITONAL FLIGHT DATA NOTE "CHART: TDZE 1280" - INCORPORATED IN CURRENT FORMS.
5. CHANGED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C (2F) OR ABOVE 45°C (114F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C". - 8260.19H 8-6-9 USING AFS HIGH TEMPERATURE CALC.
6. CRC REMAINDER CHANGED FROM 115D1ED8 TO 0468C9FB - LTP COORDINATES UPDATED.
7. CHANGES FROM P-NOTAM FOR AMDT 1A INCORPORATED INTO FORM - IAW 8260.19H PARA 8-3-4C(3).
8. CHANGED NOTE: "FOR INOPERATIVE MALSR INCREASE LPV ALL CATS VISIBILITY TO RVR 5000 AND LNAV CAT D VISIBILITY TO RVR 6000" TO "CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO RVR 5500" - PER VISCHECK TOOL.
9. ADDED PROCEDURE ENTRY RESTRICTION NOTES FOR ARRIVALS AT EGUPE AND FISIN - TURN EXCEEDS 90 DEGREES.
10. CHANGED LNAV CAT C VISIBILITY FROM RVR 2400 TO RVR 3000 - PER VISCHECK TOOL.
11. MISSED APPROACH DESCRIPTION UPDATED - UPDATED RST SURVEY COORDINATES CHANGE, NO FIXES HAVE MOVED ON PROCEDURE.

COORDINATED WITH:

A4A☒

ALPA☒

AOPA☒

APA☒

HAI☐

NBAA☒

OTHER: RST APP CON, ZMP, AMGR

FLIGHT CHECKED BY

SCOTT WIEBE

Digitally signed by

ROBERT G HAMILTON

Dec 11, 2018

OFFICE

FICO

DATE

12/9/18

DEVELOPED BY

JULIE A. MORGAN (TYLER MITCHELL)

Digitally signed by

ROBERT G HAMILTON

Dec 11, 2018

OFFICE

AJV-5420

DATE

10/17/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

ROBERT G HAMILTON

Dec 11, 2018

OFFICE

AJV-5420

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRST
RUNWAY	RW13
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	435512.5430N
LTP/FTP LONGITUDE	0923043.6585W
LTP/FTP ELLIPSOIDAL HEIGHT	+03566
FPAP LATITUDE	435412.6100N
FPAP LONGITUDE	0922912.0300W
THRESHOLD CROSSING HEIGHT (TCH)	00053.4
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	0468C9FB

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03866
FPAP ORTHOMETRIC HEIGHT	+03866



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.

<u>AIRPORT</u> ROCHESTER INTL	<u>AIRPORT ID</u> KRST	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 2B	<u>CITY</u> ROCHESTER	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1317	<u>TDZE</u> 1305	<u>SUPERSEDED</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 2A	<u>DATED</u> 05/28/2015	<u>MAG VAR</u> 1E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

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>
CORDY		COLOG		TF	FB	1.00	076.82	14.83	3000
RST VOR/DME		BOCAG		TF	FO	1.00	026.66	23.08	3000
COLOG	IAF	BOCAG	NOPT	TF	FB	1.00	115.47	7.00	3000
BOCAG	IF/IAF	AYUGI		TF	FB	1.00	205.57	8.87	3000
AYUGI	FAF	RW20	MAP	TF	FO	0.30	205.51	5.24	
RW20	MAP	1555 MSL		CA			205.51		
1555 MSL		LERPE		DF	FB	1.00			
LERPE		RST VOR/DME		TF	FO	1.00	216.47	2.66	3000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT LERPE AND ON TRACK 216.47 TO RST VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NE BOCAG, RT, 205.57 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 205.51FAF: AYUGIDIST FAF TO MAP: 5.24DIST FAF TO THLD: 5.24

4. MIN ALT: BOCAG 3000, AYUGI 3000

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.70GS ANT:

6. MIN GP INCPT: 3000GP ALT AT FAF : AYUGI 3000OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 50.0

8. MSA FROM: RW20 3900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -28°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CORDY ON V82-161 NORTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON RST VOR/DME AIRWAY RADIALS 310 CW 099.
CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT BOCAG ON V218 SOUTHEAST BOUND.

ADDITIONAL FLIGHT DATA:

CHART: ASR.
CHART CIRCLING ICON.
CHART VDP AT 1.07 NM TO RW20*
*LNAV ONLY
WAAS CHANNEL #57922
REFERENCE PATH ID: W20A
CHART FAS OBST: 1419 TANK 435514N/0922844W.
HOLD NE, RT, 240.00 INBOUND
LTP HAE: 360.8 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1555	1	250	1555	1	250	1555	1	250	1555	1	250			
LNAV/VNAV DA	1603	1	298	1603	1	298	1603	1	298	1603	1	298			
LNAV MDA	1680	1	375	1680	1	375	1680	1	375	1680	1	375			
CIRCLING	1720	1	403	1780	1	463	1900	1 1/2	583	1900	2	583			

QUALITY
10
CHECKED

CHANGES - REASONS

1. UPDATED LPV DA FROM 1532 TO 1555, UPDATED LNAV/VNAV DA FROM 1580 TO 1603 - INCORPORATING P-NOTAM.
2. RAISED LNAV MDA/HAT FROM 1660/355 TO 1680/375 - NEW CONTROLLING OBSTACLE.
3. CHANGED LINE 7 FROM 34:1: IS NOT CLEAR TO 34:1: IS CLEAR 20:1: IS CLEAR - VISUAL AREA IS CLEAR.
4. REMOVED CHART NOTE DME/DME RNP-0.3 NA - NO LONGER REQUIRED.
5. CHANGED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -28C (-18F) OR ABOVE 35C (95F). TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -28C OR ABOVE 54C. - 8260.19H 8-6-9
6. REMOVED CHART NOTE: WHEN VGSI INOP, STRAIGHT-IN CIRCLING RWY 20 PROCEDURE NA AT NIGHT - VISUAL AREA CLEAR.
7. REMOVED CHART NOTE: VGSI AND RNAV GLIDPATH ARE NOT COINCIDENT - VGSI AND RNAV GLIDEPATH ARE COINCIDENT.
8. ADDED PBN REQUIREMENTS NOTE: RNP APPROACH - 8260.19H 8-6-8.
9. PUBLISHED VDP AT 1.07 NM FROM RWY 20 - VISUAL AREA CLEAR.
10. CRC REMAINDER CHANGED FROM 6F74817C TO D8CF145 - LTP COORDINATES UPDATED.
11. UPDATED CA LEG OF MISSED APPROACH FROM 1532 FT TO 1555 FT - LOWEST DA NOW 1555.
12. CHANGED CHARTED FAS OBSTRUCTION FROM CHART FAS OBST: 1399 TREE 435447N/0922914W TO CHART FAS OBST: 1419 TANK 435514N/0922844W. - NEW CONTROLLING OBSTACLE.
13. ADDED MAX HOLDING 6000 AT BOCAG - 8260.19H PARA 8-6-7B(2).
14. UPDATED MISSED APPROACH INSTRUCTIONS FROM CLIMB TO 3000 DIRECT LERPE AND ON TRACK 216.42 TO RST VOR/DME AND HOLD TO CLIMB TO 3000 DIRECT LERPE AND ON TRACK 216.47 TO RST VOR/DME AND HOLD - UPDATED RST SURVEY COORDINATES CHANGE, NO FIXES HAVE MOVED ON PROCEDURE.

COORDINATED WITH:

A4A ☒ALPA ☒AOPA ☒APA ☒HAI ☐NBAA ☒OTHER: ZMP, RST ATCT, AMGR, RST APP CON

FLIGHT CHECKED BY	Digitally signed by	OFFICE	DATE	
SCOTT WIEBE	ROBERT G HAMILTON	FICO	12/9/18	
	Dec 11, 2018			
DEVELOPED BY	Digitally signed by	OFFICE	DATE	
JULIE A. MORGAN (TYLER MITCHELL)	ROBERT G HAMILTON	AJV-5420	10/16/2018	
	Dec 11, 2018			
APPROVED BY	Digitally signed by	OFFICE	DATE	TITLE
JULIE MORGAN	ROBERT G HAMILTON	AJV-5420		MANAGER
	Dec 11, 2018			



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRST
RUNWAY	RW20
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W20A
LTP/FTP LATITUDE	435446.2835N
LTP/FTP LONGITUDE	0922940.4865W
LTP/FTP ELLIPSOIDAL HEIGHT	+03608
FPAP LATITUDE	435326.5100N
FPAP LONGITUDE	0923035.4100W
THRESHOLD CROSSING HEIGHT (TCH)	00050.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	D8C4F145

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03908
FPAP ORTHOMETRIC HEIGHT	+03908



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.

<u>AIRPORT</u> WINDOM MUNI	<u>AIRPORT ID</u> KMWM	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> WINDOM	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 1411	<u>TDZE</u> 1411	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 10/15/2015	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2005
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
RWF VOR/DME	IAF	HEDLO	NOPT	TF	FB	1.00	174.63	21.45	3000
GOPEC	IAF	HEDLO	NOPT	TF	FB	1.00	087.21	9.48	3000
HEDLO	IF/IAF	JELET		TF	FB	1.00	177.35	6.63	3000
JELET	FAF	CATCO/2.30 NM TO RW17		TF	FB	0.30	177.35	2.57	
CATCO/2.30 NM TO RW17		RW17	MAP	TF	FO	0.30	177.35	2.30	
RW17	MAP	1661 MSL		CA			177.35		
1661 MSL		BAKAC		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 DIRECT BAKAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD N HEDLO, RT, 177.35 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 177.35FAF: JELETDIST FAF TO MAP: 4.87DIST FAF TO THLD: 4.87
4. MIN ALT: HEDLO 3000, JELET 3000, CATCO/2.30 NM TO RW17 2180*
5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.66GS ANT:
6. MIN GP INCPT: 3000GP ALT AT FAF : JELET 3000OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 40.0
8. MSA FROM: RW17 3100

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON RWF VOR/DME AIRWAY RADIALS 103 CW 263.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.16 NM TO RW17*
*LNAV ONLY
WAAS CHANNEL #53742
REFERENCE PATH ID: W17A
CHART FAS OBST: 1570 TREE 435613N/0950609W.
HOLD S, RT, 357.35 INBOUND
LTP HAE: 402.2 M

MINIMUMS:

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

ALTERNATE: NA

☐

 STANDARD

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
LPV DA	1661	1	250	1661	1	250	1661	1	250		NA				
LNAV/VNAV DA	1858	1 3/8	447	1858	1 3/8	447	1858	1 3/8	447		NA				
LNAV MDA	1820	1	409	1820	1	409	1820	1 1/8	409		NA				
CIRCLING	1880	1	469	1900	1	489	1920	1 1/2	509		NA				



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMWM
RUNWAY	RW17
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	435506.0475N
LTP/FTP LONGITUDE	0950633.6895W
LTP/FTP ELLIPSOIDAL HEIGHT	+04022
FPAP LATITUDE	435336.9420N
FPAP LONGITUDE	0950634.4420W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1656
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	6D6777EA

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04295
FPAP ORTHOMETRIC HEIGHT	+04295



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.

<u>AIRPORT</u> WINDOM MUNI	<u>AIRPORT ID</u> KMWM	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> WINDOM	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 1411	<u>TDZE</u> 1411	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 12/10/2015	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2005
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
CUDET	IAF	BAKAC	NOPT	TF	FB	1.00	087.18	10.73	3100
FEKIR	IAF	BAKAC	NOPT	TF	FB	1.00	267.51	10.00	3100
BAKAC	IF/IAF	DODYE		TF	FB	1.00	357.35	6.12	3000
DODYE	FAF	CESAY/2.18 NM TO RW35		TF	FB	0.30	357.35	2.70	
CESAY/2.18 NM TO RW35		RW35	MAP	TF	FO	0.30	357.35	2.18	
RW35	MAP	1661 MSL		CA			357.35		
1661 MSL		HEDLO		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT HEDLO AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S BAKAC, RT, 357.35 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 357.35FAF: DODYEDIST FAF TO MAP: 4.88DIST FAF TO THLD: 4.88

4. MIN ALT: BAKAC 3100, DODYE 3000, CESAY/2.18 NM TO RW35 2140*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.67GS ANT:

6. MIN GP INCPT: 3000GP ALT AT FAF : DODYE 3000OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 40.0

8. MSA FROM: RW35 3100

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CUDET ON V250 SOUTHWEST BOUND.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.23 NM TO RW35*
*LNAV ONLY
WAAS CHANNEL #63242
REFERENCE PATH ID: W35A
CHART FAS OBST: 1588 ANTENNA 435252N/0950712W.
HOLD N, RT, 177.35 INBOUND
LTP HAE: 401.3 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1661	1	250	1661	1	250	1661	1	250		NA				
LNAV/VNAV DA	1672	1	261	1672	1	261	1672	1	261		NA				
LNAV MDA	1840	1	429	1840	1	429	1840	1 1/4	429		NA				
CIRCLING	1880	1	469	1900	1	489	1920	1 1/2	509		NA				



CHANGES - REASONS

1. ADDED LPV AND LNAV/VNAV LINES OF MINIMA - FPT/WAAS AVAILABLE.
2. DELETED CHART NOTE: DME/DME RNP-0.3 NA - 8260.19H.
3. ADDED EQUIPMENT REQUIREMENT NOTE: RNP APCH - 8260.19H.
4. CHANGED INTERMEDIATE SEGMENT LENGTH FROM 6.18 TO 6.12 - PFAF (DODYE) MOVED 383.78 FT SOUTH.
5. LOWERED CIRCLING CAT A MDA/HAA FROM 1900/489 TO 1880/469 - NEW CIRCLING RADII APPLIED/NEW OBSTACLE EVALUATION.
6. RAISED CIRCLING CAT C MDA/HAA FROM 1900/489 TO 1920/509 - NEW CIRCLING RADII APPLIED/NEW OBSTACLE EVALUATION.
7. ADDED FAS DATA - LPV MINIMUMS ADDED TO PROCEDURE.
8. CHANGED DIST FAF TO MAP AND FAF TO THLD FROM 4.82 TO 4.88 - PFAF (DODYE) MOVED 383.78 FT SOUTH.
9. ADDED CHART CIRCLING ICON - NEW CIRCLING RADII/CRITERIA APPLIED.
10. AMEND ALTERNATE MINIMUMS FROM NA TO STANDARD - ALTERNATE MINS NOW AUTHORIZED FOR RNAV PROCEDURES WHEN LOCAL WEATHER ON WMSCR.
11. DELETED FRM FEEDER AND ALL ASSOCIATED PROCEDURE NA FOR ARRIVAL NOTES - FRM VOR MON DECOMMISSIONING.
12. RAISED CESAY STEPDOWN MIN ALTITUDE FROM 2080 TO 2140 - NEW OBSTACLE EVALUATION.
13. STEPDOWN FIX DISTANCE FROM RWY 35 CHANGED FROM 1.97 TO 2.18 - PROVIDE STABILIZED DESCENT.
14. ADDED FAS DATA - LPV MINIMUMS ADDED TO PROCEDURE.

COORDINATED WITH:

A4A☐

ALPA☒

AOPA☒

APA☐

HAI☐

NBAA☒

OTHER: ZMP, AMGR

FLIGHT CHECKED BY

JOHN R CLOUGH

Digitally signed by

WARDELL HENNING

OFFICE

FICO

DATE

1/2/19

DEVELOPED BY

WARDELL HENNING (THERON CYRUS)

Digitally signed by

WARDELL HENNING

Jan 07, 2019

OFFICE

AJV-5430

DATE

10/25/2018

APPROVED BY

WARDELL HENNING

Digitally signed by

WARDELL HENNING

Jan 07, 2019

OFFICE

AJV-5430

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMWM
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	435430.5150N
LTP/FTP LONGITUDE	0950633.9895W
LTP/FTP ELLIPSOIDAL HEIGHT	+04013
FPAP LATITUDE	435559.6205N
FPAP LONGITUDE	0950633.2365W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1656
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	483322BA
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04287
FPAP ORTHOMETRIC HEIGHT	+04287



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
NDB OR GPS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.27

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> CONRAD	<u>AIRPORT ID</u> KS01	<u>PROCEDURE NAME</u> NDB OR GPS RWY 24	<u>ORIGINAL/AMENDMENT</u> 4C	<u>CITY</u> CONRAD	<u>STATE</u> MT
<u>AIRPORT ELEVATION</u> 3545	<u>TDZE</u> 3535	<u>SUPERSEDED</u> NDB OR GPS RWY 24	<u>ORIGINAL/AMENDMENT</u> 4B	<u>DATED</u> 10/23/2008	<u>MAG VAR</u> <u>EPOCH YEAR</u>
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u> CANCEL	

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>

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)
2.				
3. FAC:	FAF:	DIST FAF TO MAP:	DIST FAF TO THLD:	
4. MIN ALT:				
8. MSA FROM:				

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

ADDITIONAL FLIGHT DATA:

MINIMUMS:

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



ALTERNATE: NA ☐

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>

CHANGES - REASONS

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☒ NBAA ☒ OTHER: ZLC

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

JAMES ROGERS

Digitally signed by
JAMES ROGERS
Nov 01, 2018

OFFICE

AJV-5421

DATE

10/12/2018

APPROVED BY

JULIE A. MORGAN

Digitally signed by
DAVID DANNER
Jan 04, 2019

OFFICE

AJV-5420

DATE

TITLE



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.

<u>AIRPORT</u> CONRAD	<u>AIRPORT ID</u> S01	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 6	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> CONRAD	<u>STATE</u> MT
<u>AIRPORT ELEVATION</u> 3548	<u>TDZE</u> 3548	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u> 12E <u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
JEBOB		PENRY		TF	FO	1.00	295.83	27.77	7000
PENRY	IF/IAF	YEYUL	PFAF	TF	FB	1.00	046.71	6.26	5300
YEYUL	FAF	WONVI/2.53 NM TO RW06		TF	FB	0.30	058.16	2.83	
WONVI/2.53 NM TO RW06		RW06	MAP	TF	FO	0.30	058.16	2.53	
RW06	MAP	4500 MSL		CA			058.16		4500
4500 MSL		PENRY		DF	FO	1.00			7000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW06

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4500, THEN CLIMBING RIGHT TURN TO 7000 DIRECT PENRY AND HOLD, CONTINUE CLIMB IN HOLD TO 7000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SW PENRY, RT, 046.71 INBOUND, 7000 FT. IN LIEU OF PT (IF/IAF), MAX 10000.

3. FAC: 058.16

PFAF: YEYUL

DIST PFAF TO MAP: 5.36

DIST PFAF TO THLD: 5.36

4. MIN ALT: PENRY 7000, YEYUL 5300, WONVI/2.53 NM TO RW06 4400*

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

367 HAT: 1.01

GS ANT:

6. MIN GP INCPT: 5300

GP ALT AT PFAF : YEYUL 5300

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH: 45.0

8. MSA FROM: RW06 6600

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 15 AND 33.
CHART NOTE: RWY 6 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: BARO-VNAV NA.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -22°C OR ABOVE 53°C .
*LNAV ONLY
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT JEBOB ON V21 SOUTHEAST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT PENRY ON V365 SOUTHBOUND.
CHART NOTE: USE CUTBANK ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #58342
REFERENCE PATH ID: W06A
CHART FAS OBST: 3784 TRANSMISSION_LINE 481001N/1120128W.
LTP HAE: 1067 M
HOLD S, RT, 340.00 INBOUND.

MINIMUMS:

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

ALTERNATE: NA ☒

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
LPV DA	3915	1	367	3915	1	367	3915	1	367	3915	1	367			
LNAV/VNAV DA	4266	2	718	4266	2	718	4266	2	718	4266	2	718			
LNAV MDA	4220	1	672	4220	1	672	4220	1 7/8	672	4220	1 7/8	672			
CIRCLING	4220	1	672	4340	1	792	4460	2 3/4	912	4620	3	1072			

CHANGES - REASONS



AIRPORT
CONRAD

AIRPORT ID
S01

PROCEDURE NAME
RNAV (GPS) RWY 6

ORIGINAL/AMENDMENT
ORIG

CITY
CONRAD

STATE
MT

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLC

FLIGHT CHECKED BY

Digitally signed by

OFFICE

DATE

CHARLES D CUNNINGHAM

DAVID DANNER

FICO

1/3/19

Jan 04, 2019

DEVELOPED BY

Digitally signed by
JAMES ROGERS
Nov 30, 2018

OFFICE

DATE

JAMES ROGERS

AJV-5421

10/12/2018

APPROVED BY

Digitally signed by

OFFICE

DATE

TITLE

JULIE MORGAN

DAVID DANNER

AJV-5420

MANAGER

Jan 04, 2019

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	S01
RUNWAY	RW06
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W06A
LTP/FTP LATITUDE	480958.6075N
LTP/FTP LONGITUDE	1115908.3390W
LTP/FTP ELLIPSOIDAL HEIGHT	+10670
FPAP LATITUDE	481028.6735N
FPAP LONGITUDE	1115703.0455W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1344
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	EE1D3801

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+10814
FPAP ORTHOMETRIC HEIGHT	+10814



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.

<u>AIRPORT</u> CONRAD	<u>AIRPORT ID</u> S01	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 24	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> CONRAD	<u>STATE</u> MT	
<u>AIRPORT ELEVATION</u> 3548	<u>TDZE</u> 3538	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u> 12E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
JEBOB		ZOVUX		TF	FO	1.00	347.27	26.01	7000
WELUR		ZOVUX		TF	FO	1.00	100.39	26.11	7000
WEBVO	IAF	ZOVUX	NOPT	TF	FB	1.00	195.09	22.25	7000
ZOVUX	IF/IAF	UVUYO	PFAF	TF	FB	1.00	238.46	5.99	5200
UVUYO	FAF	RW24	MAP	TF	FO	0.30	238.35	5.11	
RW24	MAP	4120 MSL		CA					4120
4120 MSL		PENRY		DF	FO	1.00			7000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW24

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4120 THEN CLIMBING LEFT TURN TO 7000 DIRECT PENRY AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NE ZOVUX, RT, 238.46 INBOUND, 7000 FT. IN LIEU OF PT (IF/IAF), MAX 10000.

3. FAC: 238.35

PFAF: UVUYO

DIST PFAF TO MAP: 5.11

DIST PFAF TO THLD: 5.11

4. MIN ALT: ZOVUX 7000, UVUYO 5200

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

367 HAT: 1.04

GS ANT:

6. MIN GP INCPT: 5200

GP ALT AT PFAF : UVUYO 5200

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH: 45.0

8. MSA FROM: RW24 6600

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 15 AND 33.
CHART NOTE: RWY 24 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: BARO-VNAV NA.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -22°C OR ABOVE 53°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT WEBVO ON V430 EASTBOUND.
CHART NOTE: USE CUTBANK ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #69642
REFERENCE PATH ID: W24A
FAS OBST: 3679 AAO 481141N/1115318W.
HOLD S, RT, 340.00 INBOUND
LTP HAE: 1060.9 M

MINIMUMS:

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

ALTERNATE: NA ☒

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
LPV DA	3905	1	367	3905	1	367	3905	1	367	3905	1	367			
LNAV/VNAV DA	3949	1 1/8	411	3949	1 1/8	411	3949	1 1/8	411	3949	1 1/8	411			
LNAV MDA	4060	1	522	4060	1	522	4060	1 1/2	522	4060	1 1/2	522			
CIRCLING	4140	1	592	4340	1	792	4460	2 3/4	912	4620	3	1072			

CHANGES - REASONS



AIRPORT
CONRAD

AIRPORT ID
S01

PROCEDURE NAME
RNAV (GPS) RWY 24

ORIGINAL/AMENDMENT
ORIG

CITY
CONRAD

STATE
MT

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLC

FLIGHT CHECKED BY

Digitally signed by

DAVID DANNER

Jan 04, 2019

OFFICE

FICO

DATE

1/3/19

DEVELOPED BY

Digitally signed by

JAMES ROGERS

Nov 30, 2018

OFFICE

AJV-5421

DATE

11/01/2018

APPROVED BY

Digitally signed by

DAVID DANNER

Jan 04, 2019

OFFICE

AJV-5420

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	S01
RUNWAY	RW24
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W24A
LTP/FTP LATITUDE	481013.9445N
LTP/FTP LONGITUDE	1115804.4495W
LTP/FTP ELLIPSOIDAL HEIGHT	+10609
FPAP LATITUDE	480943.8590N
FPAP LONGITUDE	1120009.7230W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1344
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	E8B52865

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+10754
FPAP ORTHOMETRIC HEIGHT	+10754



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
CONRAD, MT	CONRAD	28 FEBRUARY 2019	1

TAKEOFF MINIMUMS:

RWY 15, 33: NA - ENVIRONMENTAL.

RWY 6: STANDARD.

RWY 24: STANDARD WITH MINIMUM CLIMB OF 256 FT PER NM TO 4400, OR 1100-3 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

RWY 24 - OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS CONRAD AIRPORT AT OR ABOVE 4500 BEFORE PROCEEDING ON COURSE.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 06, LIGHTING 8 FT FROM DER, 17 FT RIGHT OF CENTERLINE, 2 FT AGL/3530 FT MSL. LIGHTING 38 FT FROM DER, 111 FT LEFT OF CENTERLINE, 3 FT AGL/3530 FT MSL. BUILDING 59 FT FROM DER, 472 FT LEFT OF CENTERLINE, 24 FT AGL/3550 FT MSL. TOWER 307 FT FROM DER, 512 FT LEFT OF CENTERLINE, 40 FT AGL/3565 FT MSL. TREE 378 FT FROM DER, 462 FT LEFT OF CENTERLINE, 3594 FT MSL. TREES BEGINNING 1166 FT FROM DER, 48 FT LEFT OF CENTERLINE, UP TO 3604 FT MSL. TREE 2481 FT FROM DER, 176 FT RIGHT OF CENTERLINE, 3593 FT MSL. TREE 2575 FT FROM DER, 164 FT RIGHT OF CENTERLINE, 3594 FT MSL.

NOTE: RWY 24, LIGHTING 9 FT FROM DER, 17 FT RIGHT OF CENTERLINE, 2 FT AGL/3550 FT MSL. LIGHTING 9 FT FROM DER, 16 FT LEFT OF CENTERLINE, 3 FT AGL/3550 FT MSL. TRANSMISSION LINE 1482 FT FROM DER, 789 FT LEFT OF CENTERLINE, 40 FT AGL/3600 FT MSL. TRANSMISSION LINE 1667 FT FROM DER, 269 FT LEFT OF CENTERLINE, 39 FT AGL/3602 FT MSL. TRANSMISSION LINE BEGINNING 1833 FT FROM DER, 194 FT RIGHT OF CENTERLINE, UP TO 40 FT AGL/3602 FT MSL.

CONTROLLING OBSTACLES:

RWY 24: 4180 FT MSL AAO 481021.69N/1120402.29W (CG/CGTA).

RWY 24 (VCOA): 4180 FT MSL AAO 481021.69N/1120402.29W (VCA).

REMARKS:



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
CONRAD, MT	CONRAD	28 FEBRUARY 2019	1

FLIGHT INSPECTED BY:	<i>Digitally signed by</i> DAVID DANNER Jan 04, 2019	OFFICE SYMBOL:	DATE:
CHARLES D CUNNINGHAM		FICO	1/3/19

DEVELOPED BY:	<i>Digitally signed by</i> JAMES ROGERS Nov 30, 2018	OFFICE SYMBOL:	DATE:
JAMES ROGERS		AJV-5421	11/02/2018

APPROVED BY:	<i>Digitally signed by</i> DAVID DANNER Jan 04, 2019	OFFICE SYMBOL:	DATE:
JULIE MORGAN		AJV-5420	

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

<u>A4A</u>	<u>ALPA</u>	<u>AOPA</u>	<u>APA</u>	<u>HAI</u>	<u>NBAA</u>
☐	☒	☒	☐	☐	☒

OTHER:
ZLC, AMGR.

CHANGES - REASONS:

1. TAKEOFF MINIMUMS: ADDED CLIMB GRADIENT, CLIMB GRADIENT TERMINATION ALTITUDE AND CEILING AND VIS FOR VCOA, FOR RWY 24 - NEW DIV A EVALUATION.
2. DELETED TEXTUAL DEPARTURE PROCEDURE DATA - ALL OBSTACLES MITIGATED WITH THE CLIMB GRADIENT AND CLIMB GRADIENT TERMINATION ALTITUDE IN TAKEOFF MINIMUMS FOR RWY 24.
3. ADDED VCOA DATA - 8260.46F, TABLE 2-1-1.
4. UPDATED TAKEOFF OBSTACLE NOTES FOR RWY 6 AND 24 - NEW ICA EVALUATION AND OBSTACLE SURVEY DATA.
5. TAKEOFF MINIMUMS: ADDRESSED UNPAVED RUNWAYS 15 AND 33 - IAW IFP SOP UNPAVED RUNWAYS (1.2), PROCESS 4.
6. ADDED CONTROLLING OBSTACLE FOR RWY 24 CG AN CGTA; ADDED CONTROLLING OBSTACLE FOR RWY 24 VCOA VISUAL CLIMB AREA (VCA) - COMPLETED MAP STUDY FOR DEPARTURE EVALUATION.

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
NDB STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.27

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> ALBERT J ELLIS	<u>AIRPORT ID</u> KOAJ	<u>PROCEDURE NAME</u> NDB RWY 5	<u>ORIGINAL/AMENDMENT</u> 8D	<u>CITY</u> JACKSONVILLE	<u>STATE</u> NC	
<u>AIRPORT ELEVATION</u> 93	<u>TDZE</u> 89	<u>SUPERSEDED</u> NDB RWY 5	<u>ORIGINAL/AMENDMENT</u> 8C	<u>DATED</u> 04/28/2016	<u>MAG VAR</u> 8W	<u>EPOCH YEAR</u> 1990
<u>FACILITY</u> OA	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
WALLO INT		ELLAS LOM					128.69	14.81	2100
BEULA/EWN 33.07 DME		ELLAS LOM					190.52	11.04	2100
KROVE/EWN 10.74 DME		ELLAS LOM					240.90	27.69	2100
HELNA/FAY 51.64 DME	IAF	ELLAS LOM					064.76	12.85	2100

MISSED APPROACH

MAP:

5.97 NM AFTER ELLAS LOM

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 2100 DIRECT OA LOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT R **SIDE OF COURSE** 232.03 **OUTBOUND** 2100 **FT WITHIN** 10 **MILES OF** ELLAS LOM (IAF)
2.
3. **FAC:** 052.03 **FAF:** ELLAS LOM **DIST FAF TO MAP:** 5.97 **DIST FAF TO THLD:** 5.97
4. **MIN ALT:** ELLAS LOM 2100
8. **MSA FROM:** ELLAS LOM 3100

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILMINGTON ALTIMETER SETTING AND INCREASE ALL MDA 100 FEET AND S-5 VISIBILITY CATS C AND D 3/8 SM AND CIRCLING CAT C 1/4 SM.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-5 CAT A/B VISIBILITY TO 1 SM.

QUALITY
35
CHECKED

CHART NOTE: FOR INOPERATIVE ALS WHEN USING WILMINGTON ALTIMETER SETTING, INCREASE S-5 CAT A/B VISIBILITY TO 1 SM AND CAT C/D VISIBILITY TO 1 3/4 SM.

ADDITIONAL FLIGHT DATA:

OA LOM TO RW05: 3.08/55.
FAS OBST: 296 AAO 344448N/0774150W.
HOLD SW, LT, 052.03 INBOUND

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

ALTERNATE: NA ☒

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-05	620	3/4	531	620	3/4	531	620	1	531	620	1	531			
CIRCLING	620	1	527	620	1	527	620	1 1/2	527	660	2	567			

CHANGES - REASONS

1. REMOVED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILMINGTON ALTIMETER SETTING AND INCREASE ALL MDAS 100 FEET AND S-5 VISIBILITY CATS C AND D 1/4 MILE - ADDED NEW NOTES BASED ON NEW MINIMUMS FOR S-5 AND CIRCLING AND CURRENT 8260.3C, CHAPT 3, VISIBILITY TABLES.
2. REMOVED CHART NOTE: FOR INOP MALSR, INCREASE S-5 CAT C AND D VISIBILITY TO 1 3/8 - ADDED NEW NOTES BASED ON NEW MINIMUMS FOR S-5 AND CIRCLING.
3. REMOVED CHART NOTE: FOR INOP MALSR, WHEN USING WILMINGTON ALTIMETER SETTING, INCREASE S-5 CAT D VISIBILITY TO 1 3/4 - ADDED NEW NOTES BASED ON NEW MINIMUMS FOR S-5 AND CIRCLING.
4. ADDED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, INCREASE ALL MDA 100 FEET, S-5 VISIBILITY CATS C AND D 3/8 SM AND CIRCLING CAT C 1/4 SM - NEW MINIMUMS FOR S-5 AND CIRCLING.
5. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-5 CAT A/B VISIBILITY TO 1 SM - NEW MINIMUMS FOR S-5 AND CIRCLING.
6. ADDED CHART NOTE: FOR INOPERATIVE ALS WHEN USING WILMINGTON ALTIMETER SETTING, INCREASE S-5 CAT A/B VISIBILITY TO 1 SM AND CAT C/D VISIBILITY TO 1 3/4 SM - NEW MINIMUMS FOR S-5 AND CIRCLING, AND CURRENT 8260.3C, CHAPT 3, VISIBILITY TABLES.
7. RAISED S-5 MDA FROM 580/HAT 491 ALL CATS TO S-5 MDA 620/HAT 527 ALL CATS - NEW MISSED APPROACH PENETRATION OBSTACLE.
8. RAISED CIRCLING CAT A/B/C MDA FROM 580/HAA487 TO CIRCLING CAT A/B/C MDA 620/HAA 527 - REVISED S-5 MINIMUMS.
9. ADDITIONAL FLIGHT DATA: UPDATED FAS OBSTACLE FROM 415 TOWER 344702N/0773601W TO 192 TREE 344950N/0775410W - UPDATED SEGMENT EVALUATION.
10. LOWERED FEEDER ROUTE KROVE TO ELLAS LOM FROM 2600 TO 2100 - NEW CONTROLLING OBSTACLE AND ALTITUDE STANDARDIZATION WITH OTHER TERMINAL ROUTES.
11. CHANGED COURSE HELNA TO ELLAS LOM FROM 064.75 TO 064.76 - UPDATED CALCULATION.
12. REPLACED ALL INSTANCES OF OA OM WITH ELLAS LOM - CORRECTED FACILITY TYPE.

01/08/19: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 06/08/18.
1. 8260-9, PART B SUPPLEMENTAL DATA: ADDED COMMUNICATIONS WITH ELLIS ATCT.

01/23/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/08/19.
1. CHANGED BACK-UP ALTIMETER SETTING CHART NOTE FROM " WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, INCREASE ALL MDA 100 FEET AND S-5 VISIBILITY CATS C AND D 3/8 SM AND CIRCLING CAT C 1/4 SM" TO " WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILMINGTON ALTIMETER SETTING AND INCREASE ALL MDA 100 FEET AND S-5 VISIBILITY CATS C AND D 3/8 SM AND CIRCLING CAT C 1/4 SM."



<u>AIRPORT</u> ALBERT J ELLIS	<u>AIRPORT ID</u> KOAJ	<u>PROCEDURE NAME</u> NDB RWY 5	<u>ORIGINAL/AMENDMENT</u> 8D	<u>CITY</u> JACKSONVILLE	<u>STATE</u> NC
<u>COORDINATED WITH:</u>					
A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ <u>OTHER:</u> OAJ AMGR, ILM APP CON, ATA					
<u>FLIGHT CHECKED BY</u> KEVIN JOHN RIESE	<i>Digitally signed by</i> ROBERT G HAMILTON Jan 24, 2019		<u>OFFICE</u> FIOG	<u>DATE</u> 12/19/2018	
<u>DEVELOPED BY</u> DAVID A. DOWLING	<i>Digitally signed by</i> DAVID A DOWLING Jan 23, 2019		<u>OFFICE</u> AJV-5422	<u>DATE</u> 06/08/2018	
<u>APPROVED BY</u> JULIE MORGAN	<i>Digitally signed by</i> ROBERT G HAMILTON Jan 24, 2019		<u>OFFICE</u> AJV-5420	<u>DATE</u>	<u>TITLE</u> MANAGER



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.

<u>AIRPORT</u> MILLER FIELD	<u>AIRPORT ID</u> KVTN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> 2A	<u>CITY</u> VALENTINE	<u>STATE</u> NE
<u>AIRPORT ELEVATION</u> 2595	<u>TDZE</u> 2589	<u>SUPERSEDED</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 03/05/2015	<u>MAG VAR</u> 8E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 047/30 CW 227/30	NOPT	AHOFU	IF/IAF	5000
2. 227/30 CW 047/30	PT	AHOFU	IF/IAF	5000

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>
AHOFU	IF/IAF	CITBO		TF	FB	1.00	137.35	5.00	4400
CITBO	FAF	HAKNO/2.20 NM TO RW14		TF	FB	0.30	137.41	3.36	
HAKNO/2.20 NM TO RW14		RW14	MAP	TF	FO	0.30	137.41	2.20	
RW14	MAP	2861 MSL		CA			137.41		
2861 MSL		GIYIT		DF	FO	1.00			5000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW14

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 5000 DIRECT GIYIT AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NW AHOFU, RT, 137.35 INBOUND, 5000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 137.41

FAF: CITBO

DIST FAF TO MAP: 5.56

DIST FAF TO THLD: 5.56

4. MIN ALT: AHOFU 5000, CITBO 4400, HAKNO/2.20 NM TO RW14 3320*

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

272 HAT: 0.73

GS ANT:

6. MIN GP INCPT: 4400

GP ALT AT FAF : CITBO 4400

OM:

MM:

IM:

7. GP ANGLE: 3.00

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH: 40.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -25C OR ABOVE 54C.
CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.67 NM TO RW14*
*LNAV ONLY
WAAS CHANNEL #61037
REFERENCE PATH ID: W14A
CHART FAS OBST: 3003 TOWER 425319N/1003313W.
HOLD SE, RT, 317.55 INBOUND
LTP HAE: 766.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT B 1000-2

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
LPV DA	2861	1	272	2861	1	272		NA			NA				
LNAV/VNAV DA	3239	2 1/4	650	3239	2 1/4	650		NA			NA				
LNAV MDA	3160	1	571	3160	1	571		NA			NA				
CIRCLING	3160	1	565	3560	1 1/2	965		NA			NA				



AIRPORT	AIRPORT ID	PROCEDURE NAME	ORIGINAL/AMENDMENT	CITY	STATE
MILLER FIELD	KVTN	RNAV (GPS) RWY 14	2A	VALENTINE	NE

CHANGES - REASONS

- 1. DELETED CHART NOTE DME/DME RNP-0.3 NA - ADDED PBN REQUIREMENTS NOTE: RNP APCH.
- 2. ADDED 20:1 IS CLEAR TO PROFILE LINE 7 - IAW CURRENT DOCUMENTATION CRITERIA.
- 3. AMENDED LPV DA/HAT FROM 2860/271 TO 2861/272 - NEW IPDS EVALUATION RESULT.
- 4. AMENDED CIRCLING CAT B MDA/HAA FROM 3360/765 TO 3560/965 - NEW CONTROLLING OBSTACLE, 3128 MSL WINDMILL 425132.77N/1003532.78W (31-023866) THIS CLEARS FDC 8/8317.
- 5. RAISED CIRCLING CAT B VISIBILITY FROM 1 TO 1 1/2 SM - RESULT OF CIRCLING CAT B MDA/HAA GOING FROM 3360/765 TO 3560/965.
- 6. ADDED ALTERNATE MINIMUMS NOTE: CAT B 1000-2 - RESULT OF HIGHER CIRCLING MDA.
- 7. MOVED BACK-UP ALTIMETER NOTES TO BACK OF 8260-9 - KVTN IS ON WMSCR NETWORK.
- 8. FAS DATA CHANGED: LTP/FTP FROM 425139.5280N/1003304.541 5W TO 425139.5270N/1003304.5390W, FPAP FROM 425026.1 085N/10031 55.8755W TO 425026.1080N/1003155.8725W, LENGTH OFFSET FROM 1432 TO 1440, CRC REMAINDER FROM 3C23FCF6 TO 4A7B4BF0 - NEW SURVEY 02/03/17.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: AMGR, ZDV

FLIGHT CHECKED BY

GLEN B FREEMAN

Digitally signed by

BEV L BORDY

Dec 14, 2018

OFFICE

FICO

DATE

12/13/18

DEVELOPED BY

IVAN BLANCO

Digitally signed by

IVAN BLANCO

Jun 27, 2018

OFFICE

AJV-5432

DATE

06/26/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

BEV L BORDY

Dec 14, 2018

OFFICE

AJV-5430

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KVTN
RUNWAY	RW14
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W14A
LTP/FTP LATITUDE	425139.5270N
LTP/FTP LONGITUDE	1003304.5390W
LTP/FTP ELLIPSOIDAL HEIGHT	+07669
FPAP LATITUDE	425026.1080N
FPAP LONGITUDE	1003155.8725W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1440
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	4A7B4BF0
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+07887
FPAP ORTHOMETRIC HEIGHT	+07887



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.

<u>AIRPORT</u> MILLER FIELD	<u>AIRPORT ID</u> KVTN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 21	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> VALENTINE	<u>STATE</u> NE
<u>AIRPORT ELEVATION</u> 2595	<u>TDZE</u> 2595	<u>SUPERSEDED</u> RNAV (GPS) RWY 21	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 03/05/2015	<u>MAG VAR</u> 8E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 118/30 CW 298/30	NOPT	MAIMS	IF/IAF	5000
2. 298/30 CW 118/30	PT	MAIMS	IF/IAF	5000

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>
MAIMS	IF/IAF	STAPH		TF	FB	1.00	208.39	5.00	4300
STAPH	FAF	WADAB/1.90 NM TO RW21		TF	FB	0.30	208.35	3.34	
WADAB/1.90 NM TO RW21		RW21	MAP	TF	FO	0.30	208.35	1.90	
RW21	MAP	2845 MSL		CA			208.35		
2845 MSL		KILEA		DF	FO	1.00			5000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW21

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 5000 DIRECT KILEA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. HOLD NE MAIMS, RT, 208.39 INBOUND, 5000 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 208.35FAF: STAPHDIST FAF TO MAP: 5.24DIST FAF TO THLD: 5.24
4. MIN ALT:MAIMS 5000, STAPH 4300, WADAB/1.90 NM TO RW21 3220*
5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.64GS ANT:
6. MIN GP INCPT: 4300GP ALT AT FAF : STAPH 4300OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 44.7
8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C OR ABOVE 54C.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.22 NM TO RW21*
*LNAV ONLY
WAAS CHANNEL #97437
REFERENCE PATH ID: W21A
CHART 2701 TOWER 425217N/1003249W.
HOLD SW, RT, 028.22 INBOUND
LTP HAE: 766.5 M

MINIMUMS:

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

ALTERNATE: NA

☐

STANDARD - CAT B 1000-2

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
LPV DA	2845	1	250	2845	1	250		NA			NA				
LNAV/VNAV DA	2893	1	298	2893	1	298		NA			NA				
LNAV MDA	3020	1	425	3020	1	425		NA			NA				
CIRCLING	3080	1	485	3560	1 1/2	965		NA			NA				

CHANGES - REASONS

1. DELETED CHART NOTE DME/DME RNP-0.3 NA - ADDED PBN REQUIREMENTS NOTE: RNP APCH.
2. ADDED 20:1 IS CLEAR TO PROFILE LINE 7 - IAW CURRENT DOCUMENTATION CRITERIA.
3. AMENDED CIRCLING CAT B MDA/HAA FROM 3360/765 TO 3560/965 - NEW CONTROLLING OBSTACLE, 3128 MSL WINDMILL 425132.77N/1003532.78W (31-023866) THIS CLEARS FDC 8/8317.
4. RAISED CIRCLING CAT B VISIBILITY FROM 1 TO 1 1/2 SM - RESULT OF CIRCLING CAT B MDA/HAA GOING FROM 3360/765 TO 3560/965.
5. ADDED ALTERNATE MINIMUMS NOTE: CAT B 1000-2 - RESULT OF HIGHER CIRCLING MDA.
6. MOVED BACK-UP ALTIMETER NOTES TO BACK OF 8260-9 - KVTN ON WMSCR NETWORK.
7. FAS DATA CHANGED: LENGTH OFFSET FROM 1712 TO 1720, CRC REMAINDER FROM 70392295 TO E79B760F - NEW EVALUATION RESULT.



<u>AIRPORT</u> MILLER FIELD	<u>AIRPORT ID</u> KVTN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 21	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> VALENTINE	<u>STATE</u> NE
<u>COORDINATED WITH:</u>					
A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: AMGR, ZDV					
<u>FLIGHT CHECKED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
GLEN B FREEMAN		BEV L BORDY	FICO	12/13/18	
		Dec 14, 2018			
<u>DEVELOPED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
IVAN BLANCO		IVAN BLANCO	AJV-5432	06/25/2018	
		Jun 27, 2018			
<u>APPROVED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
PATRICK MULQUEEN		BEV L BORDY	AJV-5430		MANAGER
		Dec 14, 2018			



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KVTN
RUNWAY	RW21
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W21A
LTP/FTP LATITUDE	425137.2065N
LTP/FTP LONGITUDE	1003252.4665W
LTP/FTP ELLIPSOIDAL HEIGHT	+07665
FPAP LATITUDE	425025.3730N
FPAP LONGITUDE	1003404.1640W
THRESHOLD CROSSING HEIGHT (TCH)	00044.7
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1720
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	E79B760F
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+07883
FPAP ORTHOMETRIC HEIGHT	+07883



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

CITY, STATE	AIRPORT	EFFECTIVE DATE	AMDT NO
VALENTINE, NE	MILLER FIELD	28 FEBRUARY 2019	3

TAKEOFF MINIMUMS:

RWY 3, 14, 21, 32: STANDARD.

TEXTUAL DEPARTURE PROCEDURES:

RWY 3: CLIMB HEADING 028.36 TO 4000 BEFORE PROCEEDING ON COURSE.

RWY 21: CLIMB HEADING 208.32 TO 3300 BEFORE TURNING RIGHT.

RWY 32: CLIMB HEADING 317.47 TO 4000 BEFORE PROCEEDING ON COURSE.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 03: BUILDING 156 FT FROM DER, 421 FT LEFT OF CENTERLINE, 11 FT AGL/2595 FT MSL.

NOTE: RWY 14: TERRAIN BEGINNING 10 FT FROM DER, 353 FT RIGHT OF CENTERLINE, UP TO 3 FT AGL/2586 FT MSL.

ELECTRICAL SYSTEM 17 FT FROM DER, 488 FT LEFT OF CENTERLINE, 6 FT AGL/2585 FT MSL.

ELECTRICAL SYSTEM, TERRAIN BEGINNING 41 FT FROM DER, 125 FT RIGHT OF CENTERLINE, UP TO 5 FT AGL/2587 FT MSL.

ELECTRICAL SYSTEM 42 FT FROM DER, 123 FT LEFT OF CENTERLINE, 6 FT AGL/2587 FT MSL.

TERRAIN BEGINNING 150 FT FROM DER, 449 FT RIGHT OF CENTERLINE, UP TO 5 FT AGL/2588 FT MSL.

FENCE 184 FT FROM DER, 494 FT RIGHT OF CENTERLINE, 7 FT AGL/2592 FT MSL.

FENCE BEGINNING 394 FT FROM DER, 341 FT RIGHT OF CENTERLINE, UP TO 10 FT AGL/2593 FT MSL.

NOTE: RWY 32: TREES BEGINNING 16 FT FROM DER, 211 FT RIGHT OF CENTERLINE, UP TO 17 FT AGL/2604 FT MSL.

TREE 400 FT FROM DER, 192 FT LEFT OF CENTERLINE, 15 FT AGL/2603 FT MSL.

TOWER 411 FT FROM DER, 387 FT LEFT OF CENTERLINE, 15 FT AGL/2605 FT MSL.

TREES BEGINNING 416 FT FROM DER, 185 FT LEFT OF CENTERLINE, UP TO 22 FT AGL/2610 FT MSL.

TREE, BUILDING, POLE BEGINNING 444 FT FROM DER, 219 FT LEFT OF CENTERLINE, UP TO 31 FT AGL/2620 FT MSL.

POLE, BUILDING, TREE BEGINNING 646 FT FROM DER, 331 FT LEFT OF CENTERLINE, UP TO 34 FT AGL/2623 FT MSL.

TREE 1472 FT FROM DER, 91 FT RIGHT OF CENTERLINE, 47 FT AGL/2632 FT MSL.

TREE 1813 FT FROM DER, 630 FT RIGHT OF CENTERLINE, 50 FT AGL/2636 FT MSL.

TREE 1992 FT FROM DER, 42 FT LEFT OF CENTERLINE, 56 FT AGL/2642 FT MSL.

TREE 2164 FT FROM DER, 451 FT RIGHT OF CENTERLINE, 70 FT AGL/2656 FT MSL.

CONTROLLING OBSTACLES:

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:

RWY 3: 3003 FT MSL TOWER 425403.00N/1003155.00W

RWY 21, 32: 3128 FT MSL WINDMILL 425132.77N/1003532.78W

REMARKS:

QUALITY
31
CHECKED

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
VALENTINE, NE	MILLER FIELD	28 FEBRUARY 2019	3

<u>FLIGHT INSPECTED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
GLEN B FREEMAN	BEV L BORDY Dec 14, 2018	FICO	12/13/18
<u>DEVELOPED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
IVAN BLANCO	IVAN BLANCO Jun 22, 2018	AJV-5432	06/22/2018
<u>APPROVED BY:</u>	<i>Digitally signed by</i>	<u>OFFICE SYMBOL:</u>	<u>DATE:</u>
PATRICK MULQUEEN	BEV L BORDY Dec 14, 2018	AJV-5430	

REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

<u>A4A</u>	<u>ALPA</u>	<u>AOPA</u>	<u>APA</u>	<u>HAI</u>	<u>NBAA</u>
☐	☒	☒	☐	☐	☒

OTHER:
ZDV, AMGR

CHANGES - REASONS:

1. ADDED DEPARTURE PROCEDURE: RWY 21: CLIMB HEADING 208.32 TO 3300 BEFORE TURNING RIGHT - NEW DIVERSE A PENETRATION IDENTIFIED 3128 MSL WINDMILL (31-023866) 425132.77N/1003532.78W, THIS CLEARS FDC 8/2853.
2. AMENDED DEPARTURE PROCEDURE INITIAL CLIMB HEADINGS: RWY 3 FROM 028 TO 028.36, RWY 32 FROM 317 TO 317.47 - IAW CURRENT DOCUMENTATION CRITERIA.
3. ADDED/UPDATED RWY 3, 14, 32 TAKEOFF OBSTACLE NOTES - NEW EVALUATION RESULT WITH NEW VG SURVEY 01/10/2017.
4. REMOVED CONTROLLING OBSTACLES FROM RWY 3, 14, 21 AND ADDED OBSTACLES MANDATING ODP ROUTE DEVELOPMENT - TAKEOFF MINIMUMS ARE STANDARD.

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.

<u>AIRPORT</u> MORRISTOWN MUNI	<u>AIRPORT ID</u> KMMU	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 5	<u>ORIGINAL/AMENDMENT</u> 5	<u>CITY</u> MORRISTOWN	<u>STATE</u> NJ
<u>AIRPORT ELEVATION</u> 187	<u>TDZE</u> 184	<u>SUPERSEDED</u> RNAV (GPS) RWY 5	<u>ORIGINAL/AMENDMENT</u> 4A	<u>DATED</u> 12/06/2018	<u>MAG VAR</u> 13W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2005

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>
STW VOR/DME		ZELEN		TF	FB	2.00	172.48	20.83	3000
ZELEN	IAF	KWITE		TF	FB	1.00	116.08	6.92	2000
SBJ VOR/DME	IAF	KWITE		TF	FB	1.00	078.91	9.01	2000
KWITE	IF	HOSBE		TF	FB	1.00	049.00	6.84	1800
HOSBE	FAF	RW05	MAP	TF	FO	0.30	049.07	4.20	
RW05	MAP	587 MSL		CA			049.07		
587 MSL		MIKEF		DF	FO	1.00			2500

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW05

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2500 DIRECT MIKEF AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2500.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT KWITE

3. FAC: 049.07

FAF: HOSBE

DIST FAF TO MAP: 4.20

DIST FAF TO THLD: 4.20

4. MIN ALT: KWITE 2000, HOSBE 1800

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

695 HAT: 1.71

GS ANT:

6. MIN GP INCPT: 1800

GP ALT AT FAF : HOSBE 1800

OM:

MM:

IM:

7. GP ANGLE: 3.50

34:1: IS NOT CLEAR

20:1: IS CLEAR

TCH: 59.0

8. MSA FROM: RW05 2900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 5 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -15°C OR ABOVE 46°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON SBJ VOR/DME AIRWAY RADIALS 028 CW 147.
CHART NOTE: CIRCLING RWY 13, 31 NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.71 NM TO RW05*
*LNAV ONLY
WAAS CHANNEL #97720
REFERENCE PATH ID: W05A
CHART FAS OBST: 570 TREE 404551N/0742743W.
624 AAO 404442N/0742833W.
HOLD SW, RT, 049.10 INBOUND
LTP HAE: 22.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 900-2 1/2, CAT D 1100-3

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
LPV DA	879	2	695	879	2	695	879	2	695	879	2	695			
LNAV/VNAV DA	893	2	709	893	2	709	893	2	709	893	2	709			
LNAV MDA	880	1	696	880	1	696	880	2	696	880	2	696			
CIRCLING	880	1	693	900	1	713	1000	2 1/2	813	1200	3	1013			



CHANGES - REASONS

1. TERMINAL ROUTE COURSE/DIST KWITE - HOSBE CHANGED FROM 049.01/7.15 TO 049.00/6.84 - HOSBE MOVED.
2. SDF JOMIL REMOVED - NO BENEFIT GAINED DUE TO REQUIRED INCREASE IN MINIMUMS.
3. HOSBE FAF MOVED .30 NM SOUTHWEST AND DIST TO MAP/THLD CHANGED FROM 3.89 TO 4.20 - GPA CHANGED FROM 3.77 TO 3.50.
4. 20:1 STATUS CHANGED FROM 20:1 IS NOT CLEAR TO 20:1 IS CLEAR - RWY 5 20:1 PENETRATIONS REMOVED.
5. CHANGED CHART NOTE: RWY 5 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED TO CHART NOTE: RWY 5 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED - INCORPORTATED P-NOTAM FDC 8/6684.
6. CHANGED CHART NOTE: PROCEDURE NA AT NIGHT TO CHART NOTE: CIRCLING RWY 13, 31 NA AT NIGHT - INCORPORTATED P-NOTAM FDC 8/6684.
7. CHANGED ALTERNATE MINS FROM STANDARD - CAT C 900-2 1/2 TO STANDARD - CAT C 900-2 1/2, CAT D 1100-3 - CAT D MINS ADDED.
8. LPV DA/HAT AND VISIBILITY AMENDED FROM CAT A-C 861/677 AND 1 7/8 TO CAT A-D 879/695 AND 2 - GPA CHANGED FROM 3.77 TO 3.50 TO RESTORE CAT D.
9. LNAV MDA/HAT AND VISIBILITY AMENDED FROM CAT A-C 800/616, VISIBILITY CAT C 1 7/8 TO CAT A-D 880/696, VISIBILITY CAT C-D 2 - TO CLEAR VGS AND RESTORE CAT D MINS.
10. CIRCLING CAT A MDA/HAA CHANGED FROM 860/673 TO 880/693 AND CAT D CIRCLING ADDED - SI LNAV MINS CHANGED.
11. MA INSTRUCTIONS CHANGED FROM CLIMB TO 2200 DIRECT MIKEF AND HOLD TO CLIMB TO 2500 DIRECT MIKEF AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2500 - HIGHER MINS REQUIRED CLIMB IN-HOLD EVALUATION.
12. CHARTED VDP AT 1.71 NM TO RW05 - 20:1 PENETRATIONS REMOVED.
13. AMENDED BACK-UP ALTIMETER NOTE FROM WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE NEWARK ALTIMETER SETTING: INCREASE LPV DA TO 915 FEET AND ALL CATS VISIBILITY 1/8 SM; INCREASE LNAV/VNAV DA TO 947 FEET AND ALL CATS VISIBILITY 1/2 SM; INCREASE ALL MDA 60 FEET AND LNAV CAT C VISIBILITY 1/8 SM TO WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE NEWARK ALTIMETER SETTING: INCREASE LPV DA TO 933 FEET, INCREASE LNAV/VNAV DA TO 947 FEET AND ALL CATS VISIBILITY 1/2 SM; INCREASE ALL MDA 60 FEET, LNAV AND CIRCLING CAT B VISIBILITY 1/4 SM - MINIMA CHANGED.
14. CHANGED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C OR ABOVE 33C TO CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -15°C OR ABOVE 46°C - NEW TARGETS EVALUATION RESULT.
15. FAS DATA CHANGED, FPAP FROM 404847.2000N/0742400.1300W TO 404847.2030N/0742400.1255W, GPA FROM 3.77 TO 3.50, CRC REMAINDER FROM 353A4F92 TO 2256C60C - NEW EVALUATION RESULTS.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: N90, MMU ATCT, ZNY, APT MGR, ATA

FLIGHT CHECKED BY

BOB S PRESSLER

Digitally signed by

GEORGE E DAVIS

Dec 04, 2018

OFFICE

FICO

DATE

1/2/19

DEVELOPED BY

IVAN BLANCO

Digitally signed by

IVAN BLANCO

Nov 28, 2018

OFFICE

AJV-5411

DATE

11/27/2018

APPROVED BY

GEORGE DAVIS

Digitally signed by

GEORGE E DAVIS

Dec 04, 2018

OFFICE

AJV-5410

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMMU
RUNWAY	RW05
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W05A
LTP/FTP LATITUDE	404735.1745N
LTP/FTP LONGITUDE	0742509.2705W
LTP/FTP ELLIPSOIDAL HEIGHT	+00226
FPAP LATITUDE	404847.2030N
FPAP LONGITUDE	0742400.1255W
THRESHOLD CROSSING HEIGHT (TCH)	00059.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.50
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0920
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	2256C60C

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00554
FPAP ORTHOMETRIC HEIGHT	+00554



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
NDB STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.27**

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.

AIRPORT WILLIAM R POGUE MUNI	AIRPORT ID KOWP	PROCEDURE NAME NDB RWY 35	ORIGINAL/AMENDMENT 2F	CITY SAND SPRINGS	STATE OK
AIRPORT ELEVATION 891	TDZE 891	SUPERSEDED NDB RWY 35	ORIGINAL/AMENDMENT 2E	DATED 06/05/2008	MAG VAR EPOCH YEAR
FACILITY	COORDINATES OF FACILITIES	ACTUAL EFFECTIVE DATE	REQUIRED EFFECTIVE DATE ROUTINE	CANCEL/SUSPEND CANCEL	

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)
2.				
3. FAC:	FAF:	DIST FAF TO MAP:	DIST FAF TO THLD:	
4. MIN ALT:				
8. MSA FROM:				

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

ADDITIONAL FLIGHT DATA:

MINIMUMS:

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



ALTERNATE: NA ☐

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

CHANGES - REASONS

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZKC, TULSA ATCT, ST AVIATION DIR., AIRPORT MANAGER

FLIGHT CHECKED BY		OFFICE	DATE	
DEVELOPED BY	Digitally signed by	OFFICE	DATE	
MIKE MELSSEN	MIKE MELSSEN	AJV-5432	10/10/2018	
APPROVED BY		OFFICE	DATE	TITLE
PATRICK MULQUEEN	Digitally signed by	AJV-5430		
	WARDELL HENNING			
	Nov 26, 2018			



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.

<u>AIRPORT</u> WILLIAM R POGUE MUNI	<u>AIRPORT ID</u> KOWP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> SAND SPRINGS	<u>STATE</u> OK	
<u>AIRPORT ELEVATION</u> 892	<u>TDZE</u> 889	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 03/12/2009	<u>MAG VAR</u> 6E	<u>EPOCH YEAR</u> 1985
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
TUL VORTAC		ZADNO		TF	FB	1.00	302.01	17.21	3500
MANON		YEKNU		TF	FB	1.00	117.42	14.98	3500
ZADNO	IAF	WEDAX	NOPT	TF	FB	1.00	259.44	5.00	2800
YEKNU	IAF	WEDAX	NOPT	TF	FB	1.00	079.32	5.00	2800
WEDAX	IF/IAF	BLANY		TF	FB	1.00	169.38	6.45	2400
BLANY	FAF	RW17	MAP	TF	FO	0.30	169.39	4.55	
RW17	MAP	1292 MSL		CA			169.39		
1292 MSL		ACERT		DF	FO	1.00			2800

MISSED APPROACH

MAP:

LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2800 DIRECT ACERT AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD N WEDAX, RT, 169.38 INBOUND, 2800 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 169.39FAF: BLANYDIST FAF TO MAP: 4.55DIST FAF TO THLD: 4.55

4. MIN ALT: WEDAX 2800, BLANY 2400

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:

6. MIN GP INCPT:GP ALT AT FAF :OM:MM:IM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS NOT CLEARTCH:

8. MSA FROM: RW17 3600

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TUL VORTAC ON AIRWAY RADIALS 253 CW 358.
CHART NOTE: CIRCLING NA FOR CAT C EAST OF RWY 17-35.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
BLANY TO RW17: 3.04/45.
CHART FAS OBST: 1156 WTR TWR 361260N/0960838W.
HOLD S, RT, 349.40 INBOUND

MINIMUMS:

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

ALTERNATE: NA☐ STANDARD

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
LNAV MDA	1420	1	531	1420	1	531	1420	1 1/2	531		NA				
CIRCLING	1440	1	548	1440	1	548	1440	1 1/2	548		NA				



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.

<u>AIRPORT</u> WILLIAM R POGUE MUNI	<u>AIRPORT ID</u> KOWP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> SAND SPRINGS	<u>STATE</u> OK	
<u>AIRPORT ELEVATION</u> 892	<u>TDZE</u> 892	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 03/12/2009	<u>MAG VAR</u> 6E	<u>EPOCH YEAR</u> 1985
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
TUL VORTAC		CENTO		TF	FB	1.00	217.86	17.04	3000
SEARS		DARRO		TF	FB	1.00	133.67	11.06	3000
OKM VOR/DME	IAF	ACERT	NOPT	TF	FB	1.00	317.34	21.77	2800
CENTO	IAF	ACERT	NOPT	TF	FB	1.00	259.46	5.00	2800
DARRO	IAF	ACERT	NOPT	TF	FB	1.00	079.34	5.00	2800
ACERT	IF/IAF	FANCY		TF	FB	1.00	349.40	6.46	2400
FANCY	FAF	PENNN/2.60 NM TO RW35		TF	FB	0.30	349.39	1.94	
PENNN/2.60 NM TO RW35		RW35	MAP	TF	FO	0.30	349.39	2.60	
RW35	MAP	1202 MSL		CA			349.39		
1202 MSL		WEDAX		DF	FO	1.00			2800

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2800 DIRECT WEDAX AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S ACERT, RT, 349.40 INBOUND, 2800 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 349.39FAF: FANCYDIST FAF TO MAP: 4.54DIST FAF TO THLD: 4.54

4. MIN ALT: ACERT 2800, FANCY 2400, PENNN/2.60 NM TO RW35 1760*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:310 HAT: 0.84GS ANT:

6. MIN GP INCPT: 2400GP ALT AT FAF : FANCYOM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS NOT CLEARTCH: 45.0

8. MSA FROM: RW35 3600

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LNAV ONLY
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON TUL VORTAC AIRWAY RADIALS 222 CW 238.
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART NOTE: CIRCLING NA FOR CAT C EAST OF RWY 17-35.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
WAAS CHANNEL #57912
REFERENCE PATH ID: W35A
CHART FAS OBST: 984 TREE 360911N/0960909W.
HOLD N, RT, 169.38 INBOUND
LTP HAE: 242.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	1202	1	310	1202	1	310	1202	1	310		NA				
LNAV/VNAV DA	1317	1 1/2	425	1317	1 1/2	425	1317	1 1/2	425		NA				
LNAV MDA	1240	1	348	1240	1	348	1240	1	348		NA				
CIRCLING	1440	1	548	1440	1	548	1440	1 1/2	548		NA				



CHANGES - REASONS

1. ADDED PROCEDURE NA AT NIGHT - 20:1 PENETRATIONS EXIST TO RWY 17 AND 35.
2. MOVED BARO-VNAV NA NOTE TO THE BACK OF THE 8260-9 - AWOS-3 TRANSMITS TO WMSC; HOWEVER A SUITABLE BACKUP SOURCE MUST BE DETERMINED AND ANNOTATED TO THE REMARKS SECTION.
3. REMOVED FAHRENHEIT TEMPERATURES FROM FOR UNCOMPENSATED BARO-VNAV NOTE - IAW 8260.19H PARA 8-6-9(S).
4. REMOVED NOTE: DME/DME RNP-0.3 NA; ADDED PBN REQUIREMENTS NOTE: RNP APCH - IAW MEMORANDUM 266 DATED 7/18/2018 IMPLEMENTATION OF FAA ORDER 8260.19H CHG 1 FLIGHT PROCEDURES AND AIRSPACE.
5. REMOVED VISIBILITY REDUCTION BY HELICOPTERS NA NOTE; ADDED CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED - SPECIFY RUNWAY; 20:1 PENETRATIONS.
6. ADDED ALTERNATE MINIMUMS - ALTIMETER SETTING BROADCAST TO WMSC
7. ADDED CIRCLING ICON - IAW 8260.19 PARA 8-6-10(T).
8. MOVED BACKUP ALTIMETER SETTING NOTE TO THE REMARKS SECTION OF THE BACK OF THE 8260-9 - ASOS THAT TRANSMIT TO WMSC DO NOT REQUIRE A PUBLISHED ALTIMETER SOURCE; A SUITABLE BACKUP MUST BE DETERMINED FOR CONTINGENCY PURPOSES.
9. LTP LAT/LONG CHANGED FROM 361002.3900N/0960903.7900W TO 361002.4185N/0960903.7825W - FROM AIRNAV.
10. FPAP LAT/LONG CHANGED FROM 361131.3300N/0960912.6400W TO 361131.3560N/0960912.6265W - FROM AIRNAV.
11. CRC REMAINDER CHANGED FROM 2073AC1C TO 52B53758 DUE TO LTP LAT/LONG/ELLIPSOIDAL HEIGHT CHANGING.
12. LTP/FTP ELLIPSOIDAL HEIGHT CHANGED FROM +02425 TO +02426 - FROM AIRNAV.
13. LTP/FPAP ORTHOMETRIC HEIGHT CHANGED FROM +02712 TO +02713 - FROM AIRNAV.
14. PROFILE LINE 2: ADDED MAX 6000 - IAW 8260.19H PARA 8-6-7B(2)A.
15. PROFILE LINE 7: ADDED 20:1 IS NOT CLEAR - IAW 8260.19H DOCUMENTATION CRITERIA.
16. ADDED CHART NOTE: CIRCLING NA FOR CAT C EAST OF RWY 17-35 - 2303 FT ANTENNA (40-074094) 361146.52N/0960552.96W (1B) WHICH WOULD RAISE CAT C CIRCLING MDA TO 2620 WHICH IS ABOVE THE FAF ALTITUDE OF 2600.
17. ADDED CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY - IAW INOPERATIVE LIGHTING TABLE.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZKC, TUL APP CON, AMGR

FLIGHT CHECKED BY

ANTHONY D VALLERA

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

FICO

DATE

01/08/2019

DEVELOPED BY

MIKE MELSSSEN

Digitally signed by

MIKE MELSSSEN

Nov 19, 2018

OFFICE

AJV-5432

DATE

10/11/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5430

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KOWP
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	361002.4185N
LTP/FTP LONGITUDE	0960903.7825W
LTP/FTP ELLIPSOIDAL HEIGHT	+02426
FPAP LATITUDE	361131.3560N
FPAP LONGITUDE	0960912.6265W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0984
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	52B53758

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+02713
FPAP ORTHOMETRIC HEIGHT	+02713



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR/DME STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23**

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.

AIRPORT WILLIAM R POGUE MUNI	AIRPORT ID KOWP	PROCEDURE NAME VOR/DME-A	ORIGINAL/AMENDMENT 3A	CITY SAND SPRINGS	STATE OK
AIRPORT ELEVATION 891	TDZE	SUPERSEDED VOR/DME-A	ORIGINAL/AMENDMENT 3	DATED 03/12/2009	MAG VAR EPOCH YEAR
FACILITY	COORDINATES OF FACILITIES	ACTUAL EFFECTIVE DATE	REQUIRED EFFECTIVE DATE ROUTINE	CANCEL/SUSPEND CANCEL	

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)
2.				
3. FAC:	FAF:	DIST FAF TO MAP:	DIST FAF TO THLD:	
4. MIN ALT:				
8. MSA FROM:				

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

ADDITIONAL FLIGHT DATA:

MINIMUMS:

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



ALTERNATE: NA ☐

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

CHANGES - REASONS

COORDINATED WITH:

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

FLIGHT CHECKED BY	OFFICE	DATE
DEVELOPED BY <i>Digitally signed by</i> MIKE MELSSEN MIKE MELSSEN Oct 12, 2018	OFFICE AJV-5432	DATE 10/10/2018
APPROVED BY PATRICK MULQUEEN	OFFICE AJV-5430	TITLE
<i>Digitally signed by</i> WARDELL HENNING Nov 26, 2018		



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> RICHARD LLOYD JONES JR	<u>AIRPORT ID</u> KRVS	<u>PROCEDURE NAME</u> ILS OR LOC RWY 1L	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> TULSA	<u>STATE</u> OK
<u>AIRPORT ELEVATION</u> 638	<u>TDZE</u> 626	<u>SUPERSEDED</u> ILS OR LOC RWY 1L	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 03/02/2017	<u>MAG VAR</u> 3E
<u>FACILITY</u> I-RVS	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
OKM VOR/DME	IAF	INHOF INT/OKM 12.39 DME					307.51	12.39	3000
INHOF INT/OKM 12.39 DME	IF	TRIST OM					010.34	6.14 (I-RVS)	2600

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.72 NM AFTER TRIST OM

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 2600 ON HEADING 280 AND TUL VORTAC R-238 TO KEVIL INT/TUL 25.43 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT INHOF INT/OKM 12.39 DME
- FAC: 010.34 FAF: TRIST OM DIST FAF TO MAP: 5.72 DIST FAF TO THLD: 5.72
- MIN ALT: INHOF INT/OKM 12.39 DME 3000, TRIST OM 2600
- DIST TO THLD FROM OM: 5.72 MM: IM: 150 HAT: GS ANT: 900
- MIN GS INCPT: 2600 GS ALT AT FAF : OM: 2515 MM: IM:
- GP ANGLE: 3.00 34:1: 20:1: TCH: 39.9
- MSA FROM: OKM VOR/DME 080-260 2600, 260-080 3600

EQUIPMENT REQUIREMENTS NOTES:



NOTES:

CHART NOTE: CIRCLING NA NE OF RWYS 31 AND 19L.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON OKM VOR/DME AIRWAY RADIALS 308 CW 359.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
FAS OBST: 980 AAO 355718N/0960129W.
1120 AAO 355551N/0960128W.
HOLD NE, LT, 238.00 INBOUND

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN CONTROL TOWER CLOSED.; LOC: STANDARD - CAT D 800-2 1/4, 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 01L	826	3/4	200	826	3/4	200	826	3/4	200	826	3/4	200			
S-LOC 01L	1220	1	594	1220	1	594	1220	1 3/4	594	1220	1 3/4	594			
CIRCLING	1260	1	622	1280	1	642	1280	1 3/4	642	1360	2 1/4	722			

CHANGES - REASONS

1. DELETED FEEDER ROUTE GLENPOOL VOR/DME (GNP) TO TRIST OM - GNP VOR IS BEING DECOMMISSIONED, CHANGING TO DME ONLY.
2. DELETED PROCEDURE TURN SEGMENT - REMOVAL OF FEEDER SEGMENT RESULTS IN PROCEDURE TURN NO LONGER NEEDED.
3. DELETED ZIDRO FIX MINIMA - INTERSECTING RADIAL SOURCE (GNP) BEING DECOMMISSIONED. AVAILABLE FACILITIES (TUL, OKM) DO NOT MEET DIVERGENCE ANGLE CRITERIA (8260.3D 15-6-2 A. (1)) OR FIX ERROR CRITERIA (8260.3D 2-9-8 C).
4. S-LOC 01L MDA/HAA CHANGED FROM 960/334 TO 1220/598 - STEPDOWN FIX ZIDRO DELETED FROM PROCEDURE.
5. ALTERNATE MISSED APPROACH DELETED FROM PROCEDURE - GNP VOR/DME BEING DECOMMISSIONED. TUL OR OKM NOT SUITABLE DUE TO OBSTACLE PENETRATIONS (TUL).
6. ADDED PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT OKM VOR/DME ON V15 SOUTHWEST BOUND - TURN AT OKM EXCEEDS 120 DEGREES (8260.3D 2-4-1 A).
7. CENTER POINT OF MSA CHANGED FROM GNP VOR/DME TO OKM VOR/DME - GNP VOR/DME BEING DECOMMISSIONED AND IAW 8260.3D 2-3-2 B. (1).

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: AMGR, ZKC ARTCC, ZFW ARTCC, RVS ATCT, TUL APP CON

FLIGHT CHECKED BY

BRIAN HARRELSON

Digitally signed by
DONALD H LANIER
Dec 21, 2018

OFFICE
FICO

DATE
12/20/2018

DEVELOPED BY

ROBERT GRIM

Digitally signed by
ROBERT GRIM
Nov 19, 2018

OFFICE
AJV-5431

DATE
10/18/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by
DONALD H LANIER
Dec 21, 2018

OFFICE
AJV-5430

DATE

TITLE
MANAGER



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> PITTSBURGH INTL	<u>AIRPORT ID</u> KPIT	<u>PROCEDURE NAME</u> ILS OR LOC RWY 28R ILS RWY 28R SA CAT I, ILS RWY 28R SA CAT II	<u>ORIGINAL/AMENDMENT</u> 10A	<u>CITY</u> PITTSBURGH	<u>STATE</u> PA	
<u>AIRPORT ELEVATION</u> 1203	<u>TDZE</u> 1174	<u>SUPERSEDED</u> ILS OR LOC RWY 28R ILS RWY 28R SA CAT I, ILS RWY 28R CAT II	<u>ORIGINAL/AMENDMENT</u> 10	<u>DATED</u> 02/01/2018	<u>MAG VAR</u> 9W	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> I-HFE	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
AGC VOR/DME		KERRS INT/MMJ 10.05 DME/RADAR					022.22	13.28	5000
NASTY INT/MMJ 13.09 DME/RADAR	IAF	KERRS INT/MMJ 10.05 DME/RADAR	NOPT				280.96	3.04 (I-HFE)	5000
KERRS INT/MMJ 10.05 DME/RADAR	IF/IAF	COFEE INT/MMJ 6.91 DME					280.96	3.15 (I-HFE)	4000
COFEE INT/MMJ 6.91 DME		ZAICO INT/RADAR					280.96	3.15 (I-HEF)	3000

MISSED APPROACH

MAP:

ILS: DA
 LOC: 5.56 NM AFTER ZAICO INT/RADAR

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1800 THEN CLIMBING RIGHT TURN TO 5000 DIRECT EWC VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1600 THEN CLIMBING RIGHT TURN TO 4000 ON HEADING 060 AND ON AGC VOR/DME R-352 TO WISNO/AGC 28.05 DME AND HOLD (DME REQUIRED).



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD E KERRS, RT, 280.96 INBOUND, 5000 FT. IN LIEU OF PT (IAF), MAX 7000.

3. FAC: 280.96FAF: ZAIKO INT/RADARDIST FAF TO MAP: 5.56DIST FAF TO THLD: 5.56

4. MIN ALT: KERRS INT/MMJ 10.05 DME/RADAR 5000, COFEE INT/MMJ 6.91 DME 4000, ZAIKO INT/RADAR 3000, DOPNE/RADAR 2300*

5. DIST TO THLD FROM OM:MM:IM:100 HAT: 861150 HAT: 1815GS ANT: 1111

6. MIN GS INCPT: 3000GS ALT AT FAF : ZAIKO INT/RADAR 3000OM:MM:IM:

7. GP ANGLE: 3.0034:1:20:1:TCH: 54.8

8. MSA FROM: AGC VOR/DME 090-180 3800, 180-090 3100

EQUIPMENT REQUIREMENTS NOTES:

FROM NASTY: RADAR REQUIRED FOR PROCEDURE ENTRY.
RADAR REQUIRED FOR LOC ONLY.

NOTES:

SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 28R: CAT A, B, C, D RA 192, RVR 1400, HAT 150, DA 1324 MSL.
SA CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 28R: CAT A, B, C, D RA 116, RVR 1200, HAT 100, DA 1274 MSL.
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
SA CAT II CHART NOTE: REDUCED LIGHTING: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
*LOC ONLY
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 28R CAT E VISIBILITY TO RVR 4000 AND S-LOC 28R CATS C/D/E VISIBILITY TO RVR 5500.

CHART NOTE: DME FROM MMJ DME. SIMULTANEOUS RECEPTION OF I-HFE AND MMJ DME REQUIRED.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART IN PLANVIEW: WISNO/AGC 28.05 DME
CHART FAS OBST: 1282 TOWER 403012N/0801306W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD N WISNO/AGC 28.05 DME, RT, 171.77 INBOUND.
HOLD N, RT, 182.00 INBOUND

MINIMUMS:

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

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



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 28R	1374	1800	200	1374	1800	200	1374	1800	200	1374	1800	200	1374	1800	200
S-LOC 28R	1540	2400	366	1540	2400	366	1540	3500	366	1540	3500	366	1540	3500	366
CIRCLING	1700	1	497	1700	1	497	1880	2	677	1880	2 1/4	677	1880	2 1/2	677

CHANGES - REASONS

1. CHANGED PROCEDURE NAME FROM: ILS OR LOC RWY 28R, AMDT 10A; ILS RWY 28R (SA CAT I) , ILS RWY 28R (CAT II), TO: ILS OR LOC RWY 28R, AMDT 10A; ILS RWY 28R (SA CAT I) , ILS RWY 28R (SA CAT II). - "SA" WAS MISSING/OMITTED FROM THE CAT II DESCRIPTION.
2. CHANGED CHART NOTE FROM: CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 28R: CAT A, B, C, D, RA 116, RVR 1200, HAT 100, DA 1274 MSL., TO: SA CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 28R: CAT A, B, C, D, RA 116, RVR 1200, HAT 100, DA 1274 MSL. -"SA" WAS MISSING/OMITTED FROM THE CAT II DESCRIPTION.
3. CHANGED CHART NOTE FROM: CAT II CHART NOTE: REDUCED LIGHTING: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN., TO: SA CAT II CHART NOTE: REDUCED LIGHTING: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN. -"SA" WAS MISSING/OMITTED FROM THE CAT II DESCRIPTION.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZOB, PIT APP CON, PIT ATCT, AMGR, ATA

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

DATE

Digitally signed by

DEVELOPED BY

ROBERT W. COOK

Digitally signed by

DONALD H LANIER

Jan 08, 2019

DONALD H LANIER

Jan 08, 2019

OFFICE

AJV-A431

DATE

12/28/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

DONALD H LANIER

Jan 08, 2019

OFFICE

AJV-5412

DATE

TITLE
MANAGER



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23

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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
BOMAR FIELD-SHELBYVILLE MUNI	KSYI	VOR RWY 36	17	SHELBYVILLE	TN	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
801	801	VOR RWY 36	16	07/31/2008	1W	1985
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
SYI		28 FEBRUARY 2019	ROUTINE			

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>
SYI VOR/DME		BOMAR/SYI 4.85 DME	FAF/IAF				195.51	4.85	3000
RQZ VORTAC	IAF	TURGE/SYI 14.85 DME	NOPT				008.52	31.98	3000
TURGE/SYI 14.85 DME	IF	BOMAR/SYI 4.85 DME					015.51	10.00 (SYI R-196)	2300

MISSED APPROACH

MAP:

4.22 NM AFTER BOMAR/SYI 4.85 DME OR AT SYI 0.63 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2000 THEN CLIMBING LEFT TURN TO 3000 DIRECT SYI VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT R SIDE OF COURSE 195.51 OUTBOUND 3000 FT WITHIN 10 MILES OF BOMAR/SYI 4.85 DME (IAF)
- 2.
3. FAC: 015.51 FAF: BOMAR/SYI 4.85 DME DIST FAF TO MAP: 4.22 DIST FAF TO THLD: 4.22
4. MIN ALT: BOMAR/SYI 4.85 DME 2300, WEDID/SYI 3.00 DME 1600
8. MSA FROM: SYI VOR/DME 3300

EQUIPMENT REQUIREMENTS NOTES:

EQUIPMENT REQUIREMENTS NOTE: DME REQUIRED.

NOTES:

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

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TULLAHOMA ALTIMETER SETTING AND INCREASE ALL MDAS 80 FEET, AND S-36 CAT C/D VISIBILITY 1/4 SM.

CHART NOTE: VDP NA WHEN USING TULLAHOMA ALTIMETER SETTING.



ADDITIONAL FLIGHT DATA:

BOMAR TO RW36: 3.26/45
CHART CIRCLING ICON.
CHART VDP AT 1.85 DME
DISTANCE VDP TO THLD 1.22 NM
CHART FAS OBST: 969 AAO 353048N/0862713W.
HOLD S, LT, 016.00 INBOUND

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

ALTERNATE: NA ☐ STANDARD - CAT C, D 1000-3, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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-36	1220	1	419	1220	1	419	1220	1 1/8	419	1220	1 1/8	419			
CIRCLING	1260	1	459	1420	1	619	1780	3	979	1780	3	979			

CHANGES - REASONS

- MODIFIED BOMAR AND TURGE INT TO DME ONLY FIXES AND DELETED ALL REFERENCES TO BURWI (ULH) NDB - BURWI (ULH) NDB DECOMMISSIONED.
- DELETED CHART NOTE: ADF OR DME REQUIRED - BURWI (ULH) NDB DECOMMISSIONED.
- ADDED EQUIPMENT REQUIREMENTS NOTE: DME REQUIRED - CRITERIA, DME REQUIRED FOR PROCEDURE.
- LOWERED S-36 CATS C/D VISIBILITIES FROM 1 1/4 TO 1 1/8 - CRITERIA, NEW VISIBILITY TABLE REQUIREMENTS.
- ADDED WEDID STEPDOWN SEGMENT - MAINTAIN CURRENT PUBLISHED MINIMUMS.
- ADDED CHART PLANVIEW NOTE: VGSI AND DESCENT ANGLE NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {45}) - VGSI DESCENT ANGLE/TCH AND DESCENT NOT COINCIDENT.
- IN ADDITIONAL FLIGHT DATA: CHANGED CHARTED VDP DISTANCE FROM 1.90 TO: 1.85 DME AND DISTANCE VDP TO THLD FROM: 1.27, TO:1.22 - VDP RECALCULATED.
- INCREASED CATS C/D CIRCLING MDA/HAA/VISIBILITY FROM: CAT C 1420/619 VIS 1 3/4, CAT D 1440/639 VIS 2, TO: CAT C/D 1780/979 VIS 3 - APPLIED NEW CIRCLING CRITERIA, IDENTIFY NEW CAT C/D CONTROLLING OBSTACLE.
- ADDED CHART CIRCLING ICON IN ADDITIONAL FLIGHT DATA - NEW CIRCLING CRITERIA APPLIED TO PROCEDURE.
- DELETED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TULLAHOMA ALTIMETER SETTING AND INCREASE ALL MDAS 80 FEET, AND S-36 CAT C/D VISIBILITY 1/4, AND CIRCLING CAT C AND D VISIBILITY 1/4 - NOTE CHANGED, NEW CIRCLING CRITERIA APPLIED.
- ADDED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TULLAHOMA ALTIMETER SETTING AND INCREASE ALL MDAS 80 FEET, AND S-36 CAT C/D VISIBILITY 1/4 SM - NOTE CHANGED, NEW CIRCLING AND VISIBILITY CRITERIA APPLIED.
- CHANGED PROFILE LINE 1 SIDE OF COURSE AND TERMINAL ROUTE COURSE FROM: SYI VOR/DME TO: BOMAR/SYI 4.85 DME FROM: 195.50, TO: 195.51; TERMINAL ROUTE FROM: TURGE/SYI 14.85 DME TO: BOMAR/SYI 4.85 DME AND FAC COURSES FROM: 015.50 TO: 015.51 - CORRECT TYPO ERROR FROM PREVIOUS AMENDMENT, PUBLISHED COURSES REMAIN THE SAME.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZME, AIRPORT MANAGER

FLIGHT CHECKED BY

MARC J HINCK

DEVELOPED BY
ROBERT W. COOK

APPROVED BY
PATRICK MULQUEEN

Digitally signed by
DONALD H LANIER
Jan 16, 2019

Digitally signed by
ROBERT W COOK
Nov 30, 2018
Digitally signed by
DONALD H LANIER
Jan 16, 2019

OFFICE
FICO

OFFICE
AJV-5431

OFFICE
AJV-5410

DATE
01/15/2019

DATE
10/22/2018

DATE

TITLE
MANAGER



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR OR TACAN STANDARD INSTRUMENT APPROACH PROCEDURE**

TITLE 14 CFR PART 97.23

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>		<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>
EASTERWOOD FIELD		KCLL	VOR OR TACAN RWY 11	19E	COLLEGE STATION	TX
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
321	319	VOR OR TACAN RWY 10	19D	02/01/2018	8E	1965
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
CLL		28 FEBRUARY 2019	ROUTINE			

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>
CIGSO/15.00 DME CW	IAF	ILLED/15.00 DME	NOPT				15.00 DME ARC		2000
GASEC/15.00 DME CCW	IAF	ILLED/15.00 DME	NOPT				15.00 DME ARC		2000
ILLED/15.00 DME	IF	OKIGE/5.00 DME					100.08	10.00 (CLL R-280)	2000
OKIGE/5.00 DME		CLL VORTAC					100.08	5.00	1300

MISSED APPROACH

MAP:

2.61 NM AFTER CLL VORTAC OR AT 2.61 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 ON CLL VORTAC R-101 TO JUDDY INT/CLL 15.00 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT L **SIDE OF COURSE** 280.08 **OUTBOUND** 2100 **FT WITHIN** 10 **MILES OF** *CLL VORTAC (IAF)
- 2.
3. **FAC:** 100.08 **FAF:** CLL VORTAC **DIST FAF TO MAP:** 2.61 **DIST FAF TO THLD:** 2.61
4. **MIN ALT:** OKIGE 2000, CLL VORTAC 1300
8. **MSA FROM:** CLL VORTAC 360-120 3000, 120-360 2300

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: *PROCEDURE TURN NA FOR CAT E
CHART NOTE: RWY 11 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.



ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CLL VORTAC TO RW10: 3.36/50.
CHART CLL R-232 AT CIGSO.
CHART CLL R-318 AT GASEC.
CHART VDP AT 1.45 DME
DISTANCE VDP TO THLD 1.16 NM
CHART FAS OBST: 475 TOWER 303613N/0962216W.
HOLD E, RT, 280.75 INBOUND

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

ALTERNATE: NA ☐ NA WHEN LOCAL WEATHER NOT AVAILABLE.; STANDARD - CAT D 900-2 3/4, CAT E 900-3

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-11	740	1	421	740	1	421	740	1 1/4	421	740	1 1/4	421	740	1 1/4	421
CIRCLING	860	1	539	880	1	559	1000	2	679	1180	2 3/4	859	1180	3	859

CHANGES - REASONS

1. PROC NAME REFERENCE RWY FROM 10 TO 11, ALL RWY 10 REFERENCES FROM 10 TO 11 - PER MVAR UPDATE.

PDF EDITS: (PB) 9/10/19

1. ADDED ASTERIK TO LINE 1, "MILES OF *CLL VORTAC" PAGE 1, 8260-5.

1/8/19. THIS IS A CORRECTED COPY OF THE FORMS DEVELOPED ON 8/2/18.

1. ADDED OKIGE 2000 TO LINE 4.

2. ADDED DME REQUIRED FOR PROCEDURE ENTRY EQUIPMENT REQUIREMENT NOTE.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZHU, IAH APP CON, CLL ATCT, AMGR, ST. AV. DIR., ATA

FLIGHT CHECKED BY
PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE
DATE

Digitally signed by
ALLAN WILL
Jan 17, 2019

DEVELOPED BY
PHILLIP BRANDENBURG

Digitally signed by
ALLAN WILL

OFFICE
AJV-5412
DATE
08/02/2018

APPROVED BY
GEORGE DAVIS

Jan 17, 2019

OFFICE
AJV-5410

DATE

Digitally signed by
ALLAN WILL
Jan 17, 2019
TITLE
MANAGER



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> MCKINNEY NATIONAL	<u>AIRPORT ID</u> KTKI	<u>PROCEDURE NAME</u> ILS OR LOC RWY 18	<u>ORIGINAL/AMENDMENT</u> 6	<u>CITY</u> DALLAS	<u>STATE</u> TX	
<u>AIRPORT ELEVATION</u> 589	<u>TDZE</u> 576	<u>SUPERSEDED</u> ILS OR LOC RWY 18	<u>ORIGINAL/AMENDMENT</u> 5B	<u>DATED</u> 06/23/2016	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2015
<u>FACILITY</u> I-EFE	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
BYP VORTAC		JIPUK/I-EFE 6.19 DME	FAF/IAF				221.17	24.07	2400

MISSED APPROACH

MAP:

ILS: DA

LOC: 4.62 NM AFTER JIPUK/I-EFE 6.19 DME OR AT I-EFE 1.57 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 2400 ON HEADING 360 AND TTT VOR/DME R-042 TO BRDJE/TTT 41.47 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 2500 DIRECT BYP VORTAC AND HOLD.

PROFILE:

- PT R SIDE OF COURSE 359.12 OUTBOUND 2400 FT WITHIN 10 MILES OF JIPUK/I-EFE 6.19 DME (IAF)
-
- FAC: 179.12 FAF: JIPUK/I-EFE 6.19 DME DIST FAF TO MAP: 4.62 DIST FAF TO THLD: 4.62
- MIN ALT: JIPUK/I-EFE 6.19 DME 2100, LIRNE/I-EFE 4.07 DME 1420*
- DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: 1150
- MIN GS INCPT: 2100 GS ALT AT FAF : JIPUK/I-EFE 6.19 DME 2100 OM: MM: IM:
- GP ANGLE: 3.00 34:1: 20:1: TCH: 52.9
- MSA FROM: BYP VORTAC 3800 (30NM)

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED FOR PROCEDURE ENTRY.
DME REQUIRED.



NOTES:

CHART NOTE: VDP NA WHEN USING DALLAS LOVE FIELD ALTIMETER SETTING.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE DALLAS LOVE FIELD ALTIMETER SETTING AND INCREASE ALL DA 70 FEET AND ALL MDA 80 FEET, INCREASE S-LOC 18 CATS C/D VISIBILITY 1/8 SM, INCREASE CIRCLING VISIBILITY CAT C 1/2 SM, CAT D 1/4 SM.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 18 CATS C/D VISIBILITY TO 1 SM.

CHART NOTE: FOR INOPERATIVE ALS WHEN USING DALLAS LOVE FIELD ALTIMETER SETTING, INCREASE S-ILS 18 ALL CATS VISIBILITY TO 7/8 SM AND INCREASE S-LOC 18 CATS C/D TO 1 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW: BYP 24.07 DME AT JIPUK.

CHART CIRCLING ICON.

CHART IN PLANVIEW: (CFBHF) (332142.33N/0963450.24W).

CHART VDP AT 2.49 DME*

DISTANCE VDP TO THLD 0.92 NM

* LOC ONLY

CHART FAS OBST: 660 TREE 331332N/0963517W.

CHART: 1033 TOWER 331548N/0963555W.

CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE BYP VORTAC, LT, 204.39 INBOUND.

HOLD NE, RT, 222.49 INBOUND

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.

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
S-ILS 18	776	1/2	200	776	1/2	200	776	1/2	200	776	1/2	200			
S-LOC 18	920	1/2	344	920	1/2	344	920	5/8	344	920	5/8	344			
CIRCLING	1040	1	451	1120	1	531	1200	1 1/2	611	1380	2 1/2	791			



CHANGES - REASONS

1. MINIMUM SAFE ALTITUDE (MSA) CENTER CHANGED FROM MELISA (VLY) NDB TO BONHAM (BYP) VOR/DME, DISTANCE CHANGED FROM 25 NM TO 30 NM - MELISA (VLY) NDB BEING DECOMMISSIONED AND IAW 8260.3D 2-3-2 B. (1).
2. FEEDER SEGMENT BONHAM (BYP) VORTAC TO MELISA (VLY) NDB CHANGED TO BONHAM (BYP) VORTAC TO JIPUK - MELISA (VLY) NDB BEING DECOMMISSIONED.
3. PROCEDURE TURN (PT) INITIAL APPROACH FIX CHANGED FROM MELISA (VLY) NDB TO FIX JIPUK - MELISA (VLY) NDB BEING DECOMMISSIONED.
4. FINAL SEGMENT LENGTH CHANGED FROM 4.5 NM TO 4.62 NM - PER IAPA PFAF LOCATION.
5. MISSED APPROACH CHANGED FROM CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 2400 DIRECT VLY NDB AND HOLD TO CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 2400 DIRECT BRDJE/TTT 41.47 DME AND HOLD - MELISA (VLY) NDB BEING DECOMMISSIONED.
6. VISUAL DESCENT POINT (VDP) LOCATION CHANGED FROM 2.62/1.05 TO 2.49/0.92 - S-LOC MDA LOWERED BY 40 FEET.
7. DELETED NOTE: ADF REQUIRED - MELISA (VLY) NDB BEING DECOMMISSIONED.
8. ADDED NOTE: DME REQUIRED - FIXES NOW USING DME FROM {EFE} ILS.
9. ADDED NOTE: DME REQUIRED FOR PROCEDURE ENTRY. - IAW 8260.19H 8-6-8 A. (1) (B).
10. INOPERATIVE APPROACH LIGHT NOTE CHANGED FROM FOR INOPERATIVE MALSR INCREASE S-LOC 18 CATS C/D VISIBILITY TO 2 1/2 MILE TO FOR INOPERATIVE ALS, INCREASE CAT C/D VISIBILITY TO 1 SM - IAW AJV VIS CHECK CALCULATOR AND 8260.3D TABLE 3-3-1.
11. S-LOC 18 MDA/HAT CHANGED FROM 960/384 TO 920/344 - NEW CONTROLLING OBSTACLE.
12. REMOVED S-LOC 18 AND CIRCLING MINS. - DME IS REQUIRED FOR ALL PORTIONS OF FINAL, LIRNE FIX MINS RETAINED FOR LOWEST MINS AVAILABLE.
13. CHANGED INOP NOTE WHEN USING DALLAS LOVE FIELD FROM FOR INOPERATIVE MALSR WHEN USING DALLAS LOVE FIELD ALTIMETER SETTING, INCREASE S-ILS 18 ALL CATS VISIBILITY TO 7/8 MILE, AND WHEN USING LIRNE FIX MINIMUMS INCREASE S-LOC 18 CATS C/D TO 1 3/8 MILE, TO FOR INOPERATIVE ALS WHEN USING DALLAS LOVE FIELD ALTIMETER SETTING, INCREASE S-ILS 18 ALL CATS VISIBILITY TO 7/8 SM AND INCREASE S-LOC 18 CATS C/D TO 1 1/4 SM.
14. ADDED TO ADDITIONAL FLIGHT DATA BLOCK - CHART IN PLANVIEW BYP 24.07 DME AT JIPUK. - FLIGHT INSPECTION REQUIREMENT.
15. CHANGED BACK-UP ALTIMETER NOTE FROM CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE DALLAS LOVE FIELD ALTIMETER SETTING AND INCREASE ALL DA 70 FEET AND ALL MDA 80 FT,INCREASE S-LOC 18 CAT A VISIBILITY 1/4 MILE, CATS C/D VISIBILITY 1/8 MILE AND CIRCLING CAT C/D VISIBILITY 1/4 MILE. TO CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE DALLAS LOVE FIELD ALTIMETER SETTING AND INCREASE ALL DA 70 FEET AND ALL MDA 80 FEET, INCREASE S-LOC 18 CATS C/D VISIBILITY 1/8 SM, INCREASE CIRCLING VISIBILITY CAT C 1/2 SM, CAT D 1/4 SM.
16. ADDED ALTIMETER SOURCE/BACK-UP (B/U) ALTIMETER SOURCE INFORMATION - IAW 8260.19H 8-7-1 C. (3).

COORDINATED WITH:

A4A

ALPA

X

AOPA

X

APA

HAI

NBAA

X

OTHER:

TKI ATCT, REGIONAL APP CON, ZFW, ARPT MGR

Digitally signed by			
FLIGHT CHECKED BY		OFFICE	
ANTHONY D VALLERA		FICO	
		DATE	
		01/08/2019	
Digitally signed by			
DEVELOPED BY		OFFICE	
ROBERT GRIM		AJV-5431	
		DATE	
		10/25/2018	
Nov 23, 2018			
Digitally signed by			
APPROVED BY		OFFICE	
PATRICK MULQUEEN		AJV-5430	
		DATE	
		TITLE	
		MANAGER	



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.

<u>AIRPORT</u> EL PASO INTL	<u>AIRPORT ID</u> KELP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 26R	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> EL PASO	<u>STATE</u> TX	
<u>AIRPORT ELEVATION</u> 3962	<u>TDZE</u> 3950	<u>SUPERSEDED</u> RNAV (GPS) RWY 26R	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 08/20/2015	<u>MAG VAR</u> 8E	<u>EPOCH YEAR</u> 2015
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
FABAN	IAF	APUVE		TF	FB	1.00	288.32	10.88	6900
PIERS	IAF	APUVE		TF	FB	1.00	187.26	9.54	6900
APUVE	IF	WUGPI		TF	FB	1.00	265.44	4.40	6200
WUGPI		HODAK		TF	FB	1.00	265.39	2.59	5400
HODAK	FAF	JALMO/2.00 NM TO RW26R		TF	FB	0.30	265.37	2.41	
JALMO/2.00 NM TO RW26R		RW26R	MAP	TF	FO	0.30	265.37	2.00	
RW26R	MAP	4362 MSL		CA			265.37		
4362 MSL		FABAN		DF	FO	1.00			7500

MISSED APPROACH

MAP:

LNAV: RW26R

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN 7500 DIRECT FABAN AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT APUVE

3. FAC:

265.37

FAF: HODAK

DIST FAF TO MAP: 4.41

DIST FAF TO THLD: 4.41

4. MIN ALT: APUVE 6900, WUGPI 6200, HODAK 5400, JALMO/2.00 NM TO RW26R 4620

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1

IS NOT CLEAR

20:1

IS CLEAR

TCH:

8. MSA FROM: RW26R 8800

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA FOR CAT D NORTH OF RWY 26R AND NORTHWEST OF RWY 4.
CHART NOTE: RWY 26R HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT FABAN ON V66-198 EASTBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT PIERS ON V560 EASTBOUND.

ADDITIONAL FLIGHT DATA:

HODAK TO RWY26R: 3.00/45.
CHART BIGGS AAF.
CHART: ASR.
CHART CIRCLING ICON.
CHART VDP AT 1.27 NM TO RW26R
CHART FAS OBST: 4052 ANTENNA 314818N/1061939W.
CHART: 4062 TRANSMISSION_LINE 314744N/1061848W.
HOLD E, LT, 284.91 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4

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
LNAV MDA	4400	1	450	4400	1	450	4400	1 3/8	450	4400	1 3/8	450			
CIRCLING	4420	1	458	4440	1	478	4460	1 1/2	498	4680	2 1/4	718			



CHANGES - REASONS

1. CANCELED IF STEPDOWN FIX (EPUPE) AT 314757.54N/1061255.75W AND ESTABLISHED IF STEPDOWN FIX (WUGPI) AT THE SAME COORDINATES - ATC REQUEST TO RENAME IF STEPDOWN FIX TO A NEW PRONOUNCEABLE NAME THAT DOES NOT SOUND LIKE IF FIX (APUVE).
2. CHANGED INTERMEDIATE STEPDOWN ALTITUDE FROM 6900 TO 6200 - LOWERED TO ELIMINATE EXCESSIVE DESCENT GRADIENT.
3. CHANGED 'MIN. ALT: APUVE 6900, EPUPE 6900, HODAK 5400' TO 'MIN. ALT: APUVE 6900, WUGPI 6200, HODAK 5400, *JALMO/2.00 NM TO RW26 4620' ON 8260-3 LINE 4 - IF STEPDOWN FIX (WUGPI) ALTITUDE LOWERED TO ELIMINATE EXCESSIVE DESCENT GRADIENT AND ADDED LNAV STEPDOWN FIX (JALMO).
4. CHANGED AIRPORT ELEVATION FROM 3961 TO 3962 - DUE TO NEW AIRPORT SURVEY.
5. CHANGED TDZE ELEVATION FROM 3949 TO 3950 - DUE TO NEW AIRPORT SURVEY.
6. LOWERED LNAV ALL CATS HAT FROM 451 TO 450 - MAINTAINING PREVIOUSLY PUBLISHED LNAV MDA.
7. LOWERED CIRCLING CAT A HAA FROM 459 TO 458, RAISED CIRCLING CAT B MDA/HAA FROM 4420/459 TO 4440/478, LOWERED CIRCLING CAT C HAA FROM 499 TO 498 AND CIRCLING CAT D MDA/HAA FROM 5820/1859 TO 4680/718 - UPDATED EVALUATION WHICH ADDED FINAL STEPDOWN FIX (JALMO) 2.00 NM FROM RW26R, APPLIED NEW CIRCLING CRITERIA, ADDED A CIRCLING RESTRICTION AND AIRPORT ELEVATION EVALUATIONS.
8. REDUCED CAT D VISIBILITY FROM 3 TO 2 1/4 - ADDED CAT D CIRCLING RESTRICTIONS.
9. ALTERNATE MINIMUMS CHANGED FROM STANDARD @ CAT D 1900-3 TO STANDARD @ CAT D 800-2 1/4. - REDUNDANT WEATHER SOURCE, CAT D VISIBILITY WAS REDUCED FROM 3 TO 2 1/4.
10. CHANGED '34:1 IS CLEAR' TO '34:1 IS NOT CLEAR' ON 8260.3 LINE 7 - UPDATED EVALUATION, IAW 8260.19H, PARA 8-6-7G(3).
11. ADDED '20:1 IS CLEAR' TO 8260.3 LINE 7 - UPDATED EVALUATION, IAW 8260.19H, PARA 8-6-7G(3).
12. DELETED 'CHART NOTE: DME/DME RNP-0.3 NA' - IAW 8260.19H, PARA 4-6-10E AND MEMO 266 DATED 7/18/2018.
13. ADDED 'RNP APCH' TO PBN REQUIREMENTS NOTES - IAW 8260.19H, PARA 8-6-8B(1) AND MEMO 266 DATED 7/18/2018.
14. ADDED CHART NOTE 'RWY 26R HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED' - IAW 8260.19H, PARA 8-6-11K(3).
15. ADDED 'CHART NOTE: CIRCLING NA FOR CAT D NORTH OF RWY 26R AND NORTHWEST OF RWY 4' - RESTRICTION ADDED TO LOWER CAT D CIRCLING MINIMUMS AND MAINTAIN PREVIOUS PFAF ALTITUDE.
16. CHANGED FAS OBST FROM '4148 TOWER 314736N/1061724W' TO '4052 ANTENNA 314818N/1061939W' IN ADDITIONAL FLIGHT DATA - UPDATED EVALUATION.
17. ADDED 'CHART 4062 TRANSMISSION LINE 314744N/1061848W' IN ADDITIONAL FLIGHT DATA - UPDATED EVALUATION.
18. CHANGED MISSED APPROACH CA LEG TERMINATION ALTITUDE FROM 4361 TO 4362 - RESULT OF AIRPORT ELEVATION CHANGE.
19. CHANGED 'CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT FABAN ON V66-198 EAST BOUND' TO 'CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT FABAN ON V66-198 EASTBOUND' - IAW 8260.19 H, PARA 8-2-5E.
20. CHANGED 'CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT PIERS ON V560 EAST BOUND' TO 'CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT PIERS ON V560 EASTBOUND' - IAW 8260.19 H, PARA 8-2-5E.

COORDINATED WITH:

A4A☒ALPA☒AOPA☒APA☒HAI☐NBAA☒OTHER: EL PASO APP CON, AMGR

FLIGHT CHECKED BY

DONALD MCGOUGH

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

OFFICE
FICO

DATE
1/9/19

DEVELOPED BY

DIANE S LAIR (RAFAEL A MARTINEZ)

Digitally signed by
DIANE S LAIR
Nov 27, 2018

OFFICE
AJV-5433

DATE
10/30/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by
DAVID TEFFETELLER
Jan 11, 2019

OFFICE
AJV-5430

DATE

TITLE
MANAGER



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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SAN ANGELO RGNL/MATHIS FIELD	KSJT	ILS Y OR LOC Y RWY 3	22	SAN ANGELO	TX	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1919	1917	ILS OR LOC RWY 3	21A	07/29/2010	5E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
I-SJT		28 FEBRUARY 2019	02/28/2019			

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>
TANKR INT/SJT VORTAC 11.00 DME		WOOLE LOM/I-SJT 6.88 DME					154.08	10.81	4100
SJT VORTAC		WOOLE LOM/I-SJT 6.88 DME					217.59	8.44	4100
EDWAR INT/SJT VORTAC 7.00 DME		WOOLE LOM/I-SJT 6.88 DME					264.98	10.29	4100
CHILD INT		WOOLE LOM/I-SJT 6.88 DME					330.63	14.35	4100
JIGEM/SJT VORTAC 15.00 DME CCW	IAF	BONNY/SJT VORTAC 15.00 DME	NOPT				15.00 DME ARC (SJT LR-224)		4100
FELUV/SJT VORTAC 15.00 DME CW	IAF	BONNY/SJT VORTAC 15.00 DME	NOPT				15.00 DME ARC (SJT LR-208)		4100
BONNY/SJT VORTAC 15.00 DME	IF	WOOLE LOM/6.88 DME					038.15	6.57 (I-SJT)	3900

MISSED APPROACH

MAP:

ILS: DA
 LOC: 5.74 NM AFTER WOOLE LOM/I-SJT 6.88 DME OR AT 1.15 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 THEN RIGHT TURN DIRECT SJT VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT L SIDE OF COURSE 218.15 OUTBOUND 4100 FT WITHIN 10 MILES OF WOOLE LOM/6.88 DME (IAF)

2.

3. FAC: 038.15 FAF: WOOLE LOM/6.88 DME DIST FAF TO MAP: 5.74 DIST FAF TO THLD: 5.74

4. MIN ALT: WOOLE LOM/6.88 DME 3900, ERRNY/I-SJT 3.12 DME 2620*

5. DIST TO THLD FROM OM: 5.74 MM: IM: 150 HAT: GS ANT: 1000

6. MIN GS INCPT: 3900 GS ALT AT FAF : OM: 3824 MM: IM:

7. GP ANGLE: 3.00 34:1: 20:1: TCH: 50.8

8. MSA FROM: SJ NDB 4300

EQUIPMENT REQUIREMENTS NOTES:

ADF OR DME REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PROFILE NOTE: USE I-SJT DME WHEN ON THE LOCALIZER COURSE.

CHART PROFILE NOTE: CAT E PROCEDURE TURN NA.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 03 CAT E VISIBILITY TO RVR 4000, S-LOC 03 CAT C/D/E VISIBILITY TO 2 SM.

CHART NOTE: CIRCLING NA FOR CAT E W OF RWY 18-36.

CHART NOTE: ERRNY DME MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 03 CAT C/D/E VISIBILITY TO RVR 5500.

CHART NOTE: **RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 2.12 DME*.

DISTANCE VDP TO THLD 0.98 NM.

* LOC ONLY.

CHART I-SJT 13.45 DME AT BONNY.

HOLD NE, LT, 235.00 INBOUND.

2380 AAO 311706N/1003500W.

CHART: ASR.

CHART CIRCLING ICON.

CHART SJT R-309 AT JIGEM.

CHART SJT R-135 AT FELUV.

CHART FAS OBST: 2027 POLE 312007N/1003036W.



MINIMUMS:

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

ALTERNATE: NA☐

ILS: STANDARD; LOC: STANDARD - CAT D 800-2 1/2, CAT E 800-2 3/4, NA WHEN CONTROL TOWER CLOSED.

<u>CATEGORY:</u>	A			B			C			D			E		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
S-ILS 03**	2117	2400	200	2117	2400	200	2117	2400	200	2117	2400	200	2117	2400	200
S-LOC 03	2620	2400	703	2620	2400	703	2620	1 5/8	703	2620	1 5/8	703	2620	1 5/8	703
CIRCLING	2620	1	701	2620	1	701	2620	2	701	2700	2 1/2	781	2700	2 3/4	781
ERRNY DME MINIMUMS															
S-LOC 03	2280	2400	363	2280	2400	363	2280	3500	363	2280	3500	363	2280	3500	363
CIRCLING	2360	1	441	2380	1	461	2500	1 1/2	581	2700	2 1/2	781	2700	2 3/4	781



CHANGES - REASONS

1. NEW CIRCLING RADII APPLIED, CHARTED CIRCLING ICON - IAW 8260.3C 2-7-1.
2. CHANGED MINIMUM SEGMENT ALTITUDE ALT FROM 4400 TO 4300 DUE TO NEW IAPA DATA FOR CONTROLLING OBS 48-004098.
3. CHANGED FINAL ILS AND LOC CRS FROM 034.15 TO 038.15 - UPDATED MAGVAR E9/1980 TO E5/2020.
4. EDWAR FEEDER COURSE CHANGE FROM 261.00 TO 264.99M - UPDATED MAGVAR E9/1980 TO E5/2020.
5. EDWAR FEEDER MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 PT MDA INCREASED TO 4100.
6. TANKR FEEDER COURSE CHANGE FROM 150.00 TO 154.08M - UPDATED MAGVAR E9/1980 TO E5/2020.
7. TANKR FEEDER MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - PT MINIMUM SEGMENT ALTITUDE INCREASED TO 4100.
8. SJT FEEDER MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - PT MINIMUM SEGMENT ALTITUDE INCREASED TO 4100.
9. CHILD FEEDER COURSE CHANGE FROM 327.00 TO 330.63M - UPDATED MAGVAR E9/1980 TO E5/2020.
10. CHILD FEEDER MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - PT MINIMUM SEGMENT ALTITUDE INCREASED TO 4100.
11. IAF R-309 ARC TERRAIN FOR AIRSPACE CHANGED FROM 2500 TO 2579 (2600) - NEW OBSTACLE EVALUATION.
12. IAF R-309 ARC MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - FOR NEW AIRSPACE AND PT ALTITUDE REQUIREMENTS.
13. IAF R-135 ARC CONTROLLING OBS CHANGED FROM 2749 AAO TO 2928 WINDMILL - NEW OBSTACLE EVALUATION.
14. IAF R-135 ARC TERRAIN FOR AIRSPACE CHANGED FROM 2549 (2500) TO 2569 (2600) - NEW OBSTACLE EVALUATION.
15. IAF R-135 ARC MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - FOR NEW AIRSPACE AND PT ALT REQUIREMENTS.
16. BONNY INTERMEDIATE COURSE CHANGED FROM 034.00 TO 038.15M- UPDATED MAGVAR CHANGE FROM E9/1980 TO E5/2020.
17. BONNY INTERMEDIATE CONTROLLING OBS CHANGED FROM 2749 AAO TO 2903 WINDMILL - NEW OBSTACLE EVALUATION.
18. PT INBOUND COURSE CHANGED FROM 214.00 TO 218.15M - UPDATED MAGVAR CHANGE FROM E9/1980 TO E5/2020.
19. PT TERRAIN FOR AIRSPACE CHANGED FROM 2549 (2500) TO 2618 (2600) - NEW OBSTACLE EVALUATION.
20. PT MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - FOR NEW IAPA AIRSPACE EVALUATION.
21. CIRC CAT C OBS CHANGED FROM 2039 ANT TO 2183 TOWER - NEW OBSTACLE EVALUATION.
22. CIRC CAT C MDA/HAA CHANGED FROM 2460/543 TO 2500/581 - NEW CIRCLING RADII.
23. CIRC CAT D OBSTACLE CHANGED FROM 2039 ANT TO 2391 AAO - NEW OBSTACLE EVALUATION.
24. CIRC CAT D MDA/HAA CHANGED FROM 2480/563 TO 2700/781 - NEW CIRCLING RADII.
25. CIRC CAT E OBS CHANGED FROM 2272 TOWER TO 2332 AAO - NEW OBSTACLE EVALUATION.
26. CIRC CAT E MDA CHANGED FROM 2640/721 TO 2700/781. VISIBILITY CHANGED FROM 2 1/2 TO 2 3/4. - NEW CIRCLING RADII.
27. KSJT ELEV CHANGED FROM 1917 TO 1919 - NEW AIRNAV DATA.
28. CIRC A/B HAA CHANGED FROM 543 TO 541 - NEW AIRPORT AIRNAV DATA.
29. LOC VDP ADDED AT 2.12 DME - PRIOR 20:1 PENETRATIONS HAVE BEEN REMOVED.
30. CHANGED VIS FROM MI TO FT - RWY HAS RVR.
31. ALTERNATE MISSED APPROACH DELETED - PER FPT REQUEST.
32. CHANGED MSA CONTROLLING OBSTACLE FROM 3326 MSL TOWER TO 3283 MSL TOWER, AND MSA ALTITUDE CHANGED FROM 4400 TO 4300 - SAME OBSTACLE DIFFERENCE IS DUE DATABASE UPDATE .
33. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 03 CAT E VISIBILITY TO RVR 4000, S-LOC 03 CAT C/D/E VISIBILITY TO 2 SM.
34. ALTERNATE MINIMUMS CHANGED FROM STANDARD EXCEPT, ILS CATEGORY E 800-2 1/2. LOC CATEGORY E 800-2 1/2 TO ILS: STANDARD - NA WHEN CONTROL TOWER CLOSED; LOC: STANDARD - CAT D 800-2 1/2, CAT E 800-2 3/4, NA WHEN CONTROL TOWER CLOSED.
35. FAS OBST CHANGED FROM 2026 MSL POLE TO 2027 MSL POLE. SAME OBSTACLE LOCATION - DATABASE UPDATE.
36. DISTANCE FAF TO MAP/THLD CHANGED FROM 5.73 TO 5.74 - DUE TO ROUNDING.
37. MIDDLE MARKER INFORMATION DELETED - AS PER FPT CHECKLIST.
38. UPDATED ALL BEARINGS TO SJT LOM / WOOLE - UPDATED FROM AIRNAV ON MAGVAR CHG FROM E9/1980 TO E5/2020.
39. CHANGED FIX (FELUV) LAT/LONG FROM 311010.57N/1001715.86W TO 311014.37N/1001709.57W - TO REFINE FIX LOCATION OF NAMED ARC START POINT.
40. CHANGED SJT VORTAC FEEDER SEGMENT CONTROLLING OBSTACLE FROM 2710 TOWER (312517.00N/1003237.00W) LOCATED IN SECONDARY AREA TO AN 2370 AAO (311709.00N/1003457.00W) LOCATED IN PRIMARY AREA - AS PER 8260.19H, PARA 2-11-5 (B)(1) (NOTE), PT MINIMUM SEGMENT ALTITUDE INCREASE FORM 4000 TO 4100 AND FLIGHT CHECK REQUEST.
41. CHANGED FELVU 15 DME ARC LEAD RADIAL (LR) FROM LR-207 TO LR-208 - FELVU MOVED TO NEW LAT/LONG.

12/20/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 04/23/2018:

1. ADDED TO CHANGES-REASON: 42. CHANGED FELVU 15 DME ARC LEAD RADIAL (LR) FROM LR-207 TO LR-208 - FELVU MOVED TO NEW LAT/LONG.
2. ADDED TO CHANGES-REASON: 40. CHANGED FIX (FELUV) LAT/LONG FROM 311010.57N/1001715.86W TO 311014.37N/1001709.57W - TO REFINE FIX LOCATION OF NAMED ARC START POINT.
3. ADDED TO CHANGES-REASONS: 39. UPDATED ALL BEARINGS TO SJT LOM / WOOLE - UPDATED FROM AIRNAV ON MAGVAR CHG FROM E9/1980 TO E5/2020.
4. ADDED TO CHANGES-REASONS: 41. CHANGED SJT VORTAC FEEDER SEGMENT CONTROLLING OBSTACLE FROM 2710 TOWER (312517.00N/1003237.00W) LOCATED IN SECONDARY AREA TO AN 2370 AAO (311709.00N/1003457.00W) LOCATED IN PRIMARY AREA - AS PER 8260.19H, PARA 2-11-5 (B)(1) (NOTE), PT MINIMUM SEGMENT ALTITUDE INCREASE FORM 4000 TO 4100 AND FLIGHT CHECK REQUEST.



COORDINATED WITH:

A4A ☒

ALPA ☒

AOPA ☒

APA ☒

HAI ☐

NBAA ☒

OTHER: ZFW ARTCC, ZHU ARTCC, MAF ATCT, ARPT MGR, ST AV DIR

FLIGHT CHECKED BY

PENDING

Digitally signed by

OFFICE

DATE

WARDELL HENNING

Jan 17, 2019

DEVELOPED BY

WARDELL HENNING (ANDRE MARSH)

Digitally signed by

OFFICE

DATE

WARDELL HENNING

AJV-5432

12/18/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

Jan 17, 2019

OFFICE

DATE

TITLE

WARDELL HENNING

AJV-5430

MANAGER

Jan 17, 2019



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
NDB STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.27

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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SAN ANGELO RGNL/MATHIS FIELD	KSJT	NDB RWY 3	15	SAN ANGELO	TX	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1919	1917	NDB RWY 3	14A	04/20/2000	5E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
SJ		28 FEBRUARY 2019	02/28/2019			

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>
EDWAR INT		SJ NDB					264.98	10.29	4100
CHILD INT		SJ NDB					330.63	14.35	4100
SJT VORTAC		SJ NDB					217.59	8.44	4100
TANKR INT		SJ NDB					154.08	10.81	4100

MISSED APPROACH

MAP:

5.74 NM AFTER SJ NDB

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 4000 DIRECT SJ NDB AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT L **SIDE OF COURSE** 218.10 **OUTBOUND** 4100 **FT WITHIN** 10 **MILES OF** SJ NDB (IAF)

2.

3. **FAC:** 038.10 **FAF:** SJ NDB **DIST FAF TO MAP:** 5.74 **DIST FAF TO THLD:** 5.74

4. **MIN ALT:** SJ NDB 3900

8. **MSA FROM:** SJ NDB 4300

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

CHART NOTE: FOR INOPERATIVE ALS, INCREASE CAT A/B VISIBILITY TO RVR 5500, AND CAT C/D TO 2 SM.



ADDITIONAL FLIGHT DATA:
SJ NDB TO RW03: 3.18/45
HOLD SW, RT, 038.10 INBOUND
CHART: ASR.
CHART CIRCLING ICON.
FAS OBST: 2333 AAO 311800N/1003414W.
2370 AAO 311708N/1003457W.

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2, 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-03	2640	4000	723	2640	4000	723	2640	1 5/8	723	2640	1 5/8	723			
CIRCLING	2640	1	721	2640	1	721	2640	2	721	2700	2 1/2	781			

CHANGES - REASONS

- 1. FINAL CRS CHANGE FROM 034.10M TO 038.10M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 2. SJT NDB HOLDING CRS CHANGE FROM 034.10M TO 038.10M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 3. TANKR FEEDER CRS CHANGE FROM 150.08M TO 154.08M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 4. CHILD FEEDER CRS CHANGE FROM 326.63M TO 330.63M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 5. EDWAR FEEDER CRS CHANGE FROM 260.98M TO 264.987M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 6. KSJT ELEV CHANGED FROM 1917 TO 1919 - UPDATED AIRNAV INFO.
- 7. CAT A CIRCLING MDA/HAA CHANGED FROM 2460/543 TO 2640/723 - NEW OBSTACLE EVALUATION.
- 8. CAT B CIRCLING MDA/HAA CHANGED FROM 2460/543 TO 2640/723 - NEW OBSTACLE EVALUATION.
- 9. CAT C CIRCLING MDA/HAA RAISED FROM 2460/543 - 1 1/2 TO 2640/723 -1 5/8 - 2183 TOWER, NEW CIRCLING CRITERIA USED IAW 8260.3C 2-7-1.
- 10. CAT D CIRCLING MDA/HAA RAISED FROM 2480/563 - 2 TO 2700/781 - 2 1/2 - 2391 AAO, NEW CIRCLING CRITERIA USED IAW 8260.3C 2-7-1.
- 11. FINAL CONTROLLING OBSTACLE CHANGED FROM 2026 POLE TO 2333 AAO - NEW OBSTACLE EVALUATION.
- 12. PT MINIMUM SEGMENT ALTITUDE CHANGED FROM 4000 TO 4100 - HIGH TERRAIN FOR AIRSPACE INCREASED FROM 2517 (2500) TO 2618 (2600) DUE TO NEW IAPA EVALUATION.
- 13. CHILD, EDWAR SJT AND TANKR FEEDER MINIMUM SEGMENT ALTITUDES CHANGED FROM 4000 TO 4100 - PT MINIMUM SEGMENT ALTITUDE INCREASED TO 4100.
- 14. CHARTED CIRCLING ICON - IAW 8260.3C 2-7-1.
- 15. ADDED INOP NOTE - VISCHECK INFORMATION.
- 16. CHANGED VISIBILITIES FROM SM TO FT - VISCHECK EVALUATION FOR RVR.
- 17. CHANGED DESCENT ANGLE FROM 3.19/45 TO 3.18/45.- IAPA DERIVED VALUES.
- 18. CHANGED ALL BEARINGS TO SJT LOM / WOOLE - UPDATED FROM AIRNAV ON MAGVAR CHG FROM E9/1980 TO E5/2020.
- 19. CHANGED SJT VORTAC FEEDER CRS FROM 217.59M TO 222.59M - UPDATED MAGVAR E9/1980 TO E5/2020.

12/20/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 04/23/2018:
1. ADDED FAS OBST: 2333 AAO 311800N/1003414W TO ADDITIONAL FLIGHT DATA.
2. UPDATED CHANGES-REASONS/MAPS AND -9 TO IDENTIFY SAME FAS OBS: 2333 AAO.
3. CHILD -2 MOVED TO 8260-2 FILE.



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZFW ARTCC, ZHU ARTCC, MAF ATCT, ARPT MGR, ST AV DIR,

FLIGHT CHECKED BY

PENDING

Digitally signed by

OFFICE

DATE

WARDELL HENNING

Jan 17, 2019

DEVELOPED BY

WARDELL HENNING (ANDRE MARSH)

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5432

DATE

12/17/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5430

DATE

TITLE

MANAGER



**U.S. DEPARTMENT OF TRANSPORTATION -- FEDERAL AVIATION ADMINISTRATION
RADAR -- STANDARD INSTRUMENT APPROACH PROCEDURE -- FLIGHT STANDARDS SERVICE -- FAR PART 97.31**

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.

Initial approach minimum altitude(s) shall correspond with those established for enroute operation in the particular area or as set forth below. Positive identification must be established with the radar controller. From initial contact with radar to final authorized landing minimums, the instructions of the radar controller are mandatory except when; (A) Visual contact is established on final approach at or before descent to the authorized landing minimums; or (B) at pilot's discretion if it appears desirable to discontinue the approach.

Except when the radar controller may direct otherwise prior to final approach, a missed approach shall be executed as provided below when; (A) communications on final approach is lost for more than 5 seconds during a precision approach, or for more than 30 seconds during a surveillance approach; (B) directed by radar controllers; (C) visual contact is not established upon descent to authorized landing minimums; or (D) if landing is not accomplished.

RADAR TERMINAL AREA MANEUVERING SECTORS AND ALTITUDES <i>(Sectors and distances measured from radar antenna)</i>												MISSED APPROACH
FROM	T O	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	MAP:
AS ESTABLISHED BY CURRENT SAN ANGELO ASR MINIMUM VECTORING ALTITUDE CHART												RWY 18, 36: THLD.
												RWY 18: CLIMB TO 4000, THEN LEFT TURN DIRECT SJT VORTAC. RWY 36: CLIMB TO 4000, THEN RIGHT TURN DIRECT SJT VORTAC.

MINIMUMS

TAKEOFF:		STANDARD	X	SEE FAA FORM 8260-15A FOR THIS AIRPORT						ALTERNATE: N A			STANDARD @					
CATEGORY =====>		A			B			C			D			E				
		DH/ MDA	VIS	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA		
S-18		2500	1	592	2500	1	592	2500	1 3/4	592	2500	1 3/4	592	2500	1 3/4	592		
S-36		2460	1	541	2460	1	541	2460	1 5/8	541	2460	1 5/8	541	2460	1 5/8	541		
CIRCLING		2500	1	641	2500	1	641	2500	1 3/4	641	2700	2 1/2	781	2700	2 3/4	781		

NOTES:

RWY 18: FAF 6.0 MILES FROM THRESHOLD, MINIMUM ALTITUDE 4000. FINAL APPROACH COURSE 182.31.
RECOMMENDED ALTITUDES: 5 MILES 3660, 4 MILES 3320, 3 MILES 2960, 2 MILES 2600.
RWY 36: FAF 6.0 MILES FROM THRESHOLD, MINIMUM ALTITUDE 4000. FINAL APPROACH COURSE 002.31.
RECOMMENDED ALTITUDES: 5 MILES 3660, 4 MILES 3320, 3 MILES 2960, 2 MILES 2620.

CHART NOTE: CIRCLING NA FOR CAT E W OF RWY 18-36. @NA WHEN CONTROL TOWER CLOSED.
CHART NOTE: WHEN CONTROL TOWER CLOSED, ASR NA. @CAT D 800 - 2 1/2, CAT E 800 - 2 3/4.
CHART NOTE: RWY 36 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.

LOST COMMUNICATIONS (ALL RWYS): As directed by ATC on initial contact.

ADDITIONAL FLIGHT DATA

TDZE: 1908 RWY: 18 TDZE: 1919 RWY: 36

FAS OBST:
RWY 18: 2185 TOWER 312719.00N/1002933.00W
RWY 36: 2149 TREE 311746.00N/1002913.00W
CHART: CIRCLING ICON.

MAG VAR: 5E EPOCH YEAR: 2020

CITY AND STATE	ELEVATION: 1919	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP 4
SAN ANGELO, TX	AIRPORT NAME: SAN ANGELO RGNL/MATHIS FIELD	SJT ASR	RADAR 1, AMDT 1B 28 FEBRUARY 2019	AMDT: 1A
				DATED: 07/29/10

INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES

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.

CITY AND STATE	ELEVATION: 1919 TDZE:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SAN ANGELO, TX	AIRPORT NAME: SAN ANGELO RGNL/MATHIS FIELD	SJT ASR	RADAR 1, AMDT 1B 28 FEBRUARY 2019	AMDT: 1A DATED: 07/29/10

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.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SAN ANGELO RGNL/MATHIS FIELD	KSJT	RNAV (GPS) RWY 3	2	SAN ANGELO	TX	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1919	1917	RNAV (GPS) RWY 3	1	09/01/2005	5E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		28 FEBRUARY 2019	ROUTINE			

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>
SJT VORTAC		HEXPE		TF	FO	1.00	220.72	14.70	4400
TANKR		APDOW		TF	FB	1.00	204.20	11.33	4400
CHILD		ESOBY		TF	FB	1.00	300.55	5.80	4400
APDOW	IAF	HEXPE	NOPT	TF	FB	1.00	128.02	7.00	4400
ESOBY	IAF	HEXPE	NOPT	TF	FB	1.00	308.13	7.50	4400
HEXPE	IF/IAF	ILIMY		TF	FB	1.00	038.07	5.93	3900
ILIMY	FAF	ANTHY/3.24 NM TO RW03		TF	FB	0.30	038.11	2.83	
ANTHY/3.24 NM TO RW03		RW03	MAP	TF	FO	0.30	038.11	3.24	
RW03	MAP	2117 MSL		CA			038.11		
2117 MSL		LITAZ		DF	FO	1.00			3800

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW03

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3800 DIRECT LITAZ AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SW HEXPE, RT, 038.07 INBOUND, 4400 FT. IN LIEU OF PT (IAF), MAX 8000.

3. FAC: 038.11FAF: ILIMYDIST FAF TO MAP: 6.07DIST FAF TO THLD: 6.07

4. MIN ALT: HEXPE 4400, ILIMY 3900, ANTHY/3.24 NM TO RW03 3000*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:200 HAT: 0.47GS ANT:

6. MIN GP INCPT: 3900GP ALT AT FAF : ILIMY 3900OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 50.8

8. MSA FROM: RW03 4300

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8°C OR ABOVE 54°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, AND LNAV/VNAV CAT E AND LNAV CAT E VISIBILITY TO RVR 6000.
CHART NOTE: CIRCLING NA FOR CAT E W OF RWY 18-36.
CHART NOTE: **RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA.

ADDITIONAL FLIGHT DATA:

2380 AAO 311706N/1003500W
CHART: ASR.
CHART CIRCLING ICON.
CHART VDP AT 1.04 NM TO RW03*
*LNAV ONLY
WAAS CHANNEL #77517
REFERENCE PATH ID: W03A
CHART FAS OBST: 2043 TANK 312128N/1003019W.
HOLD NE, RT, 218.21 INBOUND
LTP HAE: 560.2 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2, CAT E 800-2 3/4



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
LPV DA**	2117	2400	200	2117	2400	200	2117	2400	200	2117	2400	200	2117	2400	200
LNAV/VNAV DA	2296	3500	379	2296	3500	379	2296	3500	379	2296	3500	379	2296	3500	379
LNAV MDA	2300	2400	383	2300	2400	383	2300	3500	383	2300	3500	383	2300	3500	383
CIRCLING	2360	1	441	2380	1	461	2500	1 1/2	581	2700	2 1/2	781	2700	2 3/4	781

CHANGES - REASONS

- 1. CAT E MINIMA ADDED TO PROCEDURE - FPT REQUEST
- 2. CHANGED INTERMEDIATE FIX TO PFAF DISTANCE FROM 6.04 TO 5.93 NM - FIX ILIMY MOVED 627 FT SW - IAW 8260.3C 2-6-4, D
- 3. CHART NOTE: RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA- RVR AVAILABLE AND NEW VIS CHECK.
- 4. UPDATED CIRCLING RADII TO NEW CRITERIA, CHARTED CIRCLING ICON - IAW 8260.3C, 2-7-1
- 5. INCREASED CIRCLING CAT C MDA/HAA FROM 2460/541 TO 2500/581 - CONTROLLING OBS CHANGED FROM 2043 ROD TO 2183 TOWER, IPDS EVALUATION FOR NEW CIRCLING RADII.
- 6. INCREASED CIRCLING CAT D MDA/HAA FROM 2480/561 TO 2700/781 - CONTROLLING OBS CHANGED FROM 2039 ANT TO 2391 AAO, IPDS EVALUATION FOR NEW CIRCLING RADII.
- 7. REMOVED EDWAR FEEDER- NA FROM V68 NW BOUND SERVES NO PURPOSE, PER FPT REQUEST.
- 8. CHANGED SJT FEEDER CRS FROM 216.72M TO 220.72M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 9. CHANGED TANKR FEEDER CRS/DISTANCE FROM 190.86M/11.97 NM TO 204.20M/11.33 NM - UPDATED MAGVAR E9/1980 TO E5/2020, APDOW FIX MOVED.
- 10. CHANGED IAF APDOW CRS/DISTANCE HEADING FROM 124.03M/5.0 NM TO 128.02M/7.00 NM - APDOW FIX MOVED 2.00NM NW, UPDATED MAGVAR E9/1980 TO E5/2020.
- 11. CHANGED IAF ESOBY CRS HEADING/DISTANCE FROM 304.11M/5.0 NM TO 308.13M/7.5 NM - ESOBY FIX MOVED 2.50 NM SE, UPDATED MAGVAR E919/80 TO E5/2020.
- 12. CHANGED HEXPE INTERMEDIATE CRS HEADING/DISTANCE FROM 034.07M/6.04 TO 038.07M/5.93 NM - PFAF MOVED, UPDATED MAGVAR E9/1980 TO E5/2020.
- 13. FINAL CRS/DISTANCE CHANGES FROM 034.11M/5.96 NM TO 038.11M/ 6.07 NM - PFAF MOVED, UPDATED MAGVAR E9/1980 TO E5/2020.
- 14. LOWERED LPV HAT FROM 250 TO 200 - NO OCS PENETRATIONS IDENTIFIED.
- 15. ADDED ALTERNATE MINS - NEW VISCHECK.
- 16. INCREASED LNAV/VNAV DA/HAT FROM 2301/384 TO 2296/379 - NEW OBSTACLE EVALUATION.
- 17. NEW CRC REMAINDER CHANGED FROM ED990A21 TO F51982AC - NEW FAS DATA.
- 18. CHANGED FAS DATA LTP/FTP LATITUDE/LONGITUDE FROM 312058.9300N/1002959.5200W TO 312058.9345N/1002959.5230W - NEW FAS DATA.
- 19. CHANGED FPAP LATITUDE/LONGITUDE FROM 312141.8100N/1002912.5700N TO 312204.0700N/1002848.3500W - NEW FAS DATA.
- 20. CHANGED VISIBILITY FROM SM TO FT - VISCHECK FOR RVR.
- 21. CHANGED CAT A CIRCLING MDA/HAA FROM 2460/541 TO 2360/441 - NEW OBSTACLE EVALUATION.
- 22. CHANGED CAT B CIRCLING MDA/HAA FROM 2460/541 TO 2380/461 - NEW OBSTACLE EVALUATION.
- 23. CHANGED BARO TEMP NOTE FROM: BARO-VNAV NA BELOW -18C (0F).TO: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8C OR ABOVE 54C. - USED 5 YEAR AVERAGE (2013-2017).
- 24 ADDED STEPDOWN FIX ANTHY TO LNAV FINAL- TO GET LOWER MDA.
- 25. CHANGED LITAZ MISSED APPROACH HOLDING PATTERN SIZE FROM 5 TO 9- CAT-E 265KT AIRSPEED.
- 26. CHANGED HEXPE HIL HOLDING PATTERN SIZE FROM 6 TO 10- CAT-E 265KT AIRSPEED.
- 27. ADDED FEEDER FROM CHILD TO ESOBY- PER FPT REQUEST.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZFW, ZHU, MAF APP CON, SJT ATCT, AMGR, ST. AV. DIR.

FLIGHT CHECKED BY

BRIAN HARRELSON

Digitally signed by

WARDELL HENNING

Jan 16, 2019

OFFICE

FICO

DATE

11/19/18

DEVELOPED BY

LONNIE EVERHART (KEITH CTR MCKAY)

Digitally signed by

WARDELL HENNING

Jan 16, 2019

OFFICE

AJV-5400

DATE

04/23/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by

WARDELL HENNING

Jan 16, 2019

OFFICE

AJV-5400

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSJT
RUNWAY	RW03
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W03A
LTP/FTP LATITUDE	312058.9345N
LTP/FTP LONGITUDE	1002959.5230W
LTP/FTP ELLIPSOIDAL HEIGHT	+05602
FPAP LATITUDE	312204.0700N
FPAP LONGITUDE	1002848.3500W
THRESHOLD CROSSING HEIGHT (TCH)	00050.8
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0944
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER	F51982AC

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+05842
FPAP ORTHOMETRIC HEIGHT	+05842



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.

<u>AIRPORT</u>		<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>
SAN ANGELO RGNL/MATHIS FIELD		KSJT	RNAV (GPS) RWY 18	1	SAN ANGELO	TX
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1919	1908	RNAV (GPS) RWY 18	ORIG	09/28/2006	5E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		28 FEBRUARY 2019	ROUTINE			

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>
EVILE		CUGPA		TF	FB	1.00	316.20	24.36	4100
STEEP		JIGEM		TF	FB	1.00	093.37	25.34	4300
CUGPA	IAF	HONOB	NOPT	TF	FB	1.00	257.99	5.82	4100
JIGEM	IAF	HONOB	NOPT	TF	FB	1.00	092.23	9.03	4100
HONOB	IF/IAF	ZODEN		TF	FB	1.00	182.32	5.94	3500
ZODEN	FAF	ZUXUP/2.18 NM TO RW18		TF	FB	0.30	182.32	2.70	
ZUXUP/2.18 NM TO RW18		RW18	MAP	TF	FO	0.30	182.32	2.18	
RW18	MAP	2158 MSL		CA			182.32		
2158 MSL		HUMUG		DF	FB	1.00			
HUMUG		HEXPE		TF	FO	1.00	232.30	9.14	4400

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW18

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4400 DIRECT HUMUG AND ON TRACK 232.30 TO HEXPE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)											
2.	HOLD N HONOB, RT, 182.32 INBOUND, 4100 FT. IN LIEU OF PT (IAF), MAX 8000.														
3. FAC:	182.32	FAF: ZODEN	DIST FAF TO MAP: 4.88	DIST FAF TO THLD: 4.88											
4. MIN ALT:	HONOB 4100, ZODEN 3500, ZUXUP/2.18 NM TO RW18 2640*														
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	250 HAT: 0.67	GS ANT:										
6. MIN GP INCPT: 3500	GP ALT AT FAF : ZODEN 3500			OM:	MM:	IM:									
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 45.0												
8. MSA FROM:	RW18 4300														

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8C OR ABOVE 54C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT EVILE ON V76 EASTBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT STEEP ON V68 NORTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CUGPA ON V77 NORTHBOUND.
CHART NOTE: CIRCLING NA FOR CAT E W OF RWY 18-36.

ADDITIONAL FLIGHT DATA:

CHART: ASR.
CHART CIRCLING ICON.
CHART VDP AT 1.18 NM TO RW18*
*LNAV ONLY
WAAS CHANNEL #93801
REFERENCE PATH ID: W18A
CHART FAS OBST: 2068 TOWER 312352N/1002945W.
CHART: 2320 TOWER 312712N/1003103W.
HOLD SW, RT, 038.07 INBOUND
LTP HAE: 554.8 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2, CAT E 800-2 3/4

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
LPV DA	2158	3/4	250	2158	3/4	250	2158	3/4	250	2158	3/4	250	2158	3/4	250
LNAV/VNAV DA	2246	1	338	2246	1	338	2246	1	338	2246	1	338	2246	1	338
LNAV MDA	2320	1	412	2320	1	412	2320	1 1/8	412	2320	1 1/8	412	2320	1 1/8	412
CIRCLING	2360	1	441	2380	1	461	2500	1 1/2	581	2700	2 1/2	781	2700	2 3/4	781



CHANGES - REASONS

- 1. CAT E LINE OF MINIMA ADDED - FPT/ATC REQUEST.
- 2. CHANGED CAT A CIRCLING MDA/HAA FROM 2460/541 TO 2360/441 - NEW OBSTACLE EVALUATION.
- 3. CHANGED CAT B CIRCLING MDA/HAA FROM 2460/541 TO 2380/461 - NEW OBSTACLE EVALUATION.
- 4. CIRC CAT C MDA/HAA CHANGED FROM 2460/541 TO 2500/581 - CONTROLLING OBSTACLE CHANGED FROM 2043 ROD TO 2183 TOWER, EVALUATION FOR NEW CIRCLING RADII.
- 5. CIRC CAT D MDA/HAA CHANGED FROM 2480/561 TO 2700/781 - CONTROLLING OBSTACLE CHANGED FROM 2068 TOWER TO 2391 AAO, EVALUATION FOR NEW CIRCLING RADII.
- 6. CHARTED CIRCLING ICON - 8260-19H, 8-6-10.
- 7. EVILE FEEDER CRS AND DISTANCE CHANGED FROM 308.94/23.7 TO 316.20/24.36 - CUGPA FIX MOVED, MAGVAR CHANGE FROM E9/1980 TO E5/2020.
- 8. STEEP FEEDER CRS CHANGED FROM 089.37 TO 093.37 - MAGVAR CHANGE FROM E9/1980 TO E5/2020.
- 9. IAF CUGPA CRS AND DISTANCE CHANGED FROM 268.37/5.19 TO 257.99/5.82 - CUGPA FIX MOVED, UPDATED MAGVAR E9/1980 TO E5/2020.
- 10. IAF JIGEM CRS CHANGED FROM 088.23M TO 092.23M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 12. IAF HONOB HOLD INBOUND CRS CHANGED FROM 178.32M TO 182.32M - UPDATED MAGVAR E9/1980 TO E5/2020.
- 13. HONOB INTERMEDIATE CRS AND DISTANCE CHANGED FROM 178.32M/6.00NM TO 182.23M/5.94NM - UPDATED MAGVAR E9/1980 TO E5/2020, PFAF MOVED.
- 14. FINAL CRS AND DISTANCE CHANGED FROM 178.32M/4.82 NM TO 182.32M/4.88 NM - PFAF LOCATION MOVED, UPDATED MAGVAR E9/1980 TO E5/2020.
- 15. LNAV/VNAV DA/HAT CHANGES FROM 2325/417 TO 2246/338 - NEW SURVEY AND OBSTACLE EVALUATION.
- 16. LNAV MDA/HAT CHANGES FROM 2440/532 TO 2320/412 - NEW IPDS EVALUATION SHOWS THE CONTROLLING OBS CHANGED FROM 2183 TOWER TO 2068 TOWER - (THE OLD OBS IS NOW IN THE SECONDARY AREA).
- 17. PFAF LOCATION MOVED 413 FT N - IAW 8260.54A 2.10.
- 18. CHANGED MISSED APPROACH INSTRUCTIONS FROM CLIMB TO 4000 DIRECT HUMUG AND LEFT TURN VIA 084 TRACK TO EDWAR AND HOLD TO CLIMB TO 4400 DIRECT HUMUG AND ON TRACK 232.30 TO HEXPE AND HOLD - IAW 8260-19.8.8.6D.
- 19 ADDED STEPDOWN FIX ZUXUP TO LNAV FINAL- TO GET LOWER MDA.
- 20. CHANGED BARO TEMP NOTE FROM: BARO-VNAV NA BELOW -18C (0F).TO: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8C OR ABOVE 54C. - USED 5 YEAR AVERAGE (2013-2017).
- 21. CHANGED HEXPE MISSED APPROACH HOLDING PATTERN SIZE FROM 5 TO 9- CAT-E 265KT AIRSPEED.
- 22. CHANGED HONOB HIL HOLDING PATTERN SIZE FROM 6 TO 10- CAT-E 265KT AIRSPEED.
- 23. UPDATED FAS DATA, CRC REMAINDER CHANGED FROM 134C72D3 TO 168188DF- NEW LTP COORDINATES.

12/17/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 04/20/2018:

- 1. RAISED MIN ALT STEEP-JIGEM SEGMENT FROM 4100 TO 4300.

01/22/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/17/19.

- 1. CHANGED RNP VALUE IN SEGMENT EVILE TO CUGPA AND FROM STEEP TO JIGEM FROM 2.00 TO 1.00 ON THE 8260.3.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZFW, MAF APP CON, SJT TWR, AMGR

FLIGHT CHECKED BY

BRIAN DAVID HARRELSON

Digitally signed by

WARDELL HENNING

Jan 22, 2019

OFFICE

FIOG

DATE

11/19/2018

DEVELOPED BY

LONNIE EVERHART (KEITH CTR MCKAY)

Digitally signed by

WARDELL HENNING

Jan 22, 2019

OFFICE

AJV-5400

DATE

04/20/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by

WARDELL HENNING

Jan 22, 2019

OFFICE

AJV-5400

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSJT
RUNWAY	RW18
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W18A
LTP/FTP LATITUDE	312158.8610N
LTP/FTP LONGITUDE	1002952.3520W
LTP/FTP ELLIPSOIDAL HEIGHT	+05548
FPAP LATITUDE	312030.2900N
FPAP LONGITUDE	1003005.5900W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0568
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	168188DF
<u>ADDITIONAL PATH POINT RECORD INFORMATION</u>	
ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+05789
FPAP ORTHOMETRIC HEIGHT	+05789



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.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SAN ANGELO RGNL/MATHIS FIELD	KSJT	RNAV (GPS) RWY 21	2	SAN ANGELO	TX	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
1919	1906	RNAV (GPS) RWY 21	1	09/01/2005	5E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		28 FEBRUARY 2019	ROUTINE			

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>
SJT VORTAC		LITAZ		TF	FO	1.00	033.06	7.32	3800
EVILE		RONFO		TF	FB	1.00	305.31	13.93	4000
WATOR		MIXDI		TF	FB	1.00	105.17	13.28	4100
MIXDI	IAF	LITAZ	NOPT	TF	FB	1.00	128.16	7.00	3800
RONFO	IAF	LITAZ	NOPT	TF	FB	1.00	308.26	7.00	3800
LITAZ	IF/IAF	JIPBI		TF	FB	1.00	218.21	6.00	2900
JIPBI	FAF	RW21	MAP	TF	FO	0.30	218.17	3.00	
RW21	MAP	2106 MSL		CA			218.17		
2106 MSL		HEXPE		DF	FO	1.00			4400

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW21

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4400 DIRECT HEXPE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2.	HOLD NE LITAZ, RT, 218.21 INBOUND, 3800 FT. IN LIEU OF PT (IAF), MAX 6000.				
3. FAC:	218.17	FAF: JIPBI	DIST FAF TO MAP: 3.00	DIST FAF TO THLD: 3.00	
4. MIN ALT:	LITAZ 3800, JIPBI 2900				
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	200 HAT: 0.51	GS ANT:
6. MIN GP INCPT: 2900	GP ALT AT FAF : JIPBI 2900			OM:	MM: IM:
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 52.0		
8. MSA FROM:	RW21 4300				

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SJT VORTAC ON V77.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT EVILE ON V76 EASTBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT WATOR ON V76 WESTBOUND.
CHART NOTE: CIRCLING NA FOR CAT E W OF RWY 18-36.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LPV.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV CAT A/B/E VISIBILITY TO 1 SM.; INCREASE LNAV CAT E VISIBILITY TO 1 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART: ASR.
CHART CIRCLING ICON.
CHART VDP AT 1.24 NM TO RW21*
*LNAV ONLY
WAAS CHANNEL #81817
REFERENCE PATH ID: W21A
CHART FAS OBST: 2026 TOWER 312217N/1002933W.
HOLD SW, RT, 038.07 INBOUND
LTP HAE: 552.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2, CAT E 800-2 3/4



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
LPV DA	2106	3/4	200	2106	3/4	200	2106	3/4	200	2106	3/4	200	2106	3/4	200
LNAV/VNAV DA	2250	7/8	344	2250	7/8	344	2250	7/8	344	2250	7/8	344	2250	7/8	344
LNAV MDA	2340	3/4	434	2340	3/4	434	2340	1 1/8	434	2340	1 1/8	434	2340	1 1/8	434
CIRCLING	2360	1	441	2380	1	461	2500	1 1/2	581	2700	2 1/2	781	2700	2 3/4	781

CHANGES - REASONS

1. ADDED CAT E LINE OF MINIMA - FPT REQUEST.
2. UPDATED NEW CIRCLING RADII, CHARTED NEW CIRCLING ICON - IAW 8260.3C 2-7-1.
3. JIPBI FIX MOVED TO THE NEW PFAF LOCATION - IAW 8260.58A 1-3-1.
4. MIXDI AND RONFO FIXES MOVES TO MEET CURRENT CRITERIA AND CAT E REQUIREMENTS - IAW 8260.58A 1-3-1.
5. CIRC CAT C MDA/HAA CHANGED FROM 2460/541 TO 2500/581 - CONTROLLING OBSTACLE CHANGED FROM 2043 ROD TO 2183 TOWER, EVALUATION FOR NEW CIRCLING RADII.
6. CIRC CAT D MDA/HAA CHANGED FROM 2480/561 TO 2700/781 - CONTROLLING OBSTACLE CHANGED FROM 2084 TOWER TO 2391 AAO, EVALUATION FOR NEW CIRCLING RADII.
7. SJT FEEDER CRS HEADING CHANGED FROM 029.06M TO 033.06M, MAGVAR CHANGE FROM E9/1980 TO E5/2020.
8. EVIL FEEDER CRS HEADING/DISTANCE CHANGED FROM 301.69M/15.93 NM TO 305.31M/13.93 NM MAGVAR CHANGE FROM E9/1980 TO E5/2020, RONFO FIX MOVED.
9. WATOR FEEDER CRS HEADING/DISTANCE CHANGED FROM 108.11M/15.14 NM TO 105.17M/13.28 NM MAGVAR CHANGE FROM E9/1980 TO E5/2020, MIXDI FIX MOVED.
10. WATOR FEEDER CONTROLLING OBS ALT (SAME OBS) CHANGED FROM 3009 TOWER TO 3010 TOWER, MINIMUM SEGMENT ALTITUDE CHANGES FROM 4000 TO 4100 - NEW OBSTACLE EVALUATION.
11. IAF MIXDI CRS/DISTANCE CHANGED FROM 124.21M/5.00 NM TO 128.16/7.00 NM - MAGVAR CHANGE FROM E9/1980 TO E5/2020, MIXDI FIX MOVED.
12. IAF RONFO CRS/DISTANCE CHANGED FROM 304.25M/5.00 TO 308.26M/7.00 NM - MAGVAR CHANGE FROM E9/1980 TO E5/2020, RONFO FIX MOVED.
13. LITAZ INTERMEDIATE CRS/DISTANCE CHANGED FROM 214.21M/6.05 NM TO 218.21M/6.02 NM - MAGVAR CHANGE FROM E9/1980 TO E5/2020, MIXDI FIX MOVED.
14. FINAL CRS/DISTANCE CHANGED FROM 214.17M/2.95 NM TO 218.17M/2.98 NM - MAGVAR CHANGE FROM E9/1980 TO E5/2020, PFAF MOVES,
15. LNAV/VNAV DA/HAT CHANGES FROM 2325/419 TO 2250/344 - CONTROLLING OBS ALT CHANGED PER NEW SURVEY DATA.
16. LPV DA/HAT CHANGED FROM 2156/250 TO 2106/200 - NEW IPDS EVALUATION.
17. LTP/FTP ELLIPSOIDAL HEIGHT DECREASED FROM +05530 TO +05529 - NEW FAS DATA.
18. CRC REMAINDER CHANGED FROM A26639F4 TO 8C909EB5 - NEW FAS DATA AND VERTICAL ALERT LIMIT CHANGE FROM 50 TO 35.
19. CHANGED TCH FROM 59 TO 52- MATCHING VGSI TCH PER CURRENT AIRNAV DATA.
20. CHANGED BARO TEMP NOTE FROM: BARO-VNAV NA BELOW -18C (0F).TO: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -8C OR ABOVE 54C. - USED 5 YEAR AVERAGE (2013-2017).
21. CHANGED HEXPE MISSED APPROACH HOLDING PATTERN SIZE FROM 6 TO 10- CAT-E 265KT AIRSPEED.
22. CHANGED LITAZ HIL HOLDING PATTERN SIZE FROM 5 TO 9- CAT-E 265KT AIRSPEED.

COORDINATED WITH:

A4A☒ALPA☒AOPA☒APA☒HAI☐NBAA☒OTHER: ZFW, MAF APP CON, SJT TWR, AMGR

FLIGHT CHECKED BY

BRIAN HARRELSON

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

FICO

DATE

11/19/18

DEVELOPED BY

LONNIE EVERHART (KEITH CTR MCKAY)

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5400

DATE

04/20/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by

WARDELL HENNING

Jan 17, 2019

OFFICE

AJV-5400

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSJT
RUNWAY	RW21
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W21A
LTP/FTP LATITUDE	312141.8115N
LTP/FTP LONGITUDE	1002912.6820W
LTP/FTP ELLIPSOIDAL HEIGHT	+05529
FPAP LATITUDE	312036.6600N
FPAP LONGITUDE	1003023.8400W
THRESHOLD CROSSING HEIGHT (TCH)	00052.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0944
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	8C909EB5

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+05770
FPAP ORTHOMETRIC HEIGHT	+05770



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> OGDEN-HINCKLEY	<u>AIRPORT ID</u> KOGD	<u>PROCEDURE NAME</u> ILS OR LOC RWY 3	<u>ORIGINAL/AMENDMENT</u> 5	<u>CITY</u> OGDEN	<u>STATE</u> UT
<u>AIRPORT ELEVATION</u> 4473	<u>TDZE</u> 4473	<u>SUPERSEDED</u> ILS OR LOC RWY 3	<u>ORIGINAL/AMENDMENT</u> 4D	<u>DATED</u> 03/29/2018	<u>MAG VAR</u> 11E <u>EPOCH YEAR</u> 2020
<u>FACILITY</u> I-OGD	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
RIDEN/TCH 27.04 DME	IAF	JOSIF/I-OGD 15.33 DME/RADAR					115.74	11.48 (TCH R-296)	8000
TCH VORTAC	IAF	JOSIF/I-OGD 15.33 DME/RADAR					295.74	15.56	8000
JOSIF/I-OGD 15.33 DME/RADAR	IF	WULFE/I-OGD 6.01 DME/RADAR					033.83	9.32 (I-OGD)	6000

MISSED APPROACH

MAP:

ILS: DA
LOC: 4.64 NM AFTER WULFE/I-OGD 6.01 DME/RADAR OR AT I-OGD 1.37 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 DIRECT OGD VORTAC AND ON OGD VORTAC R-263 TO MOINT/OGD 15.08 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 ON HEADING 220 AND TCH VORTAC R-304 TO MOINT/TCH 31.54 DME AND HOLD.

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT JOSIF
- FAC:** 033.83 **FAF:** WULFE/I-OGD 6.01 DME/RADAR **DIST FAF TO MAP:** 4.64 **DIST FAF TO THLD:** 4.64
- MIN ALT:** JOSIF/I-OGD 15.33 DME/RADAR 8000, WULFE/I-OGD 6.01 DME/RADAR 6000
- DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **200 HAT:** 0.47 **GS ANT:** 1325
- MIN GS INCPT:** 6000 **GS ALT AT FAF :** WULFE/I-OGD 6.01 DME/RADAR 6000 **OM:** **MM:** **IM:**
- GP ANGLE:** 3.00 **34:1:** **20:1:** **TCH:** 49.0
- MSA FROM:** OGD VORTAC 145-340 8500, 340-145 11000



EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED.
RADAR REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART NOTE: CIRCLING RWY 17 NA AT NIGHT.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 3.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE HILL AFB ALTIMETER SETTING.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 3 CAT C/D VISIBILITY TO 1 1/8 SM.
CHART NOTE: CIRCLING NA FOR CATS C AND D E OF RWYS 21 AND 35.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON TCH VORTAC AIRWAY RADIALS 249 CW 331.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT RIDEN ON V257 NORTHBOUND.

ADDITIONAL FLIGHT DATA:

CHART MOINT AS OGD VORTAC R-263/15.1 DME FIX ONLY.
CHART JOSIF AS I-OGD 15.3 DME/RADAR FIX ONLY.
CHART CIRCLING ICON.
CHART IN PLANVIEW: MOINT/TCH 31.54 DME
CHART VDP AT 2.47 DME*
DISTANCE VDP TO THLD 1.10 NM
* LOC ONLY
CHART FAS OBST: 4611 TOWER 411022N/1120204W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NW MOINT/TCH 31.54 DME, RT, 124.05 INBOUND.
HOLD W, RT, 082.61 INBOUND

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 - 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 03	4673	3/4	200	4673	3/4	200	4673	3/4	200	4673	3/4	200			
S-LOC 03	4880	3/4	407	4880	3/4	407	4880	1	407	4880	1	407			
CIRCLING	4980	1	507	5060	1	587	5120	1 3/4	647	5120	2	647			



CHANGES - REASONS

- 1. CHANGED CIRCLING MDA/HAA CAT C/D FROM 5100/627 TO 5120/647 - NEW CONTROLLING OBSTACLE.
- 2. ADDED INITIALS FROM RIDEN AND TCH VORTAC - FPT REQUEST.
- 3. CHANGED ALTITUDE AT JOSIF FROM 8600 TO 8000 - CONTROLLING AIRSPACE IN RIDEN AND TCH VORTAC INITIALS.
- 4. CHANGED MISSED APPROACH INSTRUCTIONS FROM: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 6000 DIRECT OGD VORTAC THEN CLIMB TO 13000 ON OGD VORTAC R-263 TO MOINT INT/OGD 15.08 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 13000 TO: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 DIRECT OGD VORTAC AND ON OGD R-263 TO MOINT INT/OGD 15.08 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000 - LOWERED HOLDING ALTITUDE TO MEA OF V6.
- 5. CHANGED ALTERNATE MISSED APPROACH FROM: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 8600 ON HEADING 180 AND ON I-OGD COURSE SW TO JOSIF INT/I-OGD 15.33 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 8600 TO: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 8000 ON HEADING 180 AND I-OGD SW COURSE TO JOSIF/I-OGD 15.33 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 8000 - ALTITUDE AT JOSIF CHANGED TO 8000, CONTROLLING OBSTACLES IN RIDEN AND TCH VORTAC INITIALS.
- 6. CHANGED CHART NOTE FROM CIRCLING NA FOR CAT C/D EAST OF RWYS 21 AND 35 TO CIRCLING NA FOR CATS C AND D E OF RWYS 21 AND 35 - CURRENT CRITERIA 8260.19 8-6-11.O.
- 7. CHANGED CHART NOTE FROM CIRCLING TO RWY 17 NA AT NIGHT TO CIRCLING RWY 17 NA AT NIGHT - CURRENT CRITERIA 8260.19 8-6-11.O.
- 8. I-OGD MAGNETIC VARIATION/EPOCH YEAR CHANGED FROM 14E/1985 TO 11E/2020 - FPT REQUEST.
- 9. COURSE/DISTANCE FROM JOSIF TO WULFE CHANGED FROM 030.83/9.38 TO 033.83/9.32 - WULFE MOVED 372.49 FT SW, IPDS PROVIDED PFAF LOCATION USING FORMULA 2-16B FROM 8260.54A.
- 10. DME FROM I-OGD TO WULFE CHANGED FROM 5.95 TO 6.01 - WULFE MOVED 372.49 FT SW.
- 11. LOC MAP DESCRIPTION CHANGED FROM 4.58 NM AFTER WULFE/I-OGD 5.95 DME/RADAR OR AT I-OGD 1.37 DME TO 4.64 NM AFTER WULFE/I-OGD 6.01 DME OR AT I-OGD 1.37 DME - WULFE MOVED 372.49 FT SW.
- 12. DISTANCE FAF TO MAP/THLD CHANGED FROM 4.58 TO 4.64 - WULFE MOVED 372.49 FT SW.
- 13. MSA CHANGED FROM OGD VORTAC 145-340 8600, 340-145 11000 TO OGD VORTAC 145-340 8500, 340-145 11000 - NEW CONTROLLING OBSTACLE.
- 14. ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON TCH VORTAC AIRWAY RADIALS 249 CW 331 - INITIAL ADDED FROM TCH VORTAC.
- 15. ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT RIDEN ON V257 NORTHBOUND - INITIAL ADDED FROM RIDEN.
- 16. REMOVED CHART NOTE: DME OR RADAR REQUIRED AND ADDED EQUIPMENT REQUIREMENTS NOTE: DME REQUIRED - DME IS REQUIRED FOR MISSED APPROACH HOLDING BECAUSE MLD R 162 IS UNSERVICABLE BELOW 11000.
- 17. CHANGED JOSIF INT/I-OGD 15.33 DME TO: JOSIF/I-OGD 15.33 DME/RADAR IN TERMINAL ROUTES - AN AAO IN THE INSTERSECTION FIX ERROR AREA FOR JOSIF WOULD RAISE THE PFAF ALTITUDE 400 FEET, EVALUATED AS DME/RADAR FIX AND RADAR IS REQUIRED FOR PROCEDURE ENTRY.
- 18. ADDED: CHART MOINT AS OGD VORTAC R-263/15.1 DME FIX ONLY TO ADDITIONAL FLIGHT DATA - CROSSING RADIAL FROM MLD IS UNUSABLE BELOW 11000 AND MISSED APPROACH HOLDING IS AT 9000.
- 19. ADDED: CHART JOSIF AS I-OGD 15.3 DME/RADAR FIX ONLY TO ADDITIONAL FLIGHT DATA - AN AAO IN THE INSTERSECTION FIX ERROR AREA FOR JOSIF WOULD RAISE THE PFAF ALTITUDE 400 FEET, EVALUATED AS DME/RADAR FIX AND RADAR IS REQUIRED FOR PROCEDURE ENTRY.
- 20. ADDED EQUIPMENT REQUIREMENTS NOTE: RADAR REQUIRED FOR PROCEDURE ENTRY - AN AAO IN THE INSTERSECTION FIX ERROR AREA FOR JOSIF WOULD RAISE THE PFAF ALTITUDE 400 FEET, EVALUATED AS DME/RADAR FIX.
- 21. FAC CHANGED FROM 030.83 TO 033.83 - I-OGD MAGVAR CHANGED FROM 14E TO 11E.
- 22. ALTERNATE MISSED APPROACH HOLDING INBOUND COURSE CHANGED FROM 030.83 TO 033.83 - I-OGD MAGVAR CHANGED FROM 14E TO 11E.

12/10/2018: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/06/2018.

1. ALTERNATE MISSED APPROACH CHANGED FROM: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 8000 ON HEADING 180 AND I-OGD SW COURSE TO JOSIF/I-OGD 15.33 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 8000 TO: CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 ON HEADING 220 AND TCH VORTAC R-304 TO MOINT/TCH 31.54 DME AND HOLD - FLIGHT CHECK MARKED ALTERNATE MISSED UNSAT, COORDINATED WITH FPT AND ATC.

2. ALTERNATE MISSED APPROACH HOLDING INBOUND COURSE CHANGED FROM 033.83 TO 124.05 - ALTERNATE MISSED APPROACH CLEARANCE LIMIT CHANGED FROM JOSIF TO MOINT.

3. ALTERNATE MINIMUMS: ADDED "STANDARD" AND MADE SEPARATE ENTRIES FOR THE ILS AND LOC.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLC, SLC ATCT, UT AERO, ARPT MGR

FLIGHT CHECKED BY CHARLES D CUNNINGHAM	<i>Digitally signed by</i> DAVID DANNER Jan 04, 2019	OFFICE FICO	DATE 1/3/19	
DEVELOPED BY LONNIE EVERHART (ANTHONY CAPPABIANCO)	<i>Digitally signed by</i> DAVID DANNER Jan 04, 2019	OFFICE AJV-5400	DATE 08/06/2018	
APPROVED BY LONNIE EVERHART	<i>Digitally signed by</i> DAVID DANNER Jan 04, 2019	OFFICE AJV-5400	DATE	TITLE MANAGER



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.

<u>AIRPORT</u> OGDEN-HINCKLEY	<u>AIRPORT ID</u> KOGD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 3	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> OGDEN	<u>STATE</u> UT
<u>AIRPORT ELEVATION</u> 4473	<u>TDZE</u> 4473	<u>SUPERSEDED</u> RNAV (GPS) Z RWY 3	<u>ORIGINAL/AMENDMENT</u> ORIG-B	<u>DATED</u> 06/27/2013	<u>MAG VAR</u> 11E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
MOINT		RIDEN		TF	FB	2.00	168.02	6.18	9000
RIDEN	IAF	CISBI		TF	FB	1.00	114.27	11.61	7700
STACO	IAF	CISBI		TF	FB	1.00	024.29	15.83	7700
TCH VORTAC	IAF	CISBI		TF	FB	1.00	305.35	15.54	7700
CISBI	IF	WULFE	PFAF	TF	FB	1.00	033.70	8.07	6000
WULFE	FAF	RW03	MAP	TF	FO	0.30	033.78	4.64	
RW03	MAP	4900 MSL		CA			033.78		4900
4900 MSL		MOINT		DF	FO	1.00			9000

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW03

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 DIRECT MOINT AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)
2. PROFILE STARTS AT CISBI
3. FAC: 033.78

PFAF: WULFE

DIST PFAF TO MAP: 4.64

DIST PFAF TO THLD: 4.64
4. MIN ALT: CISBI 7700, WULFE 6000
5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

200 HAT: 0.48

GS ANT:
6. MIN GP INCPT: 6000

GP ALT AT PFAF : WULFE 6000

OM:

MM:

IM:
7. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 49.0
8. MSA FROM: RW03 11000

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE HILL AFB ALTIMETER SETTING.
CHART NOTE: CIRCLING NA FOR CATS C AND D E OF RWYS 21 AND 35.
CHART NOTE: CIRCLING RWY 17 NA AT NIGHT.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TCH VORTAC ON V21-101 SOUTHEASTBOUND.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LPV.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS AND LNAV CAT A/B VISIBILITY TO 1 1/8 SM.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING HILL AFB ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.10 NM TO RW03*
*LNAV ONLY
WAAS CHANNEL #65620
REFERENCE PATH ID: W03A
CHART FAS OBST: 4611 TOWER 411022N/1120204W.
HOLD W, RT, 085.61 INBOUND
LTP HAE: 1346.4 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
LPV DA	4673	3/4	200	4673	3/4	200	4673	3/4	200	4673	3/4	200			
LNAV/VNAV DA	4888	1	415	4888	1	415	4888	1	415	4888	1	415			
LNAV MDA	4880	3/4	407	4880	3/4	407	4880	1	407	4880	1	407			
CIRCLING	4980	1	507	5060	1	587	5120	1 3/4	647	5120	2	647			



CHANGES - REASONS

- 1. KOGD MAGNETIC VARIATION/EPOCH YEAR CHANGED FROM 14E/1985 TO 11E/2020 - FPT REQUEST.
- 2. REMOVED OGNOE FIX AND CHANGED IF TO CISBI - AIR TRAFFIC REQUEST.
- 3. ALTITUDE AT CISBI CHANGED FROM 7300 FT TO 7700 FT - IF CHANGED TO CISBI.
- 4. COURSE FROM MOINT TO RIDEN CHANGED FROM 165.02 TO 168.02 - MAGVAR SWING FROM 14E TO 11E.
- 5. REMOVED COURSE/DISTANCE FROM RIDEN TO OGNOE AND ADDED COURSE/DISTANCE FROM RIDEN TO CISBI 114.27 / 11.61 NM - IF CHANGED TO CISBI.
- 6. REMOVED COURSE/DISTANCE FROM STACO TO OGNOE AND ADDED COURSE/DISTANCE FROM STACO TO CISBI 24.29 / 15.83 NM - IF CHANGED TO CISBI.
- 7. REMOVED COURSE/DISTANCE FROM TCH VORTAC TO OGNOE AND ADDED COURSE/DISTANCE FROM TCH VORTAC TO CISBI 305.35 / 15.54 NM - IF CHANGED TO CISBI.
- 8. COURSE/DISTANCE FROM CISBI TO WULFE CHANGED FROM 30.66 / 8.13 NM TO 33.70 / 8.07 NM - WULFE MOVED 372.49 FT SW, MAGVAR SWING, AND IPDS PROVIDED PFAF LOCATION USING FORMULA 2-16B FROM 8260.54A.
- 9. COURSE/DISTANCE FROM WULFE TO RWY 3 CHANGED FROM 30.78 / 4.58 NM TO 33.78 / 4.64 NM - WULFE MOVED 372.49 FT SW, MAGVAR SWING, AND IPDS PROVIDED PFAF LOCATION USING FORMULA 2-16B FROM 8260.54A.
- 10. LNAV/VNAV, LNAV, AND CIRCLING MINIMUMS ADDED - FPT REQUEST, COMBINED WITH RNAV (GPS) Y RWY 3.
- 11. REMOVED Z DESIGNATION FROM PROCEDURE NAME - FPT REQUEST, COMBINED WITH RNAV (GPS) Y RWY 3.
- 12. ADDED ALTERNATE MINIMUMS - ADDED LNAV MINIMUMS.
- 13. CHANGED MISSED APPROACH FROM CLIMB TO 9000 DIRECT JISUP AND VIA 271 TRACK TO TOGTE AND VIA 238 TRACK TO MOINT AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000 TO CLIMB TO 4900 THEN CLIMBING LEFT TURN TO 9000 DIRECT MOINT AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000 - FPT REQUEST.
- 14. ADDED CHART NOTE: CIRCLING NA FOR CATS C/D E OF RWYS 21 AND 35 - HIGH TERRAIN EAST OF AIRPORT, AVOID INCREASED CIRCLING MDA WITH EXPANDED CIRCLING.
- 15. ADDED CHART NOTE: CIRCLING RWY 17 NA AT NIGHT - 20:1 PENETRATIONS.
- 16. REMOVED CHART NOTE: DME/DME RNP -0.3 NA AND ADDED RNP APCH - CURRENT CRITERIA 8260.19H 8-6-8B.
- 17. ADDED CHART CIRLING ICON - NEW CIRCLING CRITERIA APPLIED.
- 18. CHANGED DISTANCE TO THLD FROM 417 HAT 1.16 NM TO 200 HAT 0.48 NM - ASC IN FINAL AND MISSED.
- 19. CHANGED INTERMEDIATE SEGMENT RNP FROM 0.5 TO 1.00 - CURRENT RNAV CRITERIA.
- 20. ADDED CHART VDP AT 1.10 NM TO RW03 - ADDED LNAV MINIMUMS.
- 21. CHANGED PLANVIEW NOTE FROM PROCEDURE NA FOR ARRIVALS AT TCH VORTAC VIA V21-101 SOUTHEASTBOUND TO PROCEDURE NA FOR ARRIVALS AT TCH VORTAC ON V21-101 SOUTHEASTBOUND - CURRENT NOTATION PER 8260.19H 8-2-5E.
- 22. INOPERATIVE NOTE CHANGED FROM INOPERATIVE TABLE DOES NOT APPLY TO INOPERATIVE TABLE DOES NOT APPLY TO LPV - ADDED LNAV/VNAV AND LNAV MINIMUMS.
- 23. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS AND LNAV CAT A/B VISIBILITY TO 1 1/8 SM - ADDED LNAV/VNAV AND LNAV MINIMUMS.
- 24. ADDED CHART NOTE: BARO-VNAV AND VDP NA WHEN USING HILL AFB ALTIMETER SETTING - ADDED LNAV/VNAV AND LNAV MINIMUMS.
- 25. FPAP COORDINATES CHANGED FROM 411213.0500N-1120000.2500W TO 411220.1070N-1115951.7350W - IPDS GENERATED FAS DATA.
- 26. LENGTH OFFSET CHANGED FROM 0000 TO 0288 - IPDS GENERATED FAS DATA.
- 27. VERTICAL ALERT LIMIT CHANGED FROM 50.0 TO 35.0 - IPDS GENERATED FAS DATA.
- 28. CRC REMAINDER CHANGED FROM F4324E69 TO 59E0DC0A - REMOVED Z ROUTE INDICATOR, CHANGED FPAP LAT/LONGS, LENGTH OFFSET, VERTICAL ALERT LIMIT.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZLC, SLC ATCT, UT AERO, ARPT MGR

FLIGHT CHECKED BY

GRANT WEBBER

Digitally signed by

DAVID DANNER

Nov 28, 2018

OFFICE

FICO

DATE

11/15/18

DEVELOPED BY

LONNIE EVERHART (ANTHONY CAPPABIANCO)

Digitally signed by

DAVID DANNER

Nov 28, 2018

OFFICE

AJV-5400

DATE

08/14/2019

APPROVED BY

LONNIE EVERHART

Digitally signed by

DAVID DANNER

Nov 28, 2018

OFFICE

AJV-5400

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KOGD
RUNWAY	RW03
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W03A
LTP/FTP LATITUDE	411116.8900N
LTP/FTP LONGITUDE	1120114.9600W
LTP/FTP ELLIPSOIDAL HEIGHT	+13464
FPAP LATITUDE	411220.1070N
FPAP LONGITUDE	1115951.7350W
THRESHOLD CROSSING HEIGHT (TCH)	00049.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0288
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	59E0DC0A

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+13632
FPAP ORTHOMETRIC HEIGHT	+13632



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.

<u>AIRPORT</u> OGDEN-HINCKLEY	<u>AIRPORT ID</u> KOGD	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 3	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> OGDEN	<u>STATE</u> UT	
<u>AIRPORT ELEVATION</u> 4473	<u>TDZE</u> 4473	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 3	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 10/27/2005	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u> CANCEL		

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>

PROCEDURE CANCELLED EFFECTIVE 28 FEBRUARY 2019

MISSED APPROACH

MAP:

MISSED APPROACH INSTRUCTIONS:

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)	
2.					
3. FAC:	FAF:	DIST FAF TO MAP:	DIST FAF TO THLD:		
4. MIN ALT:					
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	GS ANT:	
6. MIN GP INCPT:	GP ALT AT FAF :		OM:	MM:	IM:
7. GP ANGLE:	34:1:	20:1:	TCH:		
8. MSA FROM:					

PBN REQUIREMENTS NOTE:

NOTES:



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLC, SLC ATCT, UT AERO, ARPT MGR

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

LONNIE EVERHART (ANTHONY CAPPABIANCO)

Digitally signed by
DAVID DANNER
Oct 15, 2018

OFFICE

AJV-5400

DATE

08/17/2018

APPROVED BY

LONNIE EVERHART

Digitally signed by
DAVID DANNER
Oct 15, 2018

OFFICE

AJV-5400

DATE

TITLE

MANAGER



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
COPTER NDB STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.35

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>HELIPORT</u> PORT ANGELES CGAS	<u>HELIPORT ID</u> KNOW	<u>PROCEDURE NAME</u> COPTER NDB 242	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> PORT ANGELES	<u>STATE</u> WA
<u>SURFACE ELEVATION</u> 13	<u>THRE</u>	<u>SUPERSEDED</u> COPTER NDB 242	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 02/09/2012	<u>MAG VAR</u> 17E <u>EPOCH YEAR</u> 2010
<u>FACILITY</u> NOW	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>

MISSED APPROACH

MAP:
NOW NDB

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 3000 ON NOW NDB BRG-148 TO NOW NDB AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT L **SIDE OF COURSE** 062.00 **OUTBOUND** 1600 **FT WITHIN** 5 **MILES OF** NOW NDB (IAF)
- 2.
3. **FAC:** 242.00 **FAF:** **DIST FAF TO MAP:** **DIST FAF TO THLD:**
4. **MIN ALT:**
8. **MSA FROM:** NOW NDB 090-270 9200, 270-360 4100, 360-090 3800

EQUIPMENT REQUIREMENTS NOTES:

RADAR REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PLANVIEW NOTE: LIMIT ALL SEGMENTS AIRSPEED TO 90 KIAS.
CHART NOTE: PRIOR PERMISSION REQUIRED.
CHART NOTE: USE WILLIAM R FAIRCHILD INTL ALTIMETER SETTING; WHEN NOT RECEIVED, USE WHIDBEY ISLAND NAS/AULT FIELD/OAK HARBOR ALTIMETER SETTING AND INCREASE MDA 120 FT.
CHART PLANVIEW NOTE: PROCEED VFR FROM MAP OR CONDUCT THE SPECIFIED MISSED APPROACH.



ADDITIONAL FLIGHT DATA:

CHART CYA102.
CHART 2400 PRIOR TO NOW NDB IN PROFILE.
FAS OBST: 300 AAO 480709N/1231728W.
HOLD NE, RT, 242.00 INBOUND

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

ALTERNATE: NA ☒

CATEGORY:	COPTER														
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
H-242	600	1	592		NA			NA			NA				

CHANGES - REASONS

1. CHANGED ALL REFERENCES OF K NDB TO NOW NDB. - NDB IDENT CHANGED.
2. CHANGED AND MOVED NOTE "CHART PLANVIEW NOTE: RADAR REQUIRED" IN ADDITIONAL FLIGHT DATA TO "RADAR REQUIRED FOR PROCEDURE ENTRY" IN EQUIPMENT REQUIREMENT NOTES. - IAW 8260.19H 8-6-8.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: NUW APP CON; ZSE; AMGR

FLIGHT CHECKED BY
PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

DEVELOPED BY
CHRISTINE BAYSE

Digitally signed by
CHRISTINE BAYSE

APPROVED BY
PATRICK MULQUEEN

Dec 28, 2018

Digitally signed by
WARDELL HENNING

Jan 09, 2019

OFFICE
Digitally signed by
WARDELL HENNING

Jan 09, 2019

DATE

OFFICE
AJV-5432

DATE
11/29/2018

OFFICE
AJV-5430

DATE

TITLE
MANAGER



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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SEATTLE-TACOMA INTL	KSEA	ILS OR LOC RWY 16C ILS RWY 16C SA CAT I, ILS RWY 16C CAT II, ILS RWY 16C CAT III	17	SEATTLE	WA	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
432	16C 430 16L 432	ILS OR LOC RWY 16C ILS RWY 16C SA CAT I, ILS RWY 16C CAT II, ILS RWY 16C CAT III	16A	10/12/2017	16E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
I-SZI		28 FEBRUARY 2019	ROUTINE			

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>
PAE VOR/DME		JINRU/I-SZI 22.18 DME/RADAR					170.00	7.03	7000
JINRU/I-SZI 22.18 DME/RADAR	IAF	HULTO/I-SZI 19.04 DME/RADAR					164.34	3.14 (I-SZI)	6000
HULTO/I-SZI 19.04 DME/RADAR	IAF	ERYKA/I-SZI 15.90 DME/RADAR					164.34	3.14 (I-SZI)	5000
ERYKA/I-SZI 15.90 DME/RADAR	IAF	MGNUM/I-SZI 12.76 DME/RADAR					164.34	3.14 (I-SZI)	4000
GRIFY	IAF	MGNUM/I-SZI 12.76 DME/RADAR		TF	FB	1.00	136.74	8.21	4000
MGNUM/I-SZI 12.76 DME/RADAR	IF	ANVIL/I-SZI 10.25 DME/RADAR					164.34	2.51 (I-SZI)	3200
ANVIL/I-SZI 10.25 DME/RADAR		SODOE/I-SZI 6.16 DME/RADAR					164.34	4.08 (I-SZI)	1900

MISSED APPROACH

MAP:

ILS: DA

LOC: 4.44 NM AFTER SODOE/I-SZI 6.16 DME/RADAR OR AT I-SZI 1.72 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB ON HEADING 160 AND SEA VORTAC R-161 TO CROSS TEBNE/SEA 2.40 DME/RADAR AT OR BELOW 2000, THEN CLIMB TO 5000 ON SEA VORTAC R-161 TO MILLT/SEA 11.00 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 TO PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. PROFILE STARTS AT JINRU

3. FAC: 164.34 FAF: SODOE/I-SZI 6.16 DME/RADAR DIST FAF TO MAP: 4.44 DIST FAF TO THLD: 4.44

4. MIN ALT: JINRU/I-SZI 22.18 DME/RADAR 7000, HULTO/I-SZI 19.04 DME/RADAR 6000, ERYKA/I-SZI 15.90 DME/RADAR 5000, MGNUM/I-SZI 12.76 DME/RADAR 4000, ANVIL/I-SZI 10.25 DME/RADAR 3200, SODOE/I-SZI 6.16 DME/RADAR 1900

5. DIST TO THLD FROM OM: MM: IM: 100 HAT: 874 150 HAT: 1828 GS ANT: 1120

6. MIN GS INCPT: 1900 GS ALT AT FAF : SODOE/I-SZI 6.16 DME/RADAR 1900 OM: MM: IM:

7. GP ANGLE: 3.00 34:1: 20:1: TCH: 54.8

8. MSA FROM: SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400

EQUIPMENT REQUIREMENTS NOTES:

FROM GRIFY: RNAV 1-GPS REQUIRED.
DME OR RADAR REQUIRED.

NOTES:

SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16C: CAT A, B, C, D RA 292, RVR 1400, HAT 150, DA 580 MSL.
CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16C: CAT A, B, C, D RA 126, RVR 1200, HAT 100, DA 530 MSL.
CAT III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16C: CAT III CAT A, B, C, D RVR 300
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO SIDESTEP 16L CATS A/B.
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
CAT II RVR 1000 CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16R.
CHART NOTE: SIMULTANEOUS OPERATIONS REQUIRE USE OF VERTICAL GUIDANCE, MAINTAIN LAST ASSIGNED ALTITUDE UNTIL ESTABLISHED ON GLIDESLOPE.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 16C CAT C, D VISIBILITY TO RVR 5500.

CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON ADJACENT INFORMATION PAGE.

PUBLISH BRIEFING PAGE SHOWING GRAPHIC OF THE RELATIONSHIP OF RUNWAY 16C AND TAXIWAY T FOR ALL RUNWAY 16C APPROACHES, AND INCLUDE THE FOLLOWING ALERT:
SEATTLE-TACOMA INTERNATIONAL AIRPORT
ALERT NOTICE

ATTENTION ALL AIRCRAFT LANDING TO THE SOUTH:
WHEN TRANSITIONING FROM AN INSTRUMENT PROCEDURE TO A VISUAL APPROACH TO RUNWAY 16C, VERIFY YOU ARE ALIGNED FOR THE INTENDED LANDING RUNWAY, NOT TAXIWAY TANGO. TAXIWAY TANGO IS WEST AND PARALLEL TO RUNWAY 16C.
TRANSITION TO VISUAL:
TAXIWAY TANGO HAS BEEN MISTAKEN FOR RUNWAY 16C FROM THE AIR DURING CERTAIN VISIBILITY CONDITIONS, I.E. WET RUNWAY, LOW SUN ANGLE REFLECTIONS. AIRCREWS ARE ADVISED TO BE AWARE OF THE PROXIMITY OF THE TAXIWAY TO RUNWAY 16C AND ITS RUNWAY-LIKE APPEARANCE WHILE ON APPROACH.
RECOMMENDATION:
AIRCREWS SHOULD USE VISUAL CUES, E.G., APPROACH LIGHTING SYSTEMS, REILS, WHEN AVAILABLE, TO CONFIRM ALIGNMENT WITH RUNWAY 16C NOT TAXIWAY TANGO. ADDITIONALLY, IT IS RECOMMENDED WHEN EXECUTING A SEGMENT OF THE ILS APPROACH FOR A VISUAL TRANSITION, TRACK THE LOCALIZER UNTIL THE RUNWAY ENVIRONMENT IS VISUALLY VERIFIED.
INSERT SEGMENTED AIRPORT DIAGRAM DEPICTING RUNWAY 16C AND TAXIWAY T.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT GRIFY.
CHART MAXIMUM 2000 AT TEBNE.
CHART SPEED ICON IN PLANVIEW AT GRIFY: MAX 210 KIAS.
CHART CIRCLING ICON.
CHART KBFI IN PLAN AND PROFILE VIEWS.
CHART IN PLANVIEW: PEYOY/OLM 20.00 DME
CHART VDP AT 2.66 DME*
DISTANCE VDP TO THLD 0.94 NM
* LOC ONLY
CHART FAS OBST: 542 TREE 472940N/1221851W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.00 INBOUND.
HOLD S, RT, 340.66 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD

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 16C	630	1800	200	630	1800	200	630	1800	200	630	1800	200			
S-LOC 16C	800	2400	370	800	2400	370	800	3500	370	800	3500	370			
SIDESTEP 16L	800	5500	368	800	5500	368	800	5500	368	800	1 1/2	368			
CIRCLING	1000	1	568	1000	1	568	1000	1 1/2	568	1000	2	568			

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>
SEATTLE-TACOMA INTL	KSEA	ILS OR LOC RWY 16C ILS RWY 16C SA CAT I, ILS RWY 16C CAT II, ILS RWY 16C CAT III	17	SEATTLE	WA

CHANGES - REASONS

- AIRPORT ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- RWY 16L TOUCHDOWN ZONE ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED FEEDER FROM "PAE VOR/DME TO ERYKA/I-SZI 15.90DME/RADAR" TO "PAE VOR/DME TO JINRU/I-SZI 22.18 DME/RADAR" - ATC REQUEST TO ADD JINRU 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED INITIAL APPROACH SEGMENT "JINRU/I-SZI 22.18 DME/RADAR TO HULTO/I-SZI 19.04 DME/RADAR" - ATC REQUEST TO ADD HULTO 6000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- CHANGED ALTERNATE MISSED APPROACH FROM "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 2000 ON HEADING 163, THEN CLIMBING RIGHT TURN TO 5000 DIRECT TCM VORTAC AND HOLD" TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 ON HEADING 163 THEN CLIMBING RIGHT TURN ON OLM VORTAC R-048 TO 5000 DIRECT PEYOY/OLM 20.00 DME AND HOLD." - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- CHANGED LINE 2 FROM "PROFILE STARTS AT MGNM" TO "PROFILE STARTS AT JINRU" - ATC REQUEST TO ADD JINRU 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED "JINRU/I-SZI 22.18 DME/RADAR 7000 AND HULTO/I-SZI 19.04 DME/RADAR 6000" TO LINE 4 MIN ALT - ATC REQUEST TO ADD JINRU 7000 FT AND HULTO 6000 FT INITIAL APPROACH FIXES FOR SIMULTANEOUS OPERATIONS.
- REMOVED IM DISTANCE FROM LINE 5 - INNER MARKER DECOMMISSIONED.
- INCREASED 100 FT HAT FROM 836 FT TO 874 FT ON LINE 5 - TCH DECREASED FROM 56.6 FT TO 54.8 FT.
- INCREASED 150 FT HAT FROM 1789 FT TO 1828 FT ON LINE 5 - TCH DECREASED FROM 56.6 FT TO 54.8 FT.
- TCH DECREASED FROM 56.6 FT TO 54.8 FT - PROCEDURE TCH FIGURES UPDATED IAW 8240.47D.
- ADDED "EQUIPMENT REQUIREMENT NOTE: DME REQUIRED" - IAW CURRENT 8260.19.
- REMOVED CHART NOTE AND CHART PLANVIEW NOTE "DME OR RADAR REQUIRED" - MOVED TO EQUIPMENT REQUIREMENT NOTES IAW CURRENT 8260.19.
- INCREASED S-LOC 16C ALL CATS MDA/HAT FROM 760/330 FT TO 800/370 FT - CONTROLLING OBSTACLE CHANGED FROM 529 MSL (KSEA0013) TO 542 (53-081793).
- INCREASED LOC SIDESTEP 16L ALL CATS MDA/HAT FROM 780/347 FT TO 800/368 FT - CONTROLLING OBSTACLE CHANGED FROM 514 MSL (KSEAC019) TO 542 (53-081793) AND UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: TCM VORTAC" TO "CHART IN PLANVIEW: PEYOY/OLM 20.00 DME" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- INCREASED VDP DISTANCE FROM 2.52 NM TO 2.66 NM - TCH DECREASED FROM 56.6 TO 54.8FT AND MDA INCREASED FROM 760 FT TO 800 FT.
- INCREASED VDP TO THLD DISTANCE FROM 0.80 NM TO 0.94 NM - TCH DECREASED FROM 56.6 TO 54.8FT AND MDA INCREASED FROM 760 FT TO 800 FT.
- CHANGED CHART FAS OBSTACLE FROM "529 TREE 472853N/1221901W" TO "542 TREE 472940N/1221851W" - NEW CONTROLLING OBSTACLE IN FINAL.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E TCM VORTAC, RT, 261.00 INBOUND" TO "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.33 INBOUND" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- INCREASED CIRCLING CATS A/B/C/D HAA FROM 567 FT TO 568 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH ILS OR LOC RWY 16R TO CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16R - IAW FPT CHECKLIST.
- CHANGED CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 16C CAT C, D VISIBILITY TO RVR 5000 TO CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 16C CAT C, D VISIBILITY TO RVR 5500 - IAW CURRENT 8260.3 VISIBILITY MINIMUMS
- CHANGED CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO SIDESTEP 16L TO CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO SIDESTEP 16L CATS A/B - IAW CURRENT 8260.3 VISIBILITY MINIMUMS.
- REMOVED CAT II & III CHART NOTE: SIMULTANEOUS APPROACH NOT AUTHORIZED - IAW FPT CHECKLIST.

12/17/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/09/18.

- CHANGED ALTERNATE MISSED APPROACH INSTRUCTIONS TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 TO PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)" PER FICO REQUEST.

QUALITY
13
CHECKED

AIRPORT
SEATTLE-TACOMA INTL

AIRPORT ID
KSEA

PROCEDURE NAME
ILS OR LOC RWY 16C
ILS RWY 16C SA CAT I,
ILS RWY 16C CAT II,
ILS RWY 16C CAT III

ORIGINAL/AMENDMENT
17

CITY
SEATTLE

STATE
WA

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZSE, SEA APCH, SEA ATCT, AMGR, ATA

FLIGHT CHECKED BY

GARY J VEER

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

FICO

DATE

12/11/18

DEVELOPED BY

DUSTIN DAVIDSON

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

AJV-5422

DATE

07/09/2018

APPROVED BY

JULIE MORGAN

Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE
MANAGER

QUALITY
13
CHECKED

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> SEATTLE-TACOMA INTL		<u>AIRPORT ID</u> KSEA	<u>PROCEDURE NAME</u> ILS OR LOC RWY 16L ILS RWY 16L SA CAT I, ILS RWY 16L CAT II, ILS RWY 16L CAT III	<u>ORIGINAL/AMENDMENT</u> 8	<u>CITY</u> SEATTLE	<u>STATE</u> WA
<u>AIRPORT ELEVATION</u> 432	<u>TDZE</u> 432	<u>SUPERSEDED</u> ILS OR LOC RWY 16L ILS RWY 16L SA CAT I, ILS RWY 16L CAT II, ILS RWY 16L CAT III	<u>ORIGINAL/AMENDMENT</u> 7A	<u>DATED</u> 10/12/2017	<u>MAG VAR</u> 16E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> I-SNQ	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 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>
PAE VOR/DME		ZEDKI/I-SNQ 22.25 DME/RADAR					168.97	6.99	7000
ZEDKI/I-SNQ 22.25 DME/RADAR	IAF	WUMUL/I-SNQ 19.10 DME/RADAR					164.34	3.14 (I-SNQ)	6000
WUMUL/I-SNQ 19.10 DME/RADAR	IAF	KENMO/I-SNQ 15.94 DME/RADAR					164.34	3.16 (I-SNQ)	5000
KENMO/I-SNQ 15.94 DME/RADAR	IAF	HELZR/I-SNQ 12.82 DME/RADAR					164.34	3.12 (I-SNQ)	4000
GRIFY	IAF	HELZR/I-SNQ 12.82 DME/RADAR		TF	FB	1.00	135.86	8.25	4000
HELZR/I-SNQ 12.82 DME/RADAR	IF	KARFO/I-SNQ 10.30 DME/RADAR					164.34	2.52 (I-SNQ)	3200
KARFO/I-SNQ 10.30 DME/RADAR		DGLAS/I-SNQ 6.20 DME/RADAR					164.34	4.10 (I-SNQ)	1900

MISSED APPROACH

MAP:

ILS: DA

LOC: 4.43 NM AFTER DGLAS/I-SNQ 6.20 DME/RADAR OR AT I-SNQ 1.77 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 900 ON HEADING 165 THEN ON SEA VORTAC R-161 TO CROSS TEBNE/SEA 2.40 DME/RADAR AT OR BELOW 2000 THEN CLIMB TO 5000 ON SEA VORTAC R-161 TO MILLT/SEA 11.00 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 TO PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT ZEDKI					
3. FAC:	164.34	FAF: DGLAS/I-SNQ 6.20 DME/RADAR	DIST FAF TO MAP: 4.43	DIST FAF TO THLD: 4.43	
4. MIN ALT:	ZEDKI/I-SNQ 22.25 DME/RADAR 7000, WUMUL/I-SNQ 19.10 DME/RADAR 6000, KENMO/I-SNQ 15.94 DME/RADAR 5000, HELZR/I-SNQ 12.82 DME/RADAR 4000, KARFO/I-SNQ 10.30 DME/RADAR 3200, DGLAS/I-SNQ 6.20 DME/RADAR 1900				
5. DIST TO THLD FROM OM:	MM:	IM:	100 HAT: 842	150 HAT: 1796	GS ANT: 1089
6. MIN GS INCPT:	1900	GS ALT AT FAF :	DGLAS/I-SNQ 6.20 DME/RADAR 1900	OM:	MM: IM:
7. GP ANGLE:	3.00	34:1:	20:1:	TCH: 55.6	
8. MSA FROM:	SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400				

EQUIPMENT REQUIREMENTS NOTES:

FROM GRIFY: RNAV 1-GPS REQUIRED.
DME OR RADAR REQUIRED.

NOTES:

SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16L: CAT A, B, C, D RA 248, RVR 1400, HAT 150, DA 582 MSL.
CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16L: CAT A, B, C, D RA 176, RVR 1200, HAT 100, DA 532 MSL.
CAT III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16L: CAT A, B, C, D RVR 300
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
CAT II RVR 1000 CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16R.

ADDITIONAL FLIGHT DATA:

CHART KBFI IN PLAN AND PROFILE VIEWS.
CHART MANDATORY 6000 AT GRIFY.
CHART: 696 ATC TOWER 472721N/1221805W
CHART SPEED ICON IN PLANVIEW AT GRIFY: MAX 210 KIAS.
CHART CIRCLING ICON.
CHART IN PLANVIEW: PEYOY/OLM 20.00 DME
CHART VDP AT 2.93 DME*
DISTANCE VDP TO THLD 1.16 NM
* LOC ONLY
CHART FAS OBST: 542 TREE 472940N/1221851W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.00 INBOUND.
HOLD S, RT, 340.66 INBOUND



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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD

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 16L	697	2000	265	632	1800	200	632	1800	200	632	1800	200			
S-LOC 16L	880	2400	448	880	2400	448	880	4500	448	880	4500	448			
CIRCLING	1000	1	568	1000	1	568	1000	1 1/2	568	1000	2	568			

CHANGES - REASONS

- AIRPORT ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- TOUCHDOWN ZONE ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED FEEDER FROM "PAE VOR/DME TO KENMO/I-SNQ 15.94 DME/RADAR" TO "PAE VOR/DME TO ZEDKI/I-SNQ 22.25 DME/RADAR" - ATC REQUEST TO ADD ZEDKI 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED INITIAL APPROACH SEGMENT "ZEDKI/I-SNQ 22.25 DME/RADAR TO WUMUL/I-SNQ 19.10 DME/RADAR" - ATC REQUEST TO ADD WUMUL 6000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- CHANGED ALTERNATE MISSED APPROACH FROM "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 2000 ON HEADING 163 THEN CLIMBING RIGHT TURN DIRECT TCM VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000" TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 ON HEADING 163 THEN CLIMBING RIGHT TURN ON OLM VORTAC R-048 TO 5000 DIRECT PEYOY/OLM 20.00 DME AND HOLD." - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- CHANGED LINE 2 FROM "PROFILE STARTS AT HELZR" TO "PROFILE STARTS AT ZEDKI" - ATC REQUEST TO ADD ZEDKI 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED "ZEDKI/I-SNQ 22.25 DME/RADAR 7000 AND WUMUL/I-SNQ 19.10 DME/RADAR 6000" TO LINE 4 MIN ALT - ATC REQUEST TO ADD ZEDKI 7000 FT AND WUMUL 6000 FT INITIAL APPROACH FIXES FOR SIMULTANEOUS OPERATIONS.
- REMOVED IM DISTANCE FROM LINE 5 - INNER MARKER DECOMMISSIONED.
- DECREASED 100 FT HAT FROM 851 FT TO 842 FT ON LINE 5 - TDZE DECREASED FROM 433 FT TO 432 FT.
- DECREASED 150 FT HAT FROM 1805 FT TO 1796 FT ON LINE 5 - TDZE DECREASED FROM 433 FT TO 432 FT.
- TCH INCREASED FROM 55.4 FT TO 55.6 FT - PROCEDURE TCH FIGURES UPDATED IAW 8240.47D.
- ADDED "EQUIPMENT REQUIREMENT NOTE: DME REQUIRED" - IAW CURRENT 8260.19.
- DECREASED SA CAT I DA FROM 583 FT TO 582 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- DECREASED CAT II DA FROM 533 FT TO 532 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: TCM VORTAC" TO "CHART IN PLANVIEW: PEYOY/OLM 20.00 DME" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- INCREASED VDP DISTANCE FROM 2.92 NM TO 2.93 NM - TCH INCREASED FROM 55.4 FT TO 55.6 FT.
- INCREASED VDP TO THLD DISTANCE FROM 1.15 NM TO 1.16 NM - TCH INCREASED FROM 55.4 FT TO 55.6 FT.
- CHANGED CHART FAS OBSTACLE FROM "514 TREE 472836N/1221818W" TO "542 TREE 472940N/1221851W" - NEW CONTROLLING OBSTACLE IN FINAL.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E TCM VORTAC, RT, 261.00 INBOUND" TO "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.33 INBOUND" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- INCREASED S-ILS 16L CAT A HAT FROM 264 FT TO 265 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- DECREASED S-ILS 16L CATS B/C/D HAT FROM 633 FT TO 632 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- INCREASED S-LOC 16L CATS A/B/C/D HAT FROM 447 FT TO 448 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- INCREASED CIRCLING CATS A/B/C/D HAA FROM 567 FT TO 568 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- REMOVED CHART NOTE AND CHART PLANVIEW NOTE "DME OR RADAR REQUIRED" - MOVED TO EQUIPMENT REQUIREMENT NOTES IAW CURRENT 8260.19.
- REMOVED CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 16L CAT A VISIBILITY TO RVR 4500, AND CATS B, C, D TO RVR 4000 - IAW CURRENT 8260.3 INOPERATIVE TABLE.

12/17/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/09/18.

- CHANGED ALTERNATE MISSED APPROACH INSTRUCTIONS TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 TO PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)" PER FICO REQUEST.



AIRPORT

SEATTLE-TACOMA INTL

AIRPORT ID

KSEA

PROCEDURE NAME

ILS OR LOC RWY 16L
ILS RWY 16L SA CAT I,
ILS RWY 16L CAT II,
ILS RWY 16L CAT III

ORIGINAL/AMENDMENT

8

CITY

SEATTLE

STATE

WA

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZSE, SEA APCH, SEA ATCT, AMGR, FPT, ATA

FLIGHT CHECKED BY

GARY JOHN VEER

Digitally signed by

JACOB POWERS

Jan 08, 2019

OFFICE

FIOG

DATE

12/12/2018

DEVELOPED BY

DUSTIN DAVIDSON

Digitally signed by

DUSTIN DAVIDSON

Dec 17, 2018

OFFICE

AJV-5422

DATE

07/09/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

JACOB POWERS

Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER

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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
SEATTLE-TACOMA INTL	KSEA	ILS OR LOC RWY 16R ILS RWY 16R SA CAT I, ILS RWY 16R CAT II, ILS RWY 16R CAT III	5	SEATTLE	WA	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
432	415	ILS OR LOC RWY 16R ILS RWY 16R SA CAT I, ILS RWY 16R CAT II, ILS RWY 16R CAT III	4A	10/12/2017	16E	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
I-CJL		28 FEBRUARY 2019	ROUTINE			

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>
PAE VOR/DME		ZIKRO/I-CJL 22.08 DME/RADAR					172.33	7.03	7000
ZIKRO/I-CJL 22.08 DME/RADAR	IAF	CIBUX/I-CJL 18.94 DME/RADAR					164.34	3.14 (I-CJL)	6000
CIBUX/I-CJL 18.94 DME/RADAR	IAF	AGANE/I-CJL 15.79 DME/RADAR					164.34	3.14 (I-CJL)	5000
AGANE/I-CJL 15.79 DME/RADAR	IAF	CELAKE/I-CJL 12.66 DME/RADAR					164.34	3.14 (I-CJL)	4000
GRIFY	IAF	CELAKE/I-CJL 12.66 DME/RADAR		TF	FB	1.00	138.34	8.04	4000
CELAKE/I-CJL 12.66 DME/RADAR	IF	BUGNE/I-CJL 10.14 DME/RADAR					164.34	2.51 (I-CJL)	3200
BUGNE/I-CJL 10.14 DME/RADAR		FINKA/I-CJL 6.06 DME/RADAR					164.34	4.08 (I-CJL)	1900

MISSED APPROACH

MAP:

ILS: DA
 LOC: 4.49 NM AFTER FINKA/I-CJL 6.06 DME/RADAR OR AT I-CJL 1.57 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 900 THEN CLIMB ON HEADING 195 AND ON SEA VORTAC R-210 TO CROSS TECED/SEA 3.00 DME/RADAR AT OR BELOW 2000 THEN CLIMB TO 5000 ON SEA VORTAC R-210 TO ZERLI/SEA 15.00 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 DIRECT PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)



AIRPORT SEATTLE-TACOMA INTL	AIRPORT ID KSEA	PROCEDURE NAME ILS OR LOC RWY 16R ILS RWY 16R SA CAT I, ILS RWY 16R CAT II, ILS RWY 16R CAT III	ORIGINAL/AMENDMENT 5	CITY SEATTLE	STATE WA
PROFILE:					
1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT ZIKRO					
3. FAC:	164.34	FAF: FINKA/I-CJL 6.06 DME/RADAR	DIST FAF TO MAP: 4.49	DIST FAF TO THLD: 4.49	
4. MIN ALT:	ZIKRO/I-CJL 22.08 DME/RADAR 7000, CIBUX/I-CJL 18.94 DME/RADAR 6000, AGANE/I-CJL 15.79 DME/RADAR 5000, CELAK/I-CJL 12.66 DME/RADAR 4000, BUGNE/I-CJL 10.14 DME/RADAR 3200, FINKA/I-CJL 6.06 DME/RADAR 1900				
5. DIST TO THLD FROM OM:	MM:	IM:	100 HAT: 863	150 HAT: 1817	GS ANT: 1148
6. MIN GS INCPT: 1900	GS ALT AT FAF : FINKA/I-CJL 6.06 DME/RADAR 1900			OM:	MM: IM:
7. GP ANGLE: 3.00	34:1:	20:1:	TCH: 55.0		
8. MSA FROM: SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400					

EQUIPMENT REQUIREMENTS NOTES:

FROM GRIFY: RNAV 1-GPS REQUIRED.
DME OR RADAR REQUIRED.

NOTES:

SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16R: CAT A, B, C, D RA 176, RVR 1400, HAT 150, DA 565 MSL.
CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16R: CAT A, B, C, D RA 139, RVR 1200, HAT 100, DA 515 MSL.
CAT III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 16R: CAT III CAT A, B, C, D RVR 300
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
CAT II RVR 1000 CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16L AND RWY 16C.
CHART NOTE: SIMULTANEOUS OPERATIONS REQUIRE USE OF VERTICAL GUIDANCE, MAINTAIN LAST ASSIGNED ALTITUDE UNTIL ESTABLISHED ON GLIDESLOPE.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT GRIFY.
CHART SPEED ICON IN PLANVIEW AT GRIFY: MAX 210 KIAS.
CHART CIRCLING ICON.
CHART KBFI IN PLAN AND PROFILE VIEWS.
CHART IN PLANVIEW: PEYOY/OLM 20.00 DME
CHART VDP AT 2.56 DME*
DISTANCE VDP TO THLD 0.99 NM
* LOC ONLY
CHART FAS OBST: 542 TREE 472903N/1221909W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.00 INBOUND.
HOLD SW, RT, 030.00 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD

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 16R	615	1800	200	615	1800	200	615	1800	200	615	1800	200			
S-LOC 16R	800	2400	385	800	2400	385	800	3500	385	800	3500	385			
CIRCLING	1000	1	568	1000	1	568	1000	1 1/2	568	1000	2	568			



<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>
SEATTLE-TACOMA INTL	KSEA	ILS OR LOC RWY 16R ILS RWY 16R SA CAT I, ILS RWY 16R CAT II, ILS RWY 16R CAT III	5	SEATTLE	WA

CHANGES - REASONS

- AIRPORT ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- CHANGED FEEDER FROM "PAE VOR/DME TO ERYKA/I-SZI 15.90DME/RADAR" TO "PAE VOR/DME TO ZIKRO/I-CJL 22.08 DME/RADAR" - ATC REQUEST TO ADD ZIKRO 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED INITIAL APPROACH SEGMENT "ZIKRO/I-CJL 22.08 DME/RADAR TO CIBUX/I-CJL 18.94 DME/RADAR" - ATC REQUEST TO ADD CIBUX 6000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- CHANGED ALTERNATE MISSED APPROACH FROM "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 2000 THEN CLIMBING RIGHT TURN DIRECT TCM VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000." TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 ON HEADING 163 THEN CLIMBING RIGHT TURN ON OLM VORTAC R-048 TO 5000 DIRECT PEYOY/OLM 20.00 DME AND HOLD." - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- CHANGED LINE 2 FROM "PROFILE STARTS AT CELAK" TO "PROFILE STARTS AT ZIKRO" - ATC REQUEST TO ADD ZIKRO 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED "ZIKRO/I-CJL 22.08 DME/RADAR 7000 AND CIBUX/I-CJL 18.94 DME/RADAR 6000" TO LINE 4 MIN ALT - ATC REQUEST TO ADD ZIKRO 7000 FT AND CIBUX 6000 FT INITIAL APPROACH FIXES FOR SIMULTANEOUS OPERATIONS.
- REMOVED IM DISTANCE FROM LINE 5 - INNER MARKER DECOMMISSIONED.
- INCREASED 100 FT HAT FROM 861 FT TO 863 FT ON LINE 5 - TCH INCREASED FROM 54.9 FT TO 55.0 FT.
- INCREASED 150 FT HAT FROM 1815 FT TO 1817 FT ON LINE 5 - TCH INCREASED FROM 54.9 FT TO 55.0 FT.
- TCH INCREASED FROM 54.9 FT TO 55.0 FT - PROCEDURE TCH FIGURES UPDATED IAW 8240.47D.
- ADDED "EQUIPMENT REQUIREMENT NOTE: DME REQUIRED OR RADAR REQUIRED" - IAW CURRENT 8260.19.
- REMOVED CHART NOTE AND CHART PLANVIEW NOTE "DME OR RADAR REQUIRED" - MOVED TO EQUIPMENT REQUIREMENT NOTES IAW CURRENT 8260.19.
- CHANGED CHART NOTE FROM "SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16L AND ILS OR LOC RWY 16C" TO "SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16L AND RWY 16C" - ATC REQUEST.
- REMOVED CHART NOTES "CAT II & III CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16L" AND "SA CAT I CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16L" - ATC REQUEST.
- CHANGED CHART NOTE FROM "SIMULTANEOUS OPERATIONS WITH RWY 16C REQUIRE USE OF VERTICAL GUIDANCE, MAINTAIN LAST ASSIGNED ALTITUDE UNTIL ESTABLISHED ON GLIDESLOPE." TO "SIMULTANEOUS OPERATIONS REQUIRE USE OF VERTICAL GUIDANCE, MAINTAIN LAST ASSIGNED ALTITUDE UNTIL ESTABLISHED ON GLIDESLOPE" - IAW CURRENT 8260.19.
- CHANGED ADDITIONAL FLIGHT DATA FAS OBSTACLE FROM "541 TREE 472905N/1221911W" TO "542 TREE 472903N/1221909W" - NEW FINAL CONTROLLING OBSTACLE.
- REMOVED ADDITIONAL FLIGHT DATA NOTE "CHART: TCM R-313 AT ZERLI" - TCM DECOMMISSIONED.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: TCM VORTAC" TO "CHART IN PLANVIEW: PEYOY/OLM 20.00 DME" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- CHANGED ADDITIONAL FLIGHT DATA FROM "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E TCM VORTAC, RT, 261.00 INBOUND" TO "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NE PEYOY/OLM 20.00 DME, RT, 228.33 INBOUND" - ATC REQUEST DUE TO DECOMMISSIONING OF TCM VORTAC.
- INCREASED CIRCLING CATS A/B/C/D HAA FROM 567 FT TO 568 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.

12/17/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/09/18.

- CHANGED ALTERNATE MISSED APPROACH INSTRUCTIONS TO "(SIMULTANEOUS OPERATIONS NA) CLIMB TO 900 THEN CLIMBING RIGHT TURN TO 5000 ON HEADING 169 AND OLM VORTAC R-048 TO PEYOY/OLM 20.00 DME AND HOLD. (DME REQUIRED)" PER FICO REQUEST.



AIRPORT

SEATTLE-TACOMA INTL

AIRPORT ID

KSEA

PROCEDURE NAME

ILS OR LOC RWY 16R
ILS RWY 16R SA CAT I,
ILS RWY 16R CAT II,
ILS RWY 16R CAT III

ORIGINAL/AMENDMENT

5

CITY

SEATTLE

STATE

WA

COORDINATED WITH:

A4A ☒

ALPA ☒

AOPA ☒

APA ☒

HAI ☐

NBAA ☒

OTHER: ZSE, SEA APP CON, SEA ATCT, AMGR, FPT, ATA

FLIGHT CHECKED BY

GARY JOHN VEER

Digitally signed by

JACOB POWERS

Jan 08, 2019

Digitally signed by

DUSTIN DAVIDSON

Dec 17, 2018

OFFICE

FIOG

DATE

12/12/2018

DEVELOPED BY

DUSTIN DAVIDSON

OFFICE

AJV-5422

DATE

07/09/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

JACOB POWERS

Jan 08, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER

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> SEATTLE-TACOMA INTL	<u>AIRPORT ID</u> KSEA	<u>PROCEDURE NAME</u> ILS OR LOC RWY 34R ILS RWY 34R SA CAT I, ILS RWY 34R SA CAT II	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> SEATTLE	<u>STATE</u> WA
<u>AIRPORT ELEVATION</u> 432	<u>TDZE</u> 34R 372 34C 387	<u>SUPERSEDED</u> ILS OR LOC RWY 34R ILS RWY 34R SA CAT I, ILS RWY 34R CAT II	<u>ORIGINAL/AMENDMENT</u> 2D	<u>DATED</u> 10/12/2017	<u>MAG VAR</u> 16E
<u>FACILITY</u> I-SEA	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

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>
SONDR	IAF	NEEAL/I-SEA 15.93 DME/RADAR		TF	FB	1.00	014.23	3.14	5000
JIPOX/I-SEA 22.21 DME/RADAR	IAF	WAGTI/I-SEA 19.07 DME/RADAR					344.34	3.14 (I-SEA)	6000
WAGTI/I-SEA 19.07 DME/RADAR	IAF	NEEAL/I-SEA 15.93 DME/RADAR					344.34	3.14 (I-SEA)	5000
NEEAL/I-SEA 15.93 DME/RADAR	IF	KLEWS/I-SEA 12.50 DME/RADAR					344.34	3.43 (I-SEA)	4000
KLEWS/I-SEA 12.50 DME/RADAR		BUCKK/I-SEA 6.34 DME/RADAR					344.34	6.17 (I-SEA)	2200

MISSED APPROACH

MAP:

ILS: DA
 LOC: 5.77 NM AFTER BUCKK/I-SEA 6.34 DME/RADAR OR AT JEVUN/0.56 DME/RADAR FIX

MISSED APPROACH INSTRUCTIONS:

CLIMB ON HEADING 343.00 AND OUTBOUND ON SEA VORTAC R-341 TO CROSS COYLA/SEA 4.70 DME/RADAR AT OR ABOVE 3000 THEN CLIMB TO 5000 ON SEA VORTAC R-341 TO MGNM/SEA 12.7 DME/RADAR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 3000 THEN CLIMBING RIGHT TURN TO 5000 DIRECT PAE VOR/DME AND HOLD.



AIRPORT	AIRPORT ID	PROCEDURE NAME	ORIGINAL/AMENDMENT	CITY	STATE
SEATTLE-TACOMA INTL	KSEA	ILS OR LOC RWY 34R ILS RWY 34R SA CAT I, ILS RWY 34R SA CAT II	3	SEATTLE	WA

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)	
2. PROFILE STARTS AT JIPOX					
3. FAC:	344.34	FAF: BUCKK/I-SEA 6.34 DME/RADAR	DIST FAF TO MAP: 5.77	DIST FAF TO THLD: 6.14	
4. MIN ALT:	JIPOX/I-SEA 22.21 DME/RADAR 7000, WAGTI/I-SEA 19.07 DME/RADAR 6000, NEEAL/I-SEA 15.93 DME/RADAR 5000, KLEWS/I-SEA 12.50 DME/RADAR 4000, BUCKK/I-SEA 6.34 DME/RADAR 2200, CNNTI/I-SEA 2.39 DME/RADAR 1040*				
5. DIST TO THLD FROM OM:	MM:	IM:	100 HAT: 849	150 HAT: 1890	GS ANT: 1135
6. MIN GS INCPT: 2200	GS ALT AT FAF : BUCKK/I-SEA 6.34 DME/RADAR 2200			OM:	MM: IM:
7. GP ANGLE: 2.75	34:1:	20:1:	TCH: 59.7		
8. MSA FROM:	SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400				

EQUIPMENT REQUIREMENTS NOTES:

EQUIPMENT REQUIREMENTS NOTE: FROM SONDR: RNAV 1-GPS REQUIRED.
EQUIPMENT REQUIREMENTS NOTE: DME OR RADAR REQUIRED.

NOTES:

SA CAT I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 34R: CAT A, B, C, D RA 250, RVR 1400, HAT 150, DA 522 MSL.
SA CAT II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED; S-ILS 34R: CAT A, B, C, D RA 200, RVR 1200, HAT 100, DA 472 MSL.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO SIDESTEP 34C CATS A/B.
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.
SA CAT II CHART NOTE: REDUCED LIGHTING: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PROFILE NOTE: USE I-SEA DME WHEN ON LOCALIZER COURSE
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 34L.

ADDITIONAL FLIGHT DATA:

CHART SPEED ICON IN PLANVIEW AT SONDR: MAX 230 KIAS.
CHART MANDATORY 6000 AT SONDR.
CHART CIRCLING ICON.
CHART IN PLANVIEW: PAE VOR/DME
CHART VDP AT 1.26 DME*
DISTANCE VDP TO THLD 1.07 NM
* LOC ONLY
CHART FAS OBST: 491 TREE 472520N/1221846W, 509 TREE 472529N/1221857W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NW PAE VOR/DME, RT, 149.04 INBOUND.
HOLD N, RT, 161.04 INBOUND



MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD

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 34R	572	1800	200	572	1800	200	572	1800	200	572	1800	200			
S-LOC 34R	740	2400	368	740	2400	368	740	3500	368	740	3500	368			
SIDESTEP 34C	760	5500	373	760	5500	373	760	5500	373	760	1 1/2	373			
CIRCLING	1000	1	568	1000	1	568	1000	1 1/2	568	1000	2	568			

CHANGES - REASONS

- AIRPORT ELEVATION DECREASED FROM 433 FT TO 432 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.
- ADDED INITIAL APPROACH SEGMENT "JIPOX/I-SEA 22.21 DME/RADAR TO WAGTI/I-SEA 19.07 DME/RADAR" - ATC REQUEST TO ADD JIPOX 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED INITIAL APPROACH SEGMENT "WAGTI/I-SEA 19.07 DME/RADAR TO NEEAL/I-SEA 15.93 DME/RADAR" - ATC REQUEST TO ADD WAGTI 6000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- CHANGED LINE 2 FROM "PROFILE STARTS AT NEEAL" TO "PROFILE STARTS AT JIPOX" - ATC REQUEST TO ADD JIPOX 7000 FT INITIAL APPROACH FIX FOR SIMULTANEOUS OPERATIONS.
- ADDED "JIPOX/I-SEA 22.21 DME/RADAR 7000 AND WAGTI/I-SEA 19.07 DME/RADAR 6000" TO LINE 4 MIN ALT - ATC REQUEST TO ADD JIPOX 7000 FT AND WAGTI 6000 FT INITIAL APPROACH FIXES FOR SIMULTANEOUS OPERATIONS.
- INCREASED 100 FT HAT FROM 843 FT TO 849 FT ON LINE 5 - CORRECTION TO OLD CALCULATED POSITION.
- INCREASED 150 FT HAT FROM 1884 FT TO 1890 FT ON LINE 5 - CORRECTION TO OLD CALCULATED POSITION.
- ADDED "EQUIPMENT REQUIREMENT NOTE: DME REQUIRED" - IAW CURRENT 8260.19.
- INCREASED VDP DISTANCE FROM 1.19 NM TO 1.26 NM - MDA INCREASED FROM 720 FT TO 740 FT.
- INCREASED VDP TO THLD DISTANCE FROM 0.99 NM TO 1.07 NM - MDA INCREASED FROM 720 FT TO 740 FT.
- CHANGED ADDITIONAL FLIGHT DATA CHART FAS OBSTACLES FROM "476 TREE 472524N/1221845W, 507 TREE 472529N/1221857W" TO "491 TREE 472520N/1221846W, 509 TREE 472529N/1221857W" - NEW FINAL AND SIDESTEP CONTROLLING OBSTACLES.
- REMOVED CHART NOTE AND CHART PLANVIEW NOTE "DME OR RADAR REQUIRED" - MOVED TO EQUIPMENT REQUIREMENT NOTES IAW CURRENT 8260.19.
- INCREASED S-LOC 34R ALL CATS MDA/HAT FROM 720/348 FT TO 740/368 FT - CONTROLLING OBSTACLE CHANGED FROM 476 MSL (KSEA0033) TO 491 (53-081859).
- INCREASED SIDESTEP 34C CATS A/B/C VISIBILITY FROM RVR 5000 TO RVR 5500 AND CAT D VISIBILITY FROM RVR 5000 TO 1 1/2 SM - IAW CURRENT 8260.3 GUIDANCE.
- INCREASED CIRCLING CATS A/B/C/D HAA FROM 567 FT TO 568 FT - UPDATED AIRPORT SURVEY SINCE PRIOR PROCEDURE FULL AMENDMENT.

10/01/18: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/09/18.

- REMOVED CIDUG/SEA 25.84 DME INITIAL APPROACH SEGMENT PER FICO REQUEST.
- REMOVED CHART PLANVIEW NOTE "PROCEDURE NA FOR ARRIVALS AT CIDUG ON V495 SOUTHBOUND".



COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZSE, SEA APP CON, SEA ATCT, APT MANAGER, ATA

FLIGHT CHECKED BY

GARY JOHN VEER
Digitally signed by
JACOB POWERS

DEVELOPED BY

DUSTIN DAVIDSON
Jan 08, 2019
Digitally signed by
DUSTIN DAVIDSON
Oct 01, 2018

APPROVED BY

JULIE MORGAN
Digitally signed by
JACOB POWERS
Jan 08, 2019

OFFICE

FIOG

DATE

09/19/2018

OFFICE

AJV-5422

DATE

07/09/2018

OFFICE

AJV-5420

DATE

TITLE

MANAGER

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> APPLETON INTL	<u>AIRPORT ID</u> KATW	<u>PROCEDURE NAME</u> ILS OR LOC RWY 30	<u>ORIGINAL/AMENDMENT</u> 4	<u>CITY</u> APPLETON	<u>STATE</u> WI
<u>AIRPORT ELEVATION</u> 918	<u>TDZE</u> 875	<u>SUPERSEDED</u> ILS OR LOC RWY 30	<u>ORIGINAL/AMENDMENT</u> 3B	<u>DATED</u> 10/15/2015	<u>MAG VAR</u> 2W
<u>FACILITY</u> I-AQZ	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

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>
GRB VORTAC		KOOKY LOM/I-AQZ 6.48 DME					202.41	22.17	2900
OSH VORTAC		KOOKY LOM/I-AQZ 6.48 DME					024.58	15.13	2900

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.19 NM AFTER KOOKY LOM/I-AQZ 6.48 DME OR AT I-AQZ 1.29 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2700 THEN CLIMBING RIGHT TURN TO 2900 DIRECT KOOKY LOM/I-AQZ 6.48 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 2700 THEN CLIMBING RIGHT TURN TO 2900 DIRECT GRB VORTAC AND HOLD.

PROFILE:

1. PT R **SIDE OF COURSE** 118.13 **OUTBOUND** 2900 **FT WITHIN** 10 **MILES OF** KOOKY LOM (IAF)

2.

3. **FAC:** 298.13 **FAF:** KOOKY LOM/I-AQZ 6.48 DME **DIST FAF TO MAP:** 5.19 **DIST FAF TO THLD:** 5.19

4. **MIN ALT:** KOOKY LOM/I-AQZ 6.48 DME 2700

5. **DIST TO THLD FROM OM:** 5.19 **MM:** **IM:** **150 HAT:** **GS ANT:** 993

6. **MIN GS INCPT:** 2700 **GS ALT AT FAF :** **OM:** 2599 **MM:** **IM:**

7. **GP ANGLE:** 3.00 **34:1:** **20:1:** **TCH:** 63.8

8. **MSA FROM:** AQ LOM 360-090 3100, 090-360 2600

EQUIPMENT REQUIREMENTS NOTES:

ADF REQUIRED.

NOTES:

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



ADDITIONAL FLIGHT DATA:

CHART (CFDWT) AT 441016.62N/0881628.51W
CHART CIRCLING ICON.
CHART IN PLANVIEW: GRB VORTAC
CHART VDP AT 2.37 DME*
DISTANCE VDP TO THLD 1.07 NM
* LOC ONLY
FAS OBST: 994 AAO 441354N/0882518W.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD S GRB VORTAC, RT, 020.00 INBOUND.
HOLD SE, RT, 298.13 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☒

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 30	1075	1/2	200	1075	1/2	200	1075	1/2	200	1075	1/2	200			
S-LOC 30	1260	1/2	385	1260	1/2	385	1260	5/8	385	1260	5/8	385			
CIRCLING	1340	1	422	1380	1	462	1400	1 1/2	482	1480	2	562			

CHANGES - REASONS

1. CHANGED GLIDESLOPE INTERCEPT AT OM FROM 2601 TO 2599 - KOOKY LOM FIX MOVED 5.8 FEET SE.
2. CHANGED GLIDESLOPE TCH FROM "60.1" TO "63.8" - CHANGED TO MATCH CURRENT ILS DATA AND CURRENT WAIVER TO EXCEED TCH LIMIT.
3. CHANGED PRIMARY MISSED APPROACH FROM "CLIMB TO 2900 THEN RIGHT TURN DIRECT KOOKY LOM/I-AQZ 6.48 DME AND HOLD" TO "CLIMB TO 2700 THEN CLIMBING RIGHT TURN TO 2900 DIRECT KOOKY LOM/I-AQZ 6.48 DME AND HOLD" - PROCEDURE RE-EVALUATED AND REDESIGNED WITH NEW CRITERIA TO AVOID DR SEGMENT EXCEEDING 10 NM.
4. CHANGED ALTERNATE MISSED APPROACH FROM "CLIMB TO 2900 THEN LEFT TURN DIRECT PCZ NDB AND HOLD SE, LT, 299.00 INBOUND" TO "CLIMB TO 2700 THEN CLIMBING RIGHT TURN TO 2900 DIRECT GRB VORTAC AND HOLD S, RT, 020 INBOUND" - PCZ NDB DECOMMISSIONED; NEW CLEARANCE LIMIT GRB VORTAC REQUESTED PER ATC.
5. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "CHART: ALTERNATE MA HOLDING, HOLD SE PCZ NDB, LT, 299.00 INBOUND" TO "CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD S GRB VORTAC, RT, 020.00 INBOUND" - PCZ NDB DECOMMISSIONED; NEW CLEARANCE LIMIT GRB VORTAC REQUESTED PER ATC.
6. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "CHART FAS OBST: 957 TOWER 441358N/0882500W" TO "FAS OBST: 994 AAO 441354N/0882518W" - NEW OBSTACLE EVALUATION COMPLETED AND NEW FINAL OBST IDENTIFIED.
7. DELETED ADDITIONAL FLIGHT DATA NOTE "CHART 945 TOWER 441304N/0882433W" - NEW OBSTACLE EVALUATION COMPLETED.
8. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "CHART VDP AT 2.24 DME" TO "CHART VDP AT 2.37 DME*" - VGSI TCH CHANGED TO 60.6 FEET AND MDA INCREASED TO 1260.
9. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "DISTANCE VDP TO THLD 0.964 MILES" TO "DISTANCE VDP TO THLD 1.07 NM" - S-LOC MDA INCREASED AND VGSI TCH CHANGED TO 60.6 FEET.
10. ADDED ADDITIONAL FLIGHT DATA NOTE "* LOC ONLY" - VDP LOCATION DOES NOT APPLY TO PRECISION ILS.
11. DELETED ADDITIONAL FLIGHT DATA NOTE "CHART IN PLANVIEW: PCZ NDB" - PCZ NDB DECOMMISSIONED.
12. ADDED ADDITIONAL FLIGHT DATA NOTE "CHART IN PLANVIEW: GRB VORTAC" - REQUIRED FOR ALTERNATE MISSED APPROACH HOLDING.
13. ADDED ADDITIONAL FLIGHT DATA NOTE "CHART CIRCLING ICON" - NEW CIRCLING CRITERIA APPLIED.
14. CHANGED MINIMUMS S-LOC 30 FROM MDA/HAT CAT A-D 1220/345 TO MDA CAT A-D 1260/385; CHANGED CAT C VISIBILITY FROM 1/2 SM TO 5/8 SM; CHANGED CAT D VISIBILITY FROM 3/4 SM TO 5/8 SM - NEW OBSTACLE ASSESSMENT, NEW VISIBILITY TABLE APPLIED, AND PROCEDURE EVALUATED FROM TDZE.
15. CHANGED MINIMUMS CIRCLING CAT C MDA/HAA FROM 1380/462 TO 1400/482 - NEW CIRCLING CRITERIA APPLIED AND NEW OBSTACLE ASSESSMENT COMPLETED.
16. REMOVED BACK UP ALTIMETER NOTES "CHART NOTE: FOR INOPERATIVE MALSR WHEN USING AUSTIN STRAUBEL INTL ALTIMETER SETTING, INCREASE A-ILS ALL CATS VISIBILITY TO 1 MILE"; "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE AUSTIN STRAUBEL INTL ALTIMETER SETTING AND INCREASE ALL DA 81 FEET AND ALL MDA 100 FEET. INCREASE S-LOC CAT C AND D VISIBILITY 1/4 MILE"; "CHART NOTE: VDP NA WHEN USING AUSTIN STAUBEL INTL ALTIMETER SETTING" - PER 19H 8-6-9 F(3) NOT REQUIRED WHEN ASOS NON-FED TRANSMITS TO WMSCR. DATA PLACED ON BACK OF -9 FOR NOTAM CONTINGENCY.
17. ADDED "CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}) - PER .19H WHEN ILS GLIDEPATH TCH AND VGSI TCH NOT COINCIDENT; CURRENT WAIVER TO EXCEED MAX TCH INCLUDED IN PACKAGE.
18. ADDED ADDITIONAL FLIGHT DATA NOTE "CHART (CFDWT) AT 441016.62N/0881628.51W - REQUIRED FACF CNF FIX FOR CODING CAPABILITY.



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZMP, AMGR, ATW ATCT, GREEN BAY APCH CON

FLIGHT CHECKED BY

PAUL R ARMSTONG

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

FICO

DATE

12/18/18

DEVELOPED BY

DEZ SILAGYI (DARREN HOOPER)

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

AJV-5421

DATE

07/16/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

DAVID DANNER

Jan 02, 2019

OFFICE

AJV-5420

DATE

TITLE

MANAGER



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.

<u>AIRPORT</u> ALEXANDER FIELD SOUTH WOOD COUNTY	<u>AIRPORT ID</u> KISW	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> WISCONSIN RAPIDS	<u>STATE</u> WI
<u>AIRPORT ELEVATION</u> 1021	<u>TDZE</u> 1021	<u>SUPERSEDED</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 06/22/2017	<u>MAG VAR</u> 1W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 28 FEBRUARY 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1995

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>
RROBB	IAF	AKAKE	NOPT	TF	FB	1.00	270.87	9.26	3000
AKAKE	IF/IAF	MERVE		TF	FB	1.00	200.85	6.76	2700
MERVE	FAF	UHTIZ/1.60 NM TO RW20		TF	FB	0.30	200.81	2.81	
UHTIZ/1.60 NM TO RW20		RW20	MAP	TF	FO	0.30	200.81	1.60	
RW20	MAP	1380 MSL		CA			200.81		
1380 MSL		WEMUG		DF	FB	1.00			
WEMUG		OCEDE		TF	FB	1.00	116.82	5.51	
OCEDE		LHALL		TF	FB	1.00	049.33	5.28	
LHALL		FAYYE		TF	FO	1.00	004.31	4.62	3000

MISSED APPROACH

MAP:

LNAV: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT WEMUG AND TRACK 116.82 TO OCEDE AND TRACK 049.33 TO LHALL AND TRACK 004.31 TO FAYYE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD N AKAKE, RT, 200.85 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 200.81

FAF: MERVE

DIST FAF TO MAP: 4.41

DIST FAF TO THLD: 4.41

4. MIN ALT: AKAKE 3000, MERVE 2700, UHTIZ/1.60 NM TO RW20 1640

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

6. MIN GP INCPT:

GP ALT AT FAF :

OM:

MM:

IM:

7. GP ANGLE:

34:1: IS NOT CLEAR

20:1: IS NOT CLEAR

TCH:

8. MSA FROM: RW20 3000

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 18 AND 36.
CHART NOTE: RWY 20 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: STRAIGHT-IN RWY 20 NA AT NIGHT, CIRCLING RWY 20, 30 NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

CHART: 1188 TANK 442344N/0894851W
CHART CIRCLING ICON.
MERVE TO RW20: 3.50/41.7.
CHART FAS OBST: 1111 TREE 442235N/0894944W.
HOLD SW, RT, 030.55 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2

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
LNAV MDA	1380	1	359	1380	1	359	1380	1	359	1380	1	359			
CIRCLING	1480	1	459	1520	1	499	1620	1 1/2	599	1800	2 1/2	779			



CHANGES - REASONS

- 1. CHANGED CLEARANCE LIMIT FROM JENUN TO FAYYE - FPT CHECKLIST FROM AIR TRAFFIC CONTROL REQUEST.
- 2. CHANGE MISSED APPROACH INSTRUCTION FROM "CLIMB 1500 THEN CLIMBING LEFT TURN TO 3000 DIRECT JENUN AND HOLD" TO "CLIMB TO 3000 DIRECT WEMUG AND ON TRACK 116.82 TO OCEDE AND ON TRACK 049.33 TO LHALL AND ON TRACK 004.31 TO FAYYE AND HOLD" - RESULT OF MOVING CLEARANCE LIMIT AND AVOIDING CLIMB-IN-HOLD PER AIR TRAFFIC.
- 3. DELETED BELGO TRANSITION - AIR TRAFFIC REQUEST TO REMOVE UNUSED TRANSITION.
- 4. CHANGED ADDITIONAL FLIGHT DATA HOLDING FROM "HOLD N RT 188.11 INBOUND" TO HOLD SW RT 030.55 INBOUND" - RESULT OF MOVING CLEARANCE LIMIT FROM JENUN TO FAYYE.
- 5. CHANGED ROUTE MERVE TO UHTIZ DISTANCE FROM 2.91 TO 2.81 - UPDATED EVALUATION TOOL FROM IPDS TO TARGETS.
- 6. CHANGED ROUTE UHTIZ TO MAP DISTANCE FROM 1.50 TO 1.60 - UPDATED EVALUATION TOOL FROM IPDS TO TARGETS/UPDATED OBSTACLE SURVEY.
- 7. ADDED "20:1 IS NOT CLEAR" NOTE - IAW 8260.19H 8-6-7 (G(3)) FOR DOCUMENTING CLEAR SLOPES FOR RNAV PROCEDURE..
- 8. DELETED DME/DME RNP-0.3 NA - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
- 9. ADDED PBN NOTE RNP APCH - IAW 8260.19H 8-6-8 (B(1)) PBN NAVSPEC.
- 10. CHANGED CAT C CIRCLING MDA/VIS/HAA FROM 1800/2 1/4/779 TO 1620/1 1/2/599 - UPDATED OBSTACLE SURVEY.
- 11. ADDED 1188 TANK TO ADDITIONAL FLIGHT DATA - IAW 8260.3 CHAPTER 2 DOCUMENTING A 7:1 OBSTACLE.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP ARTCC, AMGR

FLIGHT CHECKED BY

JOHN R CLOUGH

DEVELOPED BY

SCOTT BAGENSIE

APPROVED BY

PATRICK MULQUEEN

	<i>Digitally signed by</i> DAVID TEFFETELLER Jan 07, 2019	<u>OFFICE</u> FICO	<u>DATE</u> 1/3/19
<i>Digitally signed by</i> SCOTT BAGENSIE Nov 28, 2018	<i>Digitally signed by</i> DAVID TEFFETELLER Jan 07, 2019	<u>OFFICE</u> AJV-5433	<u>DATE</u> 11/14/2018
		<u>OFFICE</u> AJV-5430	<u>TITLE</u> MANAGER



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. [31236](#); Amdt. No. [3838](#)

**Standard Instrument Approach Procedures, and Takeoff Minimums
and Obstacle Departure Procedures; Miscellaneous Amendments**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This rule amends, suspends, or removes Standard Instrument Approach Procedures (SIAPs) and associated Takeoff Minimums and Obstacle Departure Procedures for operations at certain airports. These regulatory actions are needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, adding new obstacles, or changing air traffic requirements. These changes are designed to provide for the safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The compliance date for each SIAP, associated Takeoff Minimums, and ODP is specified in the amendatory provisions.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Availability of matter incorporated by reference in the amendment is as follows:

For Examination

1. U.S. Department of Transportation, Docket Ops-M30, 1200 New Jersey Avenue SE, West Bldg., Ground Floor, Washington, D.C., 20590-0001;

2. The FAA Air Traffic Organization Service Area in which the affected airport is located;

3. The office of Aeronautical Navigation Products, 6500 South MacArthur Blvd., Oklahoma City, OK 73169 or,

4. The National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Availability

All SIAPs and Takeoff Minimums and ODPs are available online free of charge. Visit the National Flight Data Center online at nfdc.faa.gov to register. Additionally, individual SIAP and Takeoff Minimums and ODP copies may be obtained from the FAA Air Traffic Organization Service Area in which the affected airport is located.

FOR FURTHER INFORMATION CONTACT: Thomas J. Nichols, Flight Procedures and Airspace Group, Flight Technologies and Procedures Division, Flight Standards Service, Federal Aviation Administration. Mailing Address: FAA Mike Monroney Aeronautical Center, Flight Procedures and Airspace Group, 6500 South MacArthur Blvd, Registry Bldg 29 Room 104, Oklahoma City, OK 73125. Telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION:

This rule amends Title 14, Code of Federal Regulations, Part 97 (14 CFR part 97) by amending the referenced SIAPs. The complete regulatory description of each SIAP is listed on the appropriate FAA Form 8260, as modified by the National Flight Data Center (NFDC)/Permanent Notice to Airmen (P-NOTAM), and is incorporated by reference under 5 U.S.C. 552(a), 1 CFR part 51, and 14 CFR §97.20. The large number of SIAPs, their complex nature, and the need for a special format make their verbatim publication in the **Federal Register** expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, but refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each SIAP contained on FAA form documents is unnecessary.

This amendment provides the affected CFR sections, and specifies the SIAPs and Takeoff Minimums and ODPs with their applicable effective dates. This amendment also identifies the airport and its location, the procedure and the amendment number.

Availability and Summary of Material Incorporated by Reference

The material incorporated by reference is publicly available as listed in the ADDRESSES section.

The material incorporated by reference describes SIAPs, Takeoff Minimums and ODPs as identified in the amendatory language for part 97 of this final rule.

The Rule

This amendment to 14 CFR part 97 is effective upon publication of each separate SIAP and Takeoff Minimums and ODP as amended in the transmittal. For safety and timeliness of change considerations, this amendment incorporates only specific changes contained for each SIAP and Takeoff Minimums and ODP as modified by FDC permanent NOTAMs.

The SIAPs and Takeoff Minimums and ODPs, as modified by FDC permanent NOTAM, and contained in this amendment are based on the criteria contained in the U.S. Standard for Terminal Instrument Procedures (TERPS). In developing these changes to SIAPs and Takeoff Minimums and ODPs, the TERPS criteria were applied only to specific conditions existing at the affected

airports. All SIAP amendments in this rule have been previously issued by the FAA in a FDC NOTAM as an emergency action of immediate flight safety relating directly to published aeronautical charts.

The circumstances that created the need for these SIAP and Takeoff Minimums and ODP amendments require making them effective in less than 30 days.

Because of the close and immediate relationship between these SIAPs, Takeoff Minimums and ODPs, and safety in air commerce, I find that notice and public procedure under 5 U.S.C. 553(b) are impracticable and contrary to the public interest and, where applicable, under 5 U.S.C. 553(d), good cause exists for making these SIAPs effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore-- (1) is not a "significant regulatory action" under Executive Order 12866;(2) is not a "significant rule" under DOT regulatory Policies and Procedures (44 FR 11034; February 26, 1979) ; and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR part 97

Air Traffic Control, Airports, Incorporation by reference, Navigation (Air).

Issued in Washington, DC on **JANUARY 25, 2019.**

Rick Domingo
Executive Director, Flight Standards Service

ADOPTION OF THE AMENDMENT

Accordingly, pursuant to the authority delegated to me, Title 14, Code of Federal regulations, Part 97, (14 CFR part 97), is amended by amending Standard Instrument Approach Procedures and Takeoff Minimums and ODPs, effective at 0901 UTC on the dates specified, as follows:

PART 97 – STANDARD INSTRUMENT APPROACH PROCEDURES

1. The authority citation for part 97 continues to read as follows:

AUTHORITY: 49 U.S.C. 106(f), 106(g), 40103, 40106, 40113, 40114, 40120, 44502, 44514, 44701, 44719, 44721-44722.

2. Part 97 is amended to read as follows:

By amending: §97.23 VOR, VOR/DME, VOR or TACAN, and VOR/DME or TACAN; §97.25 LOC, LOC/DME, LDA, LDA/DME, SDF, SDF/DME; §97.27 NDB, NDB/DME; §97.29 ILS, ILS/DME, MLS, MLS/DME, MLS/RNAV; §97.31 RADAR SIAPs; §97.33 RNAV SIAPs; and §97.35 COPTER SIAPs, Identified as follows:

.....EFFECTIVE UPON PUBLICATION

AIRAC DATE	STATE	CITY	AIRPORT	FDC NUMBER	FDC DATE	SUBJECT
28-Feb-19	AL	Vernon	Lamar County	8/7374	1/8/19	This NOTAM, published in TL 19-05, is hereby rescinded in its entirety.
AIRAC DATE	STATE	CITY	AIRPORT	FDC NUMBER	FDC DATE	SUBJECT
28-Feb-19	WY	Thermopolis	Hot Springs County	8/0969	1/11/19	Takeoff Minimums and Obstacle DP, Orig
28-Feb-19	HI	Honolulu	Daniel K Inouye Intl	8/1093	1/11/19	RNAV (RNP) RWY 26L, Orig-D
28-Feb-19	TX	Pleasanton	Pleasanton Muni	8/1851	1/11/19	RNAV (GPS) RWY 34, Orig
28-Feb-19	KS	St Francis	Cheyenne County Muni	8/1913	1/11/19	NDB-A, Orig
28-Feb-19	KS	St Francis	Cheyenne County Muni	8/1914	1/11/19	RNAV (GPS) RWY 32, Orig
28-Feb-19	WY	Cheyenne	Cheyenne Rgnl/Jerry Olson Field	8/2432	1/11/19	RNAV (GPS) RWY 13, Amdt 2
28-Feb-19	WY	Cheyenne	Cheyenne Rgnl/Jerry Olson Field	8/2433	1/11/19	RNAV (GPS) RWY 27, Amdt 1
28-Feb-19	WY	Cheyenne	Cheyenne Rgnl/Jerry Olson Field	8/2437	1/11/19	RNAV (GPS) RWY 31, Amdt 2
28-Feb-19	MI	Clare	Clare Muni	8/2566	1/11/19	VOR-A, Amdt 2
28-Feb-19	MI	Clare	Clare Muni	8/2567	1/11/19	RNAV (GPS) RWY 4, Orig-A
28-Feb-19	IL	Bloomington/Normal	Central Il Rgnl Arpt At Bloomington-Normal	8/2864	1/11/19	RNAV (GPS) RWY 2, Orig-B
28-Feb-19	TX	Center	Center Muni	8/2868	1/11/19	RNAV (GPS) RWY 17, Orig-B
28-Feb-19	OK	Woodward	West Woodward	8/3087	1/11/19	RNAV (GPS) RWY 17, Orig
28-Feb-19	OK	Woodward	West Woodward	8/3088	1/11/19	VOR/DME-A, Amdt 7
28-Feb-19	OK	Woodward	West Woodward	8/3089	1/11/19	RNAV (GPS) RWY 35, Orig
28-Feb-19	OR	Eugene	Mahlon Sweet Field	8/3159	1/11/19	VOR OR TACAN RWY 16R, Amdt 5C
28-Feb-19	IN	Indianapolis	Indianapolis Rgnl	8/4907	1/11/19	RNAV (GPS) RWY 16, Amdt 1A
28-Feb-19	WI	Solon Springs	Solon Springs Muni	8/5035	1/11/19	RNAV (GPS) RWY 19, Orig-A
28-Feb-19	OK	Guymon	Guymon Muni	8/5211	1/11/19	NDB RWY 18, Amdt 5B
28-Feb-19	MO	Marshall	Marshall Memorial Muni	8/5548	1/11/19	RNAV (GPS) RWY 18, Amdt 2A
28-Feb-19	OK	Miami	Miami Rgnl	8/5550	1/11/19	RNAV (GPS) RWY 17, Amdt 1

28-Feb-19	MN	Tracy	Tracy Muni	8/5889	1/11/19	RNAV (GPS) RWY 29, Orig
28-Feb-19	MN	Tracy	Tracy Muni	8/5893	1/11/19	RNAV (GPS) RWY 11, Orig
28-Feb-19	IA	Cresco	Ellen Church Field	8/6447	1/10/19	GPS RWY 15, Orig-A
28-Feb-19	IA	Cresco	Ellen Church Field	8/6448	1/10/19	GPS RWY 33, Orig-A
28-Feb-19	IL	Dixon	Dixon Muni-Charles R Walgreen Field	8/6720	1/11/19	RNAV (GPS) RWY 8, Amdt 1B
28-Feb-19	IL	Dixon	Dixon Muni-Charles R Walgreen Field	8/6722	1/11/19	RNAV (GPS) RWY 26, Orig-B
28-Feb-19	IL	Dixon	Dixon Muni-Charles R Walgreen Field	8/6724	1/11/19	VOR-A, Amdt 10B
28-Feb-19	MI	Grand Rapids	Gerald R Ford Intl	8/7765	1/11/19	ILS OR LOC RWY 35, Amdt 2
28-Feb-19	AR	Ash Flat	Sharp County Rgnl	8/7781	1/11/19	RNAV (GPS) RWY 4, Orig-A
28-Feb-19	AR	Ash Flat	Sharp County Rgnl	8/7783	1/11/19	RNAV (GPS) RWY 22, Orig
28-Feb-19	IN	Greensburg	Greensburg Municipal	8/7917	1/11/19	RNAV (GPS) RWY 36, Orig-A
28-Feb-19	WI	Ephraim	Ephraim-Gibraltar	8/7956	1/11/19	RNAV (GPS) RWY 14, Orig
28-Feb-19	WI	Ephraim	Ephraim-Gibraltar	8/7957	1/11/19	RNAV (GPS) RWY 32, Orig
28-Feb-19	WY	Big Piney	Miley Memorial Field	8/8218	1/11/19	RNAV (GPS) RWY 31, Orig-C
28-Feb-19	WY	Big Piney	Miley Memorial Field	8/8227	1/11/19	VOR RWY 31, Amdt 3D
28-Feb-19	CA	Sacramento	Sacramento Executive	8/8322	1/11/19	ILS OR LOC RWY 2, Amdt 24C
28-Feb-19	IN	Fort Wayne	Smith Field	8/8464	1/11/19	RNAV (GPS) RWY 5, Orig
28-Feb-19	ND	Watford City	Watford City Muni	8/8958	1/11/19	RNAV (GPS) RWY 30, Orig-A
28-Feb-19	FM	Weno Island	Chuuk Intl	8/9501	1/11/19	NDB RWY 22, Orig
28-Feb-19	FM	Weno Island	Chuuk Intl	8/9502	1/11/19	NDB RWY 4, Amdt 1
28-Feb-19	FM	Weno Island	Chuuk Intl	8/9503	1/11/19	RNAV (GPS) RWY 22, Orig
28-Feb-19	FM	Weno Island	Chuuk Intl	8/9508	1/11/19	RNAV (GPS) RWY 4, Amdt 1
28-Feb-19	IL	Belleville	Scott AFB/MidAmerica	8/9728	1/11/19	ILS OR LOC RWY 32R, Orig-I
28-Feb-19	OH	Waverly	Pike County	8/9930	1/11/19	RNAV (GPS) RWY 25, Amdt 1
28-Feb-19	KS	Larned	Larned-Pawnee County	9/0553	1/10/19	RNAV (GPS) RWY 35, Orig-A
28-Feb-19	OR	Mc Minnville	Mc Minnville Muni	9/1864	1/17/19	RNAV (GPS) RWY 4, Orig-B
28-Feb-19	TX	Del Rio	Del Rio Intl	9/2477	1/18/19	RNAV (GPS) RWY 13, Amdt 2
28-Feb-19	TX	Del Rio	Del Rio Intl	9/2478	1/18/19	ILS OR LOC RWY 13, Orig

28-Feb-19	GA	Columbus	Columbus	9/4515	1/16/19	RNAV (GPS) RWY 13, Orig-B
28-Feb-19	CA	San Francisco	San Francisco Intl	9/4834	1/17/19	ILS OR LOC RWY 28L, ILS RWY 28L (SA CAT II), Amdt 27A
28-Feb-19	AR	Batesville	Batesville Rgnl	9/4883	1/17/19	Takeoff Minimums and Obstacle DP, Amdt 3
28-Feb-19	ND	Watford City	Watford City Muni	9/5039	1/18/19	RNAV (GPS) RWY 12, Orig-B
28-Feb-19	AL	Vernon	Lamar County	9/5051	1/18/19	RNAV (GPS) RWY 35, Orig

AIRAC Date: 28 FEBRUARY 2019

FDC **8/0969** HSG ODP HOT SPRINGS COUNTY, Thermopolis, WY. TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES ORIG... TAKEOFF OBSTACLE NOTES: CHANGE NOTE: RWY 5: TERRAIN 22 FT FROM DER, 261 FT LEFT OF CENTERLINE, 4093 FT MSL TO READ NOTE: RWY 5: TERRAIN 22 FT FROM DER, 261 FT LEFT OF CENTERLINE, 4893 FT MSL. ALL OTHER DATA REMAINS AS PUBLISHED. THIS IS TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES, ORIG-A. 1812132224-PERM

FDC **8/1093** HNL IAP DANIEL K INOUE INTL, Honolulu, HI. RNAV (RNP) RWY 26L, ORIG-D... RNP 0.15 DA VISIBILITY 3/4 ALL CATS. DELETE NOTE: FOR INOP ALS INCREASE RNP 0.15 ALL VISIBILITIES TO 1 SM. DELETE NOTE: RF AND GPS REQUIRED. PBN REQUIREMENTS NOTE: RNP AR APCH, RF REQUIRED. THIS IS RNAV (RNP) RWY 26L, ORIG-E. 1812141355-PERM

FDC **8/1851** PEZ IAP PLEASANTON MUNI, Pleasanton, TX. RNAV (GPS) RWY 34, ORIG... CHART NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 34 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 34, ORIG-A. 1810251227-PERM

FDC **8/1913** SYF IAP CHEYENNE COUNTY MUNI, St Francis, KS. NDB-A, ORIG... DELETE NOTE: CIRCLING NA TO RWYS 9, 27, 18, AND 36. CHART NOTE: CIRCLING NA TO RWYS 18 AND 36. THIS IS NDB-A, ORIG-A. 1810251417-PERM

FDC **8/1914** SYF IAP CHEYENNE COUNTY MUNI, St Francis, KS. RNAV (GPS) RWY 32, ORIG... DELETE NOTE: CIRCLING NA TO RWYS 9, 27, 18 AND 36. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21C (-5F) OR ABOVE 54C (130F). DELETE NOTE: DME/DME RNP 0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: CIRCLING NA TO RWYS 18 AND 36. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21C OR ABOVE 54C. THIS IS RNAV (GPS) RWY 32, ORIG-A. 1810251417-PERM

FDC **8/2432** CYS IAP CHEYENNE RGNL/JERRY OLSON FIELD, Cheyenne, WY. RNAV (GPS) RWY 13, AMDT 2... CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C OR ABOVE 45C. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24 C (F) OR ABOVE 45C (F). THIS IS RNAV (GPS) RWY 13, AMDT 2A. 1809041313-PERM

FDC **8/2433** CYS IAP CHEYENNE RGNL/JERRY OLSON FIELD, Cheyenne, WY. RNAV (GPS) RWY 27, AMDT 1... CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C OR ABOVE 45C. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C (F) OR ABOVE 45C (F). THIS IS RNAV (GPS) RWY 27, AMDT 1A. 1809041315-PERM

FDC **8/2437** CYS IAP CHEYENNE RGNL/JERRY OLSON FIELD, Cheyenne, WY. RNAV (GPS) RWY 31, AMDT 2... CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C OR ABOVE 45C. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C (F) OR ABOVE 45C (F).. THIS IS RNAV (GPS) RWY 31, AMDT 2A. 1809041317-PERM

FDC **8/2566** 48D IAP CLARE MUNI, Clare, MI. VOR-A, AMDT 2... DELETE NOTE: CIRCLING TO RWY 9/27 NA AT NIGHT. CHART NOTE: CIRCLING RWY 9, 27 NA AT NIGHT. CHART MOUNT PLEASANT AWOS-3 FREQUENCY 133.025. THIS IS VOR-A, AMDT 2A. 1809171927-PERM

FDC **8/2567** 48D IAP CLARE MUNI, Clare, MI. RNAV (GPS) RWY 4, ORIG-A... DELETE NOTE: CIRCLING TO RWY 9/27 NA AT NIGHT. CHART NOTE: CIRCLING RWY 9, 27 NA AT NIGHT. CHART MOUNT PLEASANT AWOS-3 FREQUENCY 133.025. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. CHART NOTE: RWY 4 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. THIS IS RNAV (GPS) RWY 4, ORIG-B. 1809171927-PERM

FDC **8/2864** BMI IAP CENTRAL IL RGNL ARPT AT BLOOMINGTON-NORMAL, Bloomington/Normal, IL. RNAV (GPS) RWY 2, ORIG-B... DELETE PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT THEME ON V72 SOUTHEAST BOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT THEME ON V313 SOUTHBOUND. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 54C (130F). CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C OR ABOVE 54C. DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GENERAL DOWNING-PEORIA INTL ALTIMETER SETTING: INCREASE ALL DA 166 FT AND ALL MDA 120 FT; INCREASE LPV AND LNAV/VNAV ALL CATS VISIBILITY 1/2 MILE, LNAV CATS C/D VISIBILITY 3/8 MILE, AND CIRCLING ALL CATS VISIBILITY 1/4 MILE. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GENERAL DOWNING-PEORIA INTL ALTIMETER SETTING: INCREASE ALL DA 166 FEET AND ALL MDA 120 FEET; INCREASE LPV AND LNAV/VNAV ALL CATS VISIBILITY 1/2 SM, LNAV CATS C/D VISIBILITY 3/8 SM, AND CIRCLING ALL CATS VISIBILITY 1/4 SM. DELETE NOTE: DME/DME RNP-0.3 NA PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 2, ORIG-C. 1810261408-PERM

FDC **8/2868** F17 IAP CENTER MUNI, Center, TX. RNAV (GPS) RWY 17, ORIG-B... DELETE PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {4.00}/TCH {50}). DELETE DESCENT ANGLE 3.04/TCH 45. DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. DELETE NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: USE NACOGDOCHES ALTIMETER SETTING; WHEN NOT RECEIVED, USE HENDERSON ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET. CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. PBN REQUIREMENTS NOTE: RNP APCH. CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES. MISSED APPROACH: CLIMBING LEFT TURN TO 3000 DIRECT DEBKY AND HOLD, CONTINUE CLIMB IN HOLD TO 3000. THIS IS RNAV (GPS) RWY 17, ORIC-C. 1811081522-PERM

FDC **8/3087** WWR IAP WEST WOODWARD, Woodward, OK. RNAV (GPS) RWY 17, ORIG... DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C (-2F) OR ABOVE 44C (111F). DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. DELETE NOTE: BARO-VNAV NA WHEN USING GAGE ALTIMETER SETTING. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C OR ABOVE 54C. CHART NOTE: CIRCLING RWY 5, 23 NA AT NIGHT. CHART NOTE: BARO-VNAV AND VDP NA WHEN USING GAGE ALTIMETER SETTING. CHART VDP AT 1.56 NM TO RWY 17*, *LNAV ONLY. THIS IS RNAV (GPS) RWY 17, ORIG-A. 1810021742-PERM

FDC **8/3088** WWR IAP WEST WOODWARD, Woodward, OK. VOR/DME-A, AMDT 7... CHART NOTE: CIRCLING RWY 5, 23 NA AT NIGHT. MSA FROM MMB VORTAC 060-260 4500, 260-060 4200. THIS IS VOR/DME-A, AMDT 7A. 1810021743-PERM

FDC **8/3089** WWR IAP WEST WOODWARD, Woodward, OK. RNAV (GPS) RWY 35, ORIG... DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C (-2F) OR ABOVE 44C (111F). DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GAGE ALTIMETER SETTING AND INCREASE ALL LPV DA 40 FEET, ALL LNAV/VNAV DA 304 FEET, ALL MDA 40 FEET. INCREASE LPV ALL CATS AND LNAV CAT D VISIBILITY 1/4 MILE, LNAV/VNAV ALL CATS VISIBILITY 1 MILE. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GAGE ALTIMETER SETTING AND INCREASE ALL DA/MDA 40 FEET AND INCREASE LNAV CAT C AND D VISIBILITY TO 1 5/8 SM. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C OR ABOVE 54C. CHART NOTE: CIRCLING RWY 5, 23 NA AT NIGHT. THIS IS RNAV (GPS) RWY 35, ORIG-A. 1810021745-PERM

FDC **8/3159** EUG IAP MAHLON SWEET FIELD, Eugene, OR. VOR OR TACAN RWY 16R, AMDT 5C... DELETE MISSED APPROACH: CLIMB TO 800 THEN CLIMBING RIGHT TURN TO 4400 ON EUG VORTAC R-210 TO VAUGN/EUG 14.00 DME AND HOLD. CONTINUE CLIMB IN HOLD TO 4100. CHART MISSED APPROACH: CLIMB TO 800 THEN CLIMBING RIGHT TURN TO 4100 ON EUG VORTAC R-210 TO VAUGN/EUG 14.00 DME AND HOLD. CONTINUE CLIMB IN HOLD TO 4100. THIS IS VOR OR TACAN RWY 16R, AMDT 5D. 1810151542-PERM

FDC **8/4907** MQJ IAP INDIANAPOLIS RGNL, Indianapolis, IN. RNAV (GPS) RWY 16, AMDT 1A... DELETE: DESCENT ANGLE 3.00/TCH 31. CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. CHART NOTE: RWY 16 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT. ALTERNATE MINIMUMS: STANDARD EXCEPT CAT D 800-2 1/2. THIS IS RNAV (GPS) RWY 16, AMDT 1B. 1811131250-PERM

FDC **8/5035** OLG IAP SOLON SPRINGS MUNI, Solon Springs, WI. RNAV (GPS) RWY 19, ORIG-A... DELETE NOTE: NIGHT LANDING RWY 19 NA. CHART NOTE: STRAIGHT-IN RWY 19 NA AT NIGHT, CIRCLING RWY 19 NA AT NIGHT. DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE DULUTH/SKY HARBOR, MN ALTIMETER SETTING. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. CHART NOTE: RWY 19 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. ALTERNATE MINIMUMS: STANDARD. THIS IS RNAV (GPS) RWY 19, ORIG-B. 1810302019-PERM

FDC **8/5211** GUY IAP GUYMON MUNI, Guymon, OK. NDB RWY 18, AMDT 5B... S-18 VISIBILITY CAT C 2 1/2. CIRCLING VISIBILITY CAT C 2 1/2. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LIBERAL ALTIMETER SETTING AND INCREASE ALL MDA 120 FEET, INCREASE S-18 CAT A VISIBILITY 1/4 SM; INCREASE CIRCLING CATS A AND C 1/4 SM. CHART NOTE: CIRCLING NA TO RWYS 6 AND 24. THIS IS NDB RWY 18, AMDT 5C. 1810032048-PERM

FDC **8/5548** MHL IAP MARSHALL MEMORIAL MUNI, Marshall, MO. RNAV (GPS) RWY 18, AMDT 2A... DELETE NOTE: WHEN VGSI INOP, STRAIGHT-IN/CIRCLING RWY 18 PROCEDURE NA AT NIGHT. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. CHART NOTE: RWY 18 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. CHART NOTE: VDP NA WHEN USING SEDALIA ALTIMETER SETTING. CHART VDP AT 1.69 NM TO RW18. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT. CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES. DELETE DESCENT ANGLE 3.37/TCH 39. CHART NOTE: CIRCLING RWYS 9 AND 27 NA. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE SEDALIA ALTIMETER SETTING AND INCREASE ALL MDAS 80 FEET. DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE SEDALIA RGNL ALTIMETER SETTING AND INCREASE ALL MDA 80 FEET. ALTERNATE MINIMUMS: STANDARD. THIS IS RNAV (GPS) RWY 18, AMDT 2B. 1810311154-PERM

FDC **8/5550** MIO IAP MIAMI RGNL, Miami, OK. RNAV (GPS) RWY 17, AMDT 1... CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {3.0}/TCH {42}). THIS IS RNAV (GPS) RWY 17, AMDT 1A. 1810311158-PERM

FDC **8/5889** TKC IAP TRACY MUNI, Tracy, MN. RNAV (GPS) RWY 29, ORIG... LNAV CATS A/B HAT 445. CIRCLING CATS A/B HAA 579. CHART NOTE: CIRCLING NA TO RWYS 6-24 AND 17-35. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE APT ELEV 1340, CHART APT ELEV 1341. DELETE TDZE 1336, CHART TDZE 1335. THIS IS RNAV (GPS) RWY 29, ORIG-A. 1812041815-PERM

FDC **8/5893** TKC IAP TRACY MUNI, Tracy, MN. RNAV (GPS) RWY 11, ORIG... CIRCLING CATS A/B HAA 619. DELETE VDP AT 1.63 NM TO RW11. CHART NOTE: RWY 11 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. CHART NOTE: CIRCLING NA TO RWYS 6-24 AND 17-35. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE APT ELEV 1340, CHART APT ELEV 1341. 34:1 IS NOT CLEAR. THIS IS RNAV (GPS) RWY 11, ORIG-A. 1812041820-PERM

FDC **8/6447** CJJ IAP ELLEN CHURCH FIELD, Cresco, IA. GPS RWY 15, ORIG-A... CHART NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 15 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. CHART DECORAH MUNI AWOS-3. MSA FROM RW15 3900. MISSED APPROACH: CLIMB TO 2400 THEN CLIMBING LEFT TURN TO 3000 DIRECT HOBIT AND HOLD. THIS IS GPS RWY 15, ORIG-B. 1809101205-PERM

FDC **8/6448** CJJ IAP ELLEN CHURCH FIELD, Cresco, IA. GPS RWY 33, ORIG-A... S-33 CAT C VISIBILITY 1-3/8. CIRCLING CAT A/B/C MDA 1860/HAA 581. CHART NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 33 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. MSA FROM RWY 33 3900. CHART DECORAH MUNI AWOS-3. MISSED APPROACH: CLIMB TO 2400 THEN CLIMBING LEFT TURN TO 3000 DIRECT KANTE AND HOLD.. THIS IS GPS RWY 33, ORIG-B. 1809101206-PERM

FDC **8/6720** C73 IAP DIXON MUNI-CHARLES R WALGREEN FIELD, Dixon, IL. RNAV (GPS) RWY 8, AMDT 1B... DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. CHART NOTE: RWY 8 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. 34:1 IS NOT CLEAR. DELETE NOTE: PROCEDURE NA AT NIGHT. THIS IS RNAV (GPS) RWY 8, AMDT 1C. 1810051706-PERM

FDC **8/6722** C73 IAP DIXON MUNI-CHARLES R WALGREEN FIELD, Dixon, IL. RNAV (GPS) RWY 26, ORIG-B... DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. CHART NOTE: RWY 26 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. 34:1 IS NOT CLEAR. DELETE NOTE: NIGHT LANDING RWY 8, 26 NA. THIS IS RNAV (GPS) RWY 26, ORIG-C. 1810051706-PERM

FDC **8/6724** C73 IAP DIXON MUNI-CHARLES R WALGREEN FIELD, Dixon, IL. VOR-A, AMDT 10B... DELETE NOTE: NIGHT LANDING RWY 8, 26 NA. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. THIS IS VOR-A, AMDT 10C. 1810051706-PERM

FDC **8/7765** GRR IAP GERALD R FORD INTL, Grand Rapids, MI. ILS OR LOC RWY 35, AMDT 2... DELETE NOTE: HONSE FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED). ADD NOTE FOR HONSE MINIMUMS (ADF OR DME REQUIRED). EQUIPMENT REQUIREMENT NOTE: DME OR RADAR REQUIRED FOR PROCEDURE ENTRY. DELETE PLANVIEW NOTE: DME OR RADAR REQUIRED. EQUIPMENT REQUIREMENT NOTE: DME REQUIRED. THIS IS ILS OR LOC RWY 35, AMDT 2A. 1810091329-PERM

FDC **8/7781** CVK IAP SHARP COUNTY RGNL, Ash Flat, AR. RNAV (GPS) RWY 4, ORIG-A... CHART NOTE: STRAIGHT-IN RWY 4 NA AT NIGHT, CIRCLING RWY 4 NA AT NIGHT. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. CHART NOTE: RWY 4 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 4, ORIG-B. 1810091349-PERM

FDC **8/7783** CVK IAP SHARP COUNTY RGNL, Ash Flat, AR. RNAV (GPS) RWY 22, ORIG... CHART NOTE: CIRCLING RWY 4 NA AT NIGHT. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 22, ORIG-A. 1810091349-PERM

FDC **8/7917** I34 IAP GREENSBURG MUNICIPAL, Greensburg, IN. RNAV (GPS) RWY 36, ORIG-A... DELETE PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE 3.25/TCH 22). DELETE DESCENT ANGLE 3.02/TCH 40. CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES. PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 36, ORIG-B. 1810221224-PERM

FDC **8/7956** 3D2 IAP EPHRAIM-GIBRALTAR, Ephraim, WI. RNAV (GPS) RWY 14, ORIG... DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. CHART NOTE: CIRCLING NA TO RWYS 1 AND 19. THIS IS RNAV (GPS) RWY 14, ORIG-A. 1810221356-PERM

FDC **8/7957** 3D2 IAP EPHRAIM-GIBRALTAR, Ephraim, WI. RNAV (GPS) RWY 32, ORIG... DELETE NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: CIRCLING NA TO RWYS 1 AND 19. CHART NOTE: RWY 32 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. THIS IS RNAV (GPS) RWY 32, ORIG-A. 1810221356-PERM

FDC **8/8218** BPI IAP MILEY MEMORIAL FIELD, Big Piney, WY. RNAV (GPS) RWY 31, ORIG-C... DELETE NOTE: CIRCLING RWY 8, 26 NA. CHART NOTE: CIRCLING NA TO RWYS 8 AND 26. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. ALTERNATE MINIMUMS: STANDARD. THIS IS RNAV (GPS) RWY 31, ORIG-D. 1810221644-PERM

FDC **8/8227** BPI IAP MILEY MEMORIAL FIELD, Big Piney, WY. VOR RWY 31, AMDT 3D... CHART NOTE: CIRCLING NA TO RWYS 8 AND 26. CHART TDZE 6969. CHART APT ELEV 6994. S-31 HAT 711 ALL CATS. CIRCLING HAA 686 ALL CATS. THIS IS VOR RWY 31, AMDT 3E. 1810221648-PERM

FDC **8/8322** SAC IAP SACRAMENTO EXECUTIVE, Sacramento, CA. ILS OR LOC RWY 2, AMDT 24C... CHART NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 335 FEET. DELETE NOTE: NIGHT LANDING RWY 34 NA. CHART NOTE: CIRCLING RWY 34 NA AT NIGHT. DELETE NOTE: FOR INOP MALSR, INCREASE S-ILS 2 ALL CATS VISIBILITY TO 7/8. CHART NOTE: FOR INOPERATIVE MALSR, INCREASE S-ILS 2 ALL CATS VISIBILITY TO 7/8 SM AND S-LOC 2 CAT C/D VISIBILITY TO 1 SM. DELETE NOTE: FOR INOP MALSR WHEN USING SACRAMENTO INTL ALTIMETER SETTING, INCREASE S-ILS 2 ALL CATS VISIBILITY TO 1. CHART NOTE: FOR INOPERATIVE MALSR WHEN USING SACRAMENTO INTL ALTIMETER SETTING, INCREASE S-ILS 2 ALL CATS VISIBILITY TO 7/8 SM. THIS IS ILS OR LOC RWY 2, AMDT 24D. 1810221751-PERM

FDC **8/8464** SMD IAP SMITH FIELD, Fort Wayne, IN. RNAV (GPS) RWY 5, ORIG... DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. CHART NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 5 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. DELETE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE 4.00/TCH 43). CHART PROFILE NOTE: VISUAL SEGMENT - OBSTACLES. CHART CIRCLING ICON. CIRCLING CAT C MDA 1940/HAA 1104. PBN REQUIREMENTS NOTE: RNP APCH. DELETE : DESCENT ANGLE 3.04/TCH 40. ALTERNATE MINIMUMS: CAT A/B 1100-2, CAT C 1200-3. THIS IS RNAV (GPS) RWY 5, ORIG-A. 1810221843-PERM

FDC **8/8958** S25 IAP WATFORD CITY MUNI, Watford City, ND. RNAV (GPS) RWY 30, ORIG-A... DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. DELETE NOTE: CIRCLING TO RWYS 18, 36 NA. DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILLISTON ALTIMETER SETTING AND INCREASE ALL DA 82 FEET AND ALL MDA 100 FEET, INCREASE LPV VISIBILITY ALL CATS 1/4 MILE. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: RWY 30 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. CHART NOTE: CIRCLING NA TO RWY 18 AND 36. CHART NOTE: CIRCLING RWY 12 NA AT NIGHT. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILLISTON ALTIMETER SETTING AND INCREASE ALL DA 82 FEET AND ALL MDA 100 FEET, INCREASE LPV VISIBILITY ALL CATS 1/8 SM. LPV ALL CATS VISIBILITY 1 3/8. THIS IS RNAV (GPS) RWY 30, ORIG-B. 1810231448-PERM

FDC **8/9501** TTK IAP CHUUK INTL, Weno Island, . NDB RWY 22, ORIG... DELETE NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: RWY 22 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. THIS IS NDB RWY 22, ORIG-A. 1809271615-PERM

FDC **8/9502** TTK IAP CHUUK INTL, Weno Island, . NDB RWY 4, AMDT 1... DELETE
NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: RWY 4 HELICOPTER
VISIBILITY REDUCTION BELOW 1 SM NA. THIS IS NDB RWY 4, AMDT 1A.
1809271615-PERM

FDC **8/9503** TTK IAP CHUUK INTL, Weno Island, . RNAV (GPS) RWY 22, ORIG...
DELETE NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: RWY 22
HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. DELETE NOTE:
DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. CHART VDP AT
2.49 NM TO RW22. THIS IS RNAV (GPS) RWY 22, ORIG-A. 1809271615-PERM

FDC **8/9508** TTK IAP CHUUK INTL, Weno Island, . RNAV (GPS) RWY 4, AMDT 1...
DELETE NOTE: PROCEDURE NA AT NIGHT. DELETE NOTE: RWY 4
HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. DELETE NOTE:
DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV
(GPS) RWY 4, AMDT 1A. 1809271615-PERM

FDC **8/9728** BLV IAP SCOTT AFB/MIDAMERICA, Belleville, IL. ILS OR LOC RWY
32R, ORIG-I... CHART NOTE: ASTERISK, ASTERISK RVR 1800 AUTHORIZED
WITH USE OF FD OR AP OR HUD TO DA (NA WHEN USING ST LOUIS
DOWNTOWN ALTIMETER SETTING). CHANGE S-ILS 32R TO S-ILS 32R
ASTERISK, ASTERISK. DELETE ALTERNATE MINIMUMS: NA WHEN LOCAL
WEATHER NOT AVAILABLE. ALTERNATE MINIMUMS: ILS: STANDARD, LOC:
STANDARD EXCEPT CAT C 800-2 1/4, CAT D 800-2 1/2, CAT E 800-2 3/4. THIS IS
ILS OR LOC RWY 32R, ORIG-J. 1812121402-PERM

FDC **8/9930** EOP IAP PIKE COUNTY, Waverly, OH. RNAV (GPS) RWY 25, AMDT
1... NOTE: CIRCLING RWY 7 NA AT NIGHT. NOTE: RWY 25 HELICOPTER
VISIBILITY REDUCTION BELOW 3/4 NOT AUTHORIZED. DELETE NOTE:
HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. DELETE NOTE:
PROCEDURE NA AT NIGHT. DELETE NOTE: DME/DME RNP-0.3 NA. PBN
REQUIREMENTS NOTE: RNP APCH. THIS IS RNAV (GPS) RWY 25, AMDT 1A.
1812121736-PERM

FDC **9/0553** LQR IAP LARNED-PAWNEE COUNTY, Larned, KS. RNAV (GPS) RWY 35, ORIG-A... DELETE TDZE 2009. CHART TDZE 2012. LPV DA 2262/HAT 250 ALL CATS. LNAV-VNAV DA 2337/HAT 325 ALL CATS. LNAV MDA 2420/HAT 408 ALL CATS. DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C (0F) OR ABOVE 54C(130F). CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C OR ABOVE 54C. DELETE CHART NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. DELETE CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GREAT BEND ALTIMETER SETTING AND INCREASE ALL DA 49 FEET AND LNAV/VNAV ALL CATS VISIBILITY 1/8 MILE; INCREASE ALL MDA 60 FEET AND INCREASE LNAV CAT C AND CIRCLING CAT C VISIBILITY 1/4 MILE. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GREAT BEND ALTIMETER SETTING AND INCREASE ALL DA 49 FEET AND LNAV/VNAV ALL CATS VISIBILITY 1/8 SM; INCREASE ALL MDA 60 FEET AND INCREASE LNAV CAT C AND CIRCLING CAT C VISIBILITY 1/4 SM. THIS IS RNAV (GPS) RWY 35, ORIG-B. 1901031023-PERM

FDC **9/1864** MMV IAP MC MINNVILLE MUNI, Mc Minnville, OR. RNAV (GPS) RWY 4, ORIG-B... LNAV MDA 600/HAT 439 ALL CATS. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: RWY 4: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE AURORA STATE ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET AND VISIBILITY CATS C/D TO 1 3/8. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. DELETE NOTE DME/DME RNP-0.3 NA DELETE NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE AURORA STATE ALTIMETER SETTING AND INCREASE ALL MDA 60 FEET AND ALL VISIBILITY 1/4 MILE. THIS IS RNAV (GPS) RWY 4, ORIG-C. 1901072028-PERM

FDC **9/2477** DRT IAP DEL RIO INTL, Del Rio, TX. RNAV (GPS) RWY 13, AMDT 2... LPV VIS 3/4 SM ALL CATS. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: DME/DME RNP-0.3 NA. THIS IS RNAV (GPS) RWY 13, AMDT 2A. 1901082209-PERM

FDC **9/2478** DRT IAP DEL RIO INTL, Del Rio, TX. ILS OR LOC RWY 13, ORIG... S-ILS 13 VIS 3/4 SM ALL CATS. THIS IS ILS OR LOC RWY 13, ORIG-A. 1901082209-PERM

FDC **9/4515** CSG IAP COLUMBUS, Columbus, GA. RNAV (GPS) RWY 13, ORIG-B... CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE 3.00/TCH 36). DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. DELETE NOTE: NIGHT LANDING RWY 13, 31 NA. CHART NOTE: STRAIGHT-IN RWY 13 NA AT NIGHT, CIRCLING RWY 13, 31 NA AT NIGHT. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NA. CHART NOTE: RWY 13 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. THIS IS RNAV (GPS) RWY 13, ORIG-C. 1901161756-PERM

FDC **9/4834** SFO IAP SAN FRANCISCO INTL, San Francisco, CA. ILS OR LOC RWY 28L, AMDT 27A... ILS RWY 28L (SA CAT II), AMDT 27A... (SA CAT II) S-ILS 28L RVR 1200. THIS IS ILS OR LOC RWY 28L, AMDT 27B; ILS RWY 28L (SA CAT II), AMDT 27B. 1901171541-PERM

FDC **9/4883** BVX ODP BATESVILLE RGNL, Batesville, AR. TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES AMDT 3... TEXTUAL DEPARTURE PROCEDURE. NOTE: RWY 8, POLE 204 FT FROM DER, 515 FT LEFT OF CENTERLINE, 24 FT AGL/483 FT MSL. TOWER 1023 FT FROM DER, 657 FT RIGHT OF CENTERLINE, 54 FT AGL/524 FT MSL. POLE 1091 FT FROM DER, 393 FT LEFT OF CENTERLINE, 34 FT AGL/495 FT MSL. POLE 1136 FT FROM DER, 434 FT LEFT OF CENTERLINE, 37 FT AGL/497 FT MSL. TREES BEGINNING 1233 FT FROM DER, 632 FT RIGHT OF CENTERLINE, UP TO 526 FT MSL. TREES BEGINNING 1359 FT FROM DER, 22 FT RIGHT OF CENTERLINE, UP TO 527 FT MSL. TREES BEGINNING 1412 FT FROM DER, 465 FT LEFT OF CENTERLINE, UP TO 513 FT MSL. TREES BEGINNING 1554 FT FROM DER, 575 FT RIGHT OF CENTERLINE, UP TO 542 FT MSL. TREES BEGINNING 1886 FT FROM DER, 89 FT RIGHT OF CENTERLINE, UP TO 547 FT MSL. TREES BEGINNING 2187 FT FROM DER, 284 FT RIGHT OF CENTERLINE, UP TO 548 FT MSL. TREES BEGINNING 2346 FT FROM DER, 155 FT LEFT OF CENTERLINE, UP TO 539 FT MSL. TREES BEGINNING 2639 FT FROM DER, 172 FT LEFT OF CENTERLINE, UP TO 541 FT MSL. TREES BEGINNING 2973 FT FROM DER, 25 FT LEFT OF CENTERLINE, UP TO 567 FT MSL. TREE 3191 FT FROM DER, 181 FT RIGHT OF CENTERLINE, 554 FT MSL. TREE 3844 FT FROM DER, 448 FT RIGHT OF CENTERLINE, 565 FT MSL. TREE 3963 FT FROM DER, 688 FT RIGHT OF CENTERLINE, 575 FT MSL. TERRAIN+VEG 5544 FT FROM DER, 1978 FT RIGHT OF CENTERLINE, 100 FT AGL/606 FT MSL. OTHER 1.3 NM FROM DER, 900 FT RIGHT OF CENTERLINE, 679 FT MSL. THIS IS TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES, AMDT 3A. 1901171738-PERM

FDC **9/5039** S25 IAP WATFORD CITY MUNI, Watford City, ND. RNAV (GPS) RWY 12, ORIG-B... DELETE NOTE: DME/DME RNP-0.3 NA. DELETE NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA. DELETE NOTE: CIRCLING RWYS 18, 36 NA. PBN REQUIREMENTS NOTE: RNP APCH. CHART NOTE: RWY 12 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. CHART NOTE: PROCEDURE NA AT NIGHT. THIS IS RNAV (GPS) RWY 12, ORIG-C. 1901181612-PERM

FDC **9/5051** M55 IAP LAMAR COUNTY, Vernon, AL. RNAV (GPS) RWY 35, ORIG... CHART NOTE: PROCEDURE NA AT NIGHT. CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED. PBN REQUIREMENTS NOTE: RNP APCH. DELETE: HOTOW TO RW35: 3.04/40. DELETE NOTE: DME/DME RNP-0.3 NA. DELETE PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT. DELETE NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA. ADD NOTE: VISUAL SEGMENT - OBSTACLES. THIS IS RNAV (GPS) RWY 35, ORIG-A. 1901181722-PERM