

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> ST LOUIS RGNL	<u>AIRPORT ID</u> KALN	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 29	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> ALTON/ST LOUIS	<u>STATE</u> IL
<u>AIRPORT ELEVATION</u> 544	<u>TDZE</u> 531	<u>SUPERSEDED</u> RNAV (GPS) RWY 29	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 03/05/2015	<u>MAG VAR</u> 1W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 11 OCTOBER 2018	<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>
TOY VORTAC		QUNIE		TF	FO	2.00	052.94	6.88	2100
JACOB	IAF	QUNIE	NOPT	TF	FB	1.00	294.58	6.01	2100
QUNIE	IF/IAF	OSERE		TF	FB	1.00	294.51	6.76	2100
OSERE	FAF	DIYEL/1.60 NM TO RW29		TF	FB	0.30	294.43	3.17	
DIYEL/1.60 NM TO RW29		RW29	MAP	TF	FO	0.30	294.39	1.60	
RW29	MAP	731 MSL		CA			294.39		
731 MSL		SQUAR		DF	FO	1.00			2400

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW29

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2400 DIRECT SQUAR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD SE QUNIE, RT, 294.51 INBOUND, 2100 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 294.43FAF: OSERE

DIST FAF TO MAP: 4.77

DIST FAF TO THLD: 4.77

4. MIN ALT: QUNIE 2100, OSERE 2100, DIYEL/1.60 NM TO RW29 1080*

5. DIST TO THLD FROM OM:MM:IM:150 HAT:200 HAT: 0.45GS ANT:

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

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 55.0

8. MSA FROM: RW29 2700

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT JACOB ON V12 EAST BOUND.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C OR ABOVE 54C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TOY VORTAC AIRWAY RADIALS 006 CW 114.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 7/8 SM AND LNAV CAT C/D VISIBILITY TO 1 SM.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1 NM TO RW29*
*LNAV ONLY
WAAS CHANNEL #77507
REFERENCE PATH ID: W29A
CHART FAS OBST: 639 TREE 385304N/0900043W.
HOLD NW, RT, 114.20 INBOUND
LTP HAE: 129.1 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	731	1/2	200	731	1/2	200	731	1/2	200	731	1/2	200			
LNAV/VNAV DA	825	1/2	294	825	1/2	294	825	1/2	294	825	1/2	294			
LNAV MDA	900	1/2	369	900	1/2	369	900	3/4	369	900	3/4	369			
CIRCLING	1000	1	456	1000	1	456	1000	1 1/2	456	1100	2	556			



CHANGES - REASONS

1. CHANGED AIRPORT ELEVATION FROM 543 TO READ 544 - AIRNAV2 AIRPORT DATA RECORD UPDATE.
2. CHANGED MISSED APPROACH CA LEG ALTITUDE FROM 726 TO READ 731 IN TERMINAL ROUTES SECTION - LOWEST DA/MDA NOW 731 DUE TO USE OF TDZE TO COMPUTE DA INSTEAD OF THRE.
3. ADDED IS CLEAR TO 20:1 ON LINE 7 - REQUIRED BY CRITERIA.
4. ADDED RNP APCH TO PBN REQUIREMENTS NOTES SECTION - REQUIRED BY CRITERIA.
5. CHANGED UNCOMPENSATED BARO-VNAV SYSTEMS CHART NOTE UPPER TEMPERATURE LIMITS FROM 40C (104F) TO READ 54C IN NOTES SECTION - AFS LOW/HIGH TEMPERATURE LIMITS FOR BARO-VNAV PROCEDURES CALCULATOR CALCULATION.
6. REMOVED CHART NOTE: DME/DME RNP-0.3 NA FROM NOTES SECTION - DOCUMENTATION NO LONGER REQUIRED BY CRITERIA.
7. CHANGED CHART NOTE: VDP AND BARO-VNAV NA WITH LAMBERT-ST. LOUIS INTL ALTIMETER SETTING TO READ CHART NOTE: BARO-VNAV, VDP, AND ALTERNATE MINIMUMS NA IN NOTES SECTION AND MOVED FROM NOTES SECTION TO 8260-9 GENERAL REMARKS SECTION - KALN AWOS-3 TRANSMITS TO WMSCR AND DOES NOT REQUIRE A PUBLISHED BACKUP ALTIMETER SOURCE/COMPUTED FOR CONTINGENCY.
8. CHANGED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LAMBERT-ST. LOUIS INTL ALTIMETER SETTING AND INCREASE ALL DA 51 FEET AND ALL MDA 60 FEET, INCREASE LNAV CAT C AND D AND LNAV/VNAV ALL CATS VISIBILITY 1/8 MILE TO READ CHART NOTE: USE ST LOUIS LAMBERT INTL ALTIMETER SETTING; INCREASE ALL DA 51 FEET AND LNAV/VNAV ALL CATS VISIBILITY 1/8 SM; INCREASE ALL MDA 60 FEET IN NOTES SECTION AND MOVED FROM NOTES SECTION TO 8260-9 GENERAL REMARKS SECTION - KALN AWOS-3 TRANSMITS TO WMSCR AND DOES NOT REQUIRE A PUBLISHED BACKUP ALTIMETER SOURCE/COMPUTED FOR CONTINGENCY.
9. REMOVED CHART NOTE: WHEN VGSI INOP, CIRCLING TO TO RWY 17/35 NA AT NIGHT FROM NOTES SECTION - DOCUMENTATION NO LONGER REQUIRED BY CRITERIA/SURVEY ADDED WITH NO 20:1 PENETRATIONS.
10. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 7/8 SM AND LNAV CAT C/D VISIBILITY TO 1 SM TO NOTES SECTION - VISCHECK CALCULATION BASED ON INSTALLATION OF MALSR.
11. ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT JACOB ON V12 EAST BOUND TO NOTES SECTION - 141 DEGREE TURN FROM AIRWAY EXCEEDS TURN AT FIX LIMIT.
12. CHANGED LPV DA ALL CATS FROM 726 TO READ 731 IN MINIMUMS SECTION - TDZE USED TO COMPUTE DA INSTEAD OF THRE.
13. CHANGED LNAV/VNAV HAT ALL CATS FROM 294 TO READ 289 IN MINIMUMS SECTION - CONTROLLING OBSTACLE IN LEVEL SURFACE AREA / 161 FEET ROC APPLIED / TDZE USED TO COMPUTE DA INSTEAD OF THRE.
14. CHANGED LNAV HAT ALL CATS FROM 374 TO READ 369 IN MINIMUMS SECTION - TDZE USED TO COMPUTE DA INSTEAD OF THRE.
15. CHANGED CIRCLING CAT A CMDA/HAA FROM 980/435 TO READ 1000/456 IN MINIMUMS SECTION - NEW CONTROLLING OBSTACLE/AIRPORT ELEVATION NOW 544.
16. CHANGED CIRCLING CATS B/C HAA FROM 455 TO READ 456 AND CIRCLING CAT D HAA FROM 555 TO READ 556 IN MINIMUMS SECTION - AIRPORT ELEVATION NOW 544.
17. CHANGED LTP LONGITUDE FROM 0900143.8325W TO READ 0900143.8335W, FPAP LATITUDE FROM 385346.4800N TO READ 385346.4820N, FPAP LONGITUDE FROM 0900328.5900W TO READ 0900328.5975W, COURSE WIDTH FROM 106.50 TO 106.75, AND CRC REMAINDER FROM D5740CA3 TO READ 2E8B6E6B IN FAS DATA BLOCK INFORMATION SECTION - AIRNAV2 AIRPORT DATA RECORD UPDATE.

PDF EDITS:

1. REMOVED ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED FROM GENERAL REMARKS SECTION.



COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZKC, STL APP CON, ALN ATCT, AMGR

FLIGHT CHECKED BY

ANTHONY D VALLERA

Digitally signed by

DEZ SILAGYI

Aug 27, 2018

OFFICE

FICO

DATE

8/22/18

DEVELOPED BY

MICHAEL R. GARRITY JR.

Digitally signed by

MICHAEL GARRITY

Jun 29, 2018

OFFICE

AJV-5421

DATE

05/15/2018

APPROVED BY

JULIE MORGAN

Digitally signed by

DEZ SILAGYI

Aug 27, 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	KALN
RUNWAY	RW29
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W29A
LTP/FTP LATITUDE	385311.1185N
LTP/FTP LONGITUDE	0900143.8335W
LTP/FTP ELLIPSOIDAL HEIGHT	+01291
FPAP LATITUDE	385346.4820N
FPAP LONGITUDE	0900328.5975W
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	0280
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
 CRC REMAINDER	 2E8B6E6B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01604
FPAP ORTHOMETRIC HEIGHT	+01604

