

**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 ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
STL	RNAV (RNP) Z RWY 11	ORIG-C	ST LOUIS	MO	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
617	617	RNAV (RNP) Z RWY 11	08/17/2017	1W	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>	
RNAV			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>
STAAN	IAF	KARRP		TF	FB	1.00	083.65	5.53	6000
KARRP		AARBY		TF	FB	1.00	083.70	4.21	4000
AARBY	IF	HIXOB		TF	FB	1.00	077.49	5.19	3500
SISDE	IAF	ZOVUN		TF	FB	1.00	122.99	2.90	4300
ZOVUN		HIXOB		TF	FB	1.00	123.02	4.44	3500
VEEGE	IAF	YADDI		TF	FB	1.00	148.06	10.27	5500
YADDI		CORDL		TF	FB	1.00	148.13	5.70	4000
CORDL	IF	HIXOB		TF	FB	1.00	163.22	5.14	3500
HIXOB	IF	EMZEE		TF	FB	1.00	123.08	2.80	2400
RRIPP	IF	DUZER		TF	FB	1.00	302.79	2.91	5000
DUZER		PROVL		TF	FB	1.00	302.86	1.11	4200
PROVL		BUKWT		RF	FB	1.00	(2.59 NM RADIUS CW (CFBPS))	4.20	3300
BUKWT		EMZEE		RF	FB	0.50	(1.93 NM RADIUS CW (CFBPR))	2.93	2400
EMZEE		MUDYY		TF	FB	0.50	123.12	1.77	1900
HRBEE	IF	BUFEE		TF	FB	1.00	301.32	2.89	5000
BUFEE		MUDYY		RF	FB	1.00	(3.14 NM RADIUS CCW (CFBPT))	9.76	1900
MUDYY		WATRR	PFAF	TF	FB	0.30	123.09	0.87	1700
WATRR	PFAF	RW11	MAP	TF	FO	0.30	123.13	3.21	
RW11	MAP	1100 MSL		CA			123.13		1100
1100 MSL		IMPER		DF	FO	1.00			3000

QUALITY
26
CHECKED

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1100 THEN CLIMBING RIGHT TURN TO 3000 DIRECT IMPER AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1.	PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)			
2.	PROFILE STARTS AT MUDYY								
3.	FAC:	123.13	PFAF:	WATRR	DIST PFAF TO MAP:		DIST PFAF TO THLD:		
4.	MIN ALT:	MUDYY 1900, WATRR 1700							
5.	DIST TO THLD FROM OM:		MM:	IM:	150 HAT:	308 HAT:	0.78	GS ANT:	
6.	MIN GP INCPT:	1700	GP ALT AT PFAF:	WATRR 1700		OM:		MM:	IM:
7.	GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR		TCH:	59.4
8.	MSA FROM:	RW11 3000							

PBN REQUIREMENTS NOTE:

RNP AR APCH-GPS, MIN RNP 0.30. AUTHORIZATION REQUIRED FROM HRBEE OR RRIPP: RF.

EQUIPMENT REQUIREMENTS NOTES:

RADAR REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWYS 12L/R, EXCEPT FOR ARRIVALS AT RRIPP AND HRBEE.
CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -16°C OR ABOVE 54°C.
CHART PLANVIEW NOTE AT STAAN: (RNP 0.30).
CHART PLANVIEW NOTE AT SISDE: (RNP 0.30).
CHART PLANVIEW NOTE AT VEEGE: (RNP 0.30).
CHART PLANVIEW NOTE ADJACENT TO RRIPP IF: RF REQUIRED.
CHART PLANVIEW NOTE AT RRIPP: (RNP 0.30).
CHART PLANVIEW NOTE ADJACENT TO HRBEE IF: RF REQUIRED.
CHART PLANVIEW NOTE AT HRBEE: (RNP 0.30).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 4500.
CHART SPEED ICON IN PLANVIEW AT DUZER: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT PROVL: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT BUKWT: MAX 180 KIAS.
CHART SPEED ICON IN PLANVIEW AT EMZEE: MAX 180 KIAS.
CHART SPEED ICON IN PLANVIEW AT BUFEE: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD S, RT, 006.25 INBOUND.
CHART MANDATORY 7000 AT STAAN.
CHART AT OR ABOVE 5000 AT SISDE.
CHART AT OR BELOW 9000 AND AT OR ABOVE 8000 AT VEEGE.
CHART AT OR ABOVE 5000 AT RRIPP.
CHART AT OR ABOVE 5000 AT HRBEE.



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 0.30 DA	925	2400	308	925	2400	308	925	2400	308	925	2400	308			

CHANGES - REASONS

1. PROFILE LINE 5: REMOVED DIST TO THLD FROM OM: 3.21 AND CHANGED 257 HAT: 0.62 TO 308 HAT 0.78 - OGZ OM HAS SINCE BEEN DECOMMISSIONED AND HAT INCREASED FROM 257 TO 308.
2. PROFILE LINE 7: ADDED 20:1 IS CLEAR - NO VISUAL SURFACE PENETRATIONS ARE PRESENT PER 8260.19J PARA. 8-6-7G(3).
3. ADDED PBN REQUIREMENTS NOTE 'RNP AR APCH-GPS, MIN RNP 0.30. AUTHORIZATION REQUIRED FROM HRBEE OR RRIPP: RF' - PER 8260.19J PARA. 8-6-8D(5)(B)4.
4. MOVED 'RADAR REQUIRED' FROM PLANVIEW AND PLACED IN EQUIPMENT REQUIREMENTS NOTES AS 'RADAR REQUIRED FOR PROCEDURE ENTRY' - PER 8260.19J PARA. 8-6-9A(1).
5. CHANGED NOTE 'FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -16C (4F) OR ABOVE 54C (130F)' TO 'FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -16C OR ABOVE 54C' - FAHRENHEIT TEMPERATURES NO LONGER REQUIRED BY CRITERIA.
6. CHANGED NOTE 'FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO 3/4 SM' TO 'INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 4500' - PER 8260.3E TABLE 3-3-1 AND DUE TO CHANGE IN RNP 0.30 DA/HAT.
7. REMOVED NOTE 'GPS REQUIRED' - COVERED BY PBN REQUIREMENTS NOTE.
8. RAISED RNP 0.30 DA/HAT FROM 875/257 TO 925/308 AND CHANGED VISIBILITY FROM 1/2 SM TO RVR 2400 - NEW CONTROLLING OBSTRUCTION AND RWY 11 HAS RVR AT TOUCHDOWN, MIDPOINT, AND ROLLOUT.
9. CHANGED AIRPORT ELEVATION FROM 618 TO 617 - NEW SURVEY.
10. REMOVED ADDITIONAL FLIGHT DATA 'ROUTE TYPE: A, H', 'ROUTE TYPE QUALIFIER 1: F' AND 'ROUTE TYPE QUALIFIER 2: S' - NO LONGER REQUIRED BY CRITERIA.
11. REMOVED ADDITIONAL FLIGHT DATA: #TCH 677.4 (DO NOT CHART) - NO LONGER REQUIRED BY CRITERIA.

02/25/25: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 02/05/25.

1. REMOVED "CHART LOC RWY 12L AND 12R, CHART AT OR ABOVE 5000 AT HRBEE, RRIPP AND SISDE, CHART AT OR ABOVE 8000, AT OR BELOW 9000 AT VEEGE" FROM ADDITIONAL FLIGHT DATA.

2. ADDED "CHART AT OR ABOVE 5000 AT SISDE, CHART AT OR BELOW 9000 AND AT OR ABOVE 8000 AT VEEGE, CHART AT OR ABOVE 5000 AT RRIPP, CHART AT OR ABOVE 5000 AT HRBEE" TO ADDITIONAL FLIGHT DATA.

COORDINATED WITH:

A4A☒ALPA☒AOPA☒APA☒HAI☐NBAA☒

OTHER:ZKC, STL APP CON, STL TOWER, APT MGR

FLIGHT CHECKED BY
BRIAN HARRELSON

Digitally signed by

RAKE MCGRAW

Feb 05, 2025

OFFICE

AJF

DATE

02/04/2025

DEVELOPED BY

RALPH DUMAR

Digitally signed by

RALPH DUMAR

Oct 05, 2024

OFFICE

AJV-A422

DATE

07/08/2024

APPROVED BY
CASIMIR L. TABAKA

Digitally signed by

RAKE MCGRAW

Feb 28, 2025

OFFICE

AJV-A420

DATE

01/16/2025

TITLE

MANAGER



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

<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
STL	RNAV (RNP) Z RWY 11	ORIG-C	ST LOUIS	MO	617	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM STAAN TO KARRP

RNP 1.00 DISTANCE 5.53 PAT MAP HAT HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (29-001151)	384631.00N/0904614.00W	897	500	125	5E	1000				AC125 AT3978	6000
TERRAIN	384606.00N/0905345.00W	696 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

INITIAL: STEPDOWN

FROM KARRP TO AARBY

RNP 1.00 DISTANCE 4.21 PAT MAP HAT HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (29-001237)	384644.00N/0904343.00W	1128	500	50	5D	1000				AC50 AT1822	4000
TERRAIN	384633.00N/0904454.00W	663 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:



INITIAL

FROM

SISDE

TO

ZOVUN

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	2.90										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	385354.00N/0903703.00W	870	250	50	4D	1000				AC50 AT2380	4300
TERRAIN	385354.00N/0903703.00W	669 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL: STEPDOWN

FROM

ZOVUN

TO

HIXOB

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	4.44										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	385354.00N/0903703.00W	870	250	50	4D	1000				AC50 AT1580	3500
TERRAIN	385354.00N/0903703.00W	669 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL

FROM

VEEGE

TO

YADDI

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	10.27										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	390648.00N/0904839.00W	1109	250	50	4D	1000				AC50 AT3341	5500
TERRAIN	390648.00N/0904839.00W	909 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL: STEPDOWN

FROM

YADDI

TO

CORDL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	5.70										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	385951.00N/0903754.00W	978	250	50	4D	1000				AT1972 AC50	4000
TERRAIN	385951.00N/0903754.00W	778 (800)								AS1500	2300

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

AARBY

TO

HIXOB

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>			<u>HMAS</u>		
1.00	5.19										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384657.00N/0904039.00W	771	250	50	4D	500				AC50 AT2179	3500
TERRAIN	384700.00N/0904039.00W	568 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

CORDL

TO

HIXOB

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
1.00	5.14										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	385342.00N/0903448.00W	880	250	50	4D	500				AC50 AT2070	3500
TERRAIN	385342.00N/0903512.00W	679 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

HIXOB

TO

EMZEE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
1.00	2.80										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (29-002302)	384705.00N/0903108.00W	850	250	50	4D	500				AC50 AT1000	2400
TERRAIN	384651.00N/0903100.00W	607 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

RRIPP

TO

DUZER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
1.00	2.91										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (29-002924)	384255.80N/0902818.80W	755	50	20	2C	500				AT3725 AC20	5000
TERRAIN	384218.00N/0902845.00W	666 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

DUZER

TO

PROVL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	1.11										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384312.00N/0903515.00W	853	250	50	4D	500				AC50 AT2797	4200
TERRAIN	384312.00N/0903515.00W	653 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

PROVL

TO

BUKWT

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	4.20										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384312.00N/0903515.00W	853	250	50	4D	500				AC50 AT1897	3300
TERRAIN	384312.00N/0903515.00W	653 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

BUKWT

TO

EMZEE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
0.50	2.93										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384806.00N/0903512.00W	762	250	50	4D	500				AC50 AT1088	2400
TERRAIN	384806.00N/0903512.00W	561 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

EMZEE

TO

MUDYY

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
0.50	1.77										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384724.00N/0903042.00W	798	250	50	4D	500				AC50 AT552	1900
TERRAIN	384724.00N/0903039.00W	597 (600)								AS1000	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM

HRBEE

TO

BUFEE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>				<u>HMAS</u>		
1.00	2.89										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	385200.00N/0901954.00W	807	250	50	4D	500				AC50 AT3643	5000
TERRAIN	385200.00N/0901957.00W	591 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

BUFEE

TO

MUDYY

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>				<u>HMAS</u>		
1.00	9.76										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (29-000371)	384631.00N/0903048.00W	921	20	3	1A	500				AT476 AC3	1900
TERRAIN	384642.00N/0903057.00W	614 (600)								AS1000	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

MUDYY

TO

WATRR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
0.30	0.87										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	384745.00N/0902900.00W	758	250	50	4D	500				AT392 AC50	1700
TERRAIN	384745.00N/0902903.00W	558 (600)								AS1000	1600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL

FROM

WATRR

TO

RW11

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
0.30	3.21		DA		308						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TREE	384536.00N/0902530.00W	655	215	8	4B		21.67:1			AC8	925

COMPUTATIONS

TF TURN FIX

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

WATRR-RW11

1700

165

173.58

1082.7

35.63

0.00

0

0

0

3752.47

21.67:1

SEGMENT REMARKS:



MISSSED APPROACH: LEVEL SURFACE

FROM

DA

TO

IMPER

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u> 764			
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				3000
TOWER (29-000074)	383207.14N/0902224.58W	1649	50	50	2D	1000				AC50	2700
TERRAIN	384015.00N/0902333.00W	738 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MSA

CENTER

RW11

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (29-001023) (29-001023)	382139.70N/0903254.60W	196	24.8	1949	500	50	5D	1000			3000

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

VEGETATION 100 FT PER FPT.

MULTIPLE INTERMEDIATE SEGMENTS DEVELOPED PER ATC REQUEST.

AUTHORIZATION REQUIRED (AR). AC 90-101A CRITERIA USED.

VEB ROC (0.30 HIGHER VALUE) APPLIED/USED.

RF SEGMENT RADIUS/BANK ANGLE COMPUTATIONS:
RFSEGMENT ALT KIAS KTAS HAA KTW* TR BA
BUFEE-MUDYY 5000 210 232.2 4382 65 3.14 22.30
PROVL-BUKWT 4200 210 230.0 3732 53.9 2.59 24.40
BUKWT-EMZEE 3300 180 194.0 2682 53.0 2.80 24.77

TFTURNFIX ALT KIAS KTAS HAA KTW* TR BA
HIXOB 3300 250 270.2 2682 50.0 4.60 18.00
*VKTW: OBTAINED FROM HISTORICAL WIND DATA AND 8260.52
TABLE 1-3 DATA

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZKC ARTCC, STL APP CON, STL TOWER

WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	SERVICE-A	ADJUSTMENTS
ASOS	STL	24	STL	0	Y	0
BACK-UP WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	SERVICE-A	ADJUSTMENTS

WX REMARKS:

24-HOUR ATC TOWER HAS REDUNDANT WEATHER SOURCES, BACK-UP ALTIMETER NOT REQUIRED.

PRIMARY NAVAID	MONITOR POINT	HRS OPERATION	CAT
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APPROACH AND RUNWAY LIGHTING SYSTEM	RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW06 - MALSR, HIRL, PAPI-4R	PIR-G	APPROACH, ROLL OUT
RW11 - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW12L - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW12R - MALSR, TDZ, C/LINE, HIRL, PAPI-4L	PIR-G	APPROACH, ROLL OUT
RW24 - MALS, HIRL, PAPI-4L	PIR-G	APPROACH, ROLL OUT
RW29 - ALSF-2, C/LINE, HIRL, TDZ, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW30L - MALSR, C/LINE, HIRL, PAPI-4R	PIR-G	APPROACH, ROLL OUT
RW30R - ALSF-2, TDZ, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT

GLIDESLOPE ANGLE	ELEV RWY THRESHOLD	TCH	ELEV GS ANTENNA	DISTANCE FROM RWY	VGSI ANGLE	TCH
3.00	616.8	59.4			3.00	67.0

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

CRITICAL LOW	CRITICAL HIGH	ACT	APT ISA
-16C	+54C	-16C	+13.78C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2019-2023).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 963 HIGH TEMP 1270.

"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - RNP PROCEDURE.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

PART D: AIRSPACE

DOCKET #

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

DISTANCE FROM	THLD	TO 1000FT POINT	2.90
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	122.13
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	600
DISTANCE FROM	THLD	TO 1500FT POINT	4.47
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	2.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	122.12
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	600

THRESHOLD COORDINATES (IF STR-IN)	384535.83N/0902435.54W
ARP COORDINATES	384455.31N/0902212.09W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 11 DISTANCE 1.99 NM
FAF COORDINATES	384718.47N/0902804.14W
FIX NAME COORDINATES	

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.
1000' PT CONTAINED IN FINAL SEGMENT. 1500' PT CONTAINED IN TF SEGMENT EMZEE (384842.91N/0903056.07W) TO MUDYY (384746.25N/0902900.76W).

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
RALPH DUMAR	AJV-A422	07/08/2024	AERONAUTICAL INFORMATION SPECIALIST

