

**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> KLAS	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 19R	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> LAS VEGAS	<u>STATE</u> NV		
<u>AIRPORT ELEVATION</u> 2181	<u>TDZE</u> 2117	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 11E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> 02/25/2021	<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>
PPENN	IAF	KIVEY		TF	FB	0.50	263.48	2.28	5300
KIVEY	IF	MOBBB		TF	FB	0.50	262.51	4.17	3900
MOBBB		GIMBL	PFAF	TF	FB	0.50	257.97	2.01	3500
GIMBL	PFAF	* HIRLR		TF	FB	0.30	243.20	0.92	
HIRLR		* CEGIL		RF	FB	0.30	(1.28 NM RADIUS CCW (CFFLT))	1.10	
CEGIL		* RW19R	MAP	TF	FB	0.30	193.93	1.86	
RW19R	MAP	SIROE		TF	FB	0.30	193.92	2.00	
SIROE		RACOR		TF	FB	1.00	193.92	5.42	
RACOR		MATLR		TF	FO	1.00	171.22	8.00	7000

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 7000 ON THE RNAV MISSED APPROACH ROUTE TO MATLR AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7000.

*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 300 FEET PER NM TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT KIVEY					
3. FAC: *	PFAF: GIMBL		DIST PFAF TO MAP:		DIST PFAF TO THLD:
4. MIN ALT:	KIVEY 5300, MOBBB 3900, GIMBL 3500				
5. DIST TO THLD FROM OM:	3.88	MM:	IM:	150 HAT:	441 HAT: 1.15 GS ANT:
6. MIN GP INCPT:	3500	GP ALT AT PFAF : GIMBL 3500, HIRLR 3183, CEGIL 2803		OM:	MM: IM:
7. GP ANGLE:	3.24	34:1: IS NOT CLEAR	20:1: IS CLEAR	TCH: 75.0	
8. MSA FROM:	RW19R 12900				

PBN REQUIREMENTS NOTE:

RNP AR APCH.
RF REQUIRED.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 0°C OR ABOVE 54°C.
CHART PLANVIEW NOTE AT PPENN: (RNP 0.5).
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: MISSED APPROACH REQUIRES RNP LESS THAN 1.0.
CHART SPEED ICON IN PLANVIEW AT PPENN: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT PPENN
HOLD N, LT, 172.13 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 0.10 DA*	2558	1 3/8	441	2558	1 3/8	441	2558	1 3/8	441	2558	1 3/8	441			
RNP 0.20 DA*	2576	1 3/8	459	2576	1 3/8	459	2576	1 3/8	459	2576	1 3/8	459			
RNP 0.30 DA*	2636	1 3/8	519	2636	1 3/8	519	2636	1 3/8	519	2636	1 3/8	519			
RNP 0.30 DA	2669	1 5/8	552	2669	1 5/8	552	2669	1 5/8	552	2669	1 5/8	552			

CHANGES - REASONS

ORIGINAL PROCEDURE

01/05/21: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/06/20.

1. CHANGED REQUIRED EFFECTIVE DATE FROM "ROUTINE" TO "02/25/2021".

2. ADDED "PENDING" TO FLIGHT CHECKED BY SECTION

COORDINATED WITH:A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLA, LAS APP CON, LAS ATCT, AMGR**FLIGHT CHECKED BY**
DANIEL C FAVORITE

Digitally signed by

ALLAN WILL

Jan 07, 2021

OFFICE

FICO

DATE

01/26/2021

DEVELOPED BY
KELLIE R. BARNES

Digitally signed by

ALLAN WILL

Jan 07, 2021

OFFICE

AJV-A423

DATE

10/06/2020

APPROVED BY
MARLON ROBINSON

Digitally signed by

ALLAN WILL

Jan 07, 2021

OFFICE

AJV-A420

DATE**TITLE**
MANAGER

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

AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
KLAS	RNAV (RNP) Z RWY 19R	ORIG	LAS VEGAS	NV	2181	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
PPENN

TO
KIVEY

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
0.50	2.28											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.AAO	360854.00N/1145615.00W		2868	164	98	4E	1000				PR120 AC98 AT1214	5300
2.TERRAIN	360854.00N/1145615.00W		2668 (2700)								AS1500	4200

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

HISTORIC WIND DATA USED (2015-2019)

INTERMEDIATE

FROM
KIVEY

TO
MOBBB

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
0.50	4.17											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.AAO	360918.00N/1145915.00W		2842	164	98	4E	500				AC98 PR70 AT390	3900
4.TERRAIN	360918.00N/1145915.00W		2642 (2600)								AS1000	3600

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

HISTORIC WIND DATA USED (2015-2019)



INTERMEDIATE: STEPDOWN

FROM

MOBBB

TO

GIMBL

<u>RNP</u> 0.50	<u>DISTANCE</u> 2.01	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
5.AAO	360900.00N/1150706.00W		2074	164	98	4E	500				AC98 AT828	3500
6.TERRAIN	360909.00N/1150630.00W		1842 (1800)								AS1000	2800

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL

FROM

GIMBL

TO

HIRLR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
0.10	0.92											
<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				3183

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL

FROM

HIRLR

TO

CEGIL

<u>RNP</u> 0.10	<u>DISTANCE</u> 1.10	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
								ASC				2803

COMPUTATIONS													
RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE	
HIRLR-CEGIL	3183	165	177.5	1002.12	23.58	1.28	24.63	0	0	2359.03	18.48:1	(CFFLT)/1.1 NM	

SEGMENT REMARKS:

HISTORIC WIND DATA USED (2015-2019)

FINAL

FROM

CEGIL

TO

RW19R

RNP	DISTANCE	PAT	MAP	HAT	HMAS								
0.10	1.86		RW19R	441									
OBSTRUCTION		COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.BUILDING (32-042062)		360633.32N/1150918.05W		2229	20	3	1A		18.48:1	300	3000	AC3 MA141	2558

COMPUTATIONS												
ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE	
SEGMENT REMARKS:												
COMBINATION MDA INCREASE AND CLIMB GRADIENT												



FINAL

FROM

GIMBL

TO

HIRLR

<u>RNP</u> 0.20	<u>DISTANCE</u> 0.92	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>				<u>HMAS</u>			
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				3183

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

SEGMENT REMARKS:

FINAL

FROM

HIRLR

TO

CEGIL

<u>RNP</u> 0.20	<u>DISTANCE</u> 1.10	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				2803

COMPUTATIONS													
RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE	
HIRLR-CEGIL	3183	165	177.5	1002.12	23.58	1.28	24.63	0	0	2903.28	18.46:1	(CFFLT)/1.1 NM	

SEGMENT REMARKS:

HISTORIC WIND DATA USED (2015-2019)



FINAL

FROM
CEGIL

TO
RW19R

<u>RNP</u> 0.20	<u>DISTANCE</u> 1.86	<u>PAT</u>	<u>MAP</u> RW19R	<u>HAT</u> 459			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
8.BUILDING (32-020075)	360638.76N/1150918.65W		2243	20	3	1A		18.46:1	300	3000	AC3 MA114	2576

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:
COMBINATION MDA INCREASE AND CLIMB GRADIENT

FINAL

FROM
GIMBL

TO
HIRLR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
0.30	0.92											
<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				3183

COMPUTATIONS

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



FINAL

FROM

GIMBL

TO

HIRLR

<u>RNP</u> 0.30	<u>DISTANCE</u> 0.92	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>				<u>HMAS</u>			
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				3183

COMPUTATIONS

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

FINAL

FROM

HIRLR

TO

CEGIL

<u>RNP</u> 0.30	<u>DISTANCE</u> 1.10	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>				<u>HMAS</u>			
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				2803

COMPUTATIONS

RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
HIRLR-CEGIL	3183	165	177.5	1002.12	23.58	1.28	24.63	0	0	3647.36	18.45:1	(CFFLT)/1.1 NM

SEGMENT REMARKS:

HISTORIC WIND DATA USED (2015-2019)



FINAL

FROM

HIRLR

TO

CEGIL

<u>RNP</u> 0.30	<u>DISTANCE</u> 1.10	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				2803

COMPUTATIONS													
RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE	
HIRLR-CEGIL	3183	165	177.5	1002.12	23.58	1.28	24.63	0	0	3647.36	18.45:1	(CFFLT)/1.1 NM	

SEGMENT REMARKS:

HISTORIC WIND DATA USED (2015-2019)

FINAL

FROM

CEGIL

TO

RW19R

RNP	DISTANCE	PAT	MAP	HAT	HMAS								
0.30	1.86		RW19R	552									
OBSTRUCTION		COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
9.ANTENNA (32-074292)		360708.47N/1150923.37W		2329	20	3	1A		18.45:1			AC3 MA75	2669

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

SEGMENT REMARKS:



FINAL

FROM
CEGIL

TO
RW19R

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
0.30	1.86		RW19R	519								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
9.ANTENNA (32-074292)	360708.47N/1150923.37W		2329	20	3	1A		18.45:1	300	3000	AC3 MA42	2636

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:
COMBINATION MDA INCREASE AND CLIMB GRADIENT
MISSED APPROACH

FROM
DA

TO
RW19R

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
0.30-1.00							2324					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				

COMPUTATIONS

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



MISSED APPROACH

FROM
RW19R

TO
SIROE

RNP 0.30-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.MONUMENT (32-023467)	360535.17N/1151019.15W		2636	20	3	1A		ASC			AC3	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
SIROE

TO
RACOR

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM
RACOR

TO
MATLR

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
DA

TO
RW19R

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 2324				
<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				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

COMBINATION MDA INCREASE AND CLIMB GRADIENT



MISSED APPROACH

FROM
RW19R

TO
SIROE

RNP 0.30-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.MONUMENT (32-023467)	360535.17N/1151019.15W		2636	20	3	1A		ASC			AC3	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
SIROE

TO
RACOR

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM
RACOR

TO
MATLR

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
DA

TO
RW19R

<u>RNP</u> 0.20-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 2307				
<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				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

COMBINATION MDA INCREASE AND CLIMB GRADIENT



MISSED APPROACH

FROM
RW19R

TO
SIROE

RNP 0.20*-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.MONUMENT (32-023467)	360535.17N/1151019.15W		2636	20	3	1A		ASC			AC3	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
SIROE

TO
RACOR

<u>RNP</u> 0.20-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM
RACOR

TO
MATLR

RNP 0.20-1.00		DISTANCE	PAT	MAP	HAT			HMAS				
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
DA

TO
RW19R

<u>RNP</u> 0.10-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 2319				
<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				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

COMBINATION MDA INCREASE AND CLIMB GRADIENT



MISSED APPROACH

FROM
RW19R

TO
SIROE

RNP 0.10-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.MONUMENT (32-023467)	360535.17N/1151019.15W		2636	20	3	1A		ASC			AC3	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
SIROE

TO
RACOR

<u>RNP</u> 0.10-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM
RACOR

TO
MATLR

RNP 0.10-1.00		DISTANCE	PAT	MAP		HAT		HMAS				
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				

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

MISSED APPROACH: LEVEL SURFACE

FROM
DA

TO
7000 MSL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
15.AAO	355129.20N/1151208.44W		4224	50	20	2C	1000					5300
16.TERRAIN	355129.20N/1151208.44W		4024 (4000)								AS1500	5500

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

CIRCLING

☐ ALL CATS

☐ CAT A

☐ CAT B

☐ CAT C

☐ CAT D

☐ CAT E

☒ NOT AUTHORIZED

MSA

CENTER
RW19R

RADIUS
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	AAO	361618.00N/1154145.00W	281	28.1	11899	164	98	4E	1000			12900

MSA REMARKS:



NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

45 FT VEGETATION HEIGHT PER FPT



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZLA ARTCC, LAS APP CON, LAS TOWER

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KLAS	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KLAS	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>

WX REMARKS:
24 HOUR ATC AND REDUNDANT WEATHER SOURCES AVAILABLE. NO SECONDARY ALTIMETER NEEDED.

PRIMARY NAVAIDMONITOR POINTHRS OPERATIONCAT

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW01R - MIRL, REIL, PAPI-4L	NPI-G	
RW08L - HIRL, PAPI-4L	NPI-G	
RW08R - HIRL, REIL, PAPI-4L	NPI-G	
RW19L - MIRL, REIL, PAPI-4L	NPI-G	
RW19R - HIRL, REIL, PAPI-4L	NPI-G	
RW01L - MALSF, HIRL, PAPI-4L	PIR-G	
RW26L - MALSF, HIRL, PAPI-4L	PIR-G	
RW26R - MALS, HIRL, PAPI-4L	PIR-G	

<u>GLIDESLOPE ANGLE</u> 3.24	<u>ELEV RWY THRESHOLD</u> 2088.5	<u>TCH</u> 75.0	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.24	<u>TCH</u> 84.9
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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

<u>CRITICAL LOW</u> 0C	<u>CRITICAL HIGH</u> +54C	<u>ACT</u> 0C	<u>APT ISA</u> +10.68C
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CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2014-2018).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 1063 HIGH TEMP 1298.



"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	0.1 RNP	
34:1		
2150 BUILDING (32-066342) 360611.30N/1150921.62W (9.03)		2153 BUILDING (32-043216) 360611.73N/1150919.53W (8.75)
2151 BUILDING (32-000358) 360612.00N/1150919.64W (6.13)		2150 BUILDING (32-038324) 360611.93N/1150920.13W (5.82)
2147 BUILDING (32-050971) 360611.50N/1150919.28W (3.11)		2147 BUILDING (32-066230) 360611.59N/1150919.31W (2.9)
2147 BUILDING (32-050972) 360611.59N/1150919.28W (2.87)		2147 BUILDING (32-047224) 360611.92N/1150919.91W (2.62)
2147 BUILDING (32-048536) 360611.98N/1150919.31W (1.85)		2140 BUILDING (32-066232) 360609.79N/1150919.74W (1.19)
Final Type	0.2 RNP	
34:1		
2150 BUILDING (32-066342) 360611.30N/1150921.62W (9.03)		2153 BUILDING (32-043216) 360611.73N/1150919.53W (8.75)
2151 BUILDING (32-000358) 360612.00N/1150919.64W (6.13)		2150 BUILDING (32-038324) 360611.93N/1150920.13W (5.82)
2147 BUILDING (32-050971) 360611.50N/1150919.28W (3.11)		2147 BUILDING (32-066230) 360611.59N/1150919.31W (2.9)
2147 BUILDING (32-050972) 360611.59N/1150919.28W (2.87)		2147 BUILDING (32-047224) 360611.92N/1150919.91W (2.62)
2147 BUILDING (32-048536) 360611.98N/1150919.31W (1.85)		2140 BUILDING (32-066232) 360609.79N/1150919.74W (1.19)
Final Type	0.3 RNP	
34:1		
2150 BUILDING (32-066342) 360611.30N/1150921.62W (9.03)		2150 BUILDING (32-066342) 360611.30N/1150921.62W (9.03)
2153 BUILDING (32-043216) 360611.73N/1150919.53W (8.75)		2153 BUILDING (32-043216) 360611.73N/1150919.53W (8.75)
2151 BUILDING (32-000358) 360612.00N/1150919.64W (6.13)		2151 BUILDING (32-000358) 360612.00N/1150919.64W (6.13)
2150 BUILDING (32-038324) 360611.93N/1150920.13W (5.82)		2150 BUILDING (32-038324) 360611.93N/1150920.13W (5.82)
2147 BUILDING (32-050971) 360611.50N/1150919.28W (3.11)		2147 BUILDING (32-050971) 360611.50N/1150919.28W (3.11)
2147 BUILDING (32-066230) 360611.59N/1150919.31W (2.9)		2147 BUILDING (32-066230) 360611.59N/1150919.31W (2.9)
2147 BUILDING (32-050972) 360611.59N/1150919.28W (2.87)		2147 BUILDING (32-050972) 360611.59N/1150919.28W (2.87)
2147 BUILDING (32-047224) 360611.92N/1150919.91W (2.62)		2147 BUILDING (32-047224) 360611.92N/1150919.91W (2.62)
2147 BUILDING (32-048536) 360611.98N/1150919.31W (1.85)		2147 BUILDING (32-048536) 360611.98N/1150919.31W (1.85)
2140 BUILDING (32-066232) 360609.79N/1150919.74W (1.19)		2140 BUILDING (32-066232) 360609.79N/1150919.74W (1.19)

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

<u>PENETRATIONS REMARKS:</u>

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - RNP APPROACH.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

AAO PLANTED IN MISSED LEVEL SURFACE BECAUSE TARGETS WAS TURNING OFF TERRAIN IN THE LEVEL SURFACE AS WELL WHEN IT WAS TURNED OFF IN THE SLOPED SURFACE.

RNP 0.1 MINIMA REQUESTED BY LEAD USER. MANAGEMENT AGREED TO ADDING THIS ADDITIONAL LINE OF MINIMA TO PROCEDURE BECAUSE RNP 0.1 PROVIDES AN OPERATIONAL ADVANTAGE EVEN THOUGH THEY DO NOT GIVE A 50 FT DA REDUCTION OR 1/4 SM VISIBILITY REDUCTION.

WAIVER ON FILE FOR FROP DISTANCE TO DA LESS THAN 0.5 NM.

APPROVAL ON FILE TO USE PPV VALUE OF 119 IN MISSED CLIMB IN HOLD PATTERN INSTEAD OF TARGETS GENERATED PRECIPITOUS TERRAIN VALUE.



<u>AIRPORT ID</u> KLAS	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 19R	<u>AMDT NO.</u> ORIG	<u>CITY</u> LAS VEGAS	<u>STATE</u> NV	<u>AIRPORT ELEVATION</u> 2181	<u>FACILITY</u> RNAV
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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	2.72
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	0
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	2100
DISTANCE FROM	THLD	TO 1500FT POINT	7.66
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	2.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	273.51
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	2600

THRESHOLD
COORDINATES
(IF STR-IN)

360551.77N/1150927.19W

ARP COORDINATES

360448.16N/1150908.05W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 26R DISTANCE 1.53 NM

FAF
COORDINATES

360829.90N/1150623.24W

FIX NAME
COORDINATES

IF KIVEY: 360816.83N/1145846.08W

REMARKS

* RF FLT TRACK RADIUS 1.28 NM CENTERED ON CFFLT (360700.56N/1150702.85W)

QUALITY
25
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

Page 22 of 23

PART E: PREPARED BY

<u>NAME</u> KELLIE R. BARNES	<u>OFFICE</u> AJV-A423	<u>DATE</u> 10/06/2020	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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