

**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> CLT	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 1R	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> CHARLOTTE	<u>STATE</u> NC
<u>AIRPORT ELEVATION</u> 748	<u>TDZE</u> 707	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 7W
				<u>EPOCH YEAR</u> 2000
				<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>
SOLMN	IAF	KRISL		TF	FB	1.00	002.98	3.50	7000
KRISL		HUNEX		TF	FB	1.00	002.98	3.15	6000
HUNEX		DENNE		TF	FB	1.00	002.97	3.15	5000
DENNE		MARJO		TF	FB	1.00	002.97	3.02	4000
MARJO	IF	NIVSE		TF	FB	1.00	002.97	3.10	3000
NIVSE		GLASI	PFAF	TF	FB	1.00	002.96	1.67	2500
GLASI	PFAF	RW01R	MAP	TF	FO	0.30	002.97	5.51	
RW01R	MAP	TOMME		TF	FO	1.00	002.96	14.86	3000

MISSED APPROACH

MAP:
RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 ON TRACK 002.96 TO TOMME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT** SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- PROFILE STARTS AT SOLMN
- FAC:** 002.97 PFAF: GLASI DIST FAF TO MAP: DIST FAF TO THLD:
- MIN ALT:** SOLMN 8000, KRISL 7000, HUNEX 6000, DENNE 5000, MARJO 4000, NIVSE 3000, GLASI 2500
- DIST TO THLD FROM PFAF:** 5.51 **MM:** **IM:** **150 HAT:** **427 HAT:** 1.22 **GS ANT:**
- MIN GP INCPT:** 2500 **GP ALT AT PFAF:** GLASI 2500 **OM:** **MM:** **IM:**
- GP ANGLE:** 3.00 **34:1:** IS CLEAR **20:1:** IS CLEAR **TCH:** 54.3
- MSA FROM:** RW01R 3800



PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS.

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: USE OF FD OR AP REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -7°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 RNP 0.30 VISIBILITY ALL CATS TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

HOLD N, RT, 182.96 INBOUND.

MINIMUMS:

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

ALTERNATE: NA STANDARD

<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>
AUTHORIZATION REQUIRED															
RNP 0.11 DA	1134	4000	427	1134	4000	427	1134	4000	427	1134	4000	427			
RNP 0.30 DA	1180	5000	473	1180	5000	473	1180	5000	473	1180	5000	473			

CHANGES - REASONS

ORIGINAL PROCEDURE.

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** ZTL, CLT TRACON, CLT ATCT, CLT AMGR

Digitally signed by

FLIGHT CHECKED BY

ADAM K STALVEY

CASEY D HILL

Apr 24, 2026

OFFICE

AJF

DATE

04/22/2026

Digitally signed by

DEVELOPED BY

TIMOTHY JOHNSON

CASEY D HILL

Apr 24, 2026

OFFICE

AJV-A431

DATE

01/05/2026

APPROVED BY *Digitally signed by*

CASEY HILL

CASEY D HILL

Apr 24, 2026

OFFICE

AJV-A431

DATE

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>
CLT	RNAV (RNP) Z RWY 1R	ORIG	CHARLOTTE	NC	748	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM SOLMN **TO** KRISL

RNP DISTANCE PAT MAP HAT HMAS

1.00 3.50

<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 (45-000420)	345230.00N/0805547.00W	1003	500	50	5D	1000				AC50 AT4947	7000
TERRAIN	345218.00N/0805612.00W	748 (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 KRISL **TO** HUNEX

RNP DISTANCE PAT MAP HAT HMAS

1.00 3.15

<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 (45-000846)	345338.00N/0805739.00W	1105	250	50	4D	1000				AC50 AT3845	6000
TERRAIN	345236.00N/0805551.00W	761 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT REMARKS:



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INITIAL: STEPDOWN

FROM
HUNEX

TO
DENNE

RNP
1.00

DISTANCE
3.15

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	345912.00N/0805524.00W	896	215	8	4B	1000				AC8 AT3096	5000
TERRAIN	345527.00N/0805736.00W	672 (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
DENNE

TO
MARJO

RNP
1.00

DISTANCE
3.02

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	350133.00N/0805751.00W	916	215	8	4B	1000				AC8 AT2076	4000
TERRAIN	350133.00N/0805751.00W	715 (700)								AS1500	2200

COMPUTATIONS

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

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RNAV

INTERMEDIATE

FROM
MARJO **TO**
NIVSE

RNP 1.00 **DISTANCE** 3.10 **PAT** **MAP** **HAT** **HMAS**

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	350345.00N/0805842.00W	919	215	8	4B	500				AC8 AT1573	3000
TERRAIN	350342.00N/0805842.00W	718 (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
NIVSE **TO**
GLASI

RNP 1.00 **DISTANCE** 1.67 **PAT** **MAP** **HAT** **HMAS**

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TRAMWAY (37-022454)	350621.63N/0805626.76W	954	500	50	5D	500				AC50 AT996	2500
TERRAIN	350454.00N/0805548.00W	688 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:



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CITY
CHARLOTTE

STATE
NC

AIRPORT ELEVATION
748

FACILITY
RNAV

FINAL

FROM
GLASI

TO
RW01R

RNP
0.11

DISTANCE
5.51

PAT

MAP
DA

HAT
427

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>
TREE (37-088998)	351117.39N/0805711.85W	815	20	3	1A					MA316 AC3	1134

COMPUTATIONS

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

SEGMENT REMARKS:

FINAL

FROM
GLASI

TO
RW01R

RNP
0.30

DISTANCE
5.51

PAT

MAP
DA

HAT
473

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>
TREE (37-172049)	351101.01N/0805713.21W	849	20	3	1A					AC3 MA328	1180

COMPUTATIONS

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

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MISSED APPROACH: LEVEL SURFACE

FROM
DA **TO**
TOMME

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
0.11-1.00 888

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
POLE (37-171825)	351130.01N/0805657.27W	731	20	3	1A		ASC				3000
CONTROL_TOWER (37-117734)	351214.28N/0805635.76W	1068	20	3	1A	1000				AC3	2100
TERRAIN	352412.00N/0810033.00W	833 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT REMARKS:

MISSED APPROACH: LEVEL SURFACE

FROM
DA **TO**
TOMME

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
0.30-1.00 868

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE	351127.00N/0805724.00W	842	215	8	4B		ASC			AC8	3000
CONTROL_TOWER (37-117734)	351214.28N/0805635.76W	1068	20	3	1A	1000				AC3	2100
TERRAIN	352412.00N/0810033.00W	833 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT REMARKS:

CIRCLING ALL CATS CAT A CAT B CAT C CAT D CAT E NOT AUTHORIZED



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MSA

CENTER **RADIUS**
RW01R 25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (37-001173)	352049.00N/0811014.00W	316	13.9	2754	500	125	5E	1000			3800

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

CLT TOWER, CLT TRACON

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>WMSCR</u>	<u>ADJUSTMENTS</u>
ASOS	CLT	24	CLT		Y	0

<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>WMSCR</u>	<u>ADJUSTMENTS</u>

WX REMARKS:

NO BACK-UP ALTIMETER SOURCE NEEDED. 24-HR TRACON HAS REDUNDANT ALTIMETER REPORTING EQUIPMENT.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW01L - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW01R - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW18L - C/LINE, HIRL, REIL, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19L - MALSR, C/LINE, HIRL, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19R - ALSF-2, C/LINE, HIRL, TDZ, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW36R - ALSF-2, TDZ, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	692.2	54.3			3.00	72.1

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 -7C	CRITICAL HIGH +54C	ACT -7C	APT ISA +13.52C
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CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2020-2024).
 CRITICAL LOW TEMPERATURE BASED ON ACT.
 DESCENT RATE (FPM): STANDARD TEMP 964 HIGH TEMP 1272.

"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:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
 VDP NOT PUBLISHED: RNP PROCEDURE.
 VEGETATION HEIGHT: 100 FT.
 RNP DESIGN NOT TIED TO STARS DUE TO COMPLEXITY OF AIRSPACE AND ATC OPERATIONS. ATC REQUESTED NO FEEDERS ESTABLISHED AND A DESIGN SIMILAR TO ILS/RNAV PROCEDURES.

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	3.31
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	355.97
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	800
DISTANCE FROM		TO 1500FT POINT	4.88
WIDTH OF		SEGMENT AT 1500FT POINT	1.20
TRUE COURSE OF		SEGMENT CONTAINING 1500FT POINT	355.97
HIGH TERRAIN IN		SEGMENT CONTAINING 1500FT POINT	800

THRESHOLD COORDINATES (IF STR-IN) 351159.97N/0805702.92W
ARP COORDINATES 351247.76N/0805709.06W
RUNWAY APCH END AND DIST FURTHEST FROM ARP RUNWAY 36R DISTANCE 1.17 NM
FAF COORDINATES 350629.89N/0805634.57W
FIX NAME COORDINATES

REMARKS

PART E: PREPARED BY

NAME TIMOTHY JOHNSON	OFFICE AJV-A431	DATE 01/05/2026	TITLE AERONAUTICAL INFORMATION SPECIALIST
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