

**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> CMH	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 10R	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> COLUMBUS	<u>STATE</u> OH
<u>AIRPORT ELEVATION</u> 815	<u>TDZE</u> 809	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 10R	<u>DATED</u> 04/22/2021	<u>MAG VAR</u> 7W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>EPOCH YEAR</u> 2015
				<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>
EPATY	IAF	AVUSE		TF	FB	1.00	101.00	3.50	4000
AVUSE		JOGMA		TF	FB	1.00	101.05	2.14	3300
HANTI	IAF	ZOGIK		TF	FB	1.00	030.00	3.72	4000
ZOGIK		JOGMA		TF	FB	1.00	072.05	2.24	3300
HELDI	IAF	RRNLD		TF	FB	1.00	170.50	3.59	3900
RRNLD		JOGMA		TF	FB	1.00	130.39	2.11	3300
PAYJJ	IF	TOYON		TF	FB	1.00	281.13	9.95	4900
SLATS	IF	TOYON		TF	FB	1.00	281.04	3.77	4900
TOYON		SHUUU		RF	FB	1.00	(2.60 NM RADIUS CW (CFFDW))	8.17	2300
WILGO	IF	CASER		TF	FB	1.00	281.28	3.51	5100
CASER		HESAR		RF	FB	1.00	(2.89 NM RADIUS CCW (CFFDS))	3.75	4000
HESAR		ARNIT		RF	FB	1.00	(2.89 NM RADIUS CCW (CFFDR))	4.07	2700
ARNIT		SHUUU		RF	FB	1.00	(2.89 NM RADIUS CCW (CFFDR))	1.27	2300
JOGMA	IF	SHUUU		TF	FB	1.00	101.08	3.20	2300
SHUUU	PFAF	RW10R	MAP	TF	FO	0.30	101.13	4.52	
RW10R	MAP	1400 MSL		CA			101.13		1400
1400 MSL		BOUTN LOM		DF	FO	1.00			3000

MISSED APPROACH

MAP:
RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1400 THEN CLIMBING RIGHT TURN TO 3000 DIRECT BOUTN LOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1.	PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)									
2.	PROFILE STARTS AT SHUUU														
3.	FAC:	101.13	PFAF:	SHUUU	DIST PFAF TO MAP:	DIST PFAF TO THLD:									
4.	MIN ALT:	SHUUU 2300													
5.	DIST TO THLD FROM OM:	4.52	MM:	IM:	150 HAT:	329 HAT:	0.88	GS ANT:							
6.	MIN GP INCPT:	2300	GP ALT AT PFAF:	SHUUU 2300		OM:		MM:		IM:					
7.	GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR	TCH:	54.0							
8.	MSA FROM:	RW10R 3100													

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS.

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -14°C OR ABOVE 54°C.
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 6000.
CHART SPEED ICON IN PLANVIEW AT HANTI: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT HELDI: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT PAYJJ: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT SLATS: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT WILGO: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 5000 AT HANTI.
CHART MANDATORY 5000 AT HELDI.
CHART MANDATORY 6000 AT SLATS.
CHART MANDATORY 6000 AT WILGO.
CHART MANDATORY 8000 AT PAYJJ.
HOLD SW, LT, 038.00 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 0.17 DA	1138	2600	329	1138	2600	329	1138	2600	329	1138	2600	329			
RNP 0.30 DA	1214	4000	405	1214	4000	405	1214	4000	405	1214	4000	405			



CHANGES - REASONS

1. TERMINAL ROUTES: INITIAL HANTI-ZOGIK COURSE/DISTANCE/ALTITUDE CHANGED FROM 030.55/3.70/3900 TO 030.00/3.72/4000 – PER FPT/ATC REQUEST ZOGIK FIX MOVED 244.21 FT NW.
2. TERMINAL ROUTES: INITIAL ZOGIK-JOGMA COURSE/DISTANCE CHANGED FROM 071.05/2.23 TO 072.05/2.24 – PER FPT/ATC REQUEST ZOGIK FIX MOVED 244.21 FT NW.
3. TERMINAL ROUTES: INITIAL HELDI-RRNLD COURSE/DISTANCE CHANGED FROM 170.20/3.57 TO 170.50/3.59 – PER FPT/ATC REQUEST RRNLD FIX MOVED 150.56 FT SW.
4. TERMINAL ROUTES: INITIAL RRNLD-JOGMA COURSE CHANGED FROM 131.06 TO 130.39 – PER FPT/ATC REQUEST RRNLD FIX MOVED 150.56 FT SW.
5. TERMINAL ROUTES: ADDED INTERMEDIATE SEGMENT PAYJJ-TOYON – PER ATC REQUEST.
6. TERMINAL ROUTES: ADDED SLATS-TOYON – PER ATC REQUEST.
7. TERMINAL ROUTES: DELETED HALUR-TOYON SEGMENT AND ALL ASSOCIATED NOTES – PER ATC REQUEST.
8. CHANGED PBN REQUIREMENTS NOTE FROM 'RNP AR APCH' TO 'RNP AR APCH - GPS' - 8260.19J 8-6-8.B.
9. UPDATED CHART NOTE FROM 'FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -19C OR ABOVE 54C' TO 'FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -14C OR ABOVE 54C' – UPDATED WEATHER STUDY (2019-2023).
10. ADDED 'CHART SPEED ICON IN PLANVIEW AT PAYJJ: MAX 210 KIAS' – PER FPT REQUEST, IAW 8260.19J 4-6-10.G.
11. ADDED ADDITIONAL FLIGHT DATA: 'CHART MANDATORY 8000 AT PAYJJ' AND 'CHART MANDATORY 6000 AT SLATS' – PER FPT REQUEST; IAW 8260.19J 8-6-10.N.
12. DELETED CHART SPEED ICON IN PLANVIEW AT HALUR: MAX 210 KIAS - PER ATC REQUEST.
13. DELETED CHART PLANVIEW NOTE ADJACENT TO HALUR AND WILGO: RF REQUIRED - IAW 8260.19J PARA 8-6-8.

COORDINATED WITH:

A4A

X

ALPA

X

AOPA

X

APA

X

HAI

NBAA

X

OTHER:

ZID, CMH APP CON, CMH ATCT, AMGR

FLIGHT CHECKED BY

SCOTT WIEBE

Digitally signed by

ROBERT G HAMILTON

Nov 06, 2024

OFFICE

AJF

DATE

11/01/2024

DEVELOPED BY

RAFAEL A MARTINEZ

Digitally signed by

RAFAEL A MARTINEZ

Sep 12, 2024

OFFICE

AJV-A433

DATE

06/12/2024

APPROVED BY

BEV L BORDY

Digitally signed by

ROBERT G HAMILTON

Nov 06, 2024

OFFICE

AJV-A430

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>
CMH	RNAV (RNP) Z RWY 10R	3	COLUMBUS	OH	815	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
EPATY

TO
AVUSE

RNP 1.00 DISTANCE 3.50 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 (39-001044)	400117.00N/0830839.00W	1181	500	50	5D	1000				AT1769 AC50	4000
TERRAIN	395848.00N/0831203.00W	951 (1000)								AS1500	2500

COMPUTATIONS

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

SEGMENT REMARKS:

INITIAL

FROM
AVUSE

TO
JOGMA

RNP 1.00 DISTANCE 2.14 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 (39-000074)	400147.00N/0830322.00W	1187	250	50	4D	1000				AT1063 AC50	3300
TERRAIN	395824.00N/0830718.00W	921 (900)								AS1500	2400

COMPUTATIONS

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

SEGMENT REMARKS:

QUALITY
29
CHECKED

INITIAL

FROM

HANTI

TO

ZOGIK

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	3.72										
<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 (39-003547)	395800.00N/0830628.00W	1154	50	20	2C	1000				AT1826 AC20	4000
TERRAIN	395836.00N/0830903.00W	951 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

ZOGIK

TO

JOGMA

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	2.24										
<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 (39-001873)	400050.00N/0830540.00W	1124	500	50	5D	1000				AT1126 AC50	3300
TERRAIN	400036.00N/0830903.00W	931 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

HELDI

TO

RRNLD

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	3.59										
<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 (39-001044)	400117.00N/0830839.00W	1181	500	50	5D	1000				AC50 AT1669	3900
TERRAIN	400348.00N/0830957.00W	961 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

RRNLD

TO

JOGMA

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	2.11										
<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>
TOWER (39-000074)	400147.00N/0830322.00W	1187	250	50	4D	1000				AT1063 AC50	3300
TERRAIN	400009.00N/0830857.00W	928 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

PAYJJ

TO

TOYON

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	9.95				

<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 (39-002086)	395614.00N/0830116.00W	1748	500	50	5D	500				AT2602 AC50	4900
TERRAIN	395545.00N/0824803.00W	869 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

SLATS

TO

TOYON

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.77				

<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>
TOWER (39-002086)	395614.00N/0830116.00W	1748	500	50	5D	500				AC50 AT2602	4900
TERRAIN	395400.00N/0830012.00W	816 (800)								AS1500	2300

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM

TOYON

TO

SHUUU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	8.17				

<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 (39-002086)	395614.00N/0830116.00W	1748	500	50	5D	500				AC50	2300
TERRAIN	395654.00N/0830633.00W	885 (900)								AS1000	1900

COMPUTATIONS

RF SEGMENT

TOYON-SHUUU

ALT

4900

KIAS

210

KTAS

231.89

HAA

4085

VKTW

53.45

TR

2.60

BA

24.53

DTA

0

COURSE CHANGE

0

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

(CFFDW)/8.17

SEGMENT REMARKS:

INTERMEDIATE

FROM

WILGO

TO

CASER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.51				

<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 (39-000313)	400628.00N/0830010.00W	1229	250	50	4D	500				AC50 AT3321	5100
TERRAIN	400630.00N/0825933.00W	948 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM

CASER

TO

HESAR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.75				

<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 (39-000313)	400628.00N/0830010.00W	1229	250	50	4D	500				AC50 AT2221	4000
TERRAIN	400642.00N/0830012.00W	954 (1000)								AS1500	2500

COMPUTATIONS

RF SEGMENT

CASER-HESAR

ALT

5100

KIAS

210

KTAS

232.61

HAA

4285

VKTW

27.53

TR

2.89

BA

18.84

DTA

0

COURSE CHANGE

0

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

(CFFDS)/3.75 NM

SEGMENT REMARKS:

INTERMEDIATE: STEPDOWN

FROM

HESAR

TO

ARNIT

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	4.07				

<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 (39-001230)	395816.00N/0830140.00W	1748	500	50	5D	500				AC50 AT402	2700
TERRAIN	400409.00N/0830515.00W	902 (900)								AS1500	2400

COMPUTATIONS

RF SEGMENT

HESAR-ARNIT

ALT

4000

KIAS

210

KTAS

228.73

HAA

3185

VKTW

36.17

TR

2.89

BA

19.48

DTA

0

COURSE CHANGE

0

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

(CFFDR)/4.07 NM

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

ARNIT

TO

SHUUU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	1.27				

<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>
TOWER (39-001230)	395816.00N/0830140.00W	1748	500	50	5D	500				AC50	2300
TERRAIN	400157.00N/0830021.00W	859 (900)								AS1000	1900

COMPUTATIONS

RF SEGMENT

ARNIT-SHUUU

ALT

2700

KIAS

210

KTAS

224.27

HAA

1885

VKTW

36.25

TR

2.89

BA

18.89

DTA

0

COURSE CHANGE

0

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

(CFFDR)/1.27 NM

SEGMENT REMARKS:

INTERMEDIATE

FROM

JOGMA

TO

SHUUU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.20				

<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>
TOWER (39-001230)	395816.00N/0830140.00W	1748	500	50	5D	500				AC50	2300
TERRAIN	400206.00N/0830421.00W	866 (900)								AS1000	1900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL

FROM

SHUUU

TO

RW10R

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.17	4.52		DA				329				
<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 (39-040944)	395922.08N/0825526.24W	908	20	3	1A		21.45:1			AC3 XP7	1138

COMPUTATIONS

<u>TF TURN FIX</u>	<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
SHUUU-RW10R	2300	165	175.15	1485	34.59	0.00	0	0	0	2839.94	21.55:1	

SEGMENT REMARKS:
XP7=RETAIN CURRENT MINIMUMS.

FINAL

FROM

SHUUU

TO

RW10R

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	4.52		DA				405				
<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 (39-048653)	400014.76N/0825529.71W	928	20	3	1A		21.43:1			AC3 XP13	1214

COMPUTATIONS

<u>TF TURN FIX</u>	<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
SHUUU-RW10R	2300	165	175.15	1485	34.59	0.00	0	0	0	3835.53	21.53:1	

SEGMENT REMARKS:
XP13=RETAIN CURRENT MINIMUMS.

MISSED APPROACH: LEVEL SURFACE

FROM

DA

TO

BOUTN LOM

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
0.17-1.00					977

<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 (39-002086)	395614.00N/0830116.00W	1748	500	50	5D	1000					2800
TERRAIN	395009.00N/0830630.00W	1003 (1000)								AS1500	2500

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

BOUTN LOM

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
0.30-1.00					1053

<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 (39-002086)	395614.00N/0830116.00W	1748	500	50	5D	1000					2800
TERRAIN	395009.00N/0830630.00W	1003 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MSA

CENTER

RW10R

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (39-000604)	400933.02N/0825522.74W	003	09.9	2049	250	50	4D	1000			3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZID ARTCC, CMH APP CON, CMH TOWER

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

WX REMARKS:

BACKUP ALTIMETER NOT ESTABLISHED DUE TO REDUNDANT WEATHER SOURCES AT AIRPORT.

PRIMARY NAVAID	MONITOR POINT	HRS OPERATION	CAT
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APPROACH AND RUNWAY LIGHTING SYSTEM	RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW10L - MALSR, HIRL, PAPI-4L	PIR-G	APPROACH, ROLL OUT
RW10R - MALSR, HIRL, TDZ, C/LINE, PAPI-4L	PIR-G	APPROACH, ROLL OUT
RW28L - MALSR, TDZ, C/LINE, HIRL, PAPI-4L	PIR-G	APPROACH, ROLL OUT
RW28R - MALSR, HIRL, PAPI-4R	PIR-G	APPROACH, ROLL OUT

GLIDESLOPE ANGLE	ELEV RWY THRESHOLD	TCH	ELEV GS ANTENNA	DISTANCE FROM RWY	VGSI ANGLE	TCH
3.00	804.9	54.0			3.00	70.2

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
-14C	+54C	-14C	+13.39C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2019-2023).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 966 HIGH TEMP 1274.

"VISUAL PORTION OF FINAL" PENETRATIONS

AIRPORT ID
CMH

PROCEDURE NAME
RNAV (RNP) Z RWY 10R

AMDT NO.
3

CITY
COLUMBUS

STATE
OH

AIRPORT ELEVATION
815

FACILITY
RNAV

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.

VEGETATION HEIGHT: 100 FT PER FPT.

PROCEDURE DESIGNED PER ATC REQUEST.

MANDATORY ALTITUDES REQUIRED BY ATC.

PFAF COORDINATES PROVIDED BY CEN FPT.

APPROVAL LETTERS - MANDATORY ALTITUDES AT INTERMEDIATE FIXES PAYJJ AT 8000, SLATS AT 6000 AND WILGO AT 6000.

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	3.27
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	094.13
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	900
DISTANCE FROM	THLD	TO 1500FT POINT	5.92
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	094.08
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	900

THRESHOLD COORDINATES (IF STR-IN) 395937.15N/0825433.04W

ARP COORDINATES 395949.01N/0825331.77W

RUNWAY APCH END AND DIST FURTHEST FROM ARP RUNWAY 28L DISTANCE 0.93 NM

FAF COORDINATES 395956.85N/0830025.38W

FIX NAME COORDINATES

REMARKS

1500 FT POINT IN TF SEGMENT JOGMA-SHUUU: 1.40 NM FROM PFAF.

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	3.27
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	094.13
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	900
DISTANCE FROM	THLD	TO 1500FT POINT	7.69
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	*
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	900

THRESHOLD COORDINATES (IF STR-IN) 395937.15N/0825433.04W

ARP COORDINATES 395949.01N/0825331.77W

RUNWAY APCH END AND DIST FURTHEST FROM ARP RUNWAY 28L DISTANCE 0.93 NM

FAF COORDINATES 395956.85N/0830025.38W

FIX NAME COORDINATES

REMARKS

*1500 FT POINT IN RF SEGMENT TOYON-SHUUU: 3.17 NM FROM PFAF; 2.60 NM RADIUS.

IF TOYON: 395445.39N/0830054.12W; CNF CFFDW: 395721.13N/0830039.98W.

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	3.27
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	094.13
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	900
DISTANCE FROM	THLD	TO 1500FT POINT	5.19
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	*
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	900

<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>
CMH	RNAV (RNP) Z RWY 10R	3	COLUMBUS	OH	815	RNAV
THRESHOLD COORDINATES (IF STR-IN)		395937.15N/0825433.04W				
ARP COORDINATES		395949.01N/0825331.77W				
RUNWAY APCH END AND DIST FURTHEST FROM ARP		RUNWAY 28L DISTANCE 0.93 NM				
FAF COORDINATES		395956.85N/0830025.38W				
FIX NAME COORDINATES						

REMARKS

*1500 FT POINT IN RF SEGMENT ARNIT-SHUUU: 0.67 NM FROM PFAF; 2.89 NM RADIUS.
IF ARNIT: 400018.64N/0830159.70W; CNF CFFDR: 400249.94N/0830009.13W

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
RAFAEL A MARTINEZ	AJV-A433	06/12/2024	AERONAUTICAL INFORMATION SPECIALIST