

**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> KCMH	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 28R	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> COLUMBUS	<u>STATE</u> OH		
<u>AIRPORT ELEVATION</u> 815	<u>TDZE</u> 813	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 28R	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 06/22/2017	<u>MAG VAR</u> 7W	<u>EPOCH YEAR</u> 2015
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> 04/22/2021	<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>
FAVUS	IAF	BOLDS		TF	FB	1.00	213.37	3.51	3900
BOLDS		WINAT		TF	FB	1.00	251.35	2.00	3300
YELYU	IAF	ORDIW		TF	FB	1.00	281.41	3.50	4000
ORDIW		WINAT		TF	FB	1.00	281.36	2.14	3300
WERUP	IAF	SINPE		TF	FB	1.00	349.37	3.60	3900
SINPE		WINAT		TF	FB	1.00	311.35	2.00	3300
TEEZE	IF	DWYFE		TF	FB	1.00	100.95	3.45	4900
DWYFE		WEEKZ		RF	FB	1.00	(2.60 NM RADIUS CW (CFFLC))	8.18	2300
JESCE	IF	HUSOR		TF	FB	1.00	100.90	3.16	5100
HUSOR		GIMPS		RF	FB	1.00	(2.89 NM RADIUS CCW (CFFLB))	5.28	3500
GIMPS		WEEKZ	PFAF	RF	FB	1.00	(2.89 NM RADIUS CCW (CFFLB))	3.77	2300
WINAT	IF	WEEKZ	PFAF	TF	FB	1.00	281.33	3.20	2300
WEEKZ	PFAF	RW28R	MAP	TF	FO	0.30	281.28	4.51	
RW28R	MAP	1400 MSL		CA			281.28		
1400 MSL		APE VORTAC		DF	FO	1.00			3000



MISSED APPROACH**MAP:**

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1400 CLIMBING RIGHT TURN TO 3000 TO APE VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:**PROFILE:**

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT WEEKZ					
3. FAC: 281.28	PFAF: WEEKZ	DIST PFAF TO MAP:		DIST PFAF TO THLD:	
4. MIN ALT: WEEKZ 2300					
5. DIST TO THLD FROM OM: 4.51	MM:	IM:	150 HAT:	316 HAT: 0.84	GS ANT:
6. MIN GP INCPT: 2300	GP ALT AT PFAF : WEEKZ 2300	OM:	MM:	IM:	
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 50.2		
8. MSA FROM: RW28R 3100					

PBN REQUIREMENTS NOTE:

RNP AR APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -19°C OR ABOVE 54°C.

CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.

CHART PLANVIEW NOTE ADJACENT TO TEEZE: RF REQUIRED.

CHART PLANVIEW NOTE ADJACENT TO JESCE: RF REQUIRED.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.16 ALL CATS VISIBILITY TO RVR 4500 AND INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 5500.

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.

CHART SPEED ICON IN PLANVIEW AT TEEZE: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT JESCE: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT FAVUS: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT WERUP: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 5000 AT WERUP.

CHART MANDATORY 5000 AT FAVUS.

CHART MANDATORY 6000 AT TEEZE.

CHART MANDATORY 6000 AT JESCE.

HOLD NE, RT, 235.00 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 0.16 DA	1129	2400	316	1129	2400	316	1129	2400	316	1129	2400	316			
RNP 0.30 DA	1185	3500	372	1185	3500	372	1185	3500	372	1185	3500	372			



CHANGES - REASONS

1. RNP 0.16 DA DECREASED FROM 1167/354 TO 1129/316; VISIBILITY DECREASED FROM RVR 5000 TO RVR 2400. - NEW OBSTACLE EVALUATION; NEW INOP VISIBILITY TABLE USED.
2. RNP 0.30 DA DECREASED FROM 1224/411 TO 1185/372; VISIBILITY DECREASED FROM RVR 5000 TO RVR 3500. - NEW OBSTACLE EVALUATION; NEW INOP VISIBILITY TABLE USED.
3. TERMINAL ROUTES: INITIAL SEGMENTS APE VORTAC-CAGTI AND BREMN-CAGTI REMOVED; ADDED IAF TRANSITIONS FROM FAVUS, BOLDS, YELU, ORDIW, WERUP, AND SINPE. - PER ATC REQUEST.
4. TERMINAL ROUTES: INTERMEDIATE CAGTI-ATPE REMOVED; INTERMEDIATES TEEZE-DWYFE, DWYFE-WEEKZ, JESCE-HUSOR, HUSOR-GIMPS, GIMPS-WEEKZ, AND WINAT-WEEKZ ADDED. - PER FPT REQUEST.
5. TERMINAL ROUTES: FINAL ATPE TO RW28R UPDATED TO WEEKZ TO RW28R; COURSE/DISTANCE UPDATED FROM 281.29/5.14 TO 281.28/4.51. - PFAF MOVED PER FPT REQUEST.
6. TERMINAL ROUTES: MISSED APPROACH CA LEG ADDED; TF LEG, RW28R TO ALEME CHANGED TO DF LEG, 1400 MSL TO APE VORTAC. - MISSED APPROACH INSTRUCTIONS UPDATED PER FPT REQUEST.
7. MISSED APPROACH INSTRUCTIONS UPDATED FROM "CLIMB TO 2800 ON TRACK 281.22 TO ALEME AND HOLD" TO "CLIMB TO 1400 THEN CLIMBING RIGHT TURN TO 3000 DIRECT APE VORTAC AND HOLD." - PER FPT REQUEST.
8. PROFILE LINE 2: UPDATED PROFILE STARTS AT CAGTI TO PROFILE STARTS AT WEEKZ. - PFAF UPDATED.
9. PROFILE LINE 3: FAC UPDATED FROM 281.29 TO 281.28; PFAF UPDATED FROM ATPE TO WEEKZ. - PFAF UPDATED AND MOVED.
10. PROFILE LINE 4: UPDATED MIN ALT CAGTI 3000, ATPE 2500 TO WEEKZ 2300. - MULTIPLE IF LOCATIONS, PFAF UPDATED.
11. PROFILE LINE 5: UPDATED DIST TO THLD FROM OM: 5.14, 354 HAT: 0.95 TO DIST TO THLD FROM OM: 4.51, 316 HAT: 0.84. - PFAF UPDATED AND MOVED, LOWEST DA UPDATED AFTER NEW OBSTACLE EVALUATION.
12. PROFILE LINE 6: MIN GP INCPT: 2500 UPDATED TO 2300; UPDATED GP ALT AT PFAF: ATPE 2500 TO WEEKZ: 2300. - IF/IAF AND FAF UPDATED AND MOVED.
13. PROFILE LINE 7: 34:1 IS NOT CLEAR UPDATED TO 34:1 IS CLEAR; 20:1 IS CLEAR ADDED, TCH 50.2# UPDATED TO 50.2. - NO 34:1/20:1 PENETRATION EXIST; # REMOVED, ADDITIONAL FLIGHT DATA NOTE NO LONGER REQUIRED.
14. PBN REQUIREMENTS NOTE: RNP AR APCH ADDED. - IAW 8260.58A TABLE 1-2-1.
15. REMOVED CHART NOTE: GPS REQUIRED. - NO LONGER A DOCUMENTATION REQUIREMENT.
16. UPDATED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -18C (0F) OR ABOVE 54C (130F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19C OR ABOVE 54C. - UPDATED WEATHER STUDY (2015-2019) USED FOR SLOPE CALCULATIONS AND TO DETERMINE UPPER/LOWER TEMPERATURE LIMITS FOR UNCOMPENSATED BARO-VNAV SYSTEMS; FAHRENHEIT REMOVED IAW 8260.19H.
17. ADDED CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS. - IAW 8260.19I 8-6-7 B(3)B.
18. ADDED CHART PLANVIEW NOTE ADJACENT TO TEEZE: RF REQUIRED. - IAW 8260.19I 4-5-3 A.
19. ADDED CHART PLANVIEW NOTE ADJACENT TO JESCE: RF REQUIRED. - IAW 8260.19I 4-5-3 A.
20. REMOVED CHART NOTE: PROCEDURE NA FOR ARRIVAL ON APE VORTAC AIRWAY RADIALS 117 CW 271. - INITIAL FROM APE VORTAC REMOVED.
21. UPDATED CHART NOTE: FROM "FOR INOPERATIVE ALS, INCREASE RNP 0.16 ALL CATS VISIBILITY TO RVR 6000 AND INCREASE RNP 0.30 ALL CATS VISIBILITY TO 1 3/8 SM" TO "FOR INOPERATIVE ALS, INCREASE RNP 0.16 ALL CATS VISIBILITY TO RVR 4500 AND INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 5500." - ALL LINES OF MINIMA UPDATED PER NEW TARGETS EVALUATION.
22. ADDED "CHART SPEED ICON IN PLANVIEW AT TEEZE: MAX 210 KIAS," ". . . AT WERUP: MAX 210 KIAS," ". . . AT FAVUS: 210 KIAS," AND ". . . AT JESCE: 210 KIAS". - PER FPT REQUEST, IAW 8260.19I 4-6-10 G.
23. ADDED ADDITIONAL FLIGHT DATA: CHART MANDATORY 5000 AT WERUP, CHART MANDATORY 5000 AT FAVUS, CHART MANDATORY 6000 AT TEEZE, AND CHART MANDATORY 6000 AT JESCE. - PER FPT REQUEST; IAW 8260.19I 8-6-10 N.
24. REMOVED ADDITIONAL FLIGHT DATA: "ROUTE TYPE: A, H," "ROUTE TYPE QUALIFIER 1: F" AND "ROUTE TYPE QUALIFIER 2: S." - NO LONGER A DOCUMENTATION REQUIREMENT.
25. REMOVED ADDITIONAL FLIGHT DATA: #TCH 862.4 MSL (DO NOT CHART). - NO LONGER REQUIRED.
26. REMOVED CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS. - NOT REQUIRED FOR RNP PROCEDURES.
27. UPDATED ADDITIONAL FLIGHT DATA: "HOLD W, RT, 101.12 INBOUND: TO "HOLD NE, RT, 235.00 INBOUND." - MISSED APPROACH UPDATED PER FPT.

3/17/2021 THIS IS AN UPDATED COPY OF THE FORM APPROVED ON 2/1/2021

1. CHANGED PUBLICATION FROM ROUTINE TO HARD DATE (4/22/2021).

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZID, CMH APP CON, CMH ATCT, AMGR

FLIGHT CHECKED BY

PENDING

Digitally signed by

JON DENTON

OFFICE

DATE

Mar 17, 2021

DEVELOPED BY

JON DENTON (BARBARA GORMAN)

Digitally signed by

JON DENTON

OFFICE

AJV-A432

DATE

12/08/2020

APPROVED BY

LONNIE EVERHART

Digitally signed by

JON DENTON

OFFICE

AJV-A430

DATE

TITLE
MANAGER

Mar 17, 2021



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

<u>AIRPORT ID</u> KCMH	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 28R	<u>AMDT NO.</u> 2	<u>CITY</u> COLUMBUS	<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 815	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
FAVUS

TO
BOLDS

RNP
1.00

DISTANCE
3.51

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 (39-002052)	400443.23N/0824013.23W	1538	500	50	5D	1000				AC50 AT1312	3900
TERRAIN	400339.00N/0824054.00W	1250 (1300)								AS1500	2800

COMPUTATIONS

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

SEGMENT REMARKS:

INITIAL

FROM
BOLDS

TO
WINAT

RNP
1.00

DISTANCE
2.00

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>
AAO	400224.00N/0824112.00W	1398	164	98	4E	1000				AC98 AT804	3300
TERRAIN	395833.00N/0824227.00W	1085 (1100)								AS1500	2600

COMPUTATIONS

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

SEGMENT REMARKS:



INITIAL

FROM

YELYU

TO

ORDIW

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
1.00	3.50											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	400112.00N/0823909.00W		1414	164	98	4E	1000				AC98 AT1488	4000
TERRAIN	400115.00N/0823918.00W		1213 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

ORDIW

TO

WINAT

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
1.00	2.14											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	400112.00N/0823909.00W		1414	164	98	4E	1000				AC98 AT788	3300
TERRAIN	400121.00N/0823948.00W		1181 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL

FROM

WERUP

TO

SINPE

<u>RNP</u> 1.00	<u>DISTANCE</u> 3.60	<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>
AAO	395545.00N/0823836.00W		1316	164	98	4E	1000				AC98 AT1486	3900
TERRAIN	395545.00N/0823836.00W		1115 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

SINPE

TO

WINAT

<u>RNP</u> 1.00	<u>DISTANCE</u> 2.00	<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>
AAO	395903.00N/0824245.00W		1286	164	98	4E	1000				AC98 AT916	3300
TERRAIN	395851.00N/0824300.00W		1085 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM
TEEZE

TO
DWYFE

<u>RNP</u> 1.00	<u>DISTANCE</u> 3.45	<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>
AAO	400609.00N/0824500.00W		1352	164	98	4E	500				AC98 AT2950	4900
TERRAIN	400636.00N/0824633.00W		1115 (1100)								AS1500	2600

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

SEGMENT REMARKS:

INTERMEDIATE

FROM
DWYFE

TO
WEEKZ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
1.00	8.18										
<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 (39-001219)	400334.00N/0824213.00W	1548	500	50	5D	500				AC50	2100
TERRAIN	400339.00N/0824054.00W	1250 (1300)								AS1000	2300

COMPUTATIONS												
RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
DWYFE-WEEKZ	4900	210	231.89	4085	45.54	2.60	23.33	0	0			(CFFLC)/8.18 NM

SEGMENT REMARKS:



INTERMEDIATE

FROM
JESCE

TO
HUSOR

<u>RNP</u> 1.00		<u>DISTANCE</u> 3.16	<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>
AAO		395542.00N/0824600.00W	1122	164	98	4E	500				AC98 AT3380	5100
TERRAIN		395557.00N/0824836.00W	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
HUSOR

TO
GIMPS

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
1.00	5.28										
<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 (39-002759)	395700.00N/0824329.00W	1360	500	50	5D	500				AC50 AT1590	3500
TERRAIN	395733.00N/0824230.00W	1085 (1100)								AS1500	2600

COMPUTATIONS													
RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE	
HUSOR-GIMPS	5100	210	232.61	4285	53.37	2.89	22.43	0	0			(CFFLB)/5.28 NM	

SEGMENT REMARKS:



INTERMEDIATE

FROM
GIMPS

TO
WEEKZ

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
1.00	3.77											
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
AAO	400009.00N/0824451.00W	1313	164	98	4E	500				AC98 AT389	2300	
TERRAIN	400009.00N/0824451.00W	1112 (1100)								AS1000	2100	

RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
GIMPS-WEEKZ	3500	210	227	2685	39.31	2.89	19.69	0	0			(CFFLB)/3.77 NM

SEGMENT REMARKS:

INTERMEDIATE

FROM
WINAT

TO
WEEKZ

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
1.00	3.20											
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
AAO	400009.00N/0824451.00W	1313	164	98	4E	500				AC98 AT389	2300	
TERRAIN	400009.00N/0824451.00W	1112 (1100)								AS1000	2100	

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

SEGMENT REMARKS:



FINAL

FROM

WEEKZ

TO

RW28R

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							
0.16	4.51		RW28R	316								
<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 (39-040835)	395945.87N/0825200.48W		907	20	3	1A		21.99:1			AC3	1129

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>
	2300	165	175.15	1485	45.54	0.00	0	0	0	2927.2	21.99:1	

SEGMENT REMARKS:

FINAL

FROM

WEEKZ

TO

RW28R

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							
0.30	4.51		RW28R	372								
<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 (39-041724)	400027.58N/0825138.55W		907	20	3	1A		21.97:1			AC3	1185

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>
	2300	165	175.15	1485	45.54	0.00	0	0	0	4006.32	21.97:1	

SEGMENT REMARKS:



MISSED APPROACH

FROM
RW28R

TO
1400 MSL

RNP 0.30-1.00	DISTANCE	PAT	MAP	HAT			HMAS 1024			CGTA	ADJUSTMENTS	MIN ALT
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				1400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
1400 MSL

TO
APE VORTAC

RNP 0.30-1.00	DISTANCE	PAT	MAP	HAT			HMAS 1024			CGTA	ADJUSTMENTS	MIN ALT
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH

FROM

RW28R

TO

1400 MSL

<u>RNP</u> 0.16-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 968				
<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				1400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM

1400 MSL

TO

APE VORTAC

<u>RNP</u> 0.16-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 968				
<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

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
APE VORTAC

RNP 0.30-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC					3000
TOWER (39-000448)	400920.44N/0823650.45W		1568	20	50	1D	1000				AC50	2700
TERRAIN	400903.00N/0823527.00W		1351 (1400)								AS1500	2900

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
APE VORTAC

RNP 0.16-1.00	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC					3000
TOWER (39-000448)	400920.44N/0823650.45W		1568	20	50	1D	1000				AC50	2700
TERRAIN	400903.00N/0823527.00W		1351 (1400)								AS1500	2900

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



MSA

CENTER

RW28R

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	355	09.7	2049	250	50	4D	1000		AC50	3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PROCEDURE DESIGNED PER ATC REQUEST.
MANDATORY ALTITUDES REQUIRED BY ATC.
PFAF COORDINATES PROVIDED BY CEN FPT.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZID ARTCC, CMH APP CON, CMH TOWER

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KCMH	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KCMH	<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:
ALTERNATE ALTIMETER SOURCE NOT USED DUE TO REDUNDANT SOURCES.

<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>
RW10L - MALSR, HIRL, PAPI-4L		PIR-G	APPROACH, ROLL OUT
RW10R - TDZ, MALSR, HIRL, C/LINE, PAPI-4L		PIR-G	APPROACH, ROLL OUT
RW28L - TDZ, MALSR, HIRL, C/LINE, PAPI-4L		PIR-G	APPROACH, ROLL OUT
RW28R - MALSR, HIRL, PAPI-4R		PIR-G	APPROACH, ROLL OUT

<u>GLIDESLOPE ANGLE</u> 3.00	<u>ELEV RWY THRESHOLD</u> 812.3	<u>TCH</u> 50.2	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 50.2
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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> -19C	<u>CRITICAL HIGH</u> +54C	<u>ACT</u> -19C	<u>APT ISA</u> +13.39C
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CRITICAL TEMPERATURE REMARKS:
AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2015-2019).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 966 HIGH TEMP 1274.

"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.
VEGETATION HEIGHT: 100 FT PER FPT.



AIRPORT ID KCMH	PROCEDURE NAME RNAV (RNP) Z RWY 28R	AMDT NO. 2	CITY COLUMBUS	STATE OH	AIRPORT ELEVATION 815	FACILITY 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	3.57
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	274.28
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1000
DISTANCE FROM	THLD	TO 1500FT POINT	6.31
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	274.33
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1100

THRESHOLD
COORDINATES
(IF STR-IN)

400005.73N/0825244.97W

ARP COORDINATES

395949.01N/0825331.77W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 28L DISTANCE 0.93 NM

FAF
COORDINATES

395945.64N/0824653.49W

FIX NAME
COORDINATES

REMARKS

1500 FT POINT IN TF SEGMENT WINAT-WEEKZ: 1.80 NM FROM PFAF

QUALITY
19
CHECKED

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

Electronic Version

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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	3.57
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	274.28
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1000
DISTANCE FROM	THLD	TO 1500FT POINT	6.48
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	1100

THRESHOLD
COORDINATES
(IF STR-IN)

400005.73N/0825244.97W

ARP COORDINATES

395949.01N/0825331.77W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 28L DISTANCE 0.93 NM

FAF
COORDINATES

395945.64N/0824653.49W

FIX NAME
COORDINATES

REMARKS

*1500 FT POINT IN RF SEGMENT GIMPS-WEEKZ: 1.97 NM FROM PFAF; 2.89 NM RADIUS.
IF GIMPS: 395725.47N/0824329.09W; CNF CFFLB: 395652.74N/0824710.32W.



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	3.57
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	274.28
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1000
DISTANCE FROM	THLD	TO 1500FT POINT	8.49
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	1300

THRESHOLD COORDINATES (IF STR-IN)

400005.73N/0825244.97W

ARP COORDINATES

395949.01N/0825331.77W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 28L DISTANCE 0.93 NM

FAF COORDINATES

395945.64N/0824653.49W

FIX NAME COORDINATES

REMARKS

*1500 FT POINT IN RF SEGMENT DWYFE-WEEKZ: 3.98 NM FROM PFAF; 2.60 NM RADIUS.
IF DWYFE: 400457.06N/0824624.15W; CNF CFFLC: 400221.32N/0824638.33W.



PART E: PREPARED BY

<u>NAME</u> JON DENTON (BARBARA GORMAN)	<u>OFFICE</u> AJV-A432	<u>DATE</u> 12/08/2020	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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