

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
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Arrival Name GRNCH (RNAV)	Number FIVE	STAR Computer Code GRNCH.GRNCH5	Superseded Number FOUR	Dated 11/03/2022	Effective Date 5 Oct 2023				
TRANSITION ROUTES:									
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
COAXE	COAXE.GRNCH5	COAXE	COAXE						AT/BELOW FL260
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000
			GRNCH	157.07	16.27	11000	2500		
DEEDA	DEEDA.GRNCH5	DEEDA	DEEDA						
			SEEJY	115.59	50.00	FL180	2500		
			ISSZZ	116.07	67.91	FL180	2500		
			ELITE	148.01	52.38	FL180	2500		
			MAYYR	176.23	17.20	FL180	2500		AT/ABOVE FL240
			COAXE	176.13	26.62	16000	2500		AT/BELOW FL260
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000
			GRNCH	157.07	16.27	11000	2500		
DEFUN	DEFUN.GRNCH5	DEFUN	DEFUN						
			LEEVP	093.59	112.68	FL180	2500		
			ISSZZ	094.70	56.50	FL180	2500		
			ELITE	148.01	52.38	FL180	2500		
			MAYYR	176.23	17.20	FL180	2500		AT/ABOVE FL240
			COAXE	176.13	26.62	16000	2500		AT/BELOW FL260
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000
			GRNCH	157.07	16.27	11000	2500		
JAMIZ	JAMIZ.GRNCH5	JAMIZ	JAMIZ						
			MAYYR	113.14	62.40	FL180	2500		AT/ABOVE FL240
			COAXE	176.13	26.62	16000	2500		AT/BELOW FL260
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000
			GRNCH	157.07	16.27	11000	2500		
WHYYT	WHYYT.GRNCH5	WHYYT	WHYYT						
			ADLYN	193.27	25.00	FL180	2500		
			ELITE	176.10	24.16	FL180	2500		

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			MAYYR	176.23	17.20	FL180	2500		AT/ABOVE FL240	
			COAXE	176.13	26.62	16000	2500		AT/BELOW FL260	
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000	
			GRNCH	157.07	16.27	11000	2500			
ZJAYX	ZJAYX.GRNCH5	ZJAYX	ZJAYX							
			ISSZZ	160.34	49.29	FL180	2500			
			ELITE	148.01	52.38	FL180	2500			
			MAYYR	176.23	17.20	FL180	2500		AT/ABOVE FL240	
			COAXE	176.13	26.62	16000	2500		AT/BELOW FL260	
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000	
			GRNCH	157.07	16.27	11000	2500			

ARRIVAL ROUTE DESCRIPTION:

FROM GRNCH ON TRACK 142.66/7.22 TO CROSS BUGGZ BETWEEN 11000 AND 16000 AND AT 280 KIAS, THEN ON TRACK 133.43/10.00 TO BLAYK.

LANDING RWY 17L/R, 18L/R: FROM BLAYK ON TRACK 133.50/8.68 TO CROSS BUNIE AT 7000 AND AT 230 KIAS, THEN ON TRACK 128.62/6.00 TO CROSS YAGGO AT 6000 AND AT 210 KIAS, THEN ON HEADING 106.75. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 35L/R, 36L/R: FROM BLAYK ON TRACK 133.50/8.14 TO CROSS WHOVL BETWEEN 9000 AND 14000 AND AT 250 KIAS, THEN ON TRACK 158.11/12.96 TO HARAM, THEN ON TRACK 180.63/2.06 TO CROSS DORII AT OR ABOVE 8000 AND AT 220 KIAS, THEN ON TRACK 186.00/13.35 TO CROSS BRICE AT 5000 AND AT 210 KIAS, THEN ON TRACK 186.00. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PBN REQUIREMENT NOTES:

RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED

PROCEDURAL DATA NOTES:

NOTE: JET AIRCRAFT ONLY

NOTE: LANDING SOUTH USE RUNWAY 18R TRANSITION, LANDING NORTH USE RUNWAY 36L TRANSITION. EXPECT RUNWAY ASSIGNMENT FROM ORL APPROACH PRIOR TO GRNCH.

NOTE: DO NOT FILE JAMIZ OR COAXE TRANSITION - TO BE ASSIGNED BY ATC.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT COAXE: HOLD N, LT, 176.13 INBOUND, 10 NM LEGS.

CHART HOLDING AT ELITE: HOLD NW, LT, 140.71 INBOUND, 10 NM LEGS.

CHART HOLDING AT GRNCH: HOLD NW, RT, 157.07 INBOUND, 10 NM LEGS.

CHART HOLDING AT JAMIZ: HOLD SE, RT, 325.00 INBOUND, 10 NM LEGS.

CHART HOLDING AT LEEVP: HOLD W, RT, 094.70 INBOUND, 10 NM LEGS.

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GRNCH (RNAV)	FIVE	GRNCH.GRNCH5	FOUR	11/03/2022	5 Oct 2023

CHART HOLDING AT SEEJY: HOLD NW, RT, 116.07 INBOUND, 10 NM LEGS.

CHART HOLDING AT WHYTY: HOLD N, RT, 193.27 INBOUND, 10 NM LEGS.

CHART HAMMY, AMEBE AS STAND-ALONE POINTS.

COMMUNICATIONS:

CHART: ORLANDO APPROACH CONTROL.

AIRPORTS SERVED:

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
KMCO	ORLANDO	FL

LOST COMMUNICATIONS PREFERENCES:**REMARKS:**

ENVIRONMENTAL REVIEW UNDER ORDER 1050.1 (LATEST EDITION) AND THE NOISE SCREENING HAVE BEEN ACCOMPLISHED.

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)

MAG VAR = KMCO 06W/2015

CHART AT YAGGO TERMINUS: KMCO LDG RWY 17L/R, 18L/R

CHART AT BRICE TERMINUS: KMCO LDG RWY 35L/R, 36L/R

FLIGHT INSPECTED BY:

JEFFREY ECKMAN

ORGANIZATION:

FPO

DATE:

07/07/2023

Flight Inspected Signature:

Digitally signed by
DAVID TEFFETELLER

Jul 12, 2023

DEVELOPED BY:

JOEY TINSLEY, ESA PBN CO-LEAD

NATCA

04/03/2023

Developed By Signature:

Digitally signed by
DAVID TEFFETELLER

Jul 12, 2023

APPROVED BY:

JOHNNIE BAKER

AJV-A430

Approved By Signature:

Digitally signed by
DAVID TEFFETELLER

Jul 12, 2023

CHANGES:

1. AMENDED HOLDING PATTERN AT WHYTT FROM LEFTHAND TURNS TO RIGHTHAND TURNS.

REASONS:

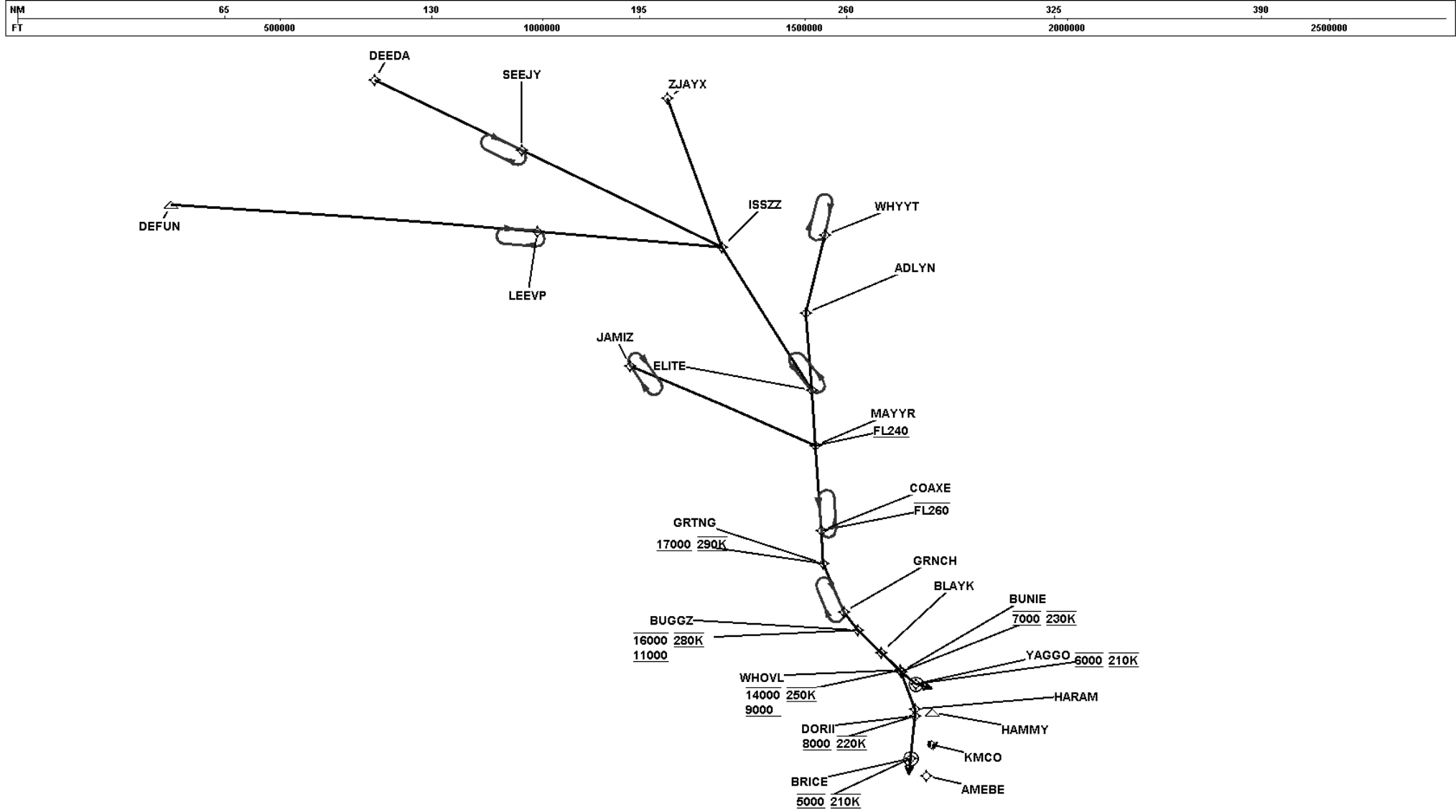
2. ATC REQUEST AND WAS INCORRECT FROM PREVIOUS AMENDMENT.

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GRNCH (RNAV)	FIVE	GRNCH.GRNCH5	FOUR	11/03/2022	5 Oct 2023

Graphic Depiction 1

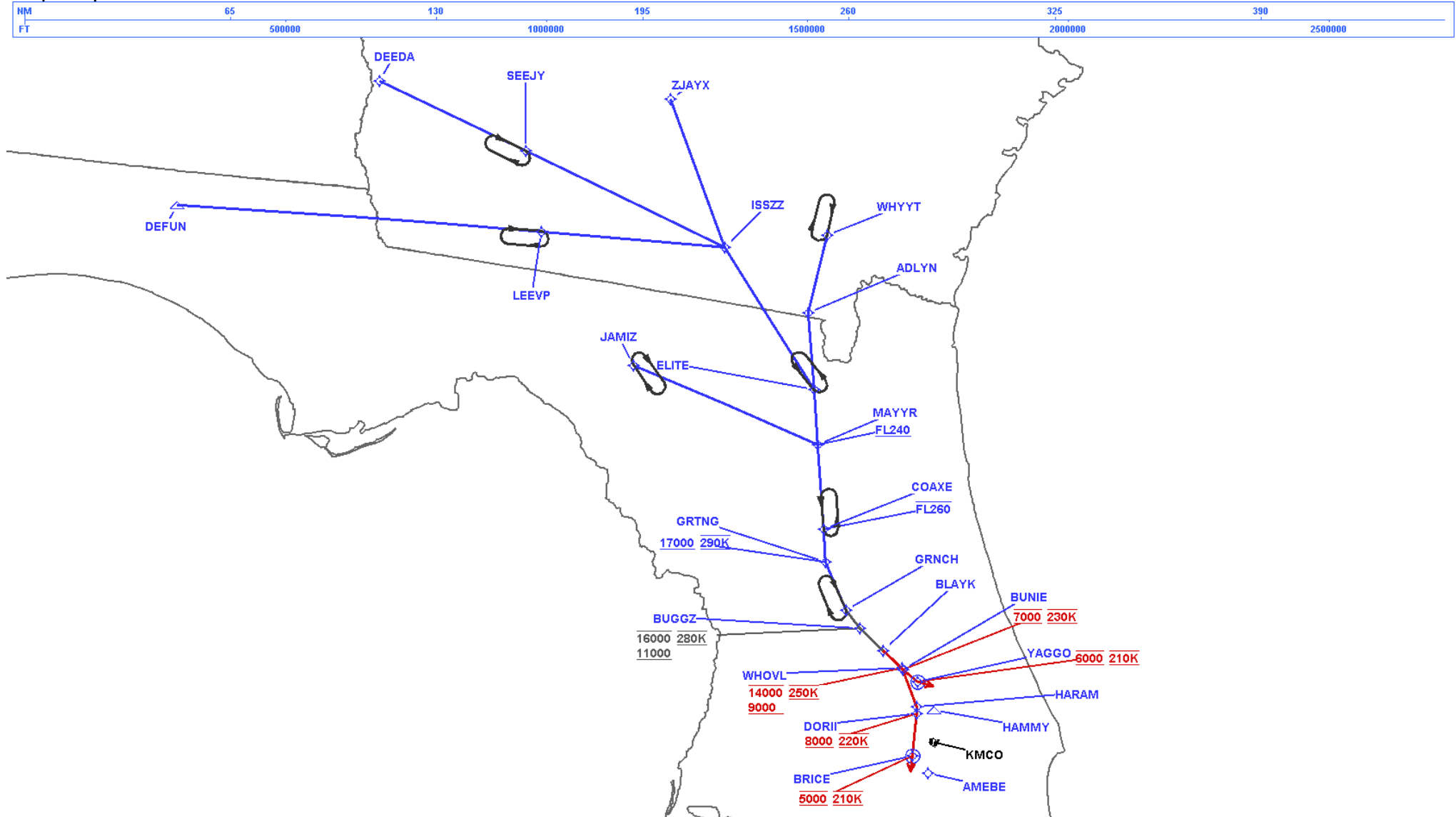


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GRNCH (RNAV)	FIVE	GRNCH.GRNCH5	FOUR	11/03/2022	5 Oct 2023

Graphic Depiction 2



**FEDERAL AVIATION ADMINISTRATION
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STAR (DATA RECORD)**

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<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
En Route Transition									
COAXE	292845.80N / 0820537.25W	Y		IF			AT/BELOW FL260		COAXE.GRNCH5
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
En Route Transition									
DEEDA	313413.55N / 0850031.10W	Y		IF					DEEDA.GRNCH5
SEEJY	311713.54N / 0840532.72W	Y	FB	TF	109.59	50.00			
ISSZZ	305330.71N / 0825124.69W	Y	FB	TF	110.07	67.91			
ELITE	301202.60N / 0821412.51W	Y	FB	TF	142.01	52.38			
MAYYR	295503.10N / 0821050.90W	Y	FB	TF	170.23	17.20	AT/ABOVE FL240		
COAXE	292845.80N / 0820537.25W	Y	FB	TF	170.13	26.62	AT/BELOW FL260		
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
En Route Transition									
DEFUN	304851.27N / 0860753.09W	Y		IF					DEFUN.GRNCH5
LEEVF	305230.12N / 0835703.46W	Y	FB	TF	087.59	112.68			
ISSZZ	305330.71N / 0825124.69W	Y	FB	TF	088.70	56.50			
ELITE	301202.60N / 0821412.51W	Y	FB	TF	142.01	52.38			
MAYYR	295503.10N / 0821050.90W	Y	FB	TF	170.23	17.20	AT/ABOVE FL240		
COAXE	292845.80N / 0820537.25W	Y	FB	TF	170.13	26.62	AT/BELOW FL260		
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
En Route Transition									
JAMIZ	301346.91N / 0831927.78W	Y		IF					JAMIZ.GRNCH5
MAYYR	295503.10N / 0821050.90W	Y	FB	TF	107.14	62.40	AT/ABOVE FL240		
COAXE	292845.80N / 0820537.25W	Y	FB	TF	170.13	26.62	AT/BELOW FL260		

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
En Route Transition									
WHYYT	310045.37N / 0821520.17W	Y		IF					WHYYT.GRNCH5
ADLYN	303553.97N / 0821900.11W	Y	FB	TF	187.27	25.00			
ELITE	301202.60N / 0821412.51W	Y	FB	TF	170.10	24.16			
MAYYR	295503.10N / 0821050.90W	Y	FB	TF	170.23	17.20	AT/ABOVE FL240		
COAXE	292845.80N / 0820537.25W	Y	FB	TF	170.13	26.62	AT/BELOW FL260		
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
En Route Transition									
ZJAYX	313804.62N / 0831612.79W	Y		IF					ZJAYX.GRNCH5
ISSZZ	305330.71N / 0825124.69W	Y	FB	TF	154.34	49.29			
ELITE	301202.60N / 0821412.51W	Y	FB	TF	142.01	52.38			
MAYYR	295503.10N / 0821050.90W	Y	FB	TF	170.23	17.20	AT/ABOVE FL240		
COAXE	292845.80N / 0820537.25W	Y	FB	TF	170.13	26.62	AT/BELOW FL260		
GRTNG	291825.97N / 0820334.87W	Y	FB	TF	170.18	10.46	AT/ABOVE 17000	AT 290K	
GRNCH	290409.00N / 0815436.00W	Y	FB	TF	151.07	16.27			
Common Route									
GRNCH	290409.00N / 0815436.00W	Y		IF					GRNCH.GRNCH5
BUGGZ	285853.00N / 0814857.00W	Y	FB	TF	136.66	07.22	11000B16000	AT 280K	
BLAYK	285247.10N / 0813954.25W	Y	FB	TF	127.43	10.00			
Runway Transition									
BLAYK	285247.10N / 0813954.25W	Y		IF					
BUNIE	284729.00N / 0813204.00W	Y	FB	TF	127.50	08.68	AT 7000	AT 230K	

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YAGGO	284414.28N / 0812619.08W	Y	FO	TF	122.62	06.00	AT 6000	AT 210K	
KMCO:RWY 18L 18R 17L 17R				VM	100.75				
Runway Transition									
BLAYK	285247.10N / 0813954.25W	Y		IF					
WHOVL	284748.91N / 0813233.40W	Y	FB	TF	127.50	08.14	9000B14000	AT 250K	
HARAM	283619.44N / 0812540.10W	Y	FB	TF	152.11	12.96			
DORII	283416.14N / 0812526.98W	Y	FB	TF	174.63	02.06	AT/ABOVE 8000	AT 220K	
BRICE	282053.00N / 0812527.00W	Y	FO	TF	180.00	13.35	AT 5000	AT 210K	
KMCO:RWY 36L 36R 35L 35R				FM	180.00				