

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.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date					
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021						
TRANSITION ROUTES:										
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes	
COAXE	COAXE.GRNCH3	COAXE	COAXE						AT/BELOW FL260	
			GRTNG	176.18	10.46	16000	2500		AT/ABOVE 17000	
			GRNCH	157.07	16.27	11000	2500			
DEEDA	DEEDA.GRNCH3	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.GRNCH3	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	
JAMIZ	JAMIZ.GRNCH3	JAMIZ	GRNCH	157.07	16.27	11000	2500			
			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	
WHYYT	WHYYT.GRNCH3	WHYYT	GRNCH	157.07	16.27	11000	2500			
			WHYYT							
			ADLYN	193.27	25.00	FL180	2500			
			ELITE	176.10	24.16	FL180	2500			

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.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name GRNCH (RNAV)			Number THREE	STAR Computer Code GRNCH.GRNCH3		Superseded Number TWO			Dated 12/02/2021	Effective Date
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes	
			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.GRNCH3	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: LANDING SOUTH USE RUNWAY 18R TRANSITION, LANDING NORTH USE RUNWAY 36L TRANSITION. EXPECT RUNWAY ASSIGNMENT FROM ORL APPROACH PRIOR TO GRNCH.

NOTE: JAMIZ and COAXE Transitions, ATC Assigned only.

NOTE: JET AIRCRAFT ONLY.

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.

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.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021	

CHART HOLDING AT LEEVP: HOLD W, RT, 094.70 INBOUND, 10 NM LEGS.
CHART HOLDING AT SEEJY: HOLD NW, RT, 116.07 INBOUND, 10 NM LEGS.
CHART HOLDING AT WHYTY: HOLD N, LT, 193.27 INBOUND, 10 NM LEGS.

COMMUNICATIONS:

CHART: ORLANDO APP CON

AIRPORTS SERVED:

ORLANDO, FL (KMCO)

LOST COMMUNICATIONS PROCEDURE:

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:

EDWARD W. MESA

Name

FPO

Organization

02/24/2022

Date

Digitally signed by

ALLAN WILL

Apr 01, 2022

Signature

Digitally signed by

ALLAN WILL

Apr 01, 2022

Signature

Digitally signed by

ALLAN WILL

Apr 01, 2022

Signature

DEVELOPED BY:

VICKI TURNER

Name

Design and Implementation Program Manager,
AJV-E22

Organization

1/05/2021

Date

APPROVED BY:

MARLON ROBINSON

Name

MANAGER, AJV-A420

Organization

Date

CHANGES:

1. REMOVED: CATEE Enroute Transition.
2. ADDED: ZJAYX Enroute Transition, DEEDA Enroute Transition, DEFUN Enroute Transition and JAMIZ Enroute Transition-ATC Assigned Only.
3. Extended ADLYN Transition to WHYTY.
4. ADDED: At or Above 17000 and 290KTS restriction at GRTNG.

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.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021	

5. ADDED: Holding at LEEVP, SEEJY, JAMIZ and WHYTY.
6. CHANGED: NOTE: CATEE Transitions, ATC Assigned only to READ NOTE: JAMIZ and COAXE Transitions, ATC Assigned only.
7. DELETED: NOTE: Descend via MACH number until intercepting 280K. Maintain 280K until slowed by the STAR or assigned by ATC.
8. DELETED: NOTE: MCO approach will issue landing runway.
9. DELETED: NOTE: MCO Landing North, Expect RADAR Vectors prior to CUBAL.
10. DELETED: NOTE: MCO Landing South, Expect RADAR Vectors prior to BANYA.
11. REMOVED HOLDING AT ADLYN

REASONS:

1. Provides unconflicted flow of traffic landing KMCO with the elimination of traffic on the same Transitions into satellite airports.
- 2-5. Aligns with actual traffic flows.
6. COAXE Transition deleted and JAMIZ added to procedure.
7. Provides more efficiency.
8. ATC REQUEST.
9. ATC REQUEST.
10. ATC REQUEST.
11. NOT NEEDED DUE TO HOLDING ADDED AT LEEVP, SEEJY, JAMIZ and WHYTY.

3/24/22: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 3/01/22.

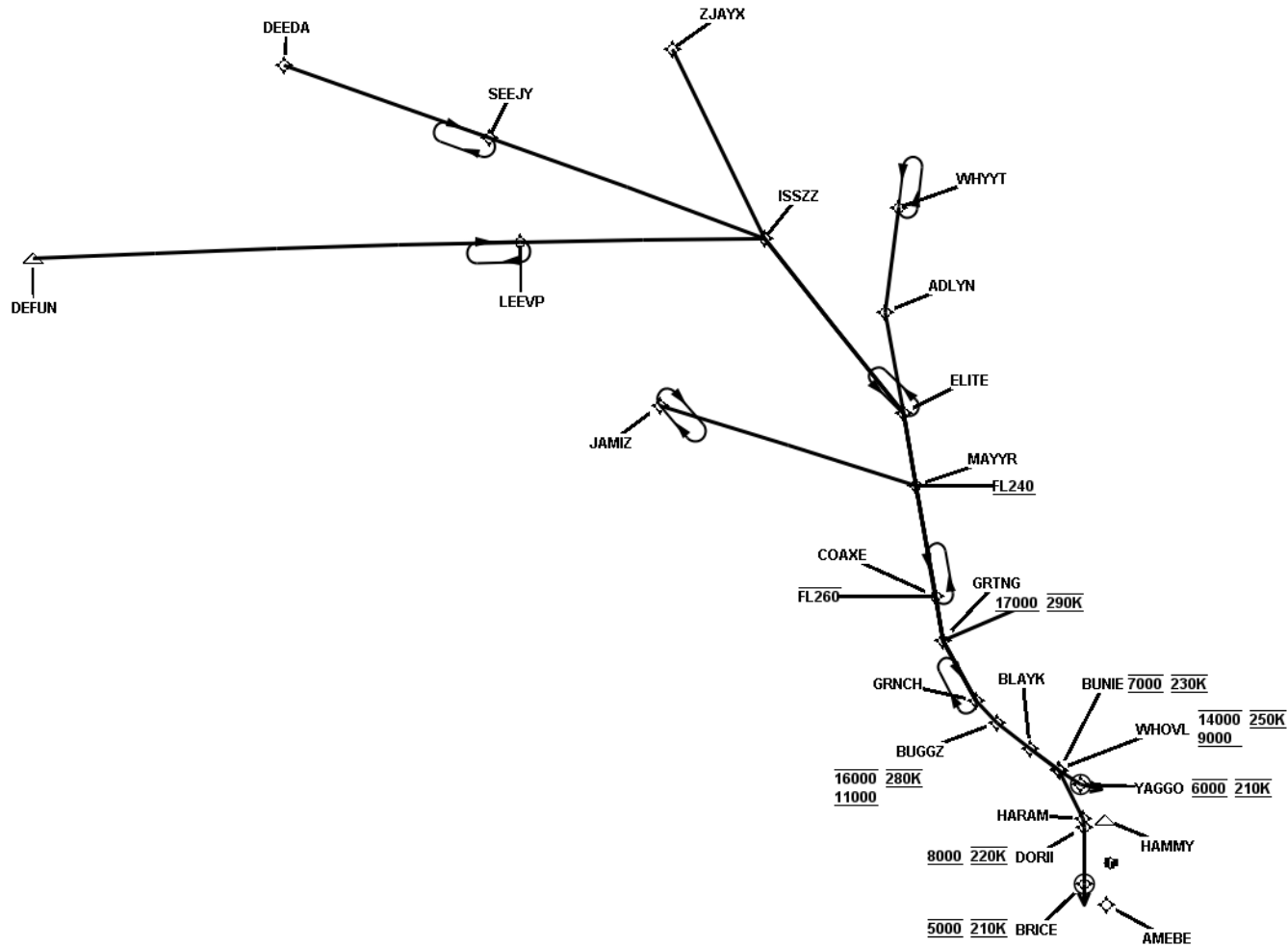
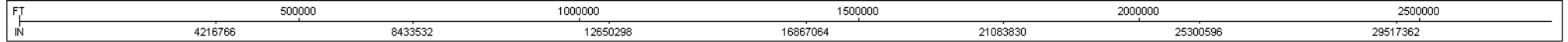
1. CHANGED PROCEDURAL DATA NOTE FROM: EXPECT "DESCEND VIA" CLEARANCE AND LANDING DIRECTION (NORTH OR SOUTH) BY ARTCC. FOR VERTICAL NAVIGATION PLANNING, LANDING SOUTH, SELECT RWY 18R, LANDING NORTH, SELECT RWY 36L" TO "LANDING SOUTH USE RUNWAY 18R TRANSITION, LANDING NORTH USE RUNWAY 36L TRANSITION. EXPECT RUNWAY ASSIGNMENT FROM ORL APPROACH PRIOR TO GRNCH."
2. REMOVED ALL REFERENCE TO LOST COMMUNICATIONS PROCEDURES.
3. REMOVED REMARK "MEAs AT or ABOVE FL180 for COMM and DME/DME/IRU SOLUTIONS."
4. REMOVED "OR AS ASSIGNED BY ATC" FROM ARRIVAL ROUTE DESCRIPTION FOR LANDING RWY 17L/R, 18L/R"
5. REMOVED HAMMY AND AMEBE FROM "FIXES AND/OR HOLDING POINTS SECTION"
6. DELETED AIRPORT NAME IN "AIRPORTS SERVED" SECTION.
7. CHANGED ADDITIONAL FLIGHT DATA INFO FROM "REFERENCE MAGNETIC VARIATION = KMCO 06W/2015" TO "MAG VAR: KMCO 06W/2015".

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.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021	

Graphic Depiction 1

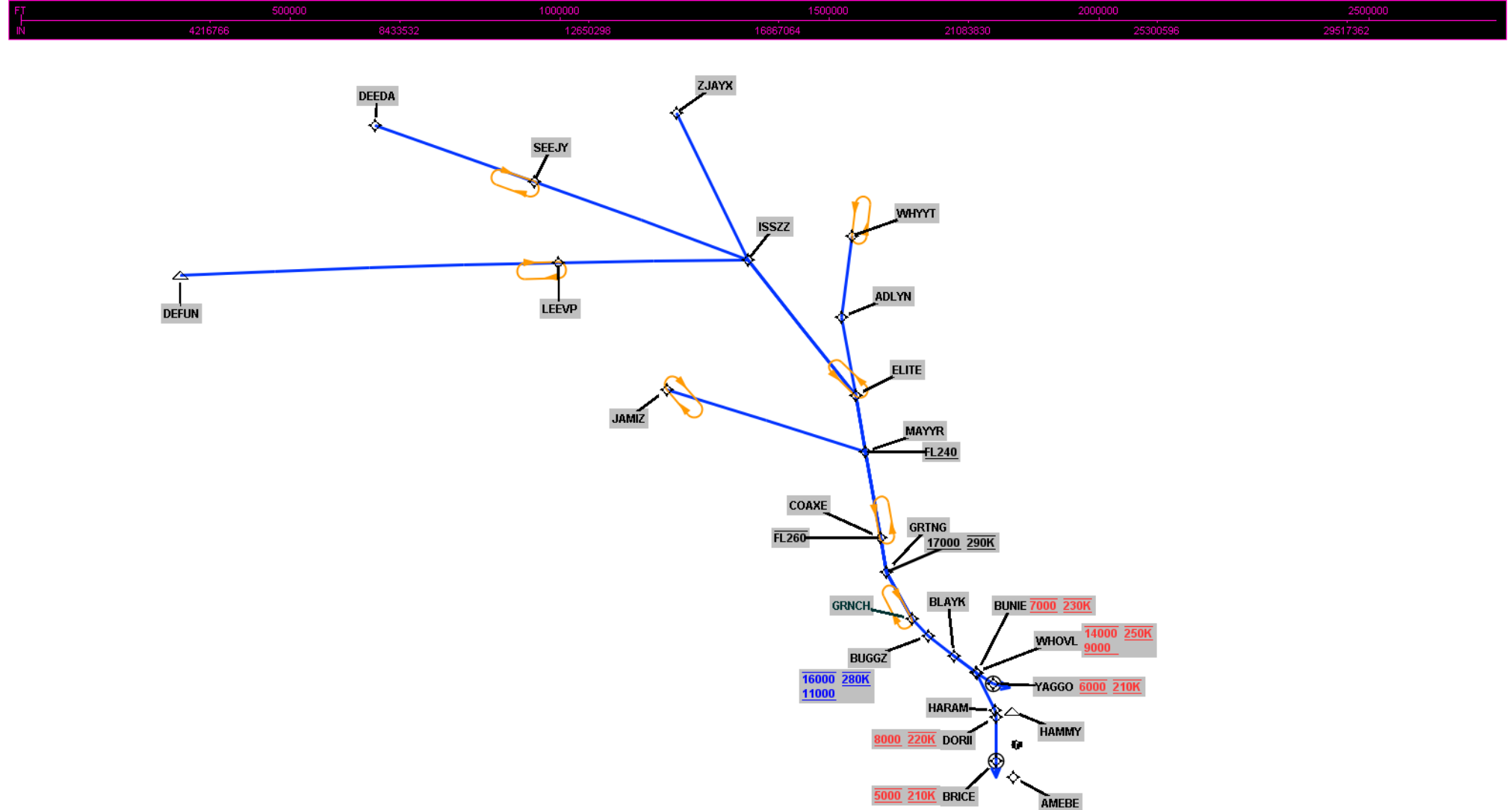


FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021	

Graphic Depiction 2

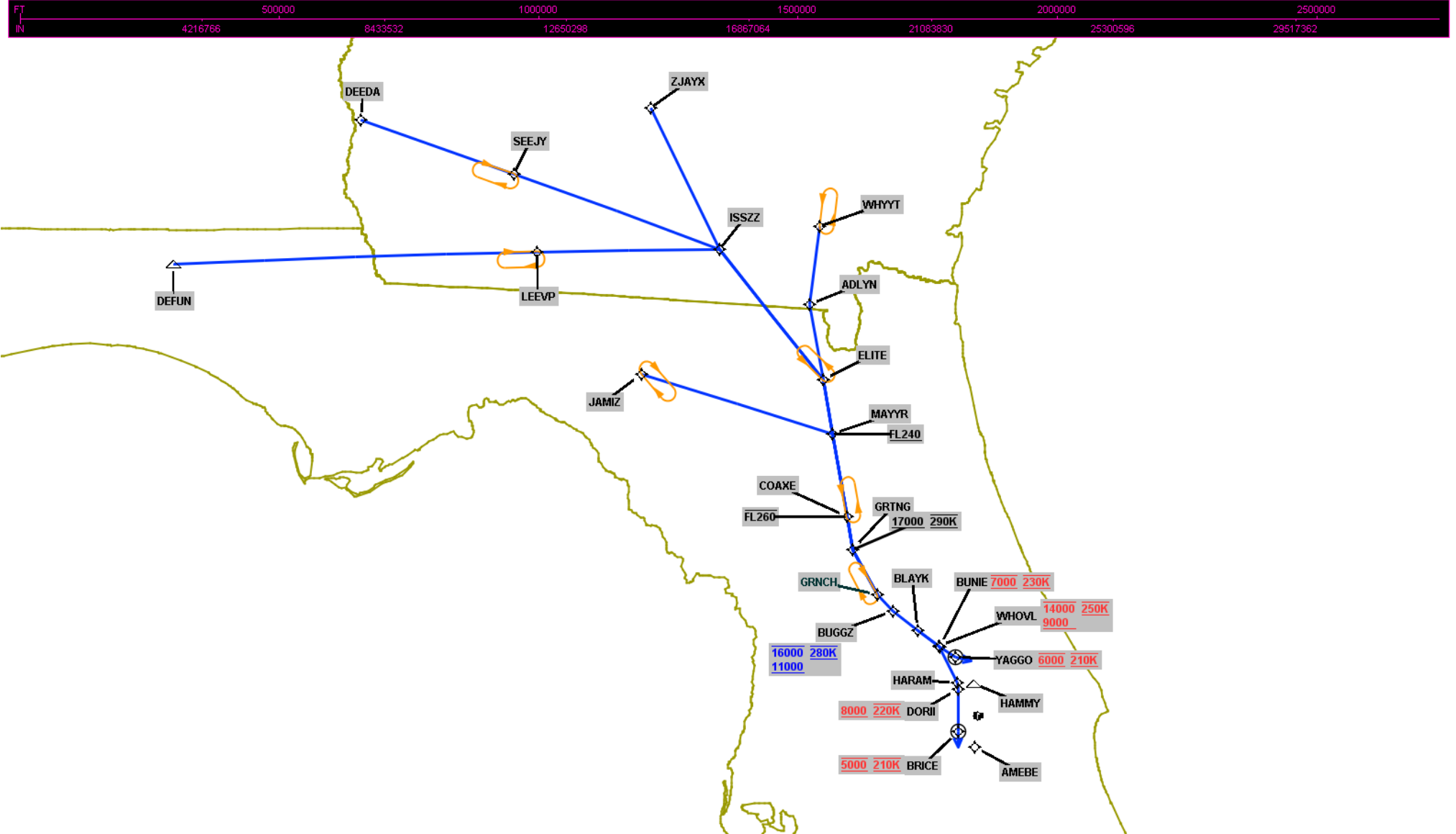


FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
GRNCH (RNAV)	THREE	GRNCH.GRNCH3	TWO	12/02/2021	

Graphic Depiction 3



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name GRNCH (RNAV)		Number THREE		STAR Computer Code GRNCH.GRNCH3		Superseded Number TWO		Dated 12/02/2021	Effective Date
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
COAXE	292845.80N / 0820537.25W	Y		IF			AT/BELOW FL260		COAXE.GRNCH3
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.GRNCH3
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.GRNCH3
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.GRNCH3
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		

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name GRNCH (RNAV)	Number THREE	STAR Computer Code GRNCH.GRNCH3		Superseded Number TWO		Dated 12/02/2021		Effective Date	
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.GRNCH3
ADLYN	303553.97N / 0821900.11W	Y	FB	TF	187.27	25.00			
ELITE	301202.60N / 0821412.51W		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.GRNCH3
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.GRNCH3
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	

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name GRNCH (RNAV)	Number THREE	STAR Computer Code GRNCH.GRNCH3	Superseded Number TWO	Dated 12/02/2021	Effective Date
-------------------------------------	------------------------	---	---------------------------------	----------------------------	----------------

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
YAGGO	284414.28N / 0812619.08W	Y	FO	TF	122.62	06.00	AT 6000	AT 210K	
KMCO:RWY 17L,RWY 17R,RWY 18L,RWY 18R				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 35L,RWY 35R,RWY 36L,RWY 36R				FM	180.00				