Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 03/19/2026	APWS Task ID: C35ABD3E9A4A4AC5B6E3EE42893CB58E	APWS Project ID: A05EE60C287142B5AD95ABEC8F222250
Procedure: JOKRS (RNAV) FOUR ARRIVAL		Enroute: YES	Specialist: Martinez, Rafael		Agreement Number:
Airport ID: KMCO			Airport City: ORLANDO		State: FL
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			

Procedure Comments:

LANDING KMCO RWY 17L/R, 18L/R: REPLACED LYENS WITH DVOLA AND MOVED DVOLA WAYPOINT 1.67 NM NORTH.

CONTACT: BEV L BORDY 405-954-8293/CASIMIR TABAKA 405-954-7931.

APPROVAL REQUEST: FAA ORDER 8260.3E, PARA 2-2-10A, GIRAF TO DVOLA DECELERATION.
WAIVER REQUEST: FAA ORDER 8260.3E, PARA 2-2-7E, MANDATORY ALTITUDE.

11/21/2025

Data as of: 11/13/2025 09:43:04 CST

FIPC DME/DME FORM

PROCEDURE:	AIRPORT NAME:	AIRPORT ID:	SPECIAL CONTROL NO:
JOKRS (RNAV) FOUR ARRIVAL	ORLANDO INTL	KMCO	AG-11-182-25

FAC ID: JOKRS4	CITY: ORLANDO	ST: FL	ORIG CHART DATE: 03/19/2026

DFL TYPE:	THIRD PARTY:	EST. TIME ON SITE:	REIMB. NUMBER:	PTS TASK ID:
PROC/D	☐ YES	1.0		C35ABD3E9A4A4AC5B6E3EE42893CB58E

PREFLIGHT NOTES

REVIEWER:	DATE:
COMMENTS:	CHECK ONE: ☐ FLT CK REQ ☐ NFCR ☐ REJECT

	YES	NO
CPV COMPLETE?	X	

PROCEDURE RESULTS

INSPECTION DATE:	CREW #:	N #:	INSTRUMENT PROCEDURE STATUS:	ARINC CODING:
12/18/2025	VN085	N89	☒ SAT ☐ SAT W/CHANGES ☐ UNSAT	☒ SAT ☐ SAT/GOLD ☐ UNSAT

FLIGHT INSPECTOR SIGNATURE:	PRINTED NAME:	NOTAM INITIATED?
kenneth e jack @ 12/19/2025 09:22	JACK, KENNETH EARL	☐ YES ☒ NO

FLIGHT INSPECTOR REMARKS:

Special Number AG-11-182-25: ORLANDO, FLORIDA, JOKRS FOUR ARRIVAL (RNAV) Completed Sat. No Electronic Data Required
RNAV Performance Based Navigation Departure Procedure, Standard Instrument Departure (SID) and Standard Terminal Arrival Route (STAR) segments within 15 NM of the departure airport do not require flight inspection for DME coverage, provided radar and communication coverage are satisfactory along the segment at the published altitudes

DME/DME STATUS:	SPECIALIST SIGNATURE:	PRINTED NAME:
☒ SAT ☐ UNSAT	steven s-ctr rager @ 12/24/2025 06:03	Steven Rager

SPECIALIST REMARKS:

Procedure table topped. No DME Post Flight Check Analysis necessary. Procedure SAT based on TARGETS analysis.

IN-FLIGHT OBSTACLE REPORT

OBSTRUCTION ID #:	COORDINATES OR LOCATION:	GNSS ALTITUDE (MSL):	BAROMETRIC ALTITUDE (MSL):	HEIGHT ABOVE GROUND LEVEL:

FIPC DME/DME FORM

PROCEDURE:	AIRPORT NAME:	AIRPORT ID:	SPECIAL CONTROL NO:
JOKRS (RNAV) FOUR ARRIVAL	ORLANDO INTL	KMCO	AG-11-182-25

FAC ID: JOKRS4	CITY: ORLANDO	ST: FL	ORIG CHART DATE: 03/19/2026

DFL TYPE:	THIRD PARTY:	EST. TIME ON SITE:	REIMB. NUMBER:	PTS TASK ID:
PROC/D	☐ YES	1.0		C35ABD3E9A4A4AC5B6E3EE42893CB58E

PREFLIGHT NOTES

REVIEWER:	DATE:
COMMENTS:	CHECK ONE: ☐ FLT CK REQ ☐ NFCR ☐ REJECT

	YES	NO
CPV COMPLETE?	X	

PROCEDURE RESULTS

INSPECTION DATE:	CREW #:	N #:	INSTRUMENT PROCEDURE STATUS:	ARINC CODING:
12/18/2025	VN085	N89	☒ SAT ☐ SAT W/CHANGES ☐ UNSAT	☒ SAT ☐ SAT/GOLD ☐ UNSAT

FLIGHT INSPECTOR SIGNATURE:	PRINTED NAME:	NOTAM INITIATED?
kenneth e jack @ 12/19/2025 09:22	JACK, KENNETH EARL	☐ YES ☒ NO

FLIGHT INSPECTOR REMARKS:

Special Number AG-11-182-25: ORLANDO, FLORIDA, JOKRS FOUR ARRIVAL (RNAV) Completed Sat. No Electronic Data Required
RNAV Performance Based Navigation Departure Procedure, Standard Instrument Departure (SID) and Standard Terminal Arrival Route (STAR) segments within 15 NM of the departure airport do not require flight inspection for DME coverage, provided radar and communication coverage are satisfactory along the segment at the published altitudes

DME/DME STATUS:	SPECIALIST SIGNATURE:	PRINTED NAME:
☐ SAT ☐ UNSAT		

SPECIALIST REMARKS:

IN-FLIGHT OBSTACLE REPORT

OBSTRUCTION ID #:	COORDINATES OR LOCATION:	GNSS ALTITUDE (MSL):	BAROMETRIC ALTITUDE (MSL):	HEIGHT ABOVE GROUND LEVEL:

Federal Aviation Administration

Memorandum

Date: December 12, 2024

To: Christopher Hope, Manager, Flight Technologies and Procedures Division
THRU: Romana Wolf, Manager, Flight Procedures and Airspace Group

From: Bev Bordy, Manager, Instrument Flight Procedures Coordination Team, AJV-A43

Prepared by: Erik J John, Sr. ATC Specialist, NAVTAC CTR Support

Subject: Deceleration Approval Request: Orlando International Airport (KMCO)
JOKRS (RNAV) STAR

GIRAF to DVOLA Segment

The requirements stated in Order 8260.3G Paragraph 2-2-10.a. are: **Deceleration.** Sufficient distance and a reduced descent gradient are required prior to any fix with a speed restriction. STARs not meeting the requirements of this paragraph may be authorized with Flight Standards approval (see paragraph 1-4-2).

b. When descent is permitted, the descent gradient leading to the fix with the speed restriction must be reduced. Apply formula 2-2-2 to determine the minimum deceleration distance (DecelD) required before the fix; the greater distance leads to a reduced descent gradient.

(3) The first altitude restriction that is below 10000 feet MSL requires a deceleration evaluation unless an airspeed restriction of 250 KIAS or less exists prior to the point where descent below 10000 feet MSL occurs [14 CFR part 91.117 (a)]. If no speed is published at the first altitude restriction that is below 10000 feet MSL, then use the lower of 250 KIAS or the previous speed restriction (if applicable). When the first fix that allows descent below 10000 feet MSL has no charted speed restriction and the altitude constraint allows continued flight above 10000 feet MSL, the calculation is extended to the subsequent fix using the total descent and total distance for the applicable fixes.

Formula 2-2-2. Minimum Deceleration Distance (NM)

$$Decel_D = \frac{Alt_1 - Alt_2}{G} + K$$

Where:
Alt_1 = Minimum altitude at the fix prior to the speed restriction
Alt_2 = Minimum altitude at the fix with the speed restriction
G = Applicable gradient value (330/318/250)
K = 1 NM for every 10 KIAS of deceleration required

Paragraph 1-4-2. …states in part:
"Nonstandard IFP. …obstacles, navigation information, or traffic congestion may require special consideration where justified by operational requirements. In such cases, nonstandard IFPs that deviate from these criteria may be approved, provided they are documented and an equivalent level of safety exists…"

The GIRAF to DVOLA segment with constraints at GIRAF of AT/ABOVE 8000/220 KIAS and at DVOLA of AT 6000/210 KIAS is 8.6 NM in length. Per the 8260.3G requirement in the above formula, the required leg length is 9 NM to reduce airspeed from 220 KIAS to 210 KIAS and descend from 8000FT to 6000FT. From analysis with a descent and deceleration tool shown below, the speed adjusted descent gradient is 263 FT/NM and a Leg Angle of 2.48°. This is well within normal performance characteristics of industry aircraft flying this procedure today. During design meetings, no objections were noted from industry on the leg construction being submitted.

Enter distance between waypoints **(D)**	**8.60**	NM
Enter beginning altitude **(a)**	**8,000**	FT
Enter ending altitude **(b)**	**6,000**	FT
Enter beginning speed	**220**	KIAS
Enter ending speed	**210**	KIAS
Calculated Descent Gradient (DG)	**232.558**	FT / NM
Calculated speed loss **(x)**	**10**	Knots
Calculated Speed Adjusted Descent Gradient	**263.2**	**FT / NM**
Leg Angle	**2.48°**	

Consideration was given to moving GIRAF and/or DVOLA but after analyzing the requirement and design along with the calculation above, it was deemed not necessary. Moving GIRAF would have also adversely affected the procedure and traffic within F11 airspace. Industry also showed no adverse effects or concerns with the design. Therefore, ATC requests approval for the design as submitted.

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURE STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY
CONTROL NO.

1. FLIGHT PROCEDURE IDENTIFICATION:

Orlando, FL
Orlando International Airport (KMCO)
JOKRS (RNAV) STAR

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

Per 8260.3G, Para. 2-2-7e. Common route and runway transitions. Establish a mandatory, minimum or block altitude restriction at a fix that represents the lowest altitude authorized by the STAR or STAR runway transition.

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

The JOKRS STAR serves multiple airports and runway configurations within Orlando Approach airspace and utilizes varying altitude restrictions to satellite airports based on dynamic traffic situations. Additionally, the procedure authorizes differing aircraft types, thus introducing different performance characteristics from one aircraft to another. The JOKRS STAR is not a descend via procedure for satellite traffic via ZALEK and ATC will issue CROSS (FIX) AT AND MAINTAIN or DESCEND AND MAINTAIN clearances to control the flow of traffic.

Coding the procedure with an altitude on the common route that serves multiple airports with mixed aircraft types and differing performance characteristics will cause confusion and additional workload when the issued altitude is different from the coded restriction on the procedure. Coding two different altitudes on one procedure based on aircraft type is not allowed per design criteria.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

With RADAR required and ATC issuing a "CROSS (FIX) AT AND MAINTAIN" or "DESCEND AND MAINTAIN" clearance for all aircraft via ZALEK which ensures the requirements are met. These altitudes provide obstacle clearance, communication, and navigable facility requirements for aircraft to utilize the procedure. When radio communications are in use, ATC will provide appropriate altitudes as specified in the ZMA/F11 Letter of Agreement and local SOP for separation, including obstacle clearance.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Consideration was given to designing the procedure with coded altitudes for satellite traffic and deemed not feasible. Procedures with coded altitudes for different aircraft types or performance is not allowed within design criteria. Establishing coded altitudes on this STARs common route restricts ATC ability to dynamically assign altitudes based upon the traffic scenarios, differing aircraft performance characteristics, and airports of intended landing and creates pilot confusion and questions resulting in a significant workload increase for ATC and pilots.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

ZMA VOR MON Full Work Group
ESC OSG PBN Co-Leads
Miami ARTCC (ZMA)
Orlando Approach (F11)
American Airlines, Southwest Airlines

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE	SIGNATURE
			Digitally signed by ***CASIMIR L TABAKA*** Nov 25, 2025

8. AFS ACTIONS:

☐ **APPROVED** ☐ **DISAPPROVED** ☐ **NOT REQUIRED**

COMMENTS:

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURE STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY
CONTROL NO.

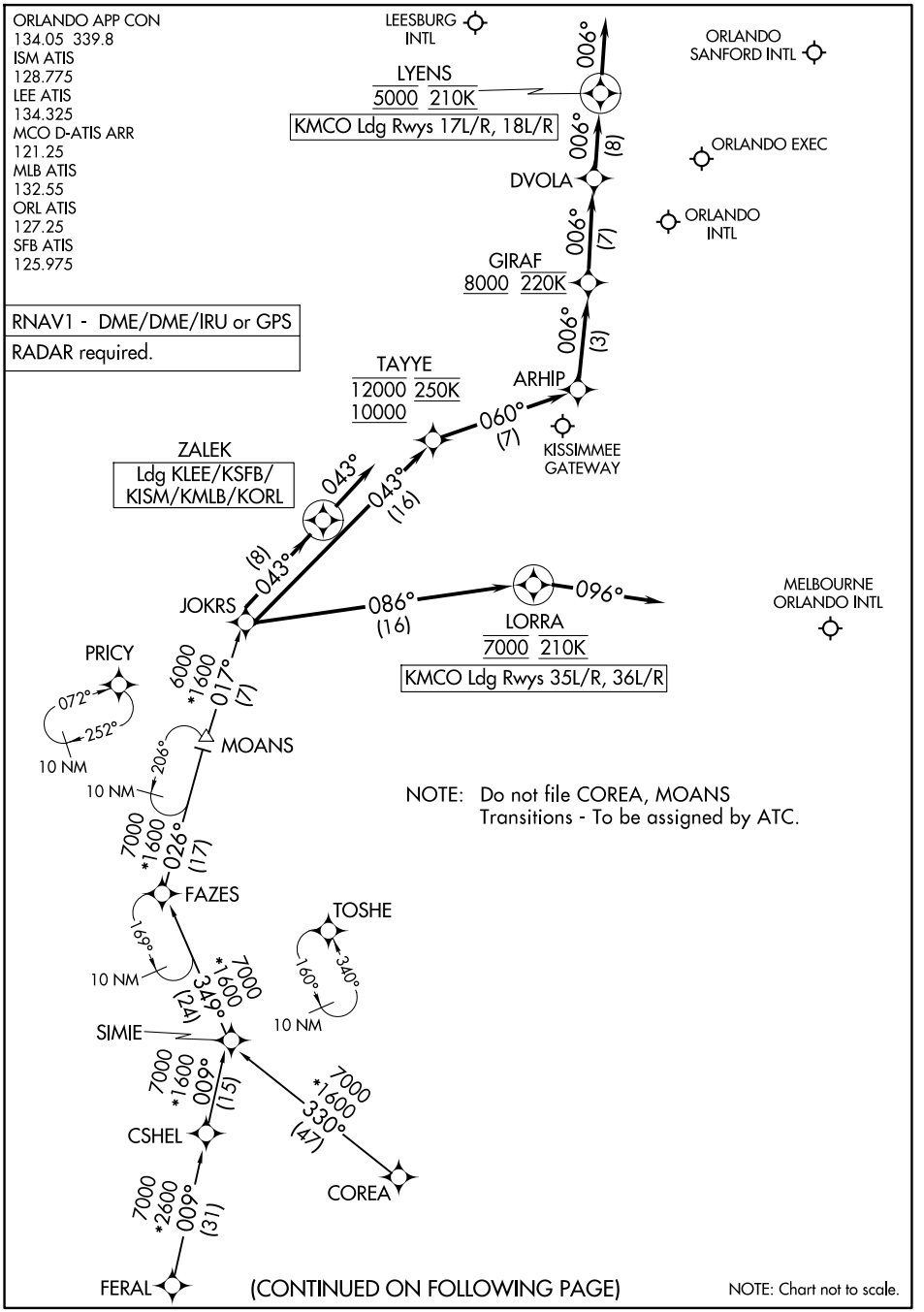
DATE	ROUTING SYMBOL	SIGNATURE

OLD

(JOKRS.JOKRS3) 25219 AL-571 (FAA)

JOKRS THREE ARRIVAL (RNAV)

ORLANDO, FLORIDA



SE-3, 04 SEP 2025 to 02 OCT 2025

SE-3, 04 SEP 2025 to 02 OCT 2025

JOKRS THREE ARRIVAL (RNAV)

ORLANDO, FLORIDA

(JOKRS.JOKRS3) 19MAY22

ARRIVAL ROUTE DESCRIPTION

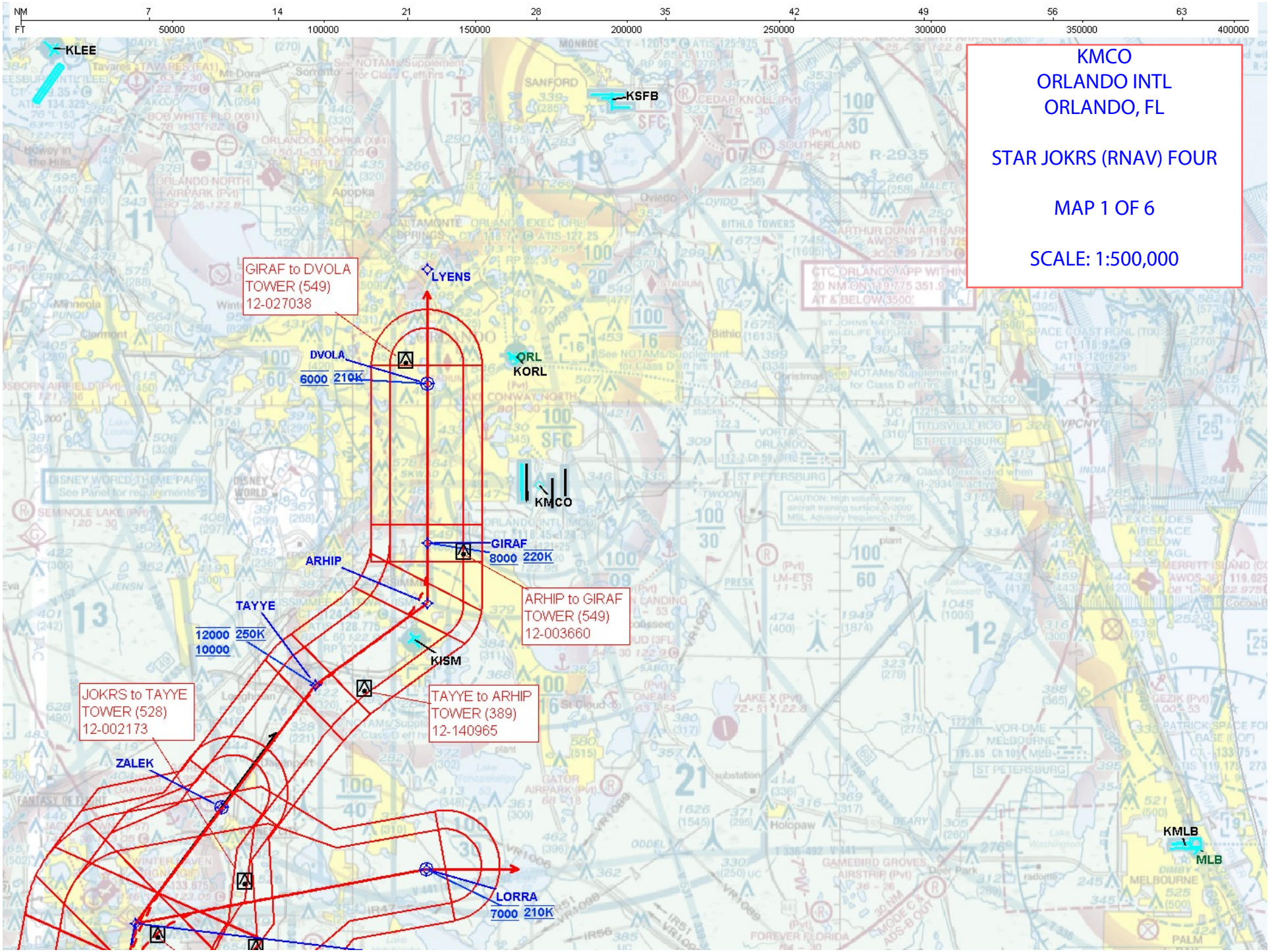
COREA TRANSITION (COREA.JOKRS3)
CSHEL TRANSITION (CSHEL.JOKRS3)
FAZES TRANSITION (FAZES.JOKRS3)
FERAL TRANSITION (FERAL.JOKRS3)
MOANS TRANSITION (MOANS.JOKRS3)

LANDING KMCO RUNWAYS 17L/R, 18L/R: From JOKRS on track 043° to cross TAYYE between 10000 and 12000 and at 250K, then on track 060° to ARHIP, then on track 006° to cross GIRAF at or above 8000 and at 220K, then on track 006° to DVOLA, then on track 006° to cross LYENS at 5000 and at 210K, then on track 006°. Expect RADAR vectors to final approach course.

LANDING KMCO RUNWAYS 35L/R, 36L/R: From JOKRS on track 086° to cross LORRA at 7000 and at 210K, then on heading 096°. Expect RADAR vectors to final approach course.

LANDING KLEE/KSFB/KISM/KMLB/KORL: From JOKRS on track 043° to ZALEK, then on heading 043°. Expect RADAR vectors to final approach course.

SE-3, 04 SEP 2025 to 02 OCT 2025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ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 1 OF 6
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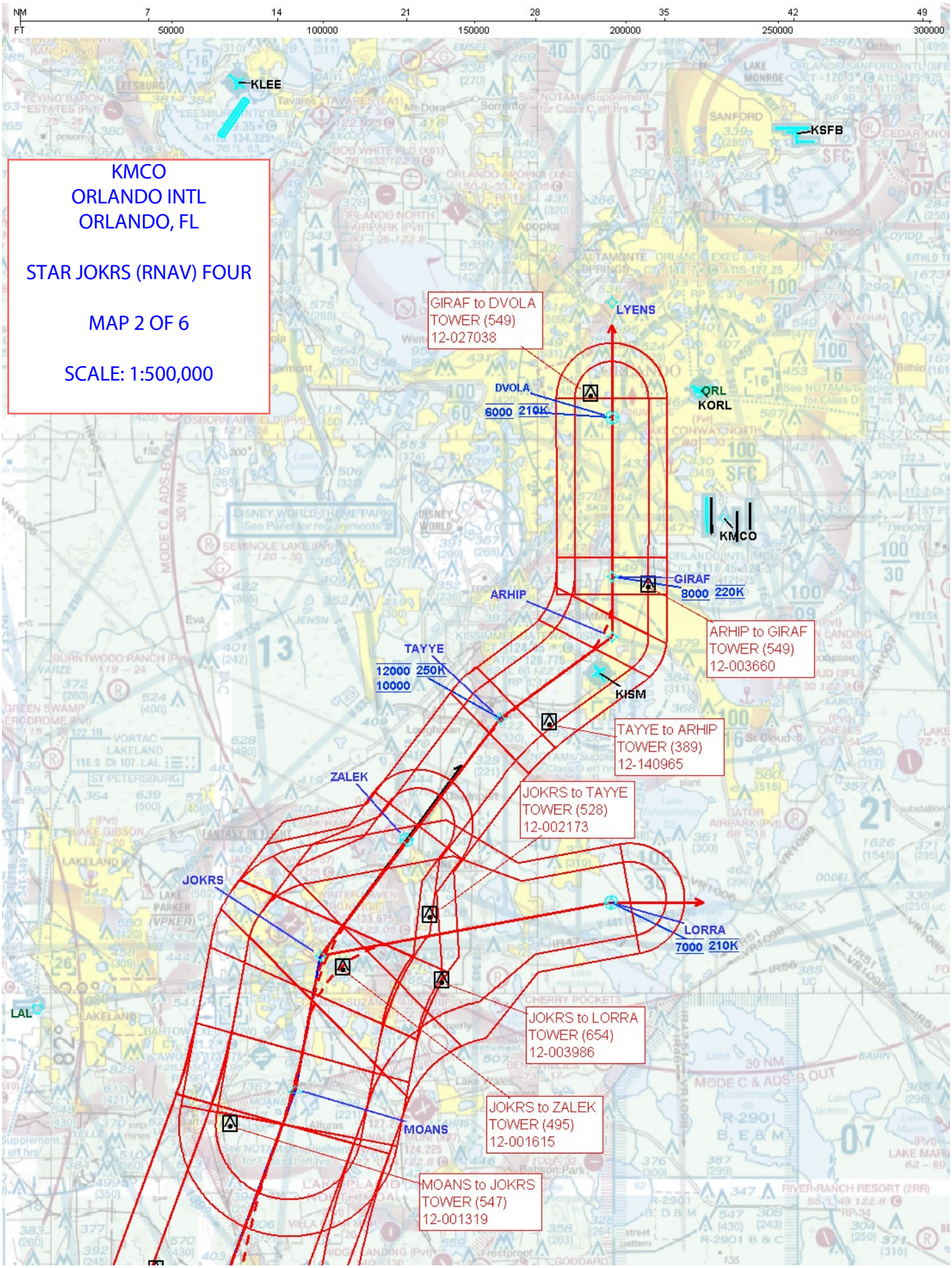
FT 50000 100000 150000 200000 250000 300000 350000 400000
KLEE
KSFB
LYENS
GIRAF to DVOLA
TOWER (549)
12-027038
DVOLA
6000 210K
ORL
KORL
KMCO
GIRAF
8000 220K
ARHIP
ARHIP to GIRAF
TOWER (549)
12-003660
TAYYE
12000 250K
10000
KISM
JOKRS to TAYYE
TOWER (528)
12-002173
TAYYE to ARHIP
TOWER (389)
12-140965
ZALEK
LORRA
7000 210K
KMLB
MLB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ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 2 OF 6
SCALE: 1:500,000
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KLEE
KSFB
LYENS
GIRAF to DVOLA
TOWER (549)
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DVOLA
6000 210K
QRL
KORL
KMCO
GIRAF
8000 220K
ARHIP
ARHIP to GIRAF
TOWER (549)
12-003660
TAYYE
12000 250K
10000
KISM
TAYYE to ARHIP
TOWER (389)
12-140965
ZALEK
JOKRS to TAYYE
TOWER (528)
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LAL
JOKRS to LORRA
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MOANS to JOKRS
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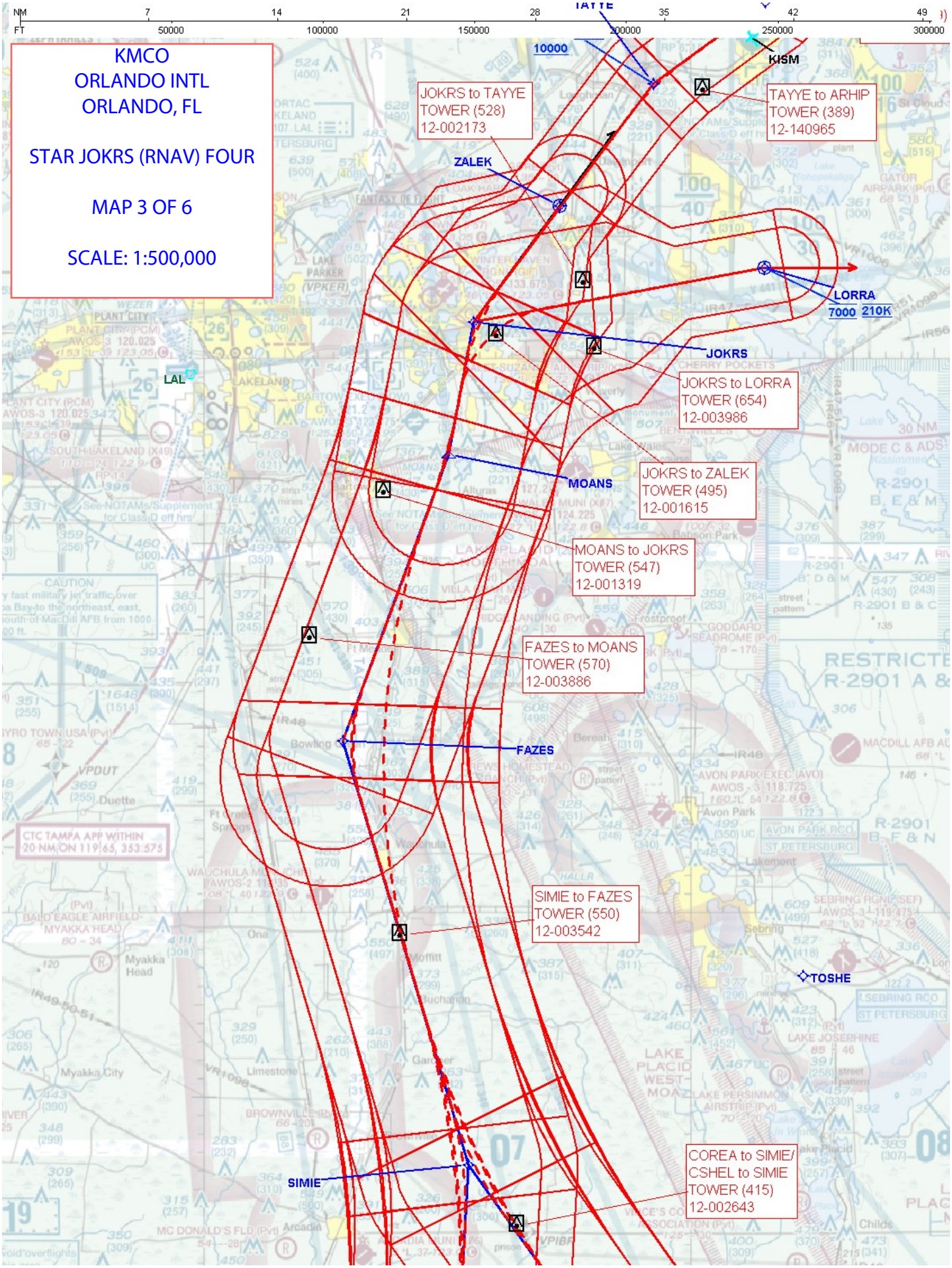
KMCO
ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 3 OF 6
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TOWER (528)
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TAYYE to ARHIP
TOWER (389)
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ZALEK
KISM
LORRA
7000
210K
JOKRS
JOKRS to LORRA
TOWER (654)
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JOKRS to ZALEK
TOWER (495)
12-001615
MOANS
MOANS to JOKRS
TOWER (547)
12-001319
FAZES to MOANS
TOWER (570)
12-003886
FAZES
SIMIE to FAZES
TOWER (550)
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TOSHE
COREA to SIMIE/
CSHEL to SIMIE
TOWER (415)
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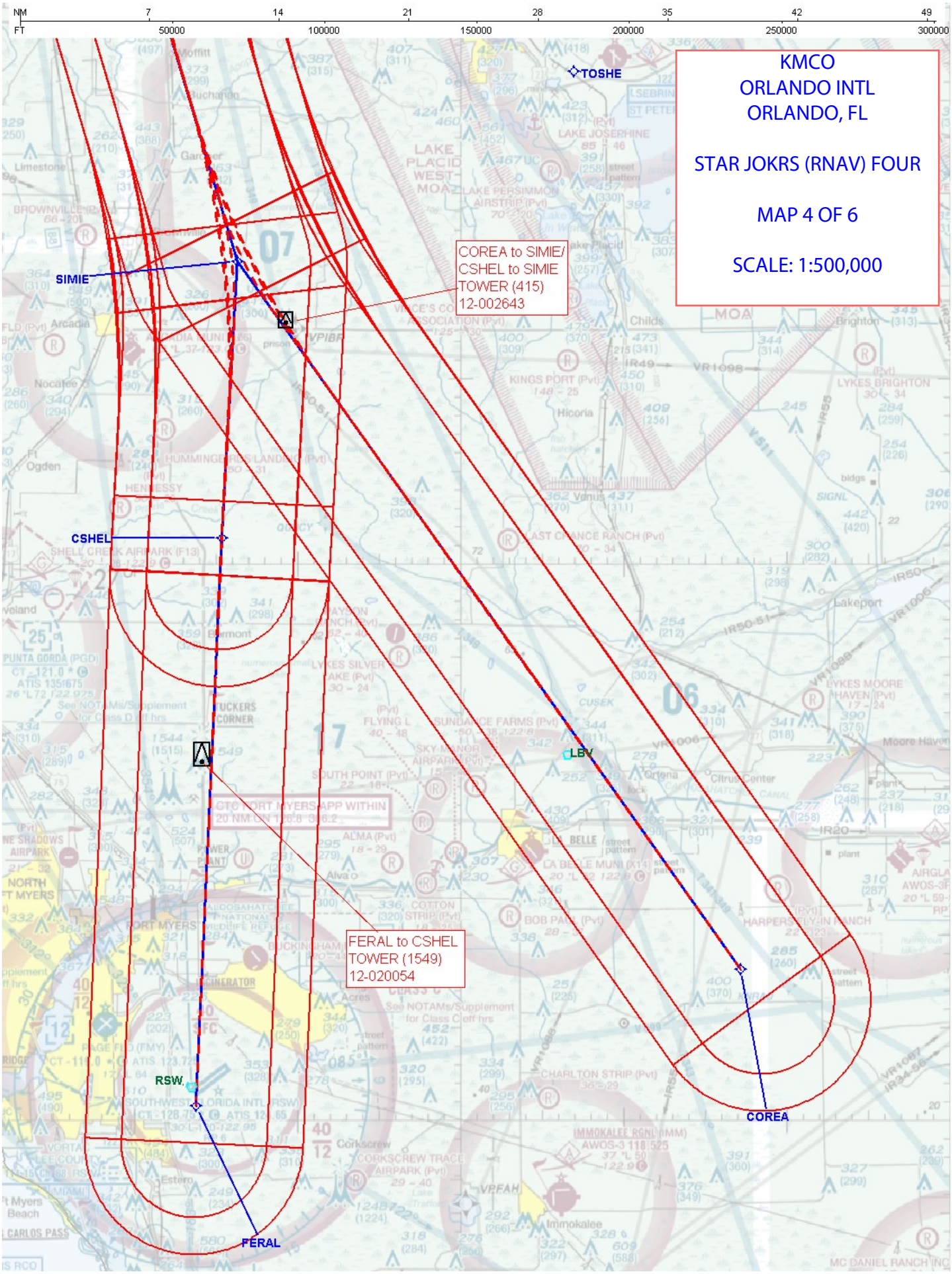
SIMIE
LAL


KMCO
ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 4 OF 6
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CSHEL to SIMIE
TOWER (415)
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FERAL to CSHEL
TOWER (1549)
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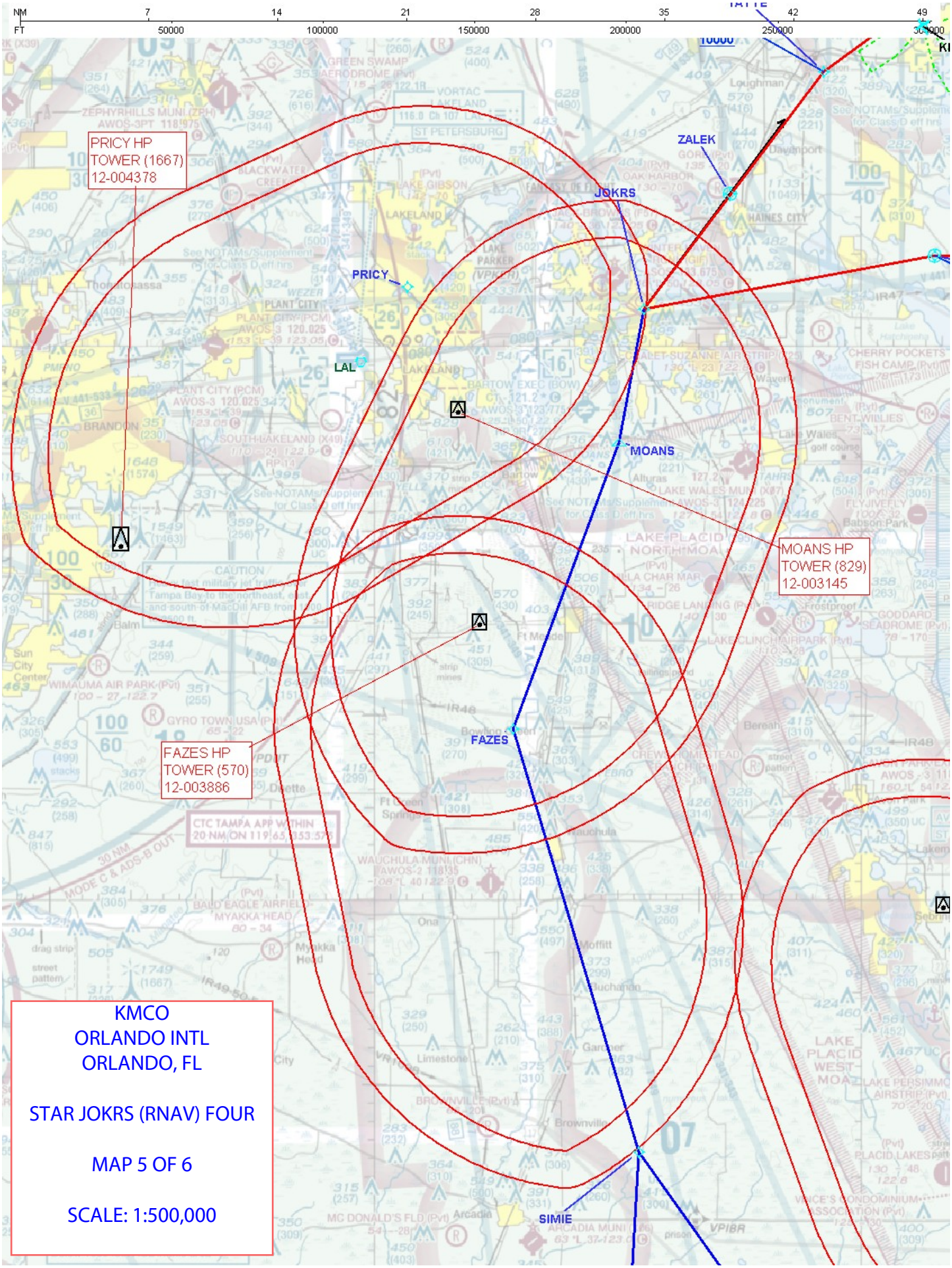
SIMIE
CSHEL
LBV
RSW
FERAL
COREA
NM
FT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ZALEK
JOKRS
PRICY
LAL
MOANS
MOANS HP
TOWER (829)
12-003145
FAZES
FAZES HP
TOWER (570)
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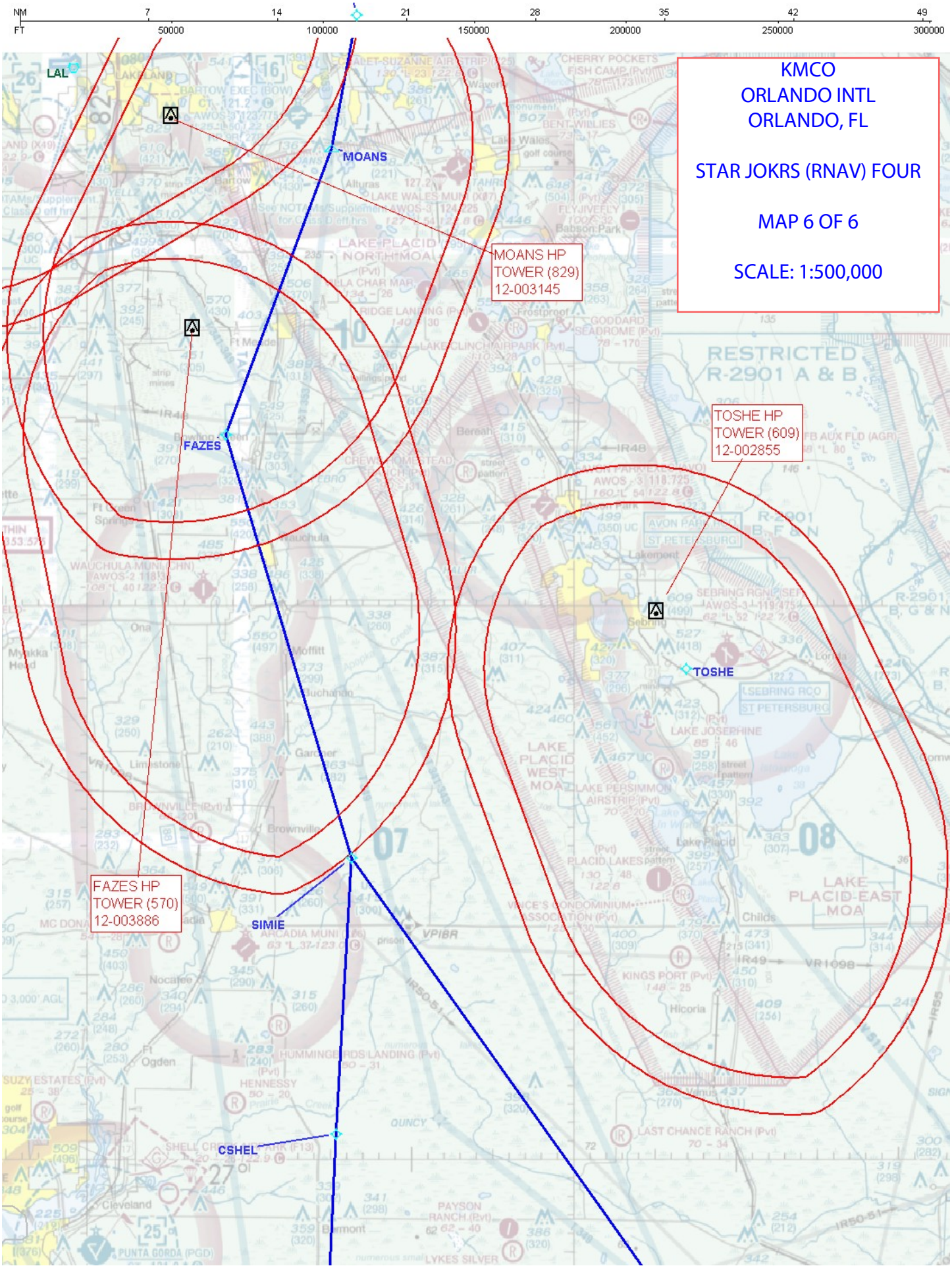
SIMIE
KMCO
ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 5 OF 6
SCALE: 1:500,000


NM 7 14 21 28 35 42 49
FT 50000 100000 150000 200000 250000 300000
KMCO
ORLANDO INTL
ORLANDO, FL
STAR JOKRS (RNAV) FOUR
MAP 6 OF 6
SCALE: 1:500,000
LAL
MOANS
MOANS HP
TOWER (829)
12-003145
FAZES
TOSHE HP
TOWER (609)
12-002855
TOSHE
FAZES HP
TOWER (570)
12-003886
SIMIE
CSHEL
RESTRICTED
R-2901 A & B
LAKE PLACID WEST MOA
LAKE PLACID-EAST MOA