

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 8/7/2025	APWS Task ID: 1CA084BC55834C34A9480B2163331563	APWS Project ID: C3AB594EDD314931B79E6977F237B91E
Procedure: RNAV (GPS) Y RWY 16R AMDT 2		Enroute: NO	Specialist: Hardison, Dustin		Agreement Number:
Airport ID: KDEN			Airport City: DENVER		State: CO
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
Procedure Comments: Second Intermediate segment starting at CLFFF added to permit STAR use and downwind entry. Procedure developed using active airport data. Contact Rake McGraw AJV-A422 (405)597-8711 QUALITY 26 CHECKED QUALITY 38 CHECKED					

FIPC BASIC FORM							
PROCEDURE: RNAV (GPS) Y RWY 16R AMDT 2			AIRPORT NAME: DENVER INTL		AIRPORT ID: KDEN	SPECIAL CONTROL NO: OG-04-201-25	
FAC ID: KDEN16R.02Y		CITY: DENVER			ST: CO	ORIG CHART DATE: 10/02/2025	
DFL TYPE: PROC/S	THIRD PARTY: ☐ YES	EST. TIME ON SITE: 0.4	REIMB. NUMBER:		PTS TASK ID: 1CA084BC55834C34A9480B2163331563		
PREFLIGHT NOTES							
REVIEWER:					DATE:		
COMMENTS:					CHECK ONE:		
					☐ FLT CK REQ ☐ NFCR ☐ REJECT		
							YES
					CPV COMPLETE?		X
PROCEDURE RESULTS							
INSPECTION DATE: 03/25/2025		CREW #: VN354	N #:	INSTRUMENT PROCEDURE STATUS: ☒ SAT ☐ SAT W/CHANGES ☐ UNSAT		ARINC CODING: ☒ SAT ☐ SAT/GOLD ☐ UNSAT	
FLIGHT INSPECTOR SIGNATURE: alex krause @ 05/01/2025 10:57			PRINTED NAME: KRAUSE, ALEX EDWARD				NOTAM INITIATED? ☐ YES ☒ NO
FLIGHT INSPECTOR REMARKS: After Figure correction, procedure evaluated SAT during simulator evaluation.							
IN-FLIGHT OBSTACLE REPORT							
OBSTRUCTION ID #:	COORDINATES OR LOCATION:		GNSS ALTITUDE (MSL):		BAROMETRIC ALTITUDE (MSL):		HEIGHT ABOVE GROUND LEVEL:

FIPC BASIC FORM						
PROCEDURE: RNAV (GPS) Y RWY 16R AMDT 2			AIRPORT NAME: DENVER INTL		AIRPORT ID: KDEN	SPECIAL CONTROL NO: SG-12-052-24
FAC ID: KDEN16R.02Y		CITY: DENVER			ST: CO	ORIG CHART DATE: 02/20/2025
DFL TYPE: PROC/S	THIRD PARTY: ☐ YES	EST. TIME ON SITE: 0.4	REIMB. NUMBER:	PTS TASK ID: 1CA084BC55834C34A9480B2163331563		
PREFLIGHT NOTES						
REVIEWER: joel p murphy					DATE: 02/05/2025	
COMMENTS:					CHECK ONE:	
					☒ FLT CK REQ ☐ NFCR ☐ REJECT	
						YES
					CPV COMPLETE?	
					X	
PROCEDURE RESULTS						
INSPECTION DATE: 02/05/2025	CREW #: VN451	N #: N87	INSTRUMENT PROCEDURE STATUS:		ARINC CODING:	
			☐ SAT ☐ SAT W/CHANGES ☒ UNSAT		☒ SAT ☐ SAT/GOLD ☐ UNSAT	
FLIGHT INSPECTOR SIGNATURE:			PRINTED NAME:			NOTAM INITIATED?
joel p murphy @ 02/05/2025 16:14			MURPHY, JOEL PATRICK			☐ YES ☒ NO
FLIGHT INSPECTOR REMARKS: Procedure flew SAT. UnSAT for human factors. The procedure is very cluttered and hard to distinguish what the proper fix, altitude, and speed restriction should be flown around FESKA.						
IN-FLIGHT OBSTACLE REPORT						
OBSTRUCTION ID #:	COORDINATES OR LOCATION:	GNSS ALTITUDE (MSL):	BAROMETRIC ALTITUDE (MSL):	HEIGHT ABOVE GROUND LEVEL:		

1. FLIGHT PROCEDURE IDENTIFICATION:

DENVER, CO
DENVER INTERNATIONAL AIRPORT (KDEN)
RNAV (GPS) Y RWY 16R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

FAAO 8260.58 table 1-2-2 Indicated Airspeed (KIAS), Minimum Airspeed Restriction
CAT C & D minimum airspeed on intermediate segment (Table requires 180 knots minimum airspeed)

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

This maximum speed of 170kts is required to alleviate aircraft exceeding the speed limitation and overshooting the course, based on findings from the monitoring program of the offset procedures.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

The requested Max 170kts at the fix prior to the capture fix is within limits of CAT C & D approach speed limitations.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Altering the procedure design is not possible because of ATC requirement from simultaneous operations on RWY16L.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

ZDV FPT
AF-430

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
11/22/24	AJV-A42	MANAGER

SIGNATURE

Digitally signed by
RAKE MCGRAW
Dec 11, 2024

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

DATE	ROUTING SYMBOL	SIGNATURE
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1. FLIGHT PROCEDURE IDENTIFICATION:

DENVER, CO
DENVER INTERNATIONAL AIRPORT (KDEN)
RNAV (GPS) Y RWY 16R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

FAAO order 8260.19H, paragraph 8-6-7b(3)(b).Procedures with multiple Intermediate fixes only apply to RNAV (RNP) AR procedures.

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

Adding RNAV intermediate segments on the RNAV (GPS) Y RWY 16R procedure which include TF turns that mirror the RNAV (RNP) Z 16R with RF segment. Implementation of this design allows for procedure connectivity to existing RNAV STARs, flexibility and usage within ATC and industry by not restricting aircrafts without RF capability. The addition of multiple intermediates fixes are developed to meet current criteria requirements on the FAAO 8260.58C, PBN transitions to ILS final.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

Fixes on the RNAV segments are charted on the plan view with associated restrictions. The "RNAV -1 and GPS required" notation is provided in the equipment requirement. Pilots will be able to select their desired transition accordingly. Selected transition will display desired track and associated informations. Pilots will be able to correlate the plan view, profile view and RNAV route connected to STAR as well as altitude constraints. A profile note will be added to the chart stating "see planview for multiple IF locations ". IAW 8260.58C Appendix Appendix C, a capture fix will be established and aligned with the final approach course and standardized across all added intermediate segments.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

None.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

This approach is developed with input and consensus of Denver ATC and industry servicing Denver International airport.

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
11/22/2024	AJV-A42	MANAGER

SIGNATURE

Digitally signed by
RAKE MCGRAW

Dec 11, 2024

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

DATE	ROUTING SYMBOL	SIGNATURE
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Federal Aviation Administration

Memorandum

Date:

To: Manager, Flight Procedure Standards

From: Beverly Bordy
Manager, Terminal Products Group

Subject: **ACTION:** Approval Request

KDEN RNAV (GPS) Y RWY 16R
Denver Intl, Denver, CO (DEN)

Approval is requested for a mandatory altitude at CLFFF Intermediate Fix in accordance with FAAO 8260.19J, para 8.6.11n.(1).

Denver ATC and industry servicing Denver International airport concur that an additional intermediate segment on the RNAV (GPS) Y RWY 16R procedure, which includes TF turns that mirror the RNAV (RNP) Z 16R with RF segment, allows for procedure connectivity to existing RNAV STARs, flexibility, and safe use by ATC and industry by not restricting aircraft without RF capability. The additional intermediate segment begins at CLFFF, which is the runway 16R terminus waypoint for CLASH(RNAV), NIIXX (RNAV), SSKII (RNAV), and TBARR (RNAV) STARs requiring an altitude of 11000.

If approved, this condition will be permanent. No other actions were deemed feasible for eliminating the requirement. KDEN ATC operations will be impacted if approval is not granted.

Attachments

INFO ONLY

1. FLIGHT PROCEDURE IDENTIFICATION:

Denver, Colorado
Denver International, KDEN
RNAV (GPS) Y RWY 16R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

8260.58C 3-3-2

Alignment. Optimum final segment alignment is with the runway centerline extended through the LTP. TF-TF turns are not allowed in the FAS. Where lowest minimums can only be achieved by offsetting the final course, it may be offset up to 15 degrees when the following conditions are met:

a. Offset ≤ 5 degrees. Align the course through LTP.

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

Aligning the aircraft with LPV requirements allows for a single gradual turn onto the extended runway centerline, reducing procedural complexity by eliminating the need to perform an "S" turn away from the final course followed by a turn back onto the extended centerline.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

The addition of stepdown fixes on this procedure improves flyability and decreases cockpit workload, by allowing ATC to vector aircraft direct to a fix rather than vector aircraft to intercept the final approach course between fixes. ATC closely monitors aircraft on final to ensure they make the necessary turn onto the extended centerline to align with the runway. Utilizing FMS automation, in lieu of hand flying to intercept a course (radial) to begin the procedure, is a capability they do not currently have on the existing RNAV (GPS) Y RWY 16R procedure. Additionally, utilization of the offset procedure reduces the possibility of a TCAS RA being generated.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Offset maintained as it reduced the number of TCAS alerts generated between 16L and 16R.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

DEN TRACON, ZDV, DEN Tower.

7. SUBMITTED BY:

DATE OFFICE IDENTIFICATION TITLE

SIGNATURE

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

Digitally signed by

ERIC N SUSKI

Jan 11, 2024

COMMENTS:

DATE ROUTING SYMBOL SIGNATURE

INFO ONLY

1. FLIGHT PROCEDURE IDENTIFICATION:

Denver, Colorado
Denver International, KDEN
RNAV (GPS) Y RWY 16R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

Request temporary waiver to not develop a capture fix. Applicable Standard is FAAO 8260.58B, Appendix C. para 2a(1): Establish a capture fix. Construct a TF leg aligned with the FAC that is common to all intermediate segments. The start fix of the leg is designated the capture fix. Alternatively where operationally necessary, the capture fix may be placed on or at the start of an RF leg. The preliminary location of the capture fix may be less than 2 NM but no closer than 1 NM prior to the PFAF.

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

The intent of a capture fix is to ensure aircraft can capture the glide slope when turning on to the final course prior to the PFAF. Flight Standards has stated criteria for development of a capture fix for intermediate segments aligned with the final approach course is currently under review. This temporary waiver will be in place until the change to capture fix language is reflected in criteria.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

The intermediate segment for this procedure is 10.85 NM and aligned with the final approach course. There are no turns between the intermediate fix (IF) and the final approach fix (FAF). The turn at the IF has a DTA that is no closer than 2NM prior to the PFAF. The altitudes provided at the IF and FAF allow for continuous descent through the intermediate and final segments.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

N/A

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

DEN TRACON, ZDV, DEN Tower.

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
06/08/23	WFPT	Aeronautical Information Specialist

SIGNATURE

MARK E
RAUSCH

Digitally signed by
MARK E RAUSCH
Date: 2023.06.08
14:00:47 -07'00'

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

DATE	ROUTING SYMBOL	SIGNATURE
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Wade Terrell
Signed By: Wade Terrell Mon Aug
21 2023 10:23:35 GMT-05:00:00
(Central Standard Time)

INFO ONLY

1. FLIGHT PROCEDURE IDENTIFICATION:

Denver, Colorado
Denver International, KDEN
RNAV (GPS) Y RWY 16R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

8260.58C para 1-3-1c:

The first leg of an initial and the first leg of an intermediate segment must be a TF that accommodates a 90-degree intercept angle.

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

Request to publish the RNAV (GPS) Y RWY 16R using the leg length from KAILE to OGINE of 1.90 NM versus the requirement of at least 4.22 NM to support ATC vectors.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

1. When aircraft are vectored to the procedure, they are only vectored to intercept the straight intermediate segment and not initial segment fixes.
2. Aircraft going to KAILE are inbound via LONGZ STAR and require less than 20° of heading change when reaching the (IAF).
3. The prohibition against vectoring to KAILE or OGINE for this procedure will be included in the next version of the facilities Standard Operation Policy (SOP).
4. A feeder segment was temporarily added to the procedure to mimic the LONGZ ARRIVAL segment from WP SWAYN to KAILE. TARGETS identified no criteria issues other than the subject of this waiver before or after KAILE.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

1. Extending the leg length from KAILE to OGINE is not feasible as it would cause tie in problems with the existing STAR and intercept angle to FAC.
2. Moving the KAILE WP to accommodate the leg length requirement would impact multiple arrivals and additional Instrument Approaches which leads to descent gradient and segment length criteria violations.
3. Changes to the LONGZ ARRIVAL will additionally require changes to integrated procedures entering and exiting TRACON airspace via this gate. Due to limited time available to resolve the high risk TCAS safety issue at this airport, there is not sufficient time to redesign the entire TRACON northwest gate structure.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

DEN TRACON, ZDV, DEN Tower.

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
06/08/23	WFPT	Aeronautical Information Specialist

SIGNATURE

MARK E
RAUSCH

Digitally signed by
MARK E RAUSCH
Date: 2023.06.08
14:13:06 -07'00'

8. AFS ACTIONS:

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

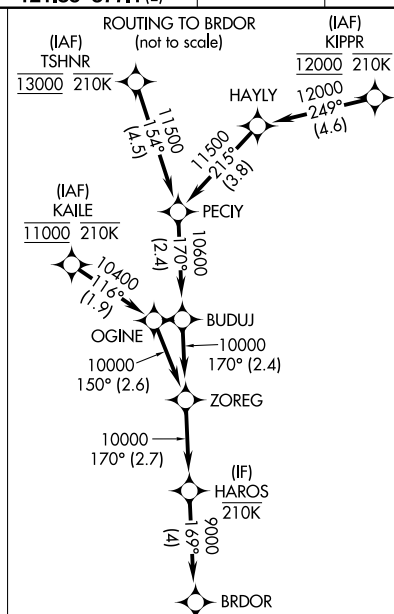
DATE	ROUTING SYMBOL	SIGNATURE
		Wade Terrell Signed By: Wade Terrell Mon Aug 21 2023 10:23:35 GMT-05:00:00 (Central Standard Time)

FIG

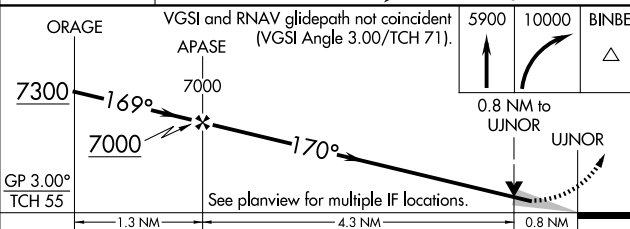
RNAV (GPS) Y RWY 16R
DENVER INTL (DEN)

MISSED APPROACH: Climb to 5900 then climbing right turn to 10000 direct BINBE and hold, continue climb-in-hold to 10000.

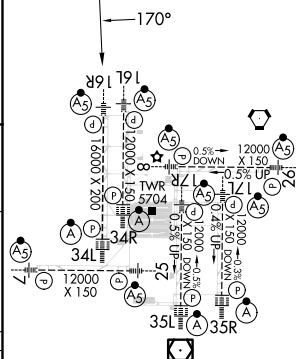
CPDLC



PROTOTYPE:
NOT FOR
NAVIGATION



ELEV 5434	D	TDZE 5326
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HIRL all Rwy's
TDZ/CL Rwy's 7, 16L, 16R, 17R,
26, 34L, 34R, 35L, 35R

DENVER INTL (DEN)

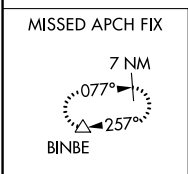
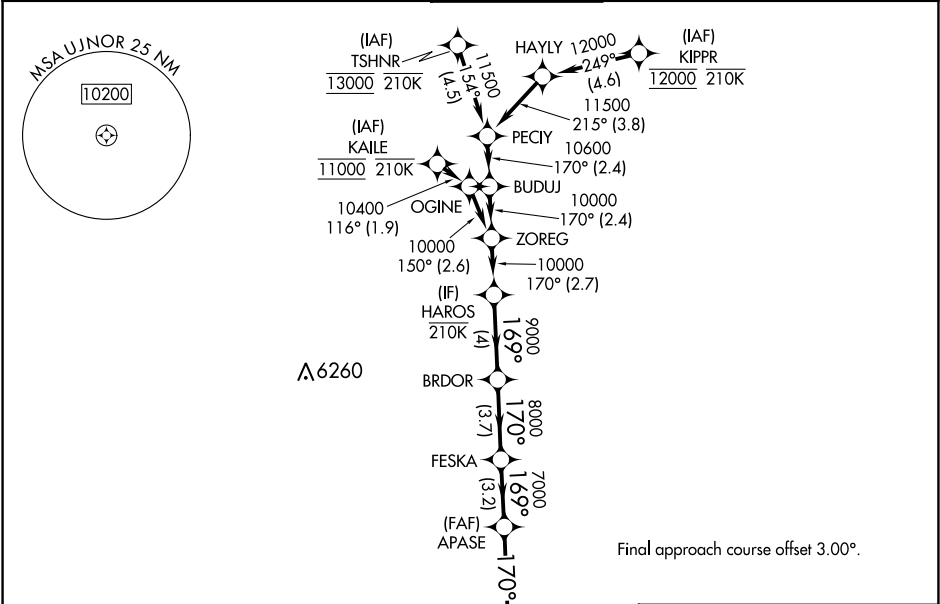
RNAV (GPS) Y RWY 16R

WAAS CH 53546 W16B	APP CRS 170°	Rwy Idg 16000 TDZE 5326 Apt Elev 5434
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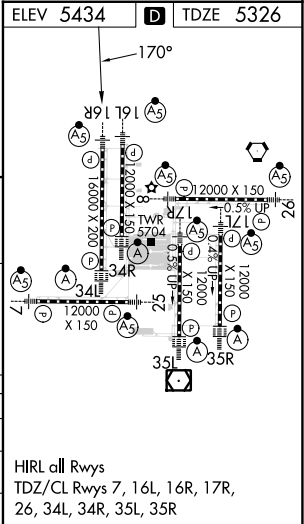
OLD

RNAV (GPS) Y RWY 16R
DENVER INTL (DEN)

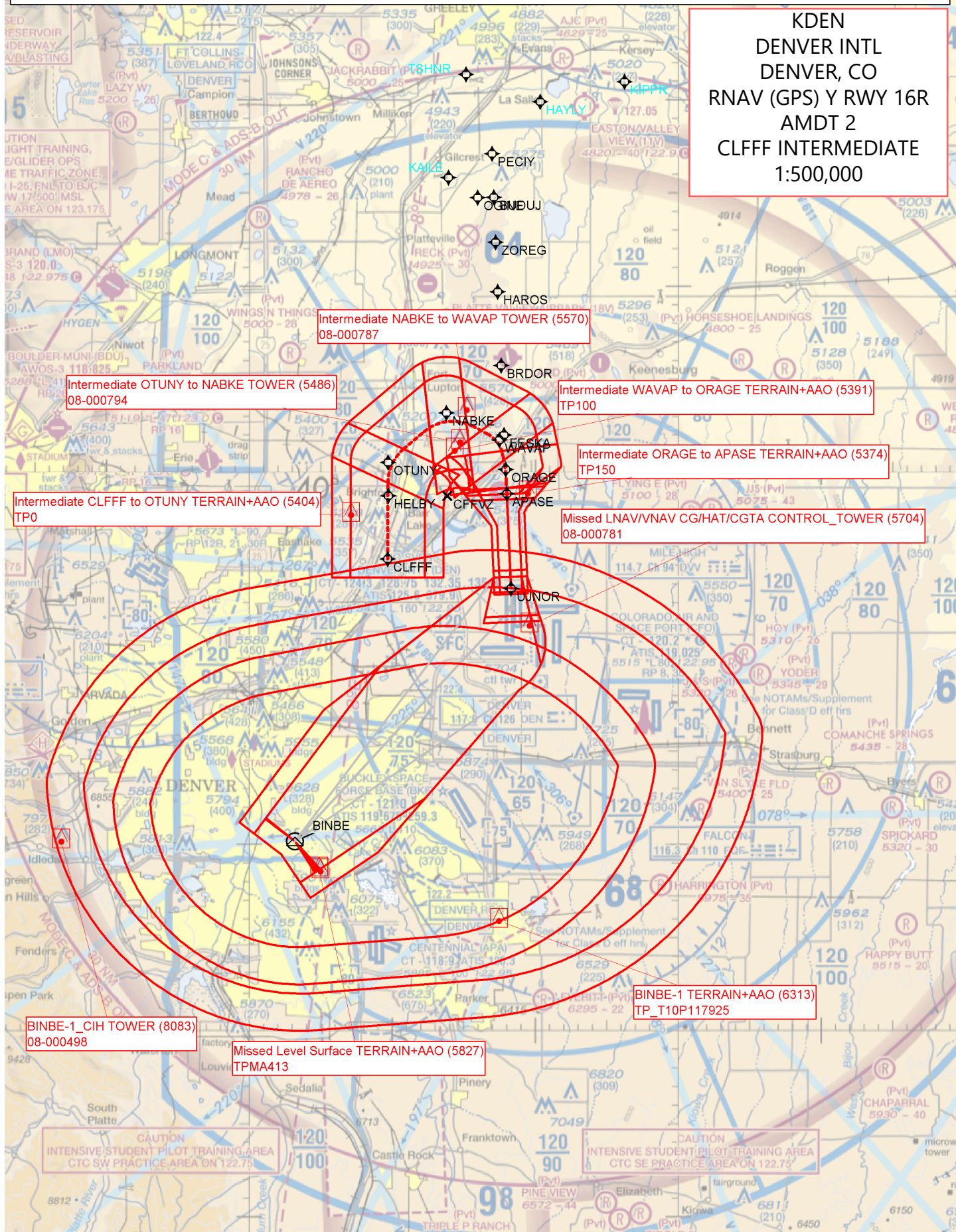
RNP APCH - GPS.			MALSR			MISSED APPROACH: Climb to 5900, then climbing right turn to 10000 direct BINBE and hold, continue climb-in-hold to 10000.		
⚠ LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -24°C or above 54°C. Use of FD or AP required during simultaneous operations. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4000. Simultaneous approach authorized.								
D-ATIS ARR 125.6 379.9 DEP 134.025	DENVER APP CON 119.3 307.3 120.35 379.3 (NORTH) (SOUTH)		DENVER TOWER 135.3 351.95		GND CON 121.35 379.175		CLNC DEL 118.75	CPDLC



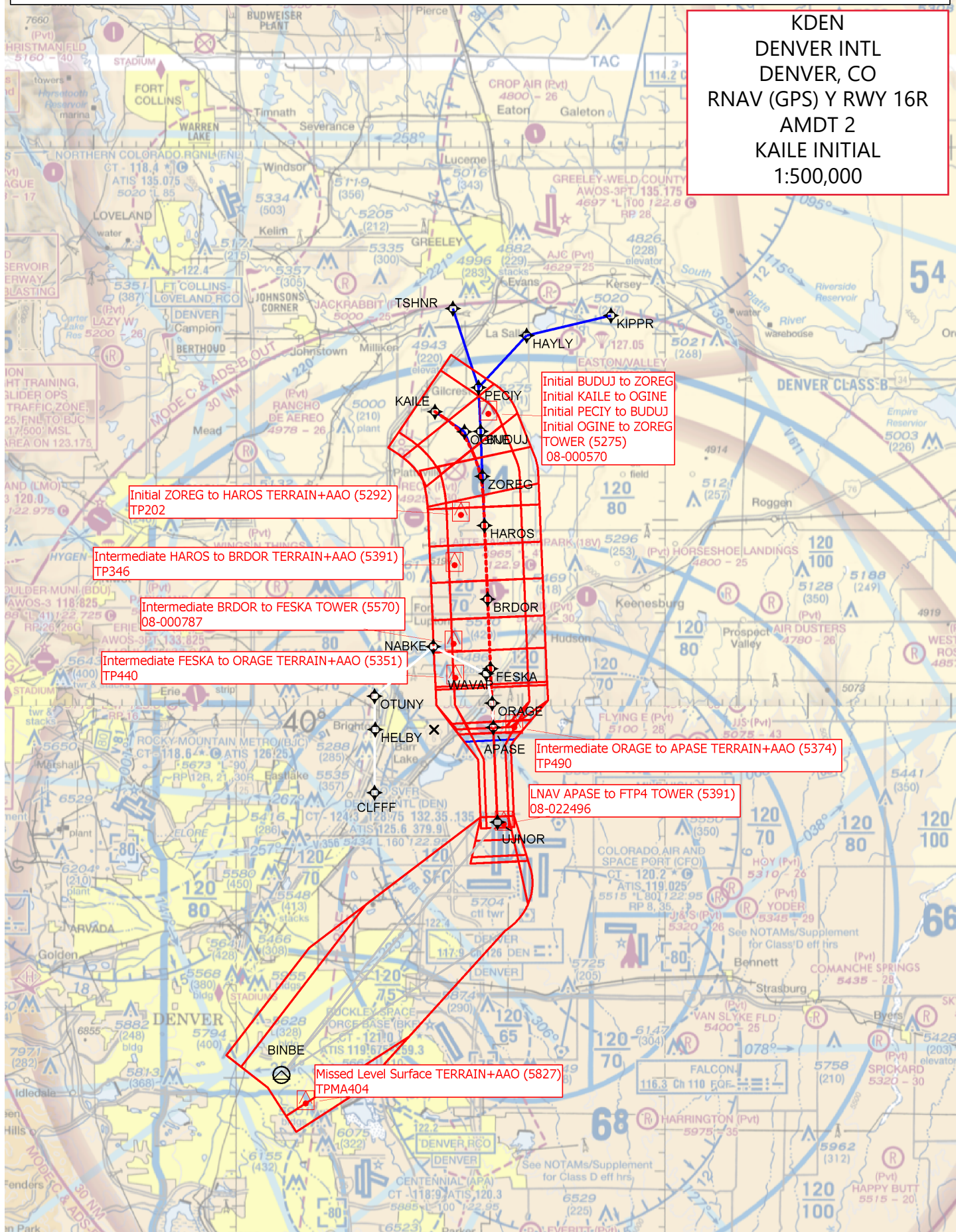
HAROS		VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).		5900	10000	BINBE
10000		BRDOR	FESKA	APASE		
GP 3.00° TCH 55		9000	8000	7000	0.8 NM to UJNOR	
		7000				
		4 NM	3.7 NM	3.2 NM	4.3 NM	0.8
CATEGORY	A	B	C	D		
LPV DA	5576/24		250 (200-½)			
LNAV/VNAV DA	5582/24		256 (200-½)			
LNAV MDA	5660/24	334 (300-½)	5660/26 334 (300-½)			



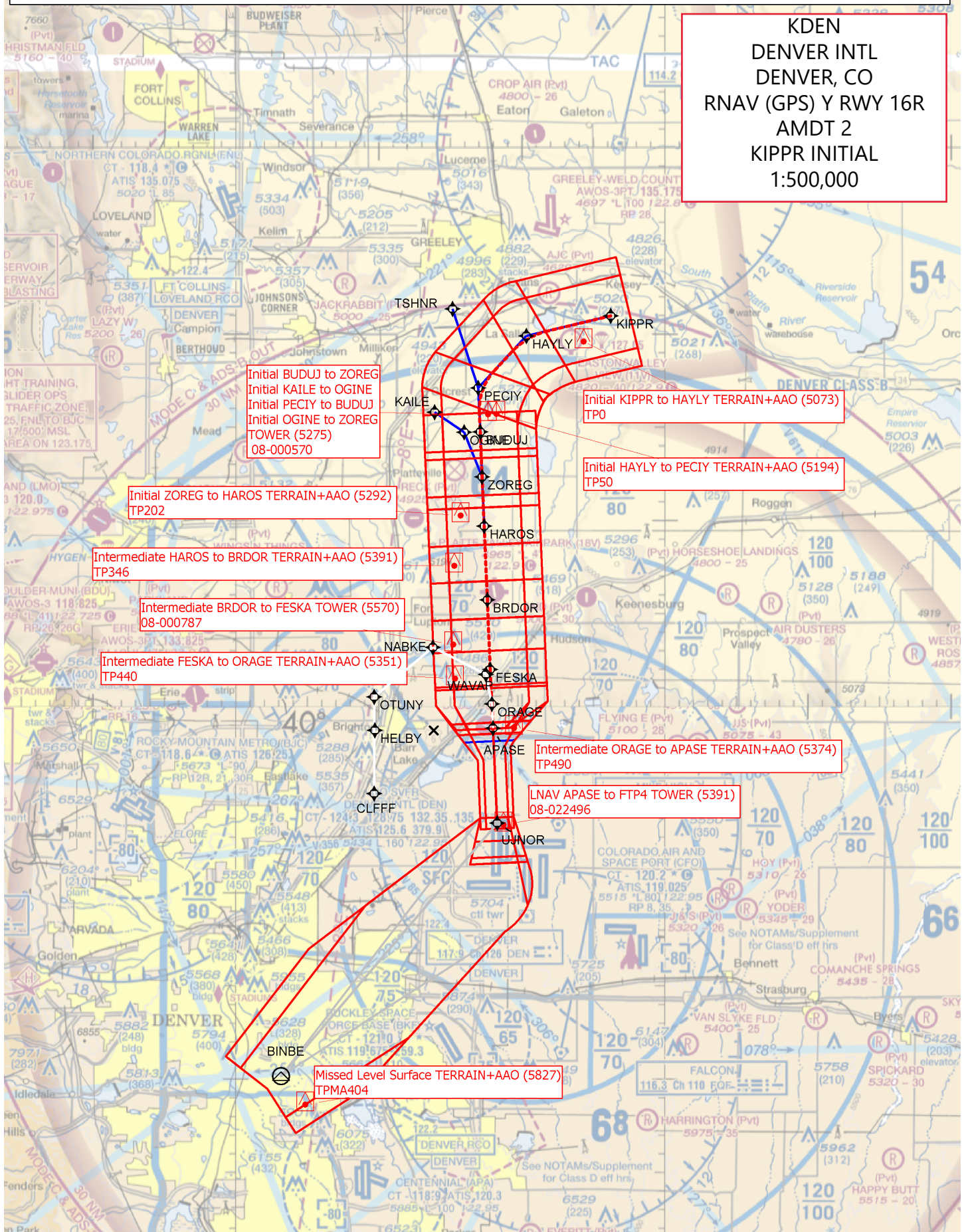
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KDEN
DENVER INTL
DENVER, CO
RNAV (GPS) Y RWY 16R
AMDT 2
KAILE INITIAL
1:500,000



KDEN
DENVER INTL
DENVER, CO
RNAV (GPS) Y RWY 16R
AMDT 2
KIPPR INITIAL
1:500,000



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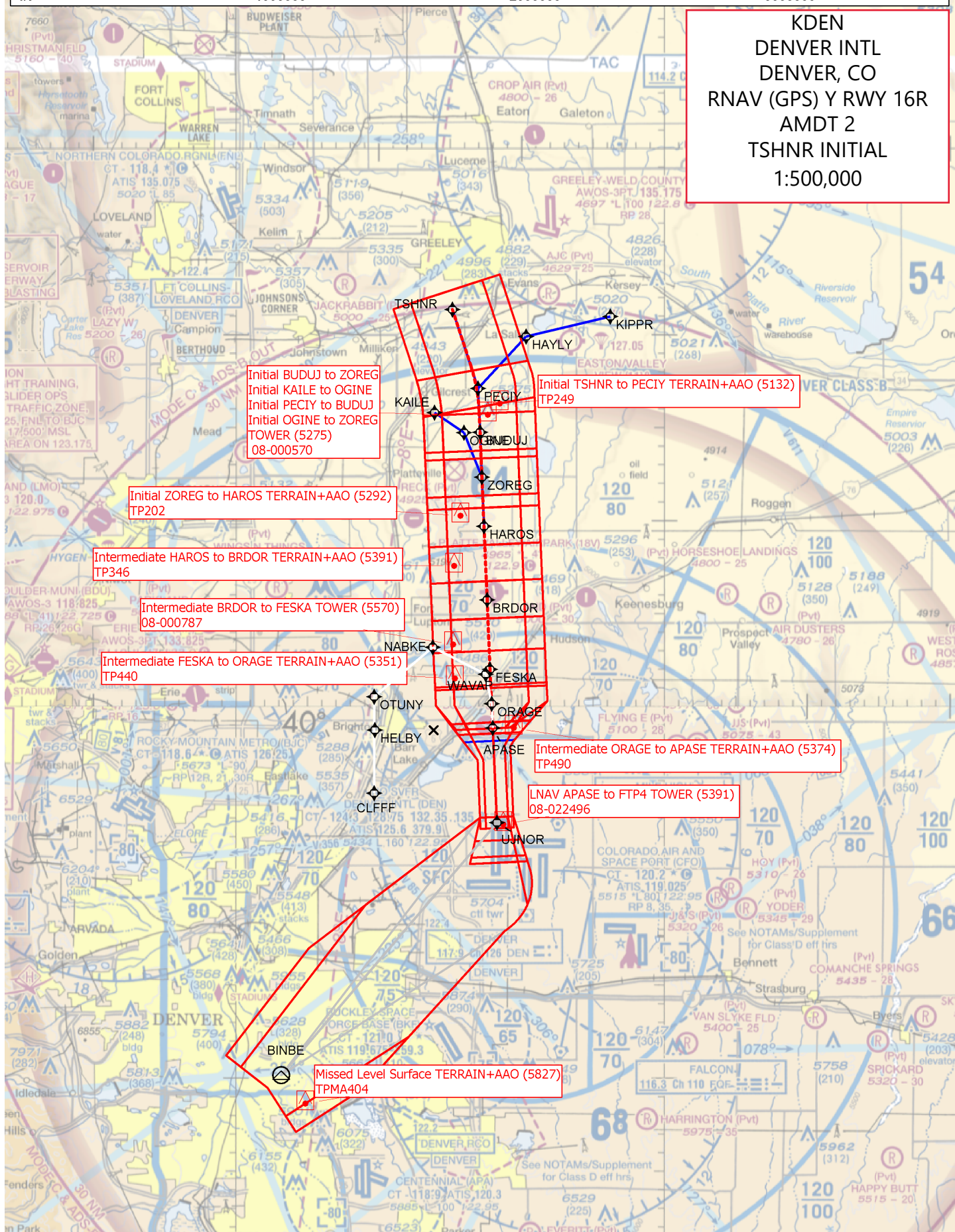
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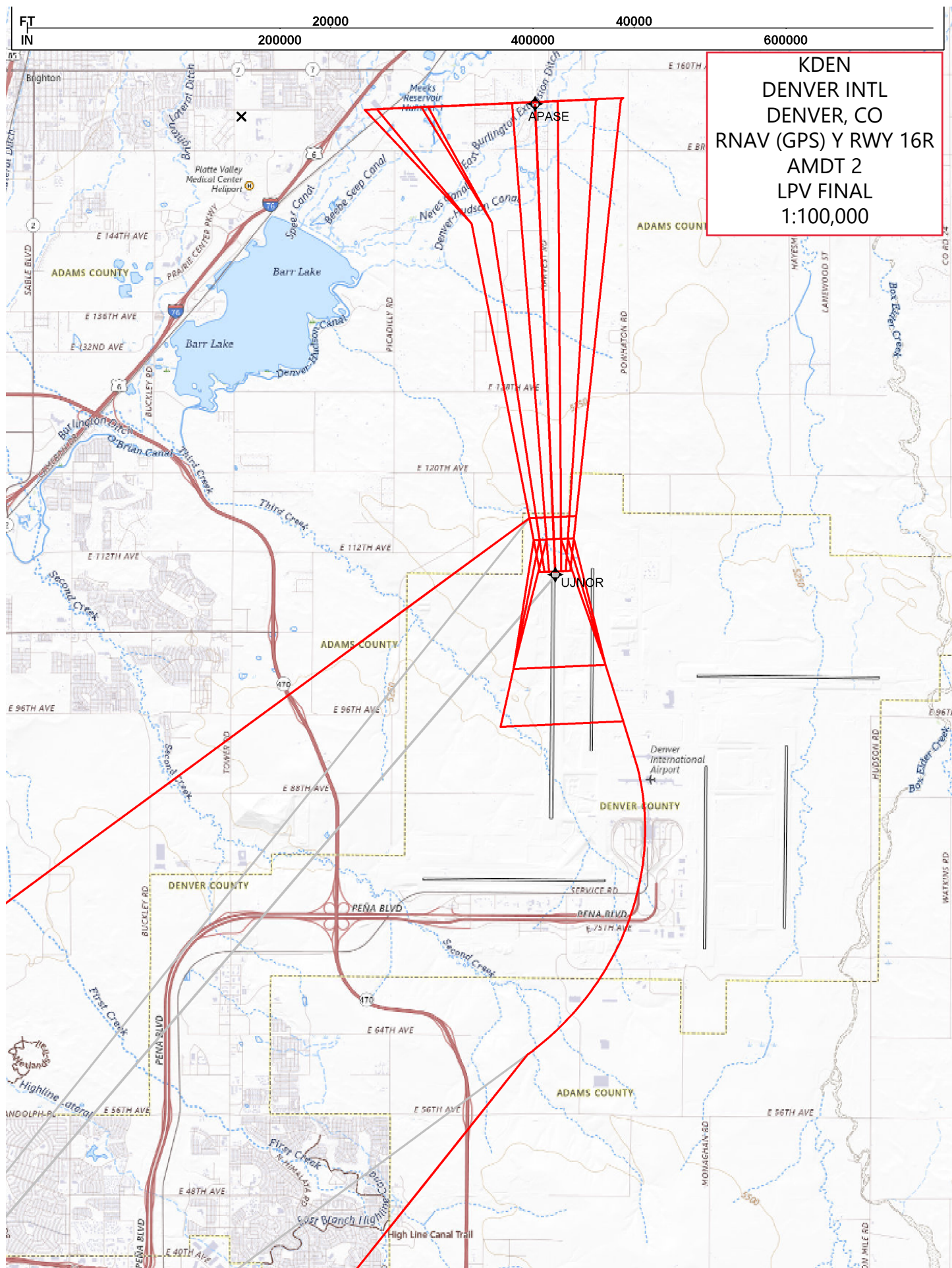
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KDEN
DENVER INTL
DENVER, CO
RNAV (GPS) Y RWY 16R
AMDT 2
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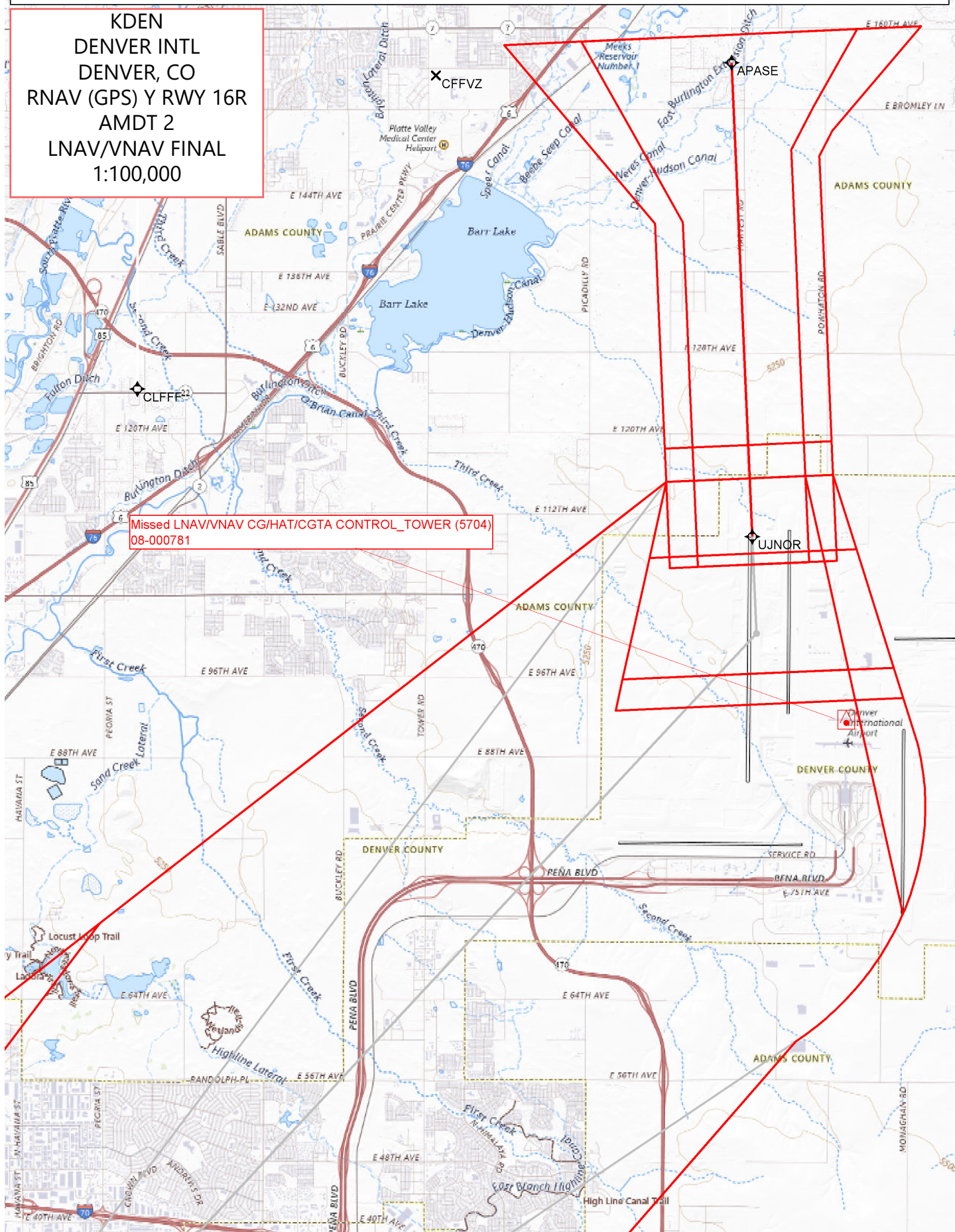
40000

200000

400000

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KDEN
DENVER INTL
DENVER, CO
RNAV (GPS) Y RWY 16R
AMDT 2
LNAV/VNAV FINAL
1:100,000



Missed LNAV/VNAV CG/HAT/CGTA CONTROL_TOWER (5704)
08-000781

