

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 06/12/2025	APWS Task ID: 7F18D209C0EA40228E4F1841B5CEA85F	APWS Project ID: 23F35FAB7F5B42598FBEFBCB3CCC8251
Procedure: OAKES (RNAV) THREE ARRIVAL		Enroute: YES	Specialist: Damron, Todd		Agreement Number:
Airport ID: KOAK			Airport City: OAKLAND		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments: PROCEDURE REDESIGNED PER PBN.  WAIVER FOR SPEED RESTRICTION AT FFIST AND LOHGN  POC: ALLAN WILL (AJV-A423), 405-954-6103   01/14/25: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/2/24. 1. SPEED RESTRICTION 210 CHANGED TO 200 KIAS AT FIX FFIST/LOHGN</div> <div><div>02/10/2025</div><div>QUALITY 14 CHECKED</div><div>QUALITY 41 CHECKED</div></div>					

<b>FIPC DME/DME FORM</b>						
<b>PROCEDURE:</b> STAR OAKES THREE (RNAV) OAKLAND CA KOAK			<b>AIRPORT NAME:</b> SAN FRANCISCO BAY OAKLAND		<b>AIRPORT ID:</b> KOAK	<b>SPECIAL CONTROL NO:</b> SG-12-267-24
<b>FAC ID:</b> OAKES3		<b>CITY:</b> OAKLAND			<b>ST:</b> CA	<b>ORIG CHART DATE:</b> 04/17/2025
<b>DFL TYPE:</b> PROC/D	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 1.0	<b>REIMB. NUMBER:</b>	<b>PTS TASK ID:</b> 7F18D209C0EA40228E4F1841B5CEA85F		
<b>PREFLIGHT NOTES</b>						
<b>REVIEWER:</b> joseph r jaquish					<b>DATE:</b> 01/22/2025	
<b>COMMENTS:</b> Flight check required to assess DME/DME performance and flyability of procedure.					<b>CHECK ONE:</b> <input checked="" type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT <div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 2px;"> <span></span> <span>YES</span> <span>NO</span> </div>	
					<b>CPV COMPLETE?</b> <input checked="" type="checkbox"/> X	
<b>PROCEDURE RESULTS</b>						
<b>INSPECTION DATE:</b> 01/22/2025	<b>CREW #:</b> VN571	<b>N #:</b> N76	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
<b>FLIGHT INSPECTOR SIGNATURE:</b> joseph r jaquish @ 01/22/2025 20:05			<b>PRINTED NAME:</b> JAQUISH, JOSEPH RICHARD			<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b> Sat, nothing significant to report. Procedure Satisfactory for GNSS operations, DME/ DME awaiting AFS/ WAJR approval						
<b>DME/DME STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> UNSAT	<b>SPECIALIST SIGNATURE:</b> mark a-ctr tellier @ 02/27/2025 10:34				<b>PRINTED NAME:</b> Mark Tellier	
<b>SPECIALIST REMARKS:</b> No new ESVs Required.						
<b>IN-FLIGHT OBSTACLE REPORT</b>						
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>	<b>GNSS ALTITUDE (MSL):</b>	<b>BAROMETRIC ALTITUDE (MSL):</b>	<b>HEIGHT ABOVE GROUND LEVEL:</b>		

<b>FIPC DME/DME FORM</b>							
<b>PROCEDURE:</b> STAR OAKES THREE (RNAV) OAKLAND CA KOAK			<b>AIRPORT NAME:</b> SAN FRANCISCO BAY OAKLAND		<b>AIRPORT ID:</b> KOAK	<b>SPECIAL CONTROL NO:</b> SG-12-267-24	
<b>FAC ID:</b> OAKES3		<b>CITY:</b> OAKLAND			<b>ST:</b> CA	<b>ORIG CHART DATE:</b> 04/17/2025	
<b>DFL TYPE:</b> PROC/D	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 1.0	<b>REIMB. NUMBER:</b>		<b>PTS TASK ID:</b> 7F18D209C0EA40228E4F1841B5CEA85F		
<b>PREFLIGHT NOTES</b>							
<b>REVIEWER:</b> joseph r jaquish					<b>DATE:</b> 01/22/2025		
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<b>PROCEDURE RESULTS</b>							
<b>INSPECTION DATE:</b> 01/22/2025		<b>CREW #:</b> VN571	<b>N #:</b> N76	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
<b>FLIGHT INSPECTOR SIGNATURE:</b> joseph r jaquish @ 01/22/2025 20:05			<b>PRINTED NAME:</b> JAQUISH, JOSEPH RICHARD				<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b> Sat, nothing significant to report. Procedure Satisfactory for GNSS operations, DME/ DME awaiting AFS/ WAJR approval							
<b>DME/DME STATUS:</b> <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT		<b>SPECIALIST SIGNATURE:</b>			<b>PRINTED NAME:</b>		
<b>SPECIALIST REMARKS:</b>							
<b>IN-FLIGHT OBSTACLE REPORT</b>							
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>		<b>GNSS ALTITUDE (MSL):</b>		<b>BAROMETRIC ALTITUDE (MSL):</b>		<b>HEIGHT ABOVE GROUND LEVEL:</b>

**1. FLIGHT PROCEDURE IDENTIFICATION:**

Oakland, CA  
San Francisco Bay Oakland International Airport (KOAK)  
OAKES RNAV STAR

**2. WAIVER REQUIRED AND APPLICABLE STANDARD:**

Request a waiver to use 200 KIAS design airspeed on a STAR. FAA Order 8260.58C, paragraph 1-2-5, Table 1-2-2, Indicated Airspeeds (KIAS) for a STAR reflects a minimum design speed of 210 KIAS below 10000' MSL for Category D aircraft.

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

NCT has received multiple ATSAPs concerning speeds below Bravo airspace. We have and continue to encounter variations in pilot application. Some pilots question ATC if they need to slow if the speed is not published on their route. Some pilots slow at the first fix under the Bravo, some slow as they are traversing under Bravo, while others begin slowing prior to flying underneath Bravo airspace in anticipation of encountering it. These varying applications and unpredictability cause compression issues for the controllers and pilots. Standard and predictable slowing will lead to increased safety and efficiency.

Fix: LOHGN: SPEED RESTRICTION 200KTS: ALTITUDE (Mandatory 6000)

Fix: FFIST: SPEED RESTRICTION 200KTS: ALTITUDE (8000-9000)

- In the instance the aircraft is at 7000, they are now below the Class Bravo Airspace.

**4. EQUIVALENT LEVEL OF SAFETY PROVIDED:**

The STAR was designed with Industry input and has their endorsement based on various aircraft flight simulator results. Slowing to 200 KIAS prior to the BRAVO prevents unpredictable speed reductions that result in overtakes.

**5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:**

Alternatives were considered however none were feasible due the need for slower, and consistent airspeeds when entering the terminal environment in order for ATC to safely sequence aircraft for multiple airport and arrival runway operations.

**6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):**

Flight Standards

**7. SUBMITTED BY:**

DATE	OFFICE IDENTIFICATION	TITLE
01/17/25	AJV A42	MGR

**SIGNATURE**

*Digitally signed by*

**ALLAN WILL**

Feb 18, 2025

**8. AFS ACTIONS:**

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

**COMMENTS:**

DATE	ROUTING SYMBOL	SIGNATURE
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Airport ID: KOAK			Airport City: OAKLAND		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments: PROCEDURE REDESIGNED PER PBN.  POC: ALLAN WILL (AJV-A423), 405-954-6103</div> <div><div>QUALITY 41 CHECKED</div><div>12/19/2024 QUALITY 14 CHECKED</div></div>					

## ESV Details

Originating Office :AJV-S3 (PBN)		Airspace Docket Number :		Request Type :Establish		
<b>Facility Data</b>						
Chart Name:MINA		City:MINA		Ident:MVA		State:NV
Type/Class: TACAN		Frequency: M1185		Reference Number: 24096179		
<b>Extended Service Volume Data: (Requesting Officer)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	
FAA 702652 - 074	205	237	66	180	224	
Requirement: KOAK, KHWD OAKES STAR MITIGATE CRITICAL DME						
Signature:Tellier Mark		Routing Symbol:AJV-W24				Date:09/04/2024
<b>Extended Service Volume Data: (FMO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 702652 - 074	205	237	66	180	224	APPROVE
Requirement/Remarks: KOAK, KHWD OAKES STAR MITIGATE CRITICAL DMEAPPROVED. FREQ. PROTECTION & FIELD STRENGTH. PENDING FLIGHT INSPECT @ REQUIRED. DIST. & MIN ALT..						
Signature:HEPSEN JOHN		Routing Symbol:			Date:09/06/2024	
<b>Extended Service Volume Data: (FIFO)</b>						
ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 702652 - 074	205	237				
Requirement/Remarks:						
Signature:		Routing Symbol:			Date:	

NORCAL APP CON  
124.8 263.15  
HWD ATIS  
126.7  
OAK D-ATIS  
133.775

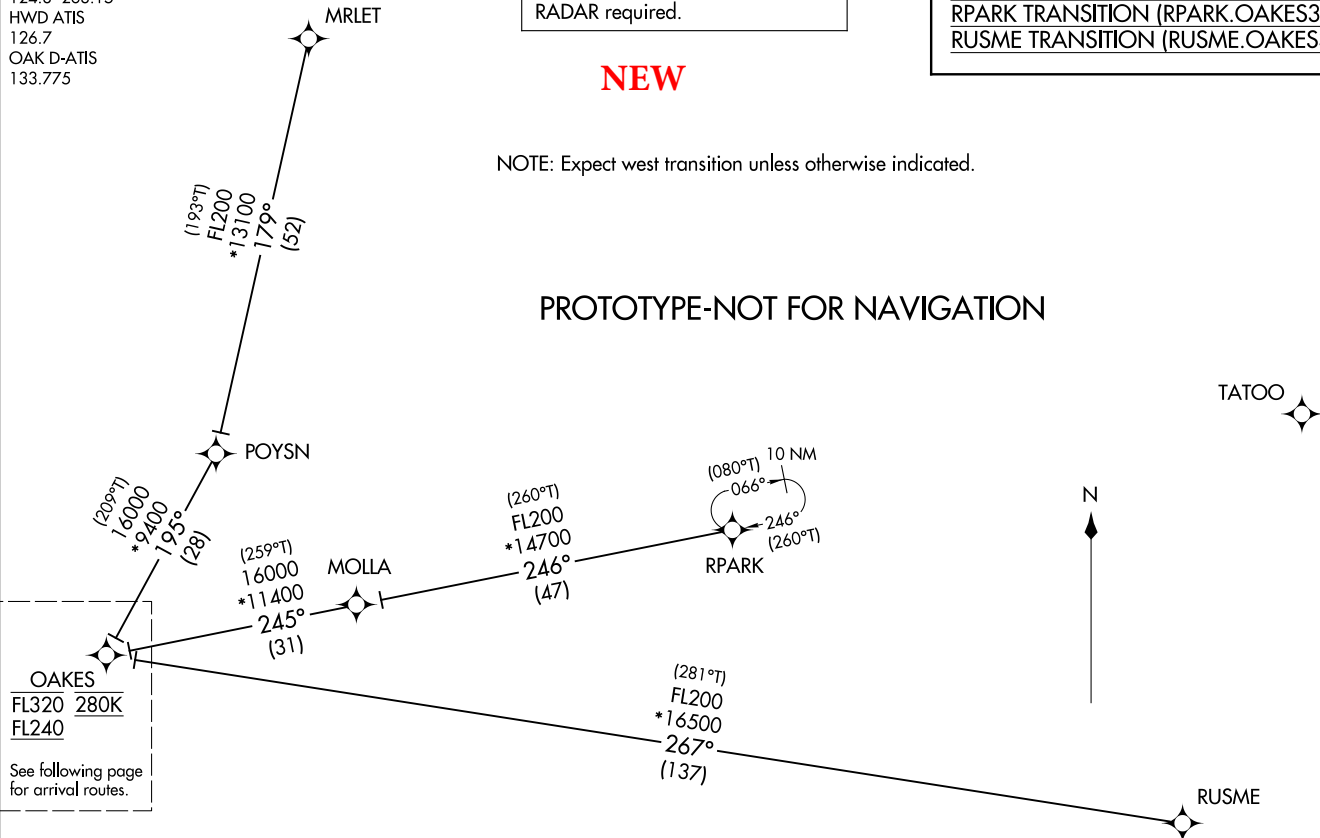
RNAV 1 - DME/DME/IRU or GPS.  
RADAR required.

MRLET TRANSITION (MRLET.OAKES3)  
RPARK TRANSITION (RPARK.OAKES3)  
RUSME TRANSITION (RUSME.OAKES3)

NEW

NOTE: Expect west transition unless otherwise indicated.

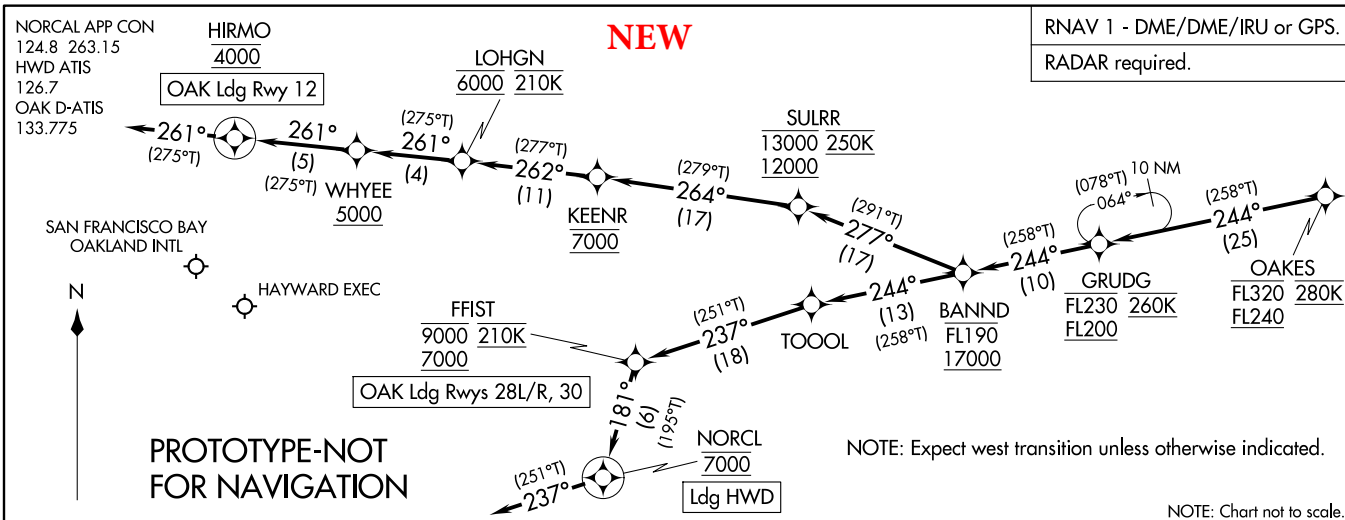
PROTOTYPE-NOT FOR NAVIGATION



See following page  
for arrival routes.

NOTE: Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)



#### ARRIVAL ROUTE DESCRIPTION

**OAK:** From OAKES on track 244° to cross GRUDG between FL200 and FL230 and at 260K, then on track 244° to cross BANND between 17000 and FL190.

**LANDING OAK RUNWAY 12:** From BANND on track 277° to cross SULRR between 12000 and 13000 and at 250K, then on track 264° to cross KEENR at 7000, then on track 262° to cross LOHGN at 6000 and at 210K, then on track 261° to cross WHYEE at or above 5000, then on track 261° to cross HIRMO at 4000, then on track 261°. Expect RNAV (RNP) Z Rwy 12 approach or RADAR vectors to final approach course.

**LANDING OAK RUNWAYS 28L/R, 30:** From BANND on track 244° to TOOO, then on track 237° to cross FFIST between 7000 and 9000 and at 210K. Expect ILS or RNAV approach Rwy 28L/R, 30 approach.

**LANDING HWD:** From OAKES on track 244° to cross GRUDG between FL200 and FL230 and at 260K, then on track 244° to cross BANND between 17000 and FL190, then on track 244° to TOOO, then on track 237° to cross FFIST between 7000 and 9000 and at 210K, then on track 181° to cross NORCL at 7000, then on track 237°. Expect RADAR vectors to final approach course.

# CURRENT

MONOH TRANSITION (MONOH.OAKES2)  
MRLET TRANSITION (MRLET.OAKES2)  
RUSME TRANSITION (RUSME.OAKES2)

NOTE: RADAR required.  
NOTE: RNAV 1.  
NOTE: DME/DME/IRU or GPS required.

INSLO

TATOO



MONOH

FL200  
246°  
(47)

MOLLA

16000  
\*11400  
245°  
(31)

16000  
\*9400  
195°  
(28)

FL200  
\*11100  
179°  
(52)

MRLET

POYSN

OAKLAND CENTER  
134.37 281.5  
NORCAL APP CON  
124.8 263.15  
D-ATIS  
133.775  
OAKLAND TOWER  
118.3 291.65 (Rwys 28L/R)  
127.2 256.9 (Rwy 30)  
GND CON  
121.9 (Rwys 28L/R)  
121.75 (Rwy 30)

OAKES  
FL320 280K  
FL240  
See following page  
for Arrival Routes.

RUSME

FL200  
\*16500  
267°  
(137)

(CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.

OAKES TWO ARRIVAL (RNAV) Transition Routes  
(OAKES.OAKES2) 150CT15  
SAN FRANCISCO BAY OAKLAND INTL (OAK)

(OAKES.OAKES2) 24249  
AL-294 (FAA)  
SAN FRANCISCO BAY OAKLAND INTL (OAK)  
OAKLAND, CALIFORNIA  
OAKES TWO ARRIVAL (RNAV) Transition Routes

# CURRENT

## ARRIVAL ROUTE DESCRIPTION

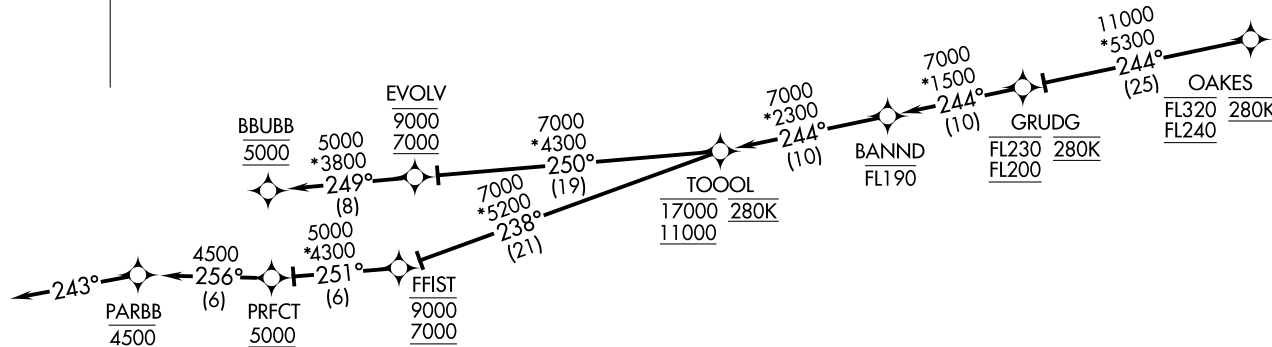
From OAKES on track 244° to cross GRUDG between FL200 and FL230 and at 280K, then on track 244° to cross BANND at or below FL190.

LANDING RUNWAYS 28L/R: From BANND on track 244° to cross TOOOL between 11000 and 17000 and at 280K, then on track 250° to cross EVOLV between 7000 and 9000, then on track 249° to cross BBUBB at 5000. Expect assigned instrument approach procedure.

LANDING RUNWAY 30: From BANND on track 244° to cross TOOOL between 11000 and 17000 and at 280K, then on track 238° to cross FFIST between 7000 and 9000, then on track 251° to cross PRFCT at or above 5000, then on track 256° to cross PARBB at 4500, then on track 243°. Expect assigned instrument approach procedure.

OAKLAND CENTER  
134.37 281.5  
NORCAL APP CON  
124.8 263.15  
D-ATIS  
133.775  
OAKLAND TOWER  
118.3 291.65 (Rwys 28L/R)  
127.2 256.9 (Rwy 30)  
GND CON  
121.9 (Rwys 28L/R)  
121.75 (Rwy 30)

N

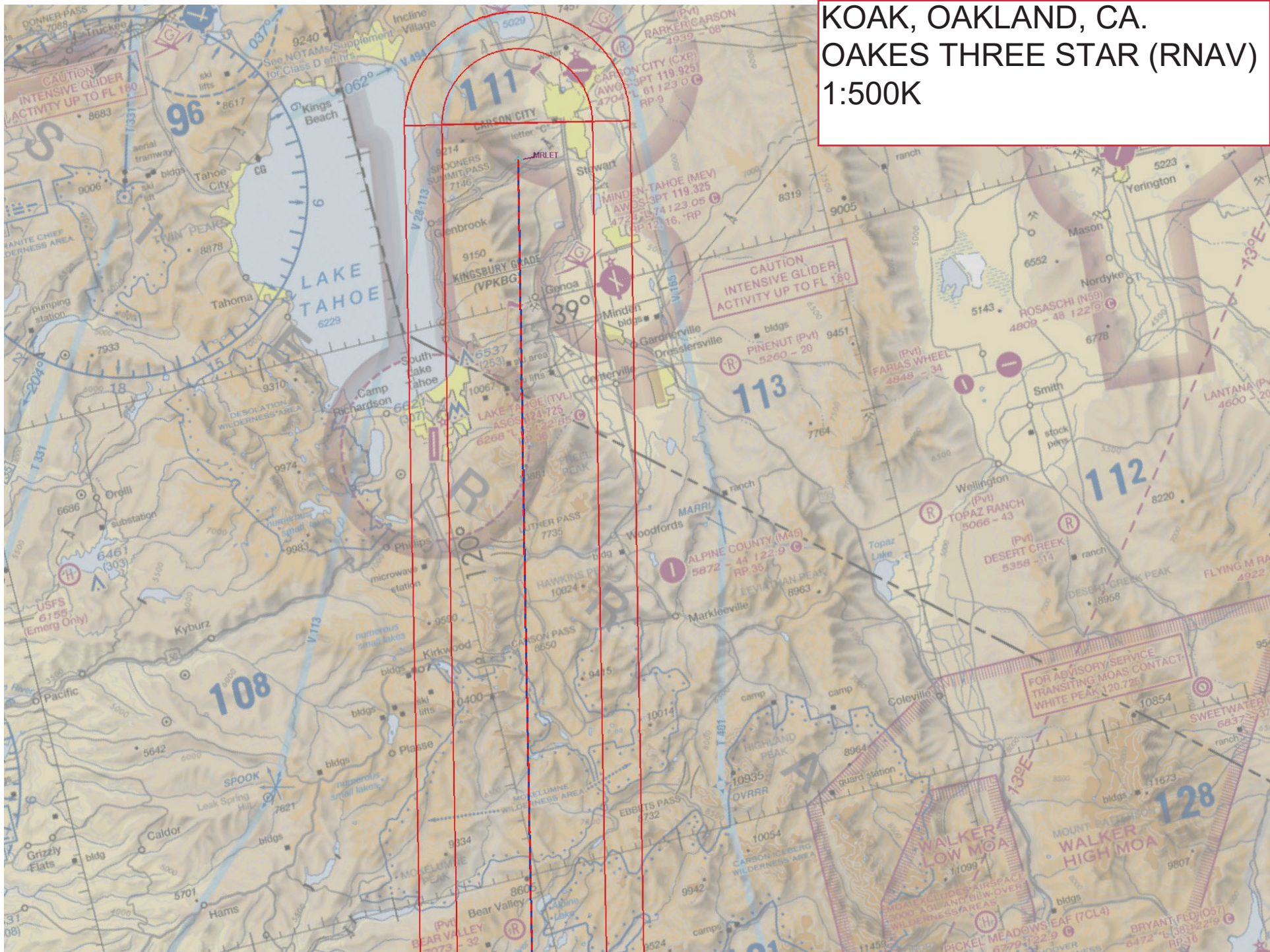


NOTE: RADAR required.  
NOTE: RNAV 1.  
NOTE: DME/DME/IRU or GPS required.

NOTE: Chart not to scale.

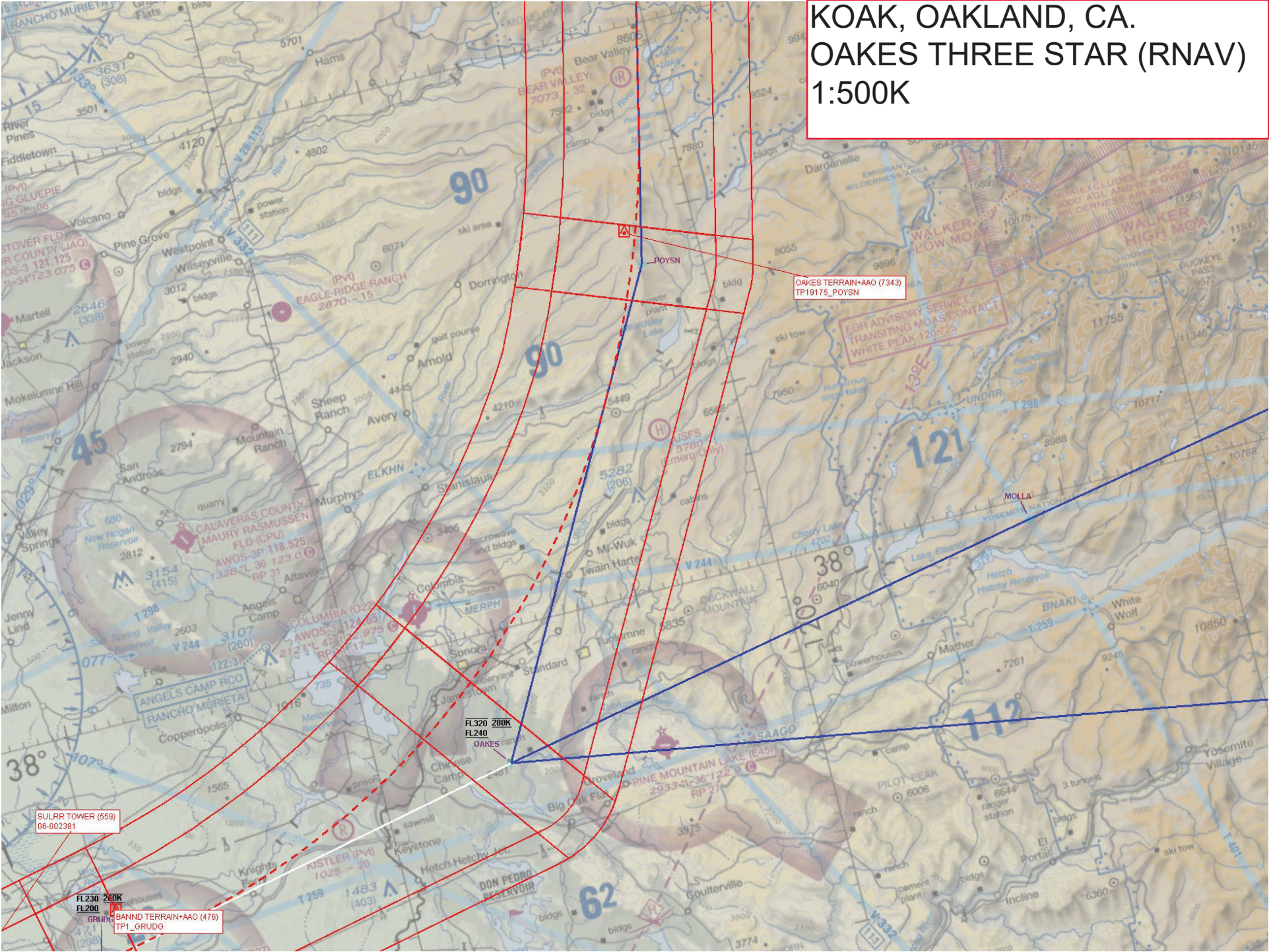


KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K



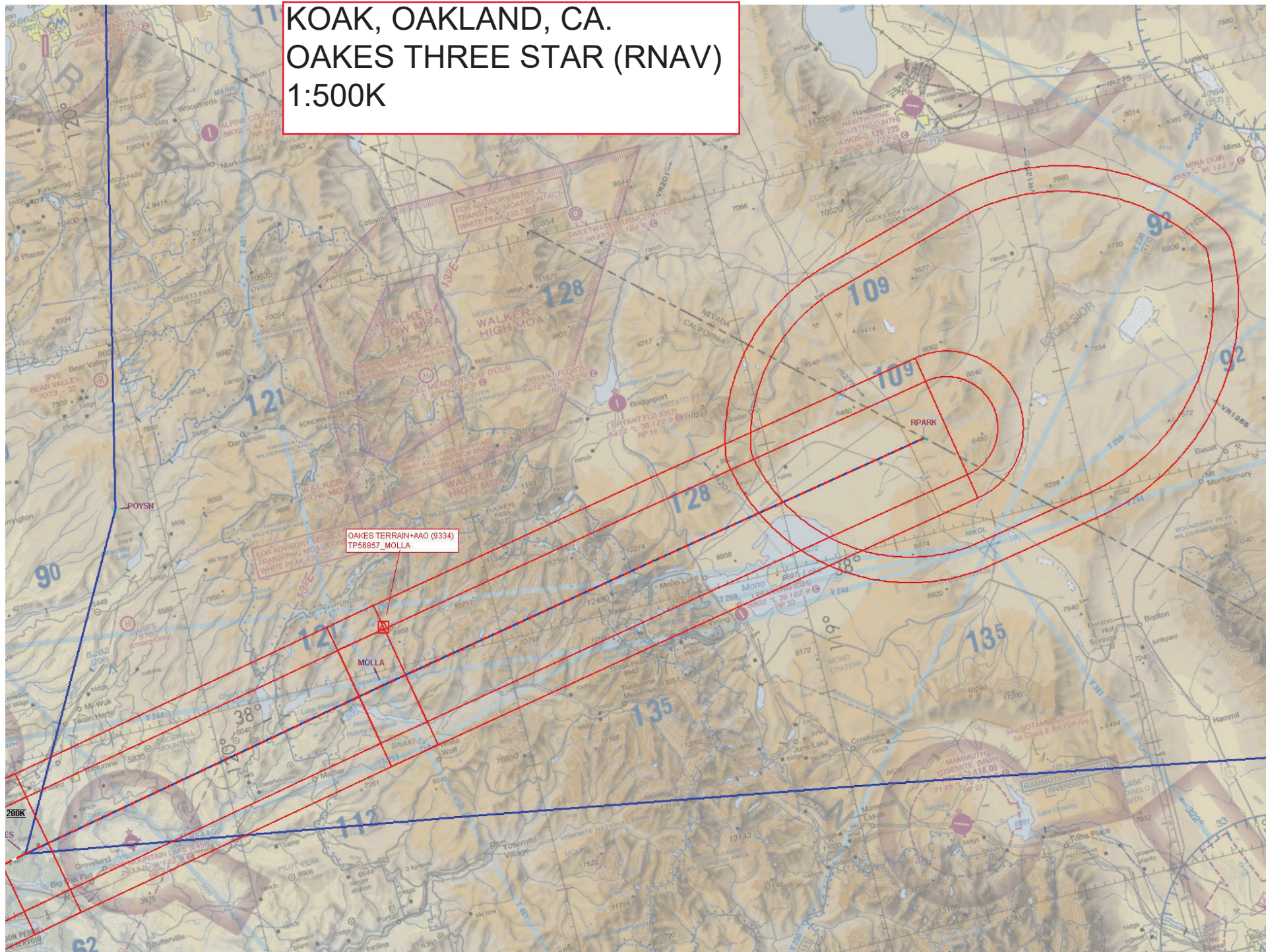


KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K



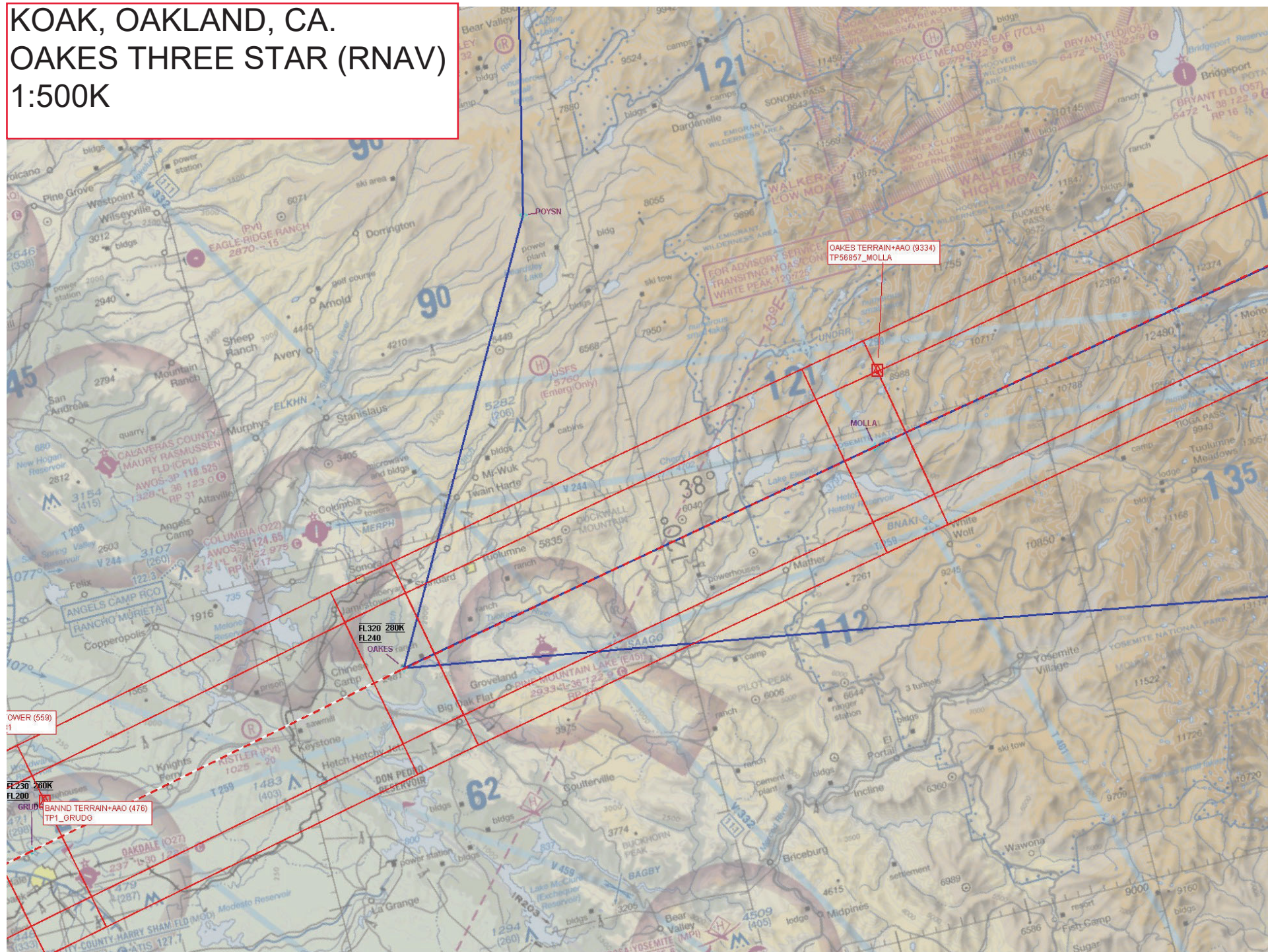


KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K





KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K

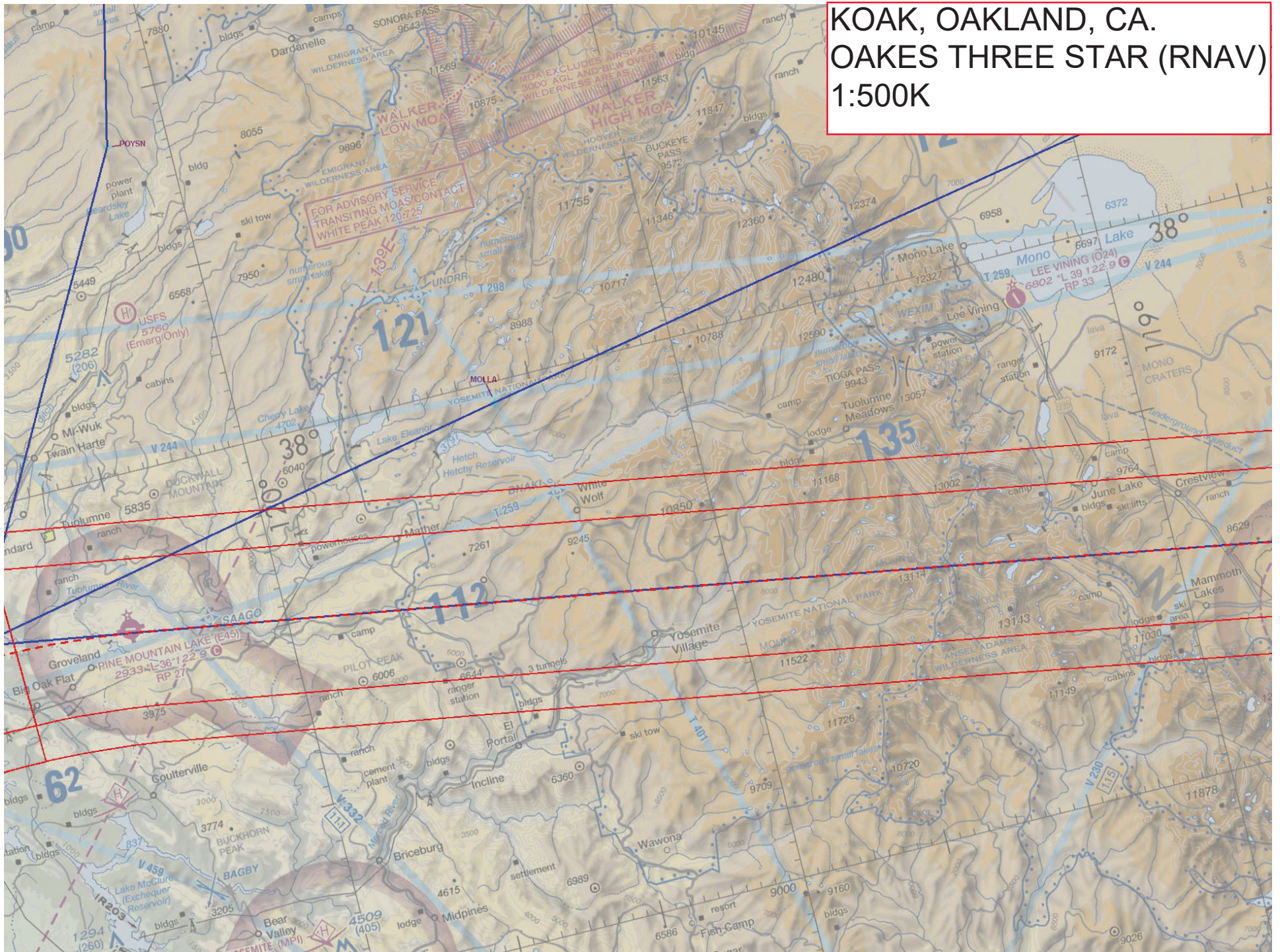






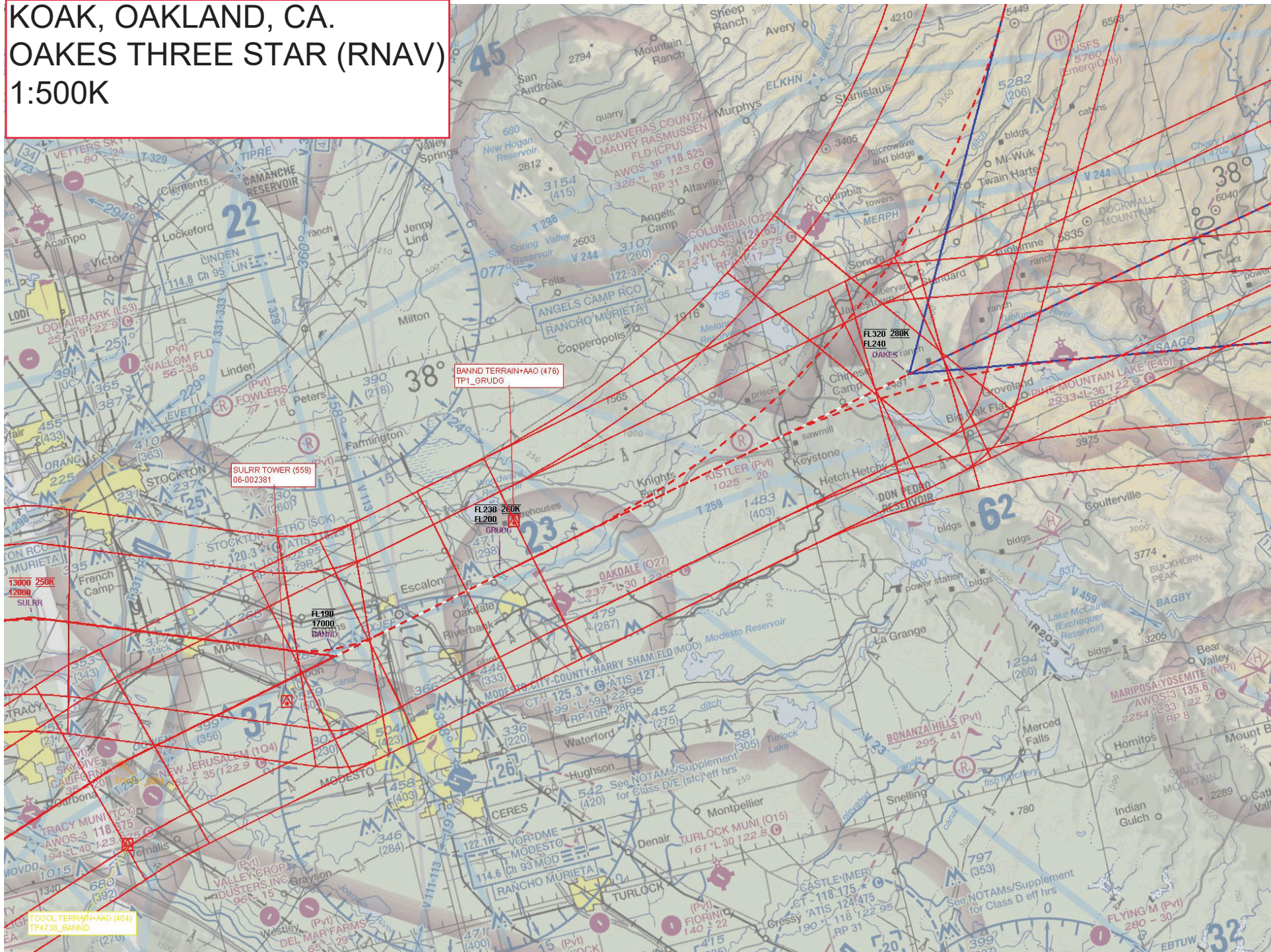


KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K





KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K





KOAK, OAKLAND, CA.  
OAKES THREE STAR (RNAV)  
1:500K

