


Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 03/24/2022	APWS Task ID: 3E7D007D8D894B4F95DD7766FEDC0951	APWS Project ID: 3D3D2FCBE44540DEBE12A168567DD684
Procedure: STAR COKTL TWO (RNAV) LAS VEGAS NV KLAS		Enroute: YES	Specialist: Powell, Dan		Agreement Number:
Airport ID: KLAS		Airport City: LAS VEGAS		State: NV	
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<p>Procedure Comments: LOA (1): LEG LENGTH BAUMM TO ROAMN.</p> <p>CONTACT: DAVE DANNER, 405-954-5077.</p> <div style="text-align: right; margin-top: 20px;"> <i>Digitally signed by</i> MARY MCDONALD 12 Nov 23, 2021 </div> <div style="text-align: right; margin-top: 400px;"> 10/20/2021  </div>					

FIPC DME/DME FORM

PROCEDURE: STAR COKTL TWO (RNAV) LAS VEGAS NV KLAS		AIRPORT NAME: HARRY REID INTL		AIRPORT ID: KLAS	SPECIAL CONTROL NO: SG-12-013-21
FAC ID: COKTL2		CITY: LAS VEGAS		ST: NV	ORIG CHART DATE: 03/24/2022
DFL TYPE: PROC/D	THIRD PARTY: <input type="checkbox"/> YES	EST. TIME ON SITE: 1.0	REIMB. NUMBER:	PTS TASK ID:	

PREFLIGHT NOTES

REVIEWER:	DATE:			
COMMENTS:	CHECK ONE: <input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT			
	<table><tr><td></td><td>YES</td><td>NO</td></tr></table>		YES	NO
		YES	NO	
CPV COMPLETE?	<table><tr><td>X</td><td></td></tr></table>	X		
X				

PROCEDURE RESULTS

INSPECTION DATE: 12/14/2021	CREW #: VN235	N #:	INSTRUMENT PROCEDURE STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT	ARINC CODING: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT
FLIGHT INSPECTOR SIGNATURE: thomas e molokie @ 12/14/2021 10:50		PRINTED NAME: MOLOKIE, THOMAS EDWARD		NOTAM INITIATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FLIGHT INSPECTOR REMARKS: Table Top review satisfactory.				
DME/DME STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> UNSAT	SPECIALIST SIGNATURE: bob ctr graham @ 12/16/2021 16:32		PRINTED NAME: Bob Graham	
SPECIALIST REMARKS: No changes to DME requirements from COKTL ONE.				

IN-FLIGHT OBSTACLE REPORT

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

PROCEDURE: STAR COKTL TWO (RNAV) LAS VEGAS NV KLAS		AIRPORT NAME: HARRY REID INTL		AIRPORT ID: KLAS	SPECIAL CONTROL NO: SG-12-013-21
FAC ID: COKTL2		CITY: LAS VEGAS		ST: NV	ORIG CHART DATE: 03/24/2022
DFL TYPE: PROC/D	THIRD PARTY: <input type="checkbox"/> YES	EST. TIME ON SITE: 1.0	REIMB. NUMBER:	PTS TASK ID:	

PREFLIGHT NOTES

REVIEWER:	DATE:
COMMENTS:	CHECK ONE: <input type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT
	<input type="checkbox"/> YES <input type="checkbox"/> NO
	CPV COMPLETE? <input checked="" type="checkbox"/> X <input type="checkbox"/>

PROCEDURE RESULTS

INSPECTION DATE: 12/14/2021	CREW #: VN235	N #:	INSTRUMENT PROCEDURE STATUS: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT	ARINC CODING: <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT
FLIGHT INSPECTOR SIGNATURE: thomas e molokie @ 12/14/2021 10:50			PRINTED NAME: MOLOKIE, THOMAS EDWARD	NOTAM INITIATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FLIGHT INSPECTOR REMARKS: Table Top review satisfactory.				
DME/DME STATUS: <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT	SPECIALIST SIGNATURE:			PRINTED NAME:

SPECIALIST REMARKS:

IN-FLIGHT OBSTACLE REPORT

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

Memorandum

Date: August 16, 2021

To: Manager, Flight Procedures and Airspace Group (AFS-420)
THRU: Manager, Flight Procedures Team, FAA, ATO Western Service
Center, Operations Support Group, AJV-W24

From: Mark Phipps, Las Vegas Metroplex Project Manager

Subject: Approval Request: Harry Reid Intl Airport, Las Vegas, NV (KLAS),
JAYSN/RNDRZ/COKTL Standard Terminal Arrivals (STARs)

Requesting approval for a leg length of 5.03 NM from BAUMM to ROAMN.

The requirement in Order 8260.3D, paragraph 2-2-10 states:

“Sufficient distance and a reduced descent gradient are required prior to any fix with a speed restriction.”

Paragraph 2-2-10.b states:

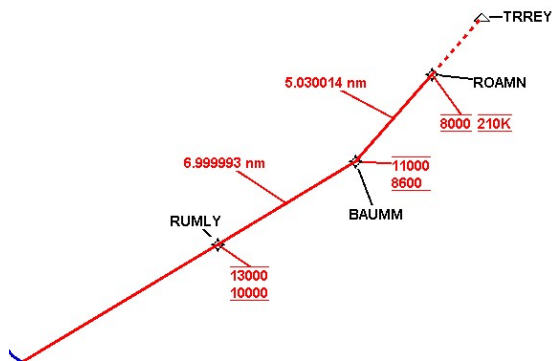
“When descent is permitted, the descent gradient leading to the fix with the speed restriction must be reduced. Apply formula 2-2-2 to determine the minimum deceleration distance required before the fix; the greater distance leads to a reduced descent gradient.”

When *Formula 2-2-2. Minimum Deceleration Distance (NM)* is applied; the required distance equals 6.4 NM (Descent Gradient 330 FT/NM) from BAUMM 8600B11000 to ROAMN AT 8000 and AT 210 KIAS. However, a total distance of 5.030014 NM (Descent Gradient 330 FT/NM) is adequate for deceleration on this STAR segment. Additionally, Industry simulation showed no difficulty in achieving the required altitude and speed restrictions.

There is an operational need to have the JAYSN, RNDRZ, and COKTL STARs operate between the altitudes and speeds as designed into the procedure due to ATC separation requirements.



JAYSN/RNDRZ/COKTL STAR
RWYs 01L/R, TRANSITION



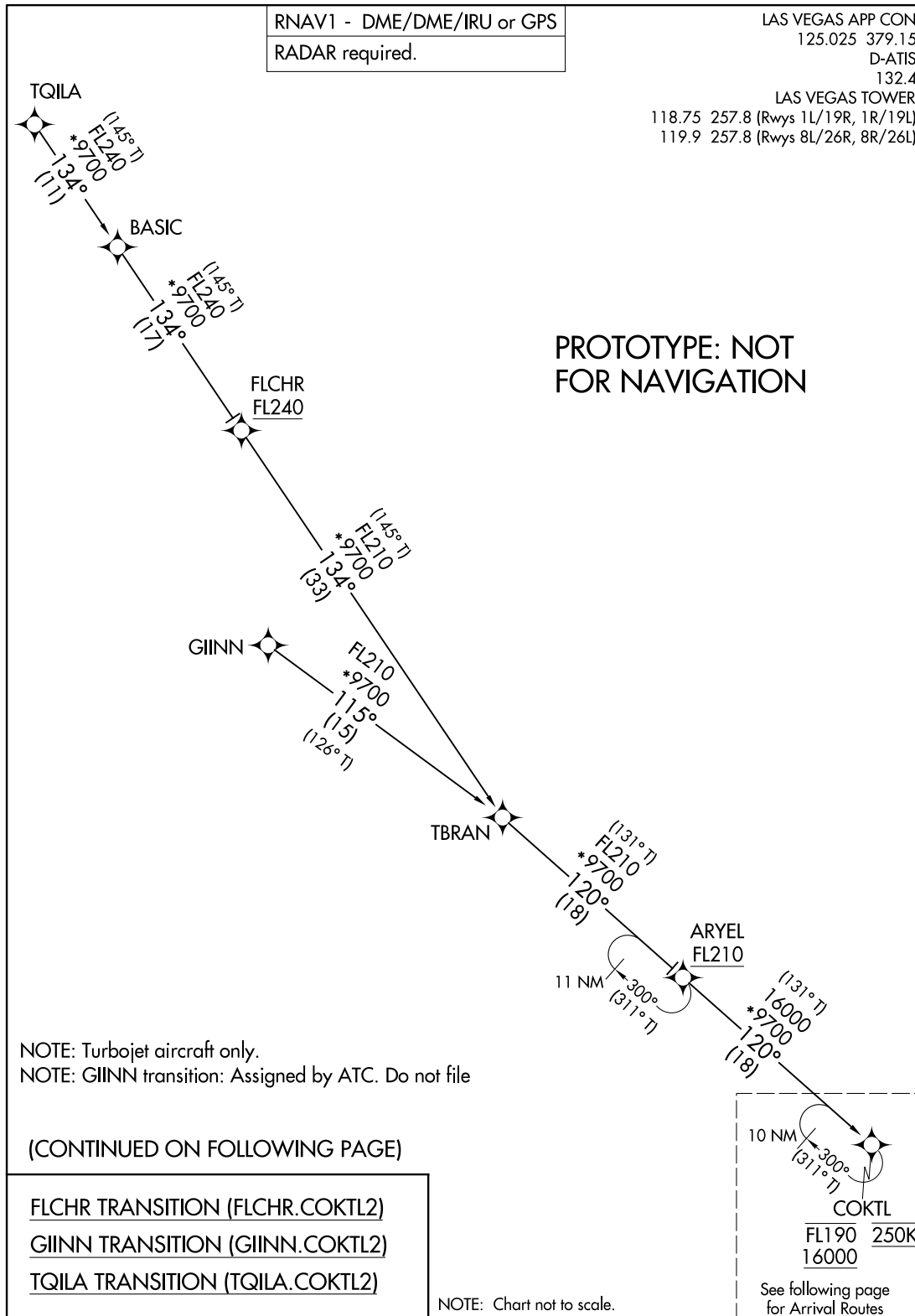
(COKTL.COKTL2) FIG
COKTL TWO ARRIVAL(RNAV) Transition Routes

AL-662 (FAA)

HARRY REID INTL (LAS)
LAS VEGAS, NEVADA

RNAV1 - DME/DME/IRU or GPS
RADAR required.

LAS VEGAS APP CON
125.025 379.15
D-ATIS
132.4
LAS VEGAS TOWER
118.75 257.8 (Rwys 1L/19R, 1R/19L)
119.9 257.8 (Rwys 8L/26R, 8R/26L)



AUTOMATED AL-662 COKTL ARRIVAL

SW-4
18 OCT 2021
COMPILER: CG
REVIEWER:
DBL CHKR:
EFF DATE: FIG

COKTL TWO ARRIVAL(RNAV) Transition Routes
(COKTL.COKTL2) FIG

LAS VEGAS, NEVADA
HARRY REID INTL (LAS)

ARRIVAL ROUTE DESCRIPTION

From COKTL on track 117° to cross ZLLDA at or above 14000.

LANDING RUNWAYS 1L/R: From ZLLDA on track 151° to cross MEZKL at or below 12000, then on track 151° to LOOMI, then on track 118° to cross ZINPI between 10000 and 11000, then on track 081° to BAUMM between 8600 and 11000, then on track 030° to cross ROAMN at 8000 and at 210K. Expect ILS or LOC 1L or RADAR vectors to final approach course.

LANDING RUNWAYS 8L/R: From ZLLDA on track 151° to cross MEZKL at or below 12000, then on track 151° to LOOMI, then on track 118° to cross ZINPI between 10000 and 11000, then on track 081° to BAUMM between 8600 and 11000, then on track 006° to cross YAGGR at 8000 and at 210K, then on track 005°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 19L/R, 26L/R: From ZLLDA on track 100° to cross DEEON at or above 12000, then on track 100° to cross ENNVY at or above 11000, then on track 083° to cross REDQN at or above 9000 and at 210K, then on track 083° to TWAFL, then on track 079° to cross BERBN at 8000 and at 210K, then on track 079°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS

LANDING RUNWAY 1L: At ROAMN execute ILS or LOC RWY 1L approach.

LANDING RUNWAY 8R: at YAGGR execute RNAV (RNP) RWY 8R approach, if unable, proceed via last track to intercept the final approach course; if unable, maintain 7000 proceed direct LAS VORTAC then direct BLD VORTAC and execute ILS or LOC RWY 26L approach.

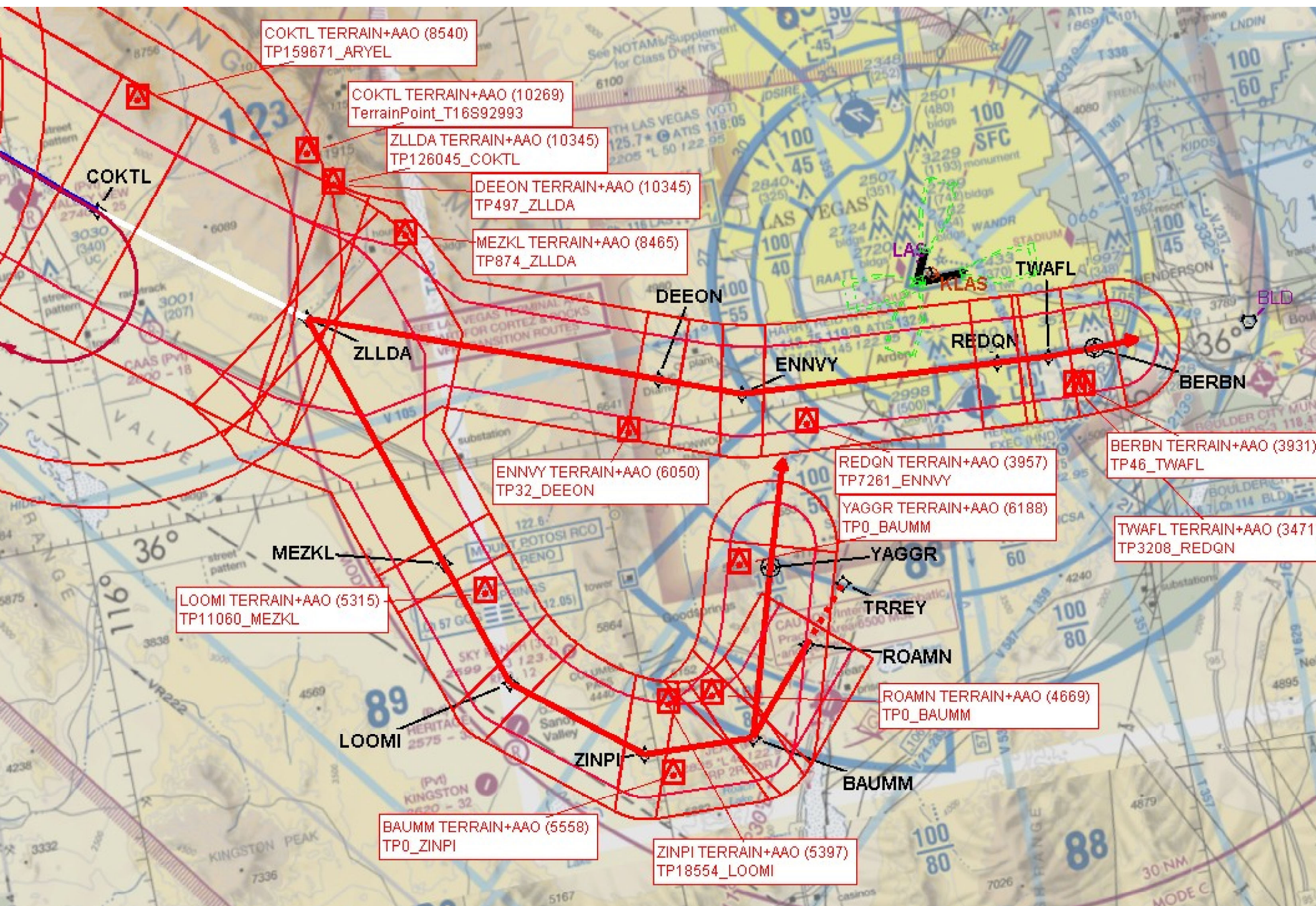
LANDING RUNWAY 26L: At BERBN execute ILS or LOC RWY 26L approach.

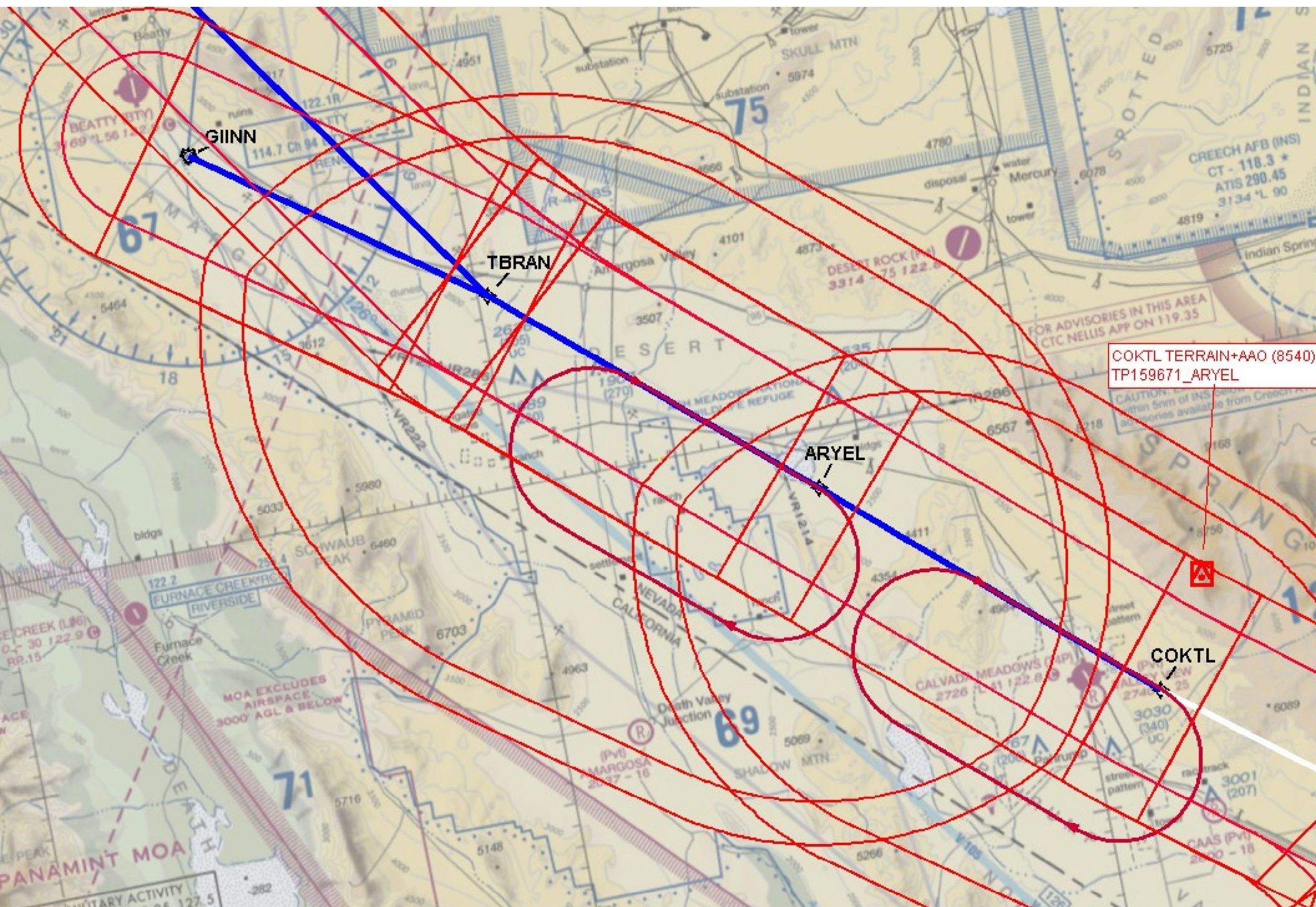
LANDING RUNWAY 26R: At BERBN execute ILS or LOC RWY 26R approach.

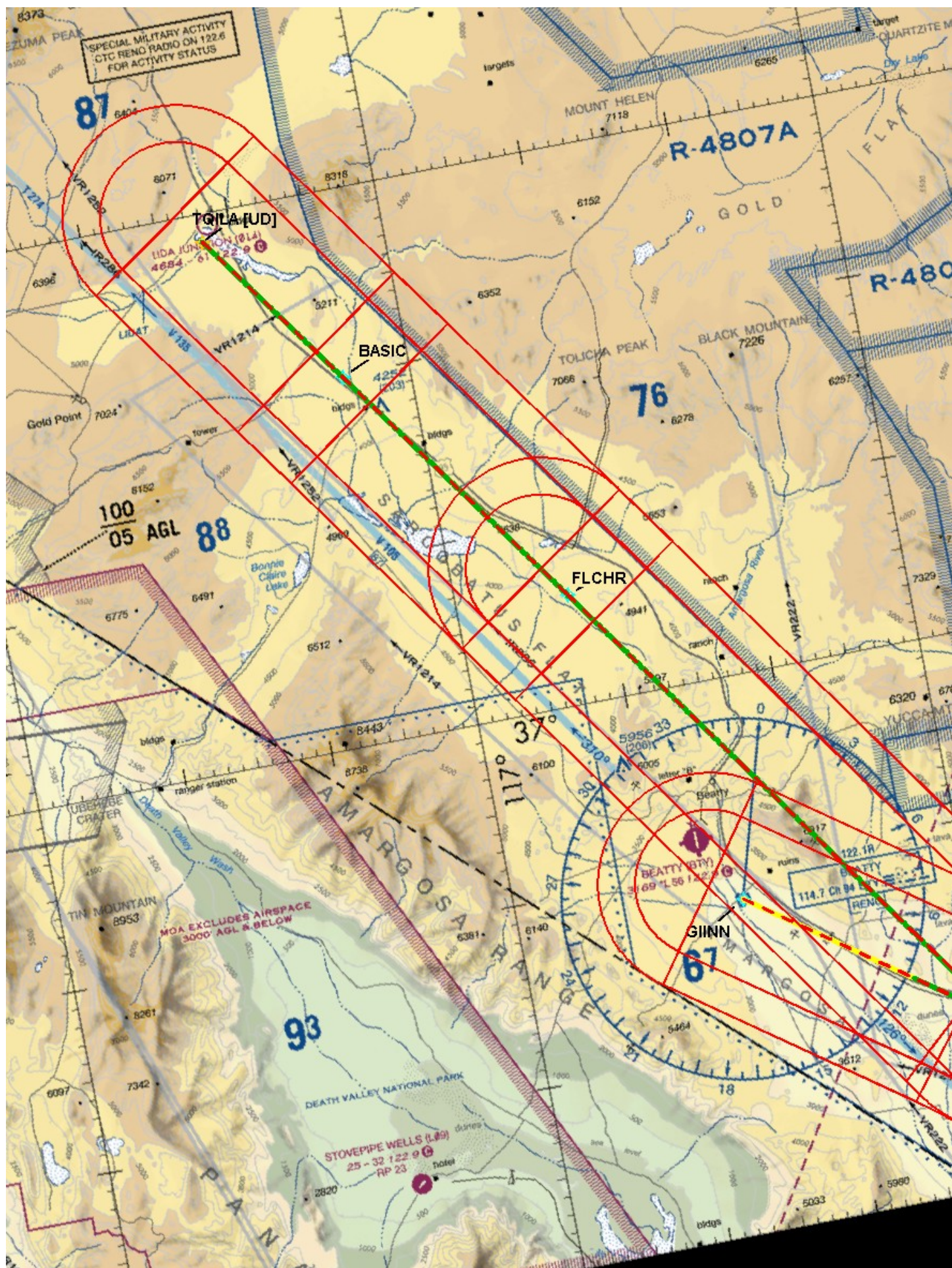
PROTOTYPE: NOT
FOR NAVIGATION

AUTOMATED AL-662 COKTL ARRIVAL (CONT 2)

SW-4
18 OCT 2021
COMPILER: CG
REVIEWER:
DBL CHKR:
EFF DATE: FIG







COKTL BAUMM to YAGGR

5695	SPOT
2000	ROC
+200	AAO
7895	

Bird
Spring

8199
5672

YAGGR

8200 210K



Federal Aviation Administration

Memorandum

Date: January 08, 2020

To: Mark Steinbicker, Manager, Flight Technologies and Procedure Division
THRU: Stephanie C. Harris, Manager Flight Procedures Team, Western
Service Center, AJV-W24

From: Brad Mayhugh, Manager Las Vegas Metroplex Team, (AJV-143)

Subject: Approval Request: Las Vegas McCarran International, Las Vegas, Nv
(KLAS) COKTL Standard Terminal Arrival (STAR)

The Las Vegas Metroplex request approval for the following concerns:

Issue 1: Leg length is less than 21.15 miles, 8260.3D (para 2-2-10a).

The TARGETS computed leg length is based on the ARYEL waypoint altitude restriction of at or above FL 210 and the COKTL waypoint altitude restriction of 16000 to FL 190 with speed of 250 knots.

RWYs 01 L/R and 08 L/R: Manual calculations from FL 210 at ARYEL and the MEZCL altitude restriction of at or below 12000 results in a descent gradient of 246.44 feet per NM. The manually calculated descent gradient allows the aircraft to cross COKTL between 16000 and FL 190 at 250 knots and meet each subsequent restriction along the route (See Figure 1). There is no requirement to cross COKTL at a specified altitude.

RWY 26 L/R: Manual calculations from FL 210 at ARYEL and the BERBN altitude/speed restriction of at 8000 and 210 knots results in a descent gradient of 223.02 feet per NM. The manually calculated descent gradient allows the aircraft to cross COKTL between 16000 and FL 190 at 250 knots and meet each subsequent restriction along the route (See Figure 1). There is no requirement to cross COKTL at a specified altitude.

Raising the lower altitude limit at the COKTL waypoint may introduce level segments for some aircraft, negating the benefits of an Optimized Profile Descent.

This procedure was subjected to flight simulation by Industry. No issues with the leg lengths were identified.

Request approval to publish the KLAS COKTL ONE STAR as designed.

See Figure 1: KLAS COKTL ONE STAR

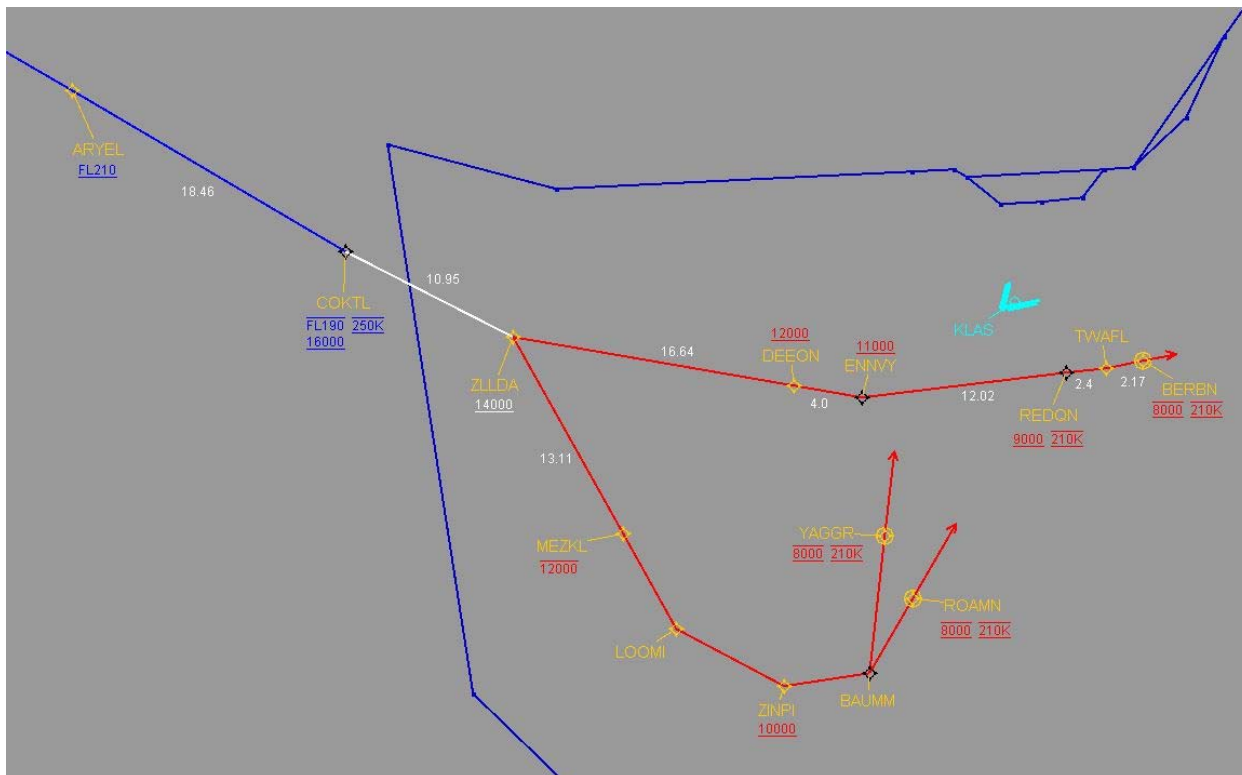


Figure 1: KLAS COKTL STAR

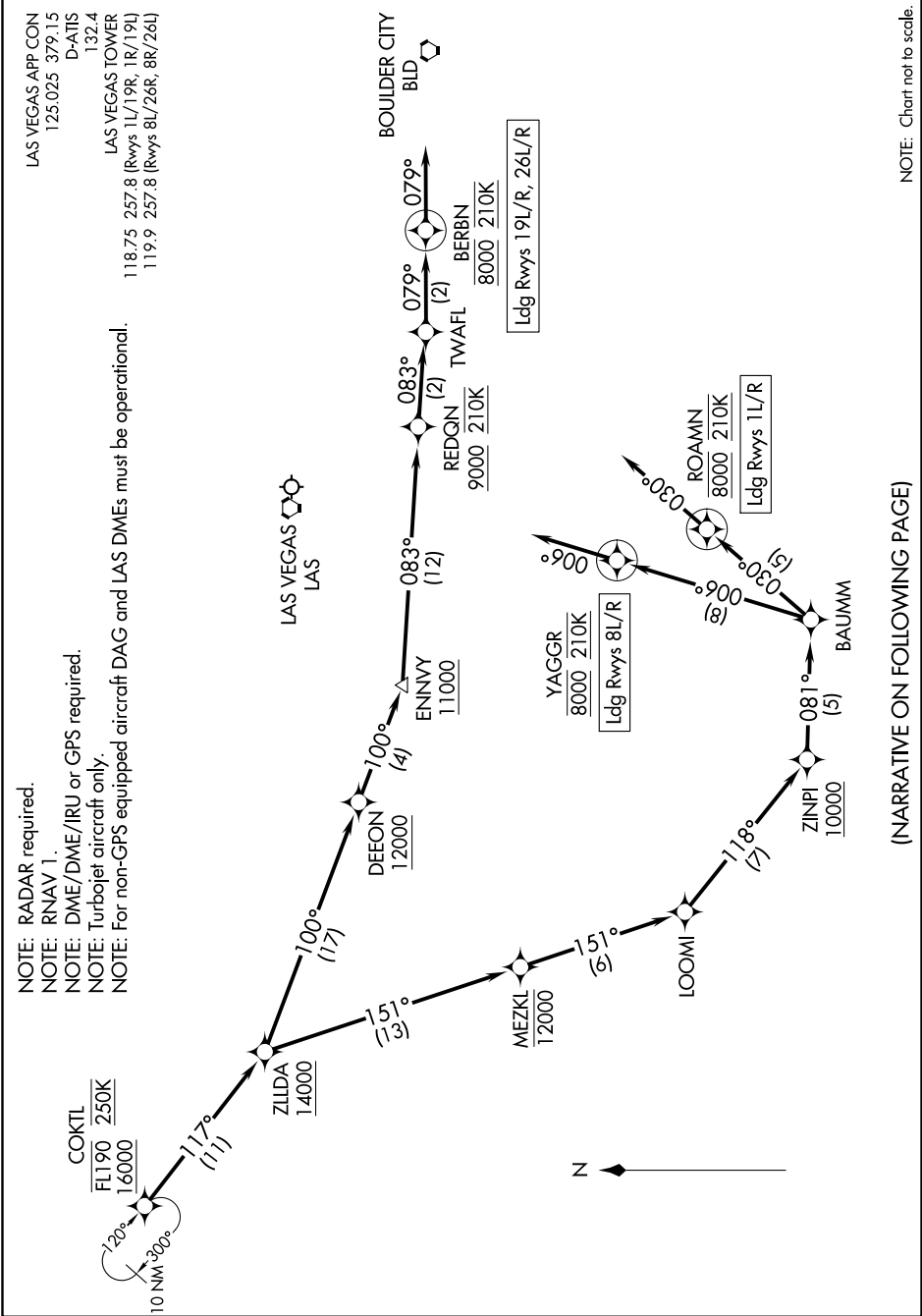
(COKTL.COKTL1) 21168

AL-662 (FAA)

HARRY REID INTL (LAS)
LAS VEGAS, NEVADA

COKTL ONE ARRIVAL (RNAV) Arrival Routes

SW-4, 07 OCT 2021 to 04 NOV 2021



COKTL ONE ARRIVAL (RNAV) Arrival Routes

(COKTL.COKTL1) 25FEB21

LAS VEGAS, NEVADA
HARRY REID INTL (LAS)

(NARRATIVE ON FOLLOWING PAGE)

SW-4, 07 OCT 2021 to 04 NOV 2021

LAS VEGAS APP CON
125.025 379.15
D-ATIS
132.4
LAS VEGAS TOWER
118.75 257.8 (Rwys 1L/19R, 1R/19L)
119.9 257.8 (Rwys 8L/26R, 8R/26L)

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet aircraft only.
NOTE: For non-GPS equipped aircraft DAG and LAS DMEs must be operational.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

From COKTL on track 117° to cross ZLLDA at or above 14000.

LANDING RUNWAYS 1L/R: From ZLLDA on track 151° to cross MEZKL at or below 12000, then on track 151° to LOOMI, then on track 118° to cross ZINPI at or above 10000, then on track 081° to BAUMM, then on track 030° to cross ROAMN at 8000 and at 210K, then on track 030°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 8L/R: From ZLLDA on track 151° to cross MEZKL at or below 12000, then on track 151° to LOOMI, then on track 118° to cross ZINPI at or above 10000, then on track 081° to BAUMM, then on track 006° to cross YAGGR at 8000 and at 210K, then on track 006°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 19L/R, 26L/R: From ZLLDA on track 100° to cross DEEON at or above 12000, then on track 100° to cross ENNVY at or above 11000, then on track 083° to cross REDQN at or above 9000 and at 210K, then on track 083° to TWAFI, then on track 079° to cross BERBN at 8000 and at 210K, then on track 079°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS

LANDING RUNWAY 1L: At ROAMN execute ILS or LOC RWY 1L approach.

LANDING RUNWAY 8R: At YAGGR execute RNAV (RNP) RWY 8R approach, if unable, proceed visually via last track to intercept the final approach course; if unable, maintain 7000 proceed direct LAS VORTAC then direct BLD VORTAC and execute ILS or LOC RWY 26L approach.

LANDING RUNWAY 26L: At BERBN execute ILS or LOC RWY 26L approach.

LANDING RUNWAY 26R: At BERBN execute ILS or LOC RWY 26R approach.

LAS VEGAS APP CON

125.025 379.15

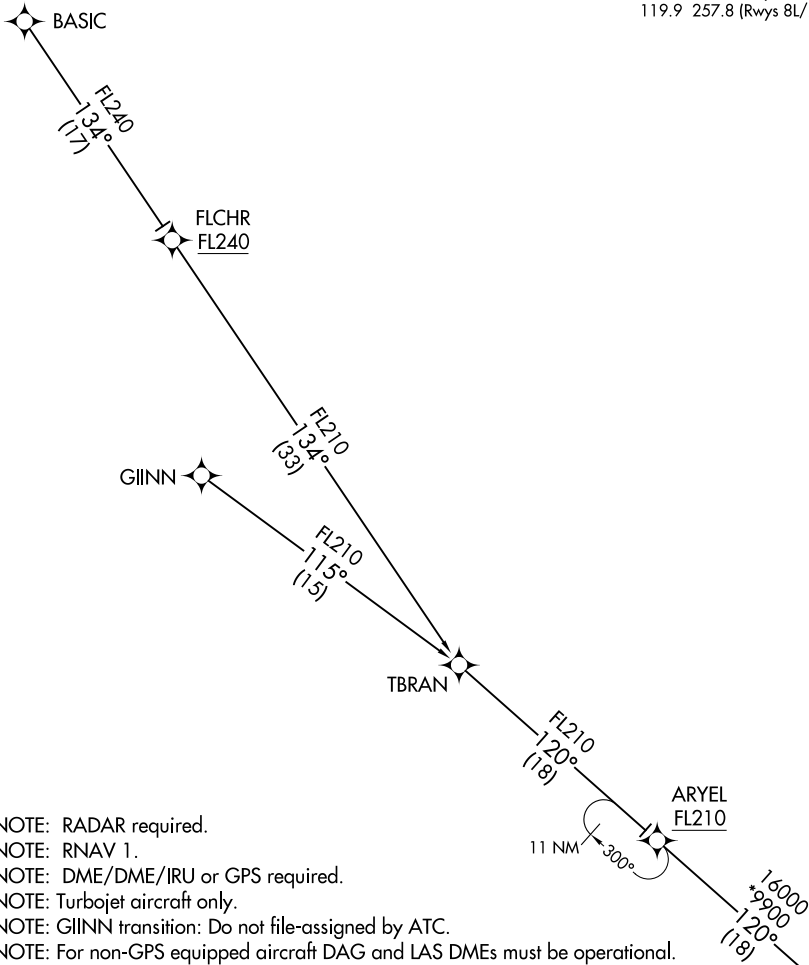
D-ATIS

132.4

LAS VEGAS TOWER

118.75 257.8 (Rwys 1L/19R, 1R/19L)

119.9 257.8 (Rwys 8L/26R, 8R/26L)

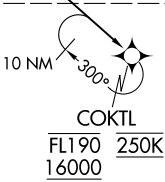


NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet aircraft only.
NOTE: GIINN transition: Do not file-assigned by ATC.
NOTE: For non-GPS equipped aircraft DAG and LAS DMEs must be operational.

(CONTINUED ON FOLLOWING PAGE)

- BASIC TRANSITION (BASIC.COKTL1)
- FLCHR TRANSITION (FLCHR.COKTL1)
- GIINN TRANSITION (GIINN.COKTL1)

NOTE: Chart not to scale.



See following page for Arrival Routes