

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 10/29/2026	APWS Task ID: A1CB1C96E6864305957D9A2176F7D33C	APWS Project ID: 86F7A18CFC2B47C08769B9F3545364FC
Procedure: BRDWK ONE (RNAV) MYRTLE BEACH		Enroute: YES	Specialist: Kuklish, Thomas		Agreement Number:
Airport ID: KMYR			Airport City: MYRTLE BEACH		State: SC
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
Procedure Comments: REASON FOR PROJECT: CREATE A NEW STAR (BRDWK) TO BETTER ASSIST ATC IN THE SEQUENCING OF ARRIVAL/DEPARTURE AIR TRAFFIC. LOA (1): DG. POC: TARA MARTINELLI AJV-432, 405-954-8376. 06/08/2026 QUALITY 14 CHECKED QUALITY 38 CHECKED					



Federal Aviation Administration

Memorandum

Date: December 16, 2025

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-A45

Prepared by: Miles H. Carpenter, Sr. ATC Specialist, NAVTAC CTR Support

Subject: Approval Request: Myrtle Beach International Airport (KMYR)
BRDWK (RNAV) STAR

CHONT to CCYOU Segment

Per FAA Order 8260.3, 2-2-8. a.:

2-2-8. Descent Gradient (DG). Calculate DGs between fixes with an altitude restriction by using the guidance in this paragraph and the calculation methods in section 2-9. When deceleration is required, also use paragraphs 2-2-9 and 2-2-10. The DG past the termination fix of the STAR is not calculated as part of the STAR design; the overall airspace design should optimize the location and altitude for the STAR termination fix and that becomes an input to the STAR design.

a. The maximum DG (see figure 2-2-1) is based on altitude, deceleration, and airspeed constraints, as follows:

- (1) The maximum permissible DG 10000 feet MSL and above is 330 ft/NM (approximately 3.11 degrees).
- (2) The maximum permissible DG below 10000 feet MSL is 318 ft/NM (approximately 3.0 degrees).
- (3) When a STAR contains a descent between fixes that passes through 10000 feet MSL, the maximum permissible DG is between 318 ft/NM and 330 ft/NM and is in proportion to the amount of the altitude change that is below/above 10000 feet MSL. Use formula 2-2-1 to determine the maximum DG (DG_{max}) between fixes that contain a descent that passes through 10000 feet MSL.

(4) Gradient after deceleration to 220 KIAS. After a speed restriction of 220 KIAS or less is used, for subsequent fixes along the route of the STAR the maximum permissible descent gradient is 250 ft/NM (approximately 2.36 degrees).

(6) If more than one of paragraphs 2-2-8.a(1) through 2-2-8.a(5) applies, use the lower of the resulting values for the maximum DG.

b. When a gradient exceeds the maximum DG allowed in paragraph 2-2-8.a, the STAR requires approval (see paragraph 1-4-2).

Formula 2-2-1. Maximum DG Passing Through 10000 Feet MSL (ft/NM)

$$DG_{max} = \frac{(Alt_1 - 10000) \times 12}{(Alt_1 - Alt_2)} + 318$$

Where:

Alt_1 = Altitude at the fix prior to crossing 10000 feet MSL

Alt_2 = Altitude at the fix after crossing 10000 feet MSL

TARGETS Reference Software computed a descent gradient of 483.28 FT/NM for the segment from CHONT (at or below 11,000 feet) to CCYOU (at or above 4,000 feet), over a distance of 14.48 NM. This value exceeds the established criteria, which stipulate that the descent gradient should not exceed 319.71 FT/NM.

If the DG is calculated from the first point with a mandatory altitude, BRDWK at 11000 feet and 250 KIAS and evaluated to CHONT at or above 4000, the resulting descent gradient is 265.20 FT/NM.

Descent, Distance and Deceleration Tool

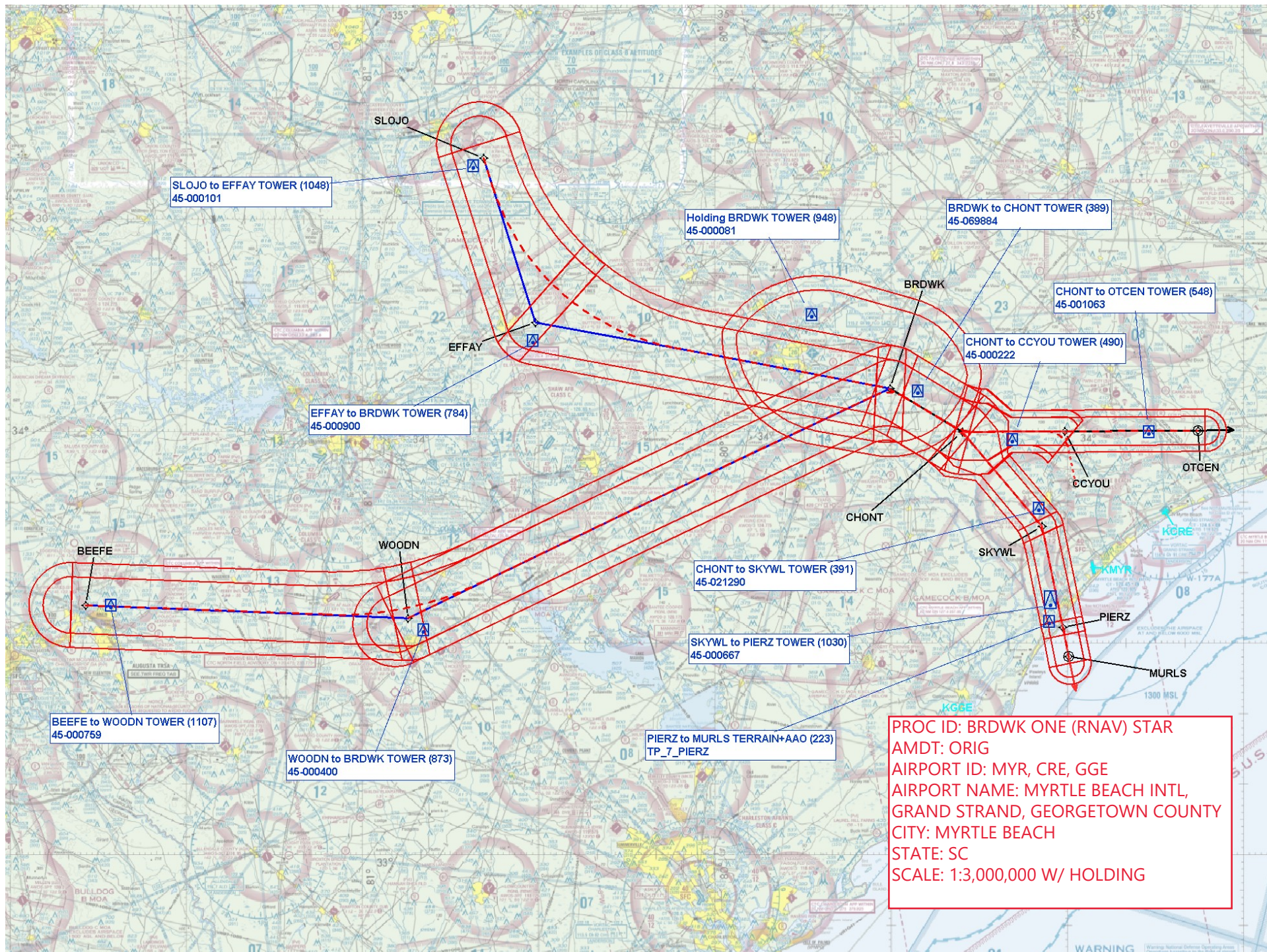
Tool for Establishing Altitude and Speed Restrictions		
Enter distance between waypoints (D)	26.40	NM
Enter beginning altitude (a)	11,000	FT
Enter ending altitude (b)	4,000	FT
Enter beginning speed	250	KIAS
Enter ending speed	250	KIAS
Calculated Descent Gradient (DG)	265.152	FT / NM
Calculated speed loss (x)	0	Knots
Calculated Speed Adjusted Descent Gradient	265.2	FT / NM
Leg Angle	2.5°	

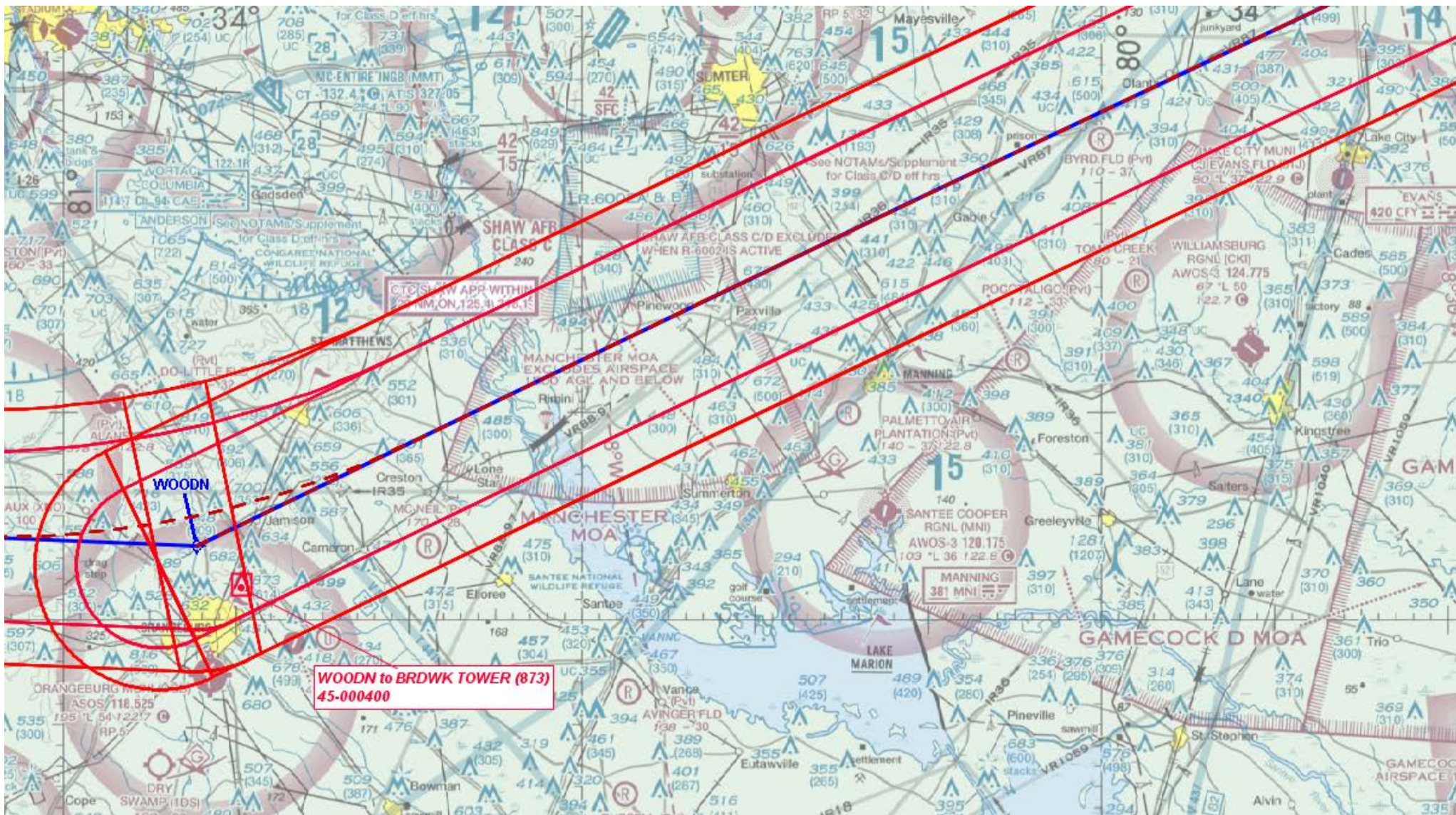
While the initial computed descent gradient from CHONT to CCYOU exceeds the 319.71 FT/NM limit, discussion with industry during design meetings, there were no objections to the altitude constraints and confirmed the descent gradient is well within limits of aircraft that will use the procedure.

Consideration was given to relocating CCYOU; however, this would adversely impact the newly connected RNAV and ILS approaches that originate at CCYOU. Similarly, relocating CHONT was discussed, but this would significantly affect multiple traffic flows within the MYR

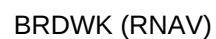
Terminal Area, leading to increased controller workload and the potential introduction of safety risks.

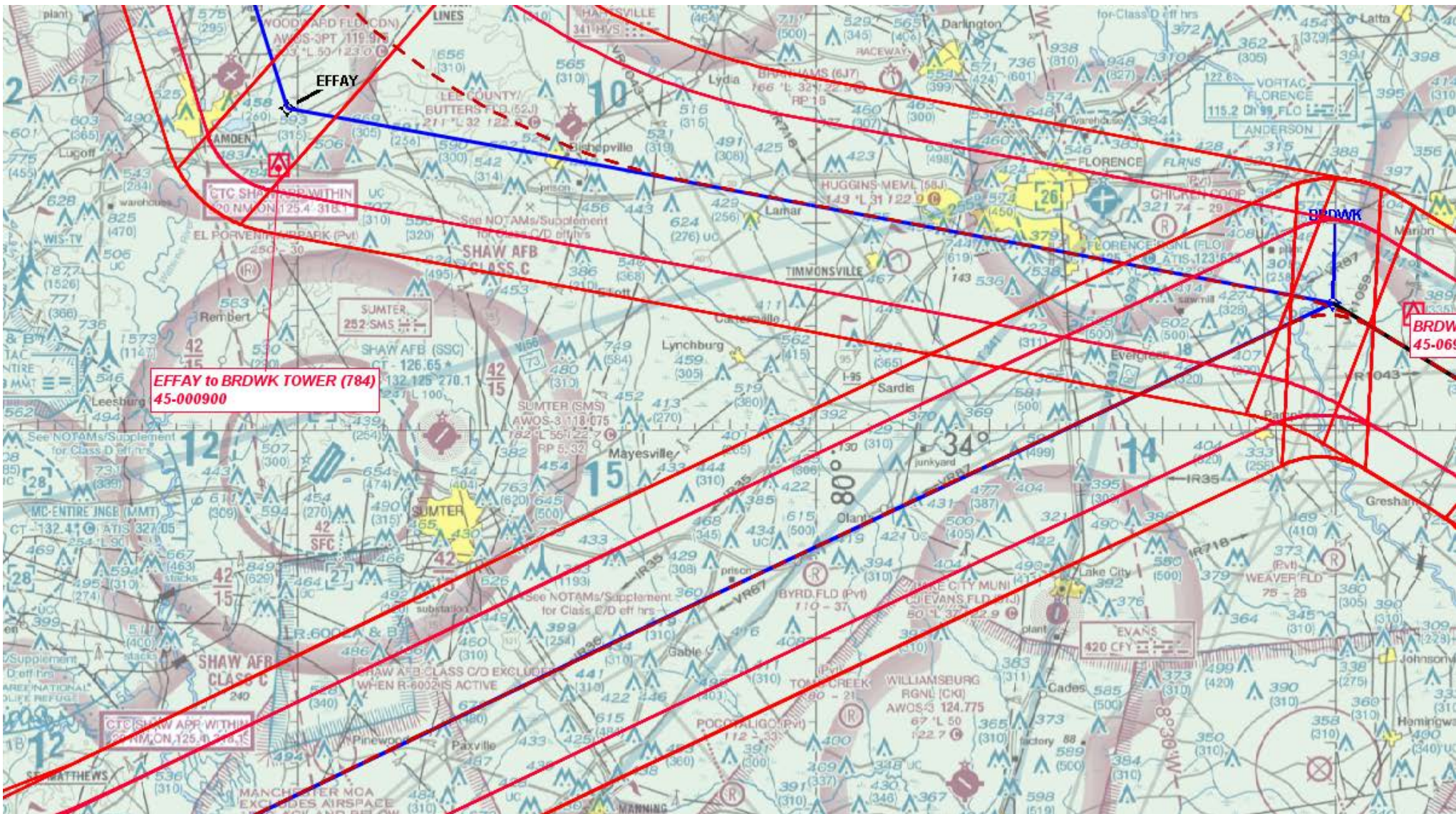
In light of the above analysis and operational constraints, Myrtle Beach ATCT respectfully requests approval to chart the BRDWK ARRIVAL as currently designed. This procedure ensures continued procedural integrity, maintains safety, and minimizes operational disruptions within the terminal area.



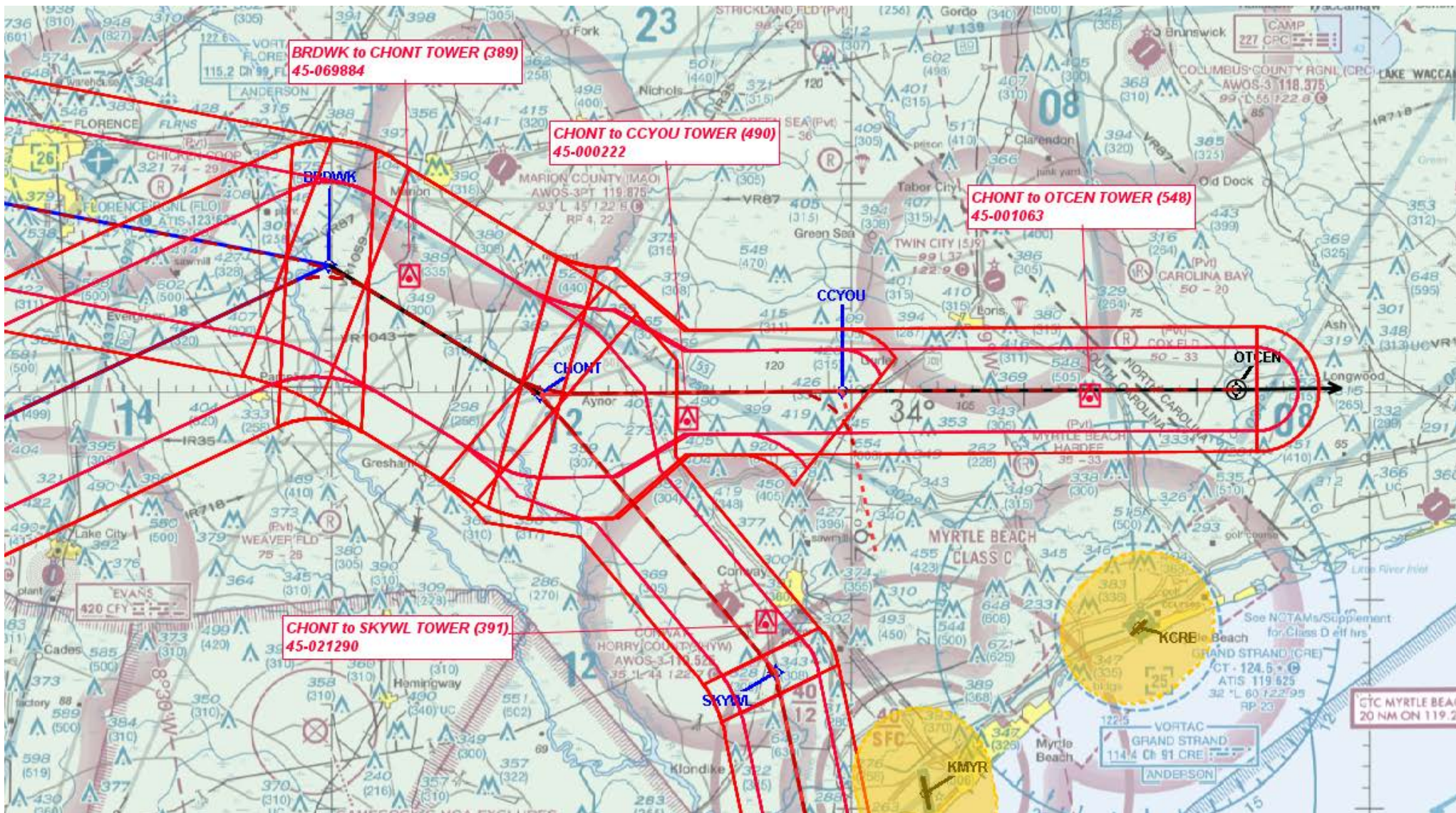


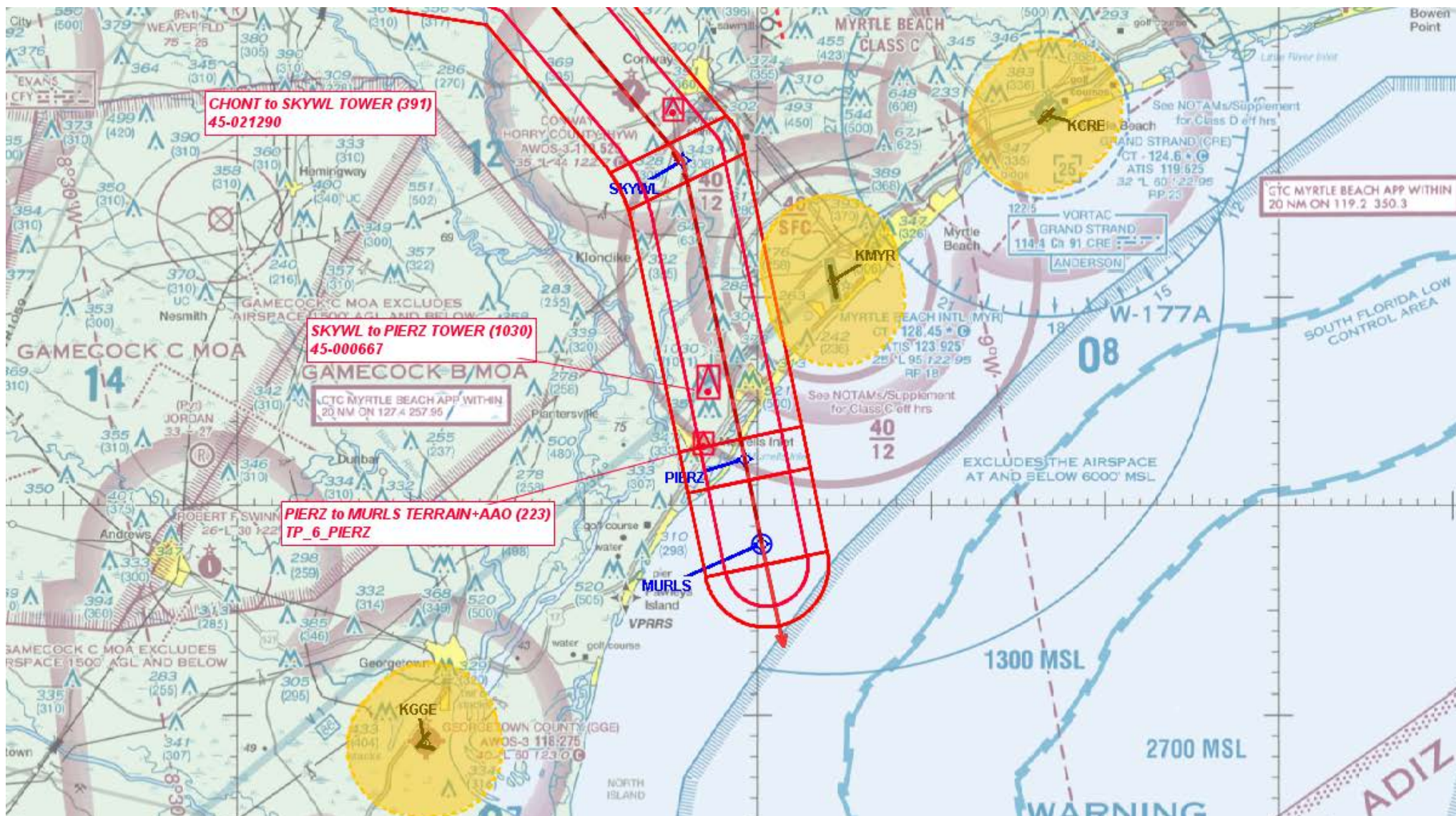
BRDVK (RNAV)





BRDWK (RNAV)





BRDWK (RNAV)