

**AERONAUTICAL CHARTING MEETING**  
**Instrument Procedures Group**  
**Meeting 22-01 – April 25-26, 2022**

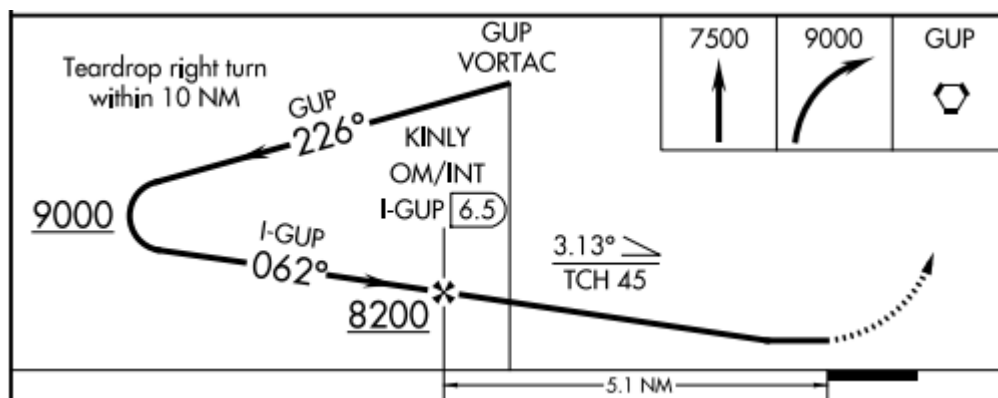
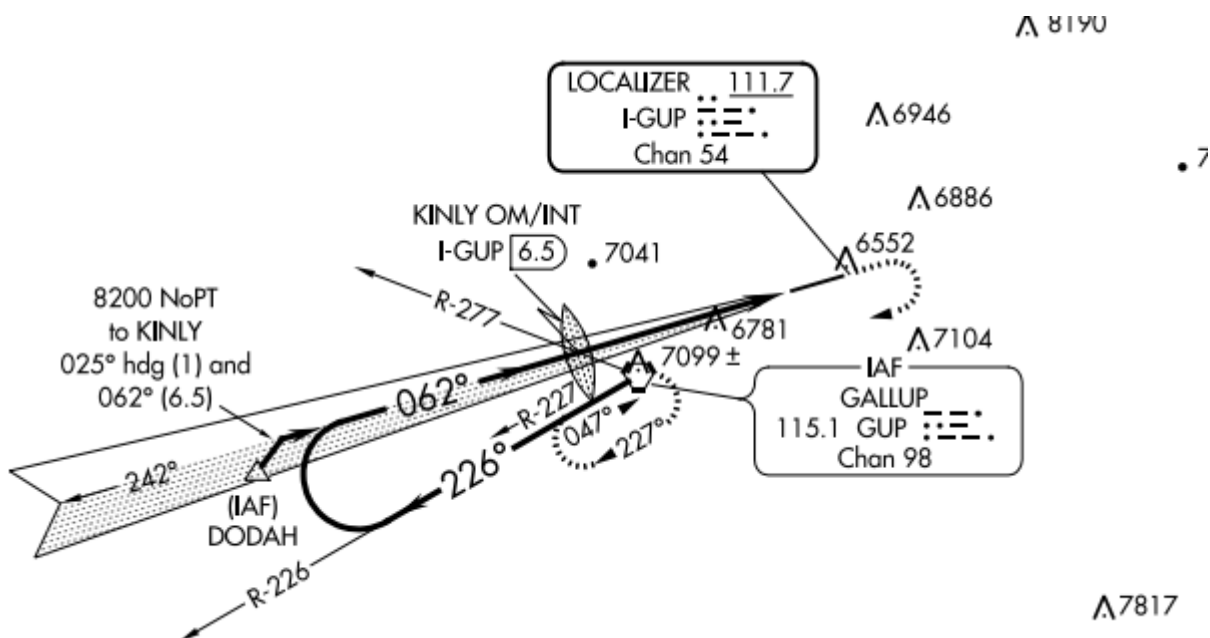
**RECOMMENDATION DOCUMENT**

FAA Control # 22-01-365

**Subject:** As Charted, Teardrop Course Reversals Lack Pilot Guidance on How to Fly the Reversal

**Background/Discussion:**

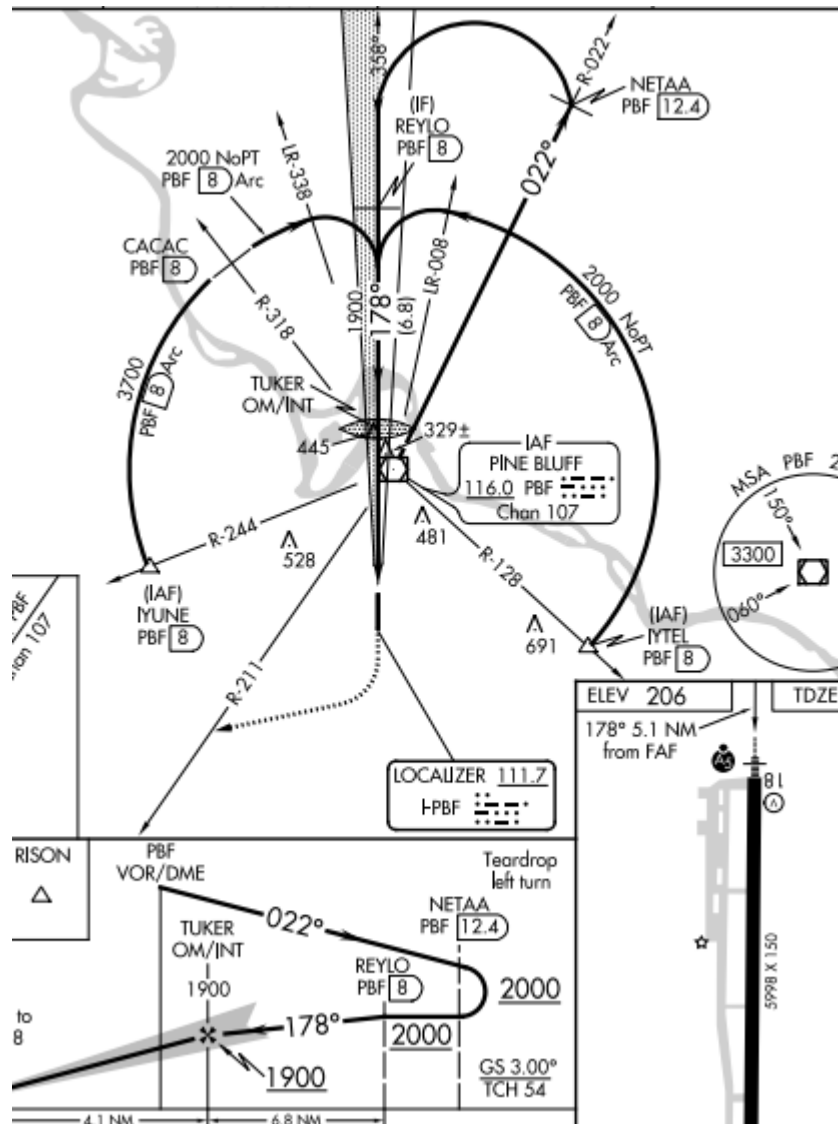
Here is a teardrop course reversal (excerpted from GUP LOC 6, Appendix A has full procedure):



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The FAA publishes extensive pilot guidance on other course reversals; namely procedure turn, hold-in-lieu of procedure turn, and DME arcs. However, there is no substantial guidance on how to fly a teardrop. Ask most pilots “how to” and they will respond, “standard rate turn,” which is incorrect.

Problems may result from lack of guidance; for example, in PBF (full chart in Appendix A), there is no profile view “remain within” distance note for the teardrop. Without this note, the turn from NETAA to intercept the final is technically unbounded as there is no way to follow the depicted semicircle (when flying the approach with conventional navigation).



When Teardrops are presented by a FMS, depending on ARINC 424 coding and the display software, the Teardrop may be shown like the as-charted, as a 90-degree intercept, or a sharp 180-degree turn.

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**Recommendations:**

If charting continues to depict Teardrops as semicircles, provide pilots with AIM and/or IPH guidance equivalent to procedure turn, hold-in-lieu of procedure turn, and DME arcs.

Alternatively, change procedure design and/or charting to provide a navigable route line.

**Comments:**

**Submitted by:** Dr. Bill Tuccio

**Organization:** Garmin

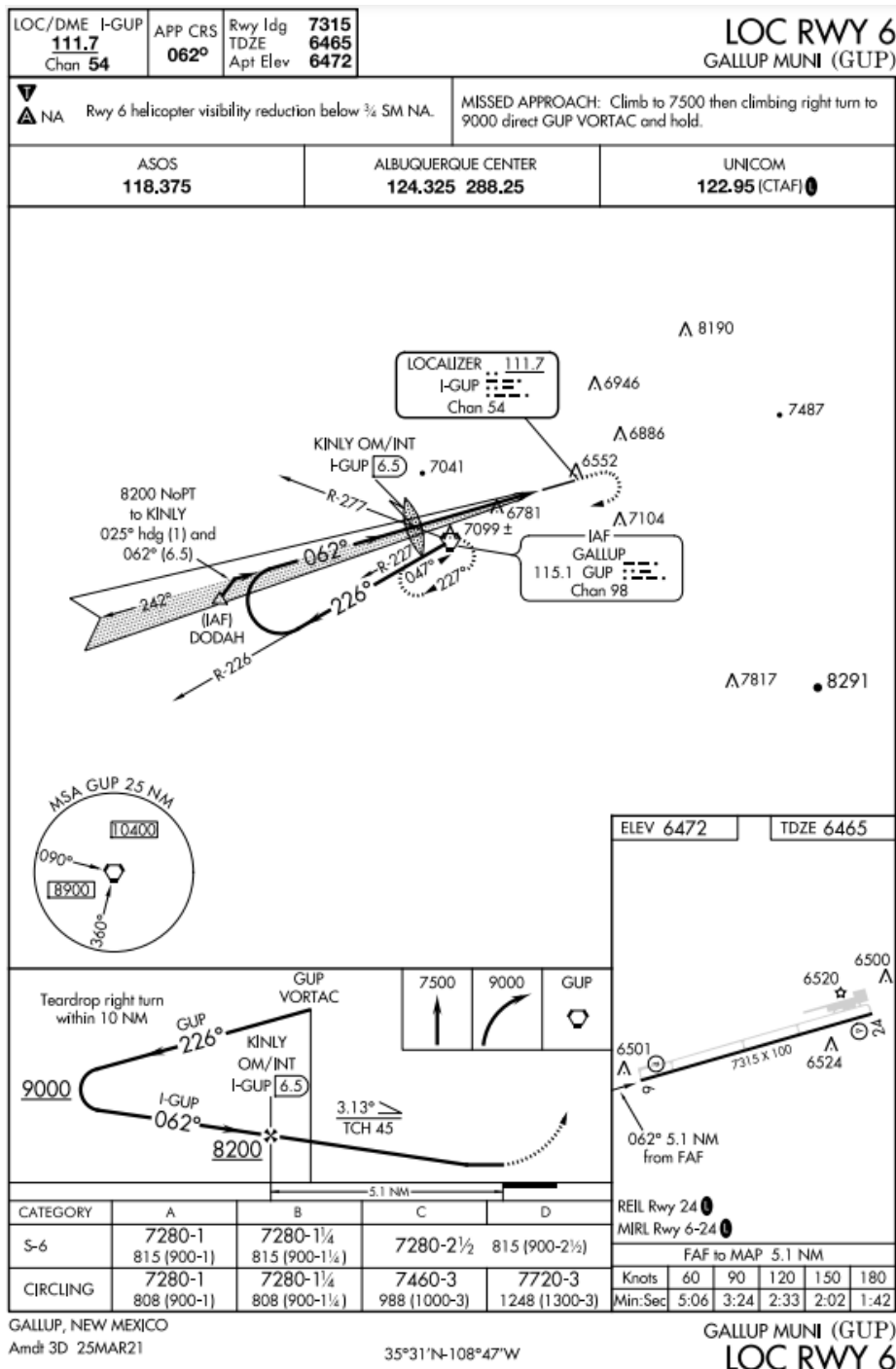
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**Date:** 3/2/2022

## Appendix A

### Example Procedures with Teardrop Course Reversals



Please send completed form and any attachments to:

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PINE BLUFF, ARKANSAS

AL-901 (FAA)

21280

LOC I-PBF	APP CRS	Rwy Idg	5998
111.7	178°	TDZE	206
		Apt Elev	206

# ILS or LOC RWY 18 PINEBLUFF RGNL/GRIDER FLD (PBF)

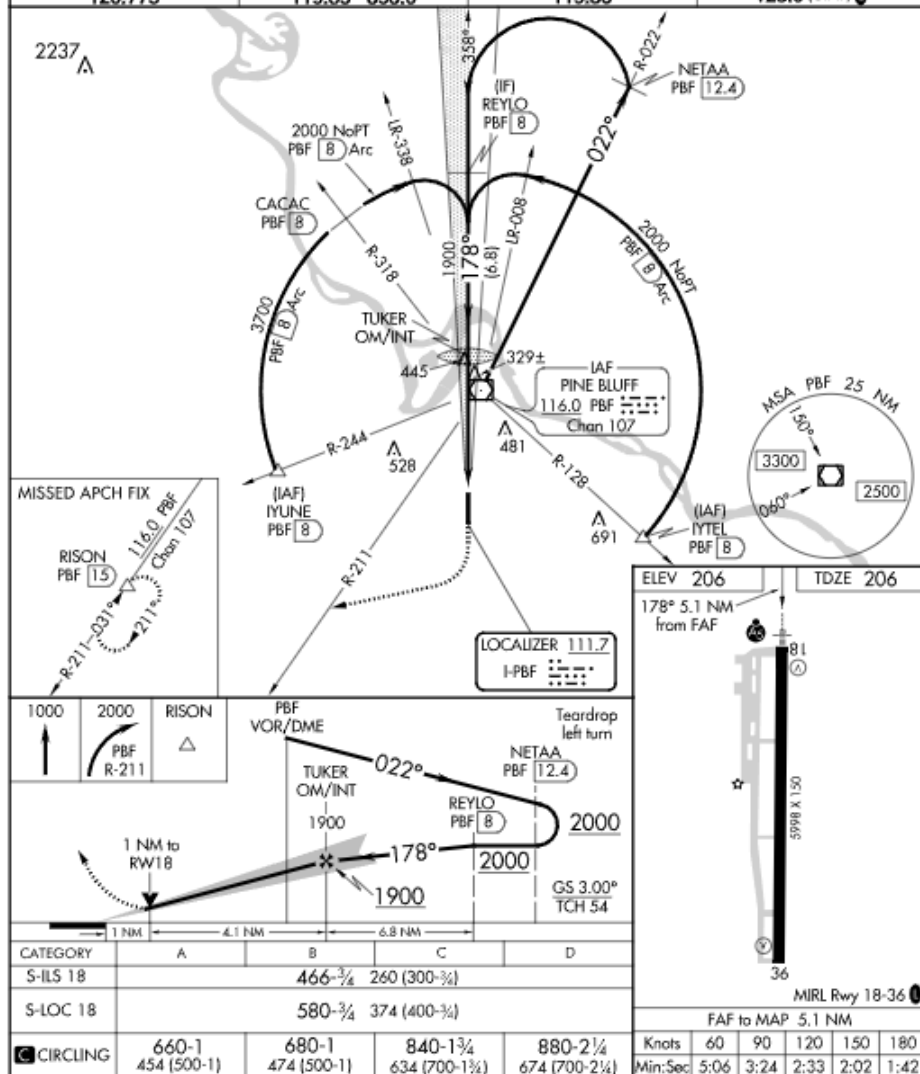
DME required.

**NA** Rwy 18 helicopter visibility reduction below  $\frac{3}{4}$  SM NA. Inop table does not apply to S-ILS 18. For inop ALS, increase S-LOC 18 all Cts visibility to 1 SM. For inop ALS when using Stuttgart altimeter setting, increase S-LOC 18 Cat A/B visibility to 1 SM. DME from PBF VOR/DME. DME requires simultaneous reception of I-PBF and PBF DME. When local altimeter setting not received, use Stuttgart altimeter setting; increase DA to 541 feet and all MDA 80 feet; increase S-LOC 18 Cat C/D visibility  $\frac{1}{4}$  SM and Circling Cts C/D visibility  $\frac{1}{4}$  SM.



**MISSED APPROACH:** Climb to 1000 then climbing right turn to 2000 on PBF VOR/DME R-211 to RISON/PBF 15 DME and hold.

ASOS	LITTLE ROCK APP CON	CINC DEL	UNICOM
120.775	119.85 353.6	119.85	123.0 (CTAF) 0



PINE BLUFF, ARKANSAS

Amdt 3E 07OCT21

34°10'N-91°56'W

PINEBLUFF RGNL/GRIDER FLD (PBF)  
ILS or LOC RWY 18

SC-1. 24 FEB 2022 to 24 MAR 2022

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