

ARINC 424 NDB

**Draft 1 of Supplement 24
Proposal**

**Location St Louis, Missouri
September 13-15, 2022**

ALLOW LOC BASED APPROACHES TO BE CODED WITHOUT FACF – PART 2

V 1

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SUMMARY
During the last meeting, the group accepted a proposal to remove the requirement for an FACF to be coded for all LOC based approaches. Unfortunately, there are more rules which need to be updated to allow such coding.

1.0 INTRODUCTION/ BACK GROUND

During the last meeting, I made a proposal to remove the requirement for an FAF for all LOC based approaches. As mentioned in the summary, there are more rules in attachment 5 that still require the FAF to be coded.

This proposal addresses this inconsistency and modifies the previously overlooked rules.

2.0 DISCUSSION and or ACTION

The group is kindly asked to review the proposal to update several rules in attachment 5 to be consistent with the previously approved change. The following is a summary of the changes:

- 6.2.5.2 has a typo in 424-23, it reads “8 1NM” but should read “8NM”.
- 7.1.1 is repeating the requirements as specified in the general part, in rule 6.2.5, with the exception of the step-down fixes. I propose to change the text to reference to 6.2.5 and only list the additional information.
- 7.1.2 is a repetition of the old rule 6.2.5.2. I recommend deleting 7.1.2 or including a text saying that the rule can be found in 6.2.5.2.
- 7.1.3 is a repetition of 6.2.10.1
- 7.1.4 should also allow the FAF to optional, and the wording could be harmonized with the GLS rule 7.3.3.

3.0 Changes as depicted (Track Changes is Helpful)

6.2.5.2 If no waypoint is established by source documentation for the final approach course fix and one is required by the requirements in Rule 6.2.5, one must be computed by the data supplier. The FAF will be computed on the published course to the FAF at a distance not less than 2NM to the FAF. For localizer-based approach procedures, the FAF will not be computed more than 8-1NM from the FAF. Altitude coding for this fix is defined in Rule 6.2.10.

7.0 Precision Approach Procedure Coding

7.1 Final Approach Segment

The following rules apply to the Final Approach Coding of full ILS Localizer based approach procedures. These procedures may include full ILS (localizer and GS), converging ILS, and those IGS (Instrument Guidance System) that are full ILS equivalent. These rules will be applied to the final approach coding of LDA and SDF procedures when those procedures include reference to an electronic glideslope, GLS, and MLS Approach Procedures.

7.1.1 [The Approach Procedure Fix requirements for](#) All such approach procedures ~~must begin at the FAF~~ [are specified in rule 6.2.5 in this attachment](#). They must ~~consist of a FAF, FAF and missed approach point fix and~~ [include](#) all step-down fixes published in

the vertical path. The missed approach point will be a runway fix (landing threshold) unless otherwise indicated in government source documents. When a MAP is not provided by source and the published missed approach procedure requires a turn prior to the landing threshold, the missed approach point must be created on the glideslope at the highest published Decision Altitude.

- 7.1.2 For localizer based procedures, the FACF [placement rules, if one is included, are specified in rule 6.2.5.2](#), ~~is defined as a fix located on the localizer beam center, 8NM or less from the FAF or within the reception range of the Localizer. This may be a source document provided fix or a fix created using these positioning rules.~~
- 7.1.3 ~~The FACF is coded as an IF leg. An altitude will not be assigned to the FACF unless specified in government source documents.~~ [The altitude coding rules at the FACF, if one is coded, are specified in rule 6.2.10.1.](#)
- 7.1.4 The track from the FACF to the FAF, [when a FACF is coded, is will be](#) coded as a CF or TF leg with altitude constraints as indicated for the specific procedure types below.
- 7.1.5 The recommended navaid must be the procedure reference localizer. Theta and Rho must be provided from that navaid for each sequence of the Final Approach Coding, including any step-down fixes, the runway or helipad fix and/or missed approach point.
- 7.1.6 The Outbound Magnetic Course field in all sequences must be equal to the localizer bearing or MLS course, derived from official government source.
- 7.1.7 For approach procedures with an electronic glideslope, the vertical angle must be coded in both the Final Approach Fix and the fix, which carries the missed approach point coding, except when the altitude 1 and altitude 2 at the FAF are identical, in which case the vertical angle is omitted on the FAF.
- 7.3 **GLS Precision Approach Procedure Coding**
- 7.3.1 The rules for coding GLS Approach Procedures are understood to be identical to those of Localizer coding as found in Section 7.1 of this attachment with the exception listed below.
- 7.3.2 The Final Approach Coding of GLS Instrument Approach Procedures does not require the coding of a FACF waypoint.
- 7.3.3 The track from the FACF to the FAF, when a FACF is coded, will be coded as a TF leg with altitude constraints as indicated for the specific procedure types below.
- 7.3.4 The recommended navaid must be the procedure reference ground station.
- 7.3.5 The Outbound Course field in all sequences must be equal to the course derived from official government source.
- 7.3.6 The lateral and vertical leg data coding from the FAF inbound will be in accordance with the data contained in the GLS Path Point Record.