

AERONAUTICAL CHARTING MEETING
Charting Group
Meeting 21-02 – October 26 - 28, 2021

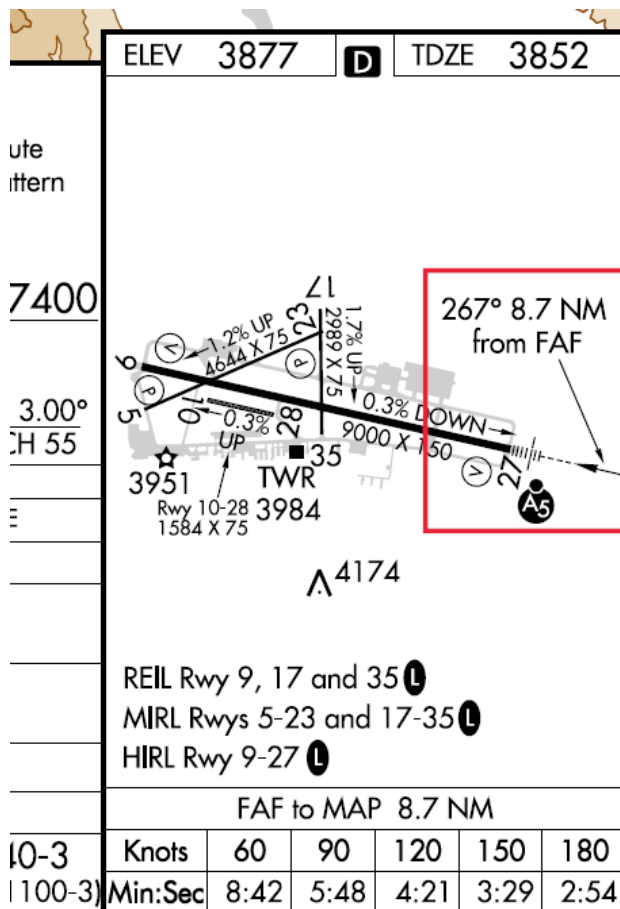
RECOMMENDATION DOCUMENT

FAA Control #21-02-364

Subject: Airport Sketch – Final Approach Track

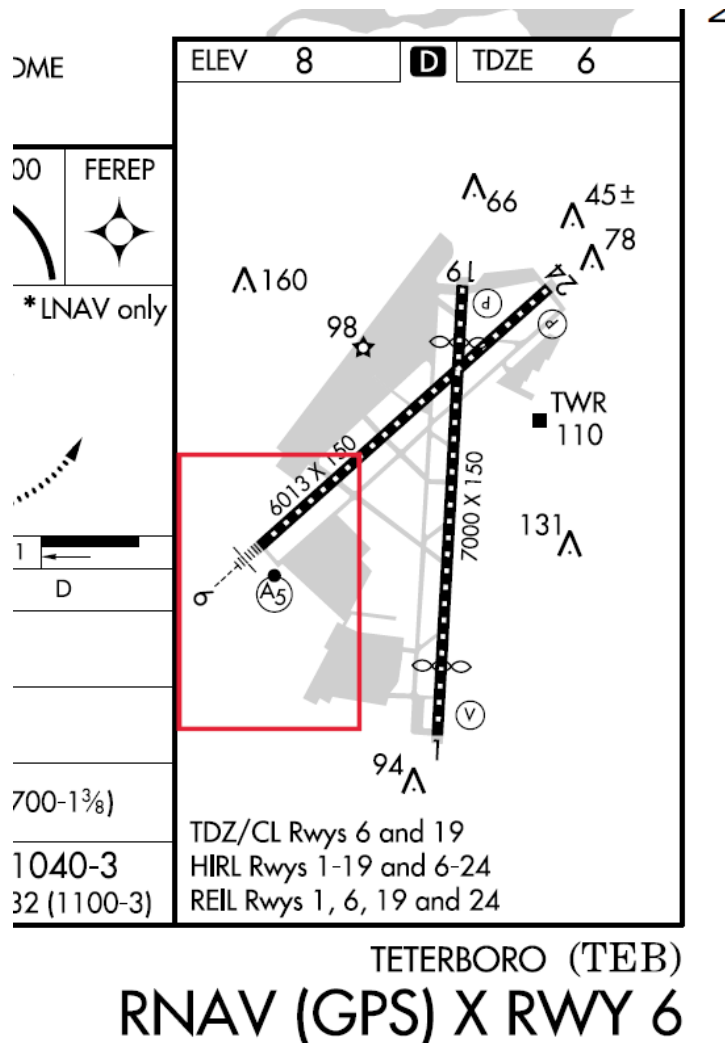
Background/Discussion:

The Interagency Air Committee (IAC) Specification Document #4, paragraph 3.4.7.6 prescribes the criteria upon which the Final Approach Track is depicted on the instrument approach chart's Airport Sketch (exception: ILS CAT II, ILS CAT II & III, ILS SA CAT I, ILS SA CAT II, and ILS SA CAT I & II approaches). Here is an example for the ILS or LOC Y Rwy 27 approach at Helena, MT – KHLN:



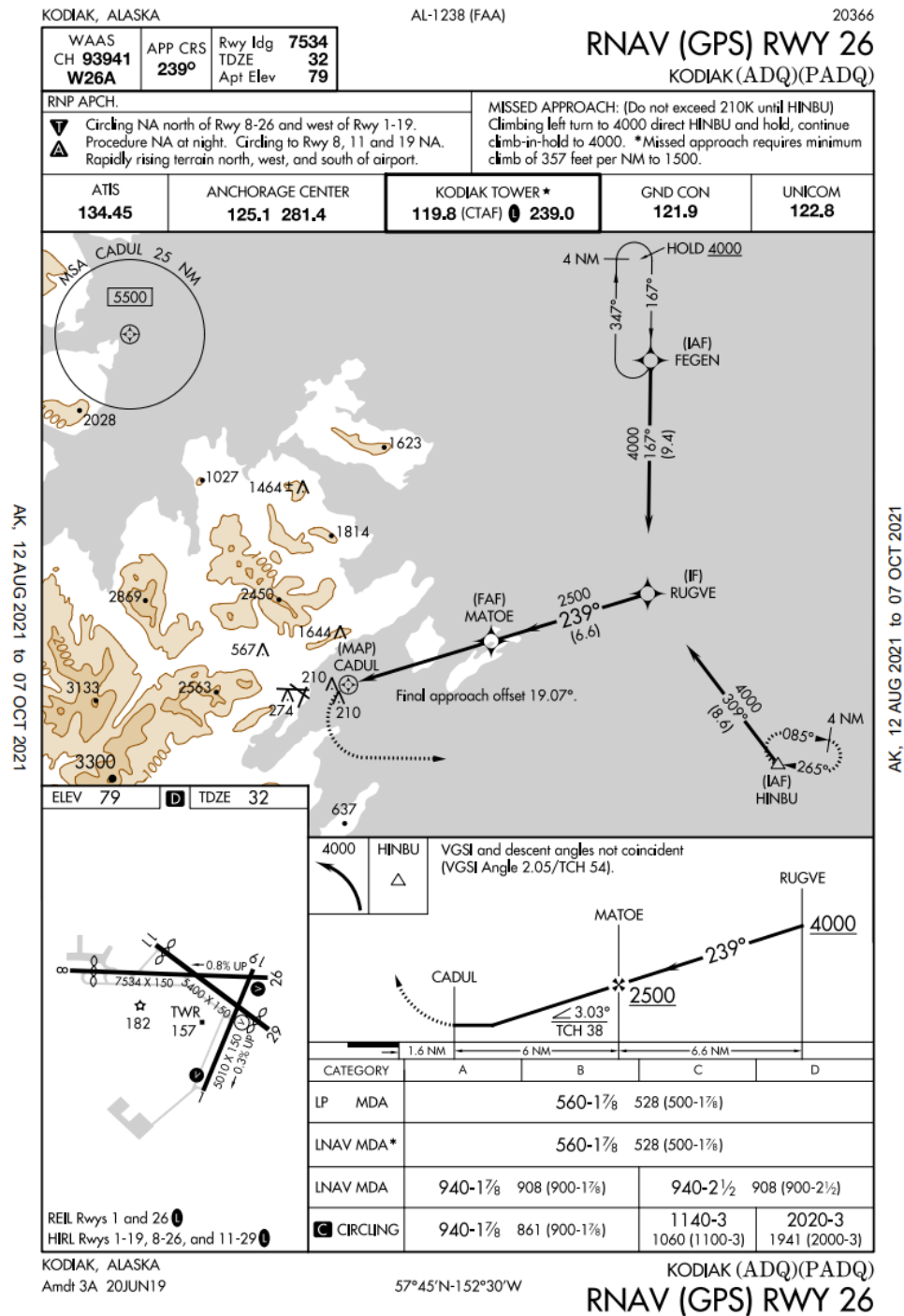
HELENA RGNL (HLN)
ILS or LOC Y RWY 27

The Final Approach Track is shown only when the missed approach point (MAP) lies within the boundaries of the Airport Sketch. In a case where the MAP occurs prior to the Airport Sketch boundary, a Final Approach Track arrow will not be shown. Here is an example using the RNAV (GPS) X Rwy 6 at Teterboro, NJ – KTEB, where the MAP lies outside of the Airport Sketch boundary, and where the Final Approach Track is not depicted:

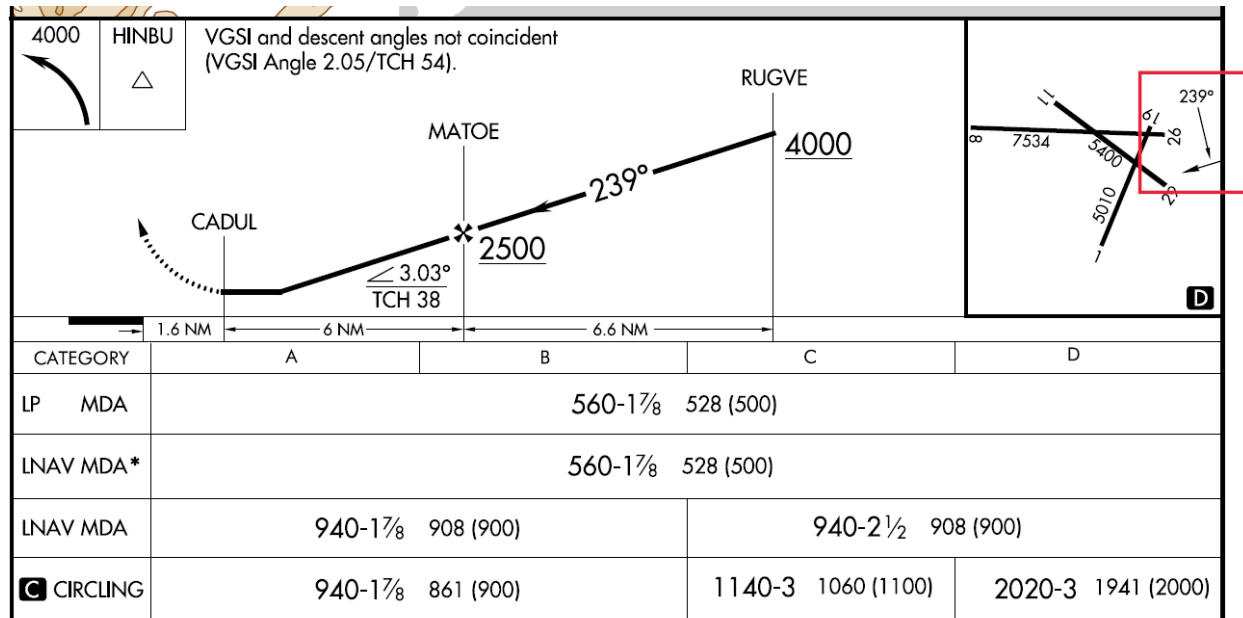


During the ACM-CG Instrument Approach Chart Modernization Working Group's activities, there was much discussion about whether this Final Approach Track should be depicted on the Airport Sketch in all cases (**except those ILS approaches noted above**) regardless of the location of the MAP in relation to the Airport Sketch boundary. Pilot participants generally agreed on the benefits of always charting the Final Approach Track, especially when the Final Approach Track was offset from the extended runway centerline. However, there was significant concern expressed by the charting community that depicting the Final Approach Track beyond the MAP on the Airport Sketch could be misinterpreted as implying that the approach is safe to continue beyond the MAP in IMC conditions, or that it could result in a delayed execution of the missed approach turn at the MAP.

That later concern was illustrated when the working group looked at the RNAV (GPS) Rwy 26 at Kodiak AK – PADQ). In this procedure, the MAP (CADUL) is located 1.6 NM from the runway threshold. The final approach course is also offset from runway 26 by 19 degrees:



Because the MAP is located outside of the Airport Sketch, the Final Approach Track is not depicted. As part of its work, the ACM-CG working group prepared an option where the Final Approach Track was depicted on the revised Airport Sketch for comparison:



KODIAK, ALASKA
Amdt 3A 20JUN19

57°45'N-152°30'W

KODIAK (ADQ)(PADQ)

RNAV (GPS) RWY 26

Again, there were differing opinions expressed on the depiction of the Final Approach Track when the MAP is located outside of the Airport Sketch. Pilots generally believed it beneficial to show the relationship of the final approach course to the landing runway as an aid to sighting aligning with the landing runway during the visual segment of the approach. Charting representatives expressed concern that doing so could imply to the pilot that it was safe to continue the approach beyond the MAP without the CFR-required visual references and that the course depicted by the arrow may be safely followed in such instances. There was also concern expressed that pilots might misinterpret the arrow as implying the missed approach procedure was a straight out missed instead of a turning missed, as described on the procedure.

It should be noted that the National Geospatial Agency (NGA) and Department of Defense (DoD) have filed an exception to this IAC specification. In all cases, on IAP charts published by these agencies, they depict the Final Approach Track on the Airport Sketch except on those ILS approaches described above.

In conclusion, the working group determined that the decision on whether to chart the Final Approach Track when the MAP is located outside of the Airport Sketch's boundary is outside of scope for the working group. A change to the IAC specification would require a separate review before the ACM Charting Group and should be discussed as a separate agenda item.

Recommendations:

The ACM-CG Instrument Approach Chart Modernization Working Group brings this agenda item to the ACM-CG for a determination on whether it is desirable to revise the IAC specification and chart the Final Approach Track on the Airport Sketch regardless of the location of the MAP in relation to the Airport Sketch Boundary. We ask that the ACM-CG express their desire to AJV-A and Terminal Charting concerning this specification and the need, if any, to revise this specification.

No change is proposed concerning the prohibition on depicting the Final Approach Track on ILS CAT II, ILS CAT II & III, ILS SA CAT I, ILS SA CAT II, and ILS SA CAT I & II IAPs.

Comments:

The change affects the following:

- IAC 4, paragraph 3.4.7.6 Final Approach Track
- FAA Chart Users Guide
- FAA publications: Instrument Flying Handbook, Instrument Procedures Handbook.

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Date: August 30, 2021

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MEETING 21-02

Rich Boll, NBAA, [presented](#) the new recommendation. This proposal ties in with Recommendation Document [21-02-363](#) and comes out of the Chart Modernization Workgroup. Rich explained that currently the charting specification requires the final approach track to be shown in the airport sketch box only when the missed approach point (MAP) lies inside the boundaries of the box. When the MAP is located prior to the airport sketch parameters, a final approach track is not shown. Pilot participants in the Chart Modernization workgroup generally agreed on the benefit of always depicting the final approach track in the airport sketch. Depicting the final approach track assists pilots in identifying the runway environment and their alignment to it during the transition from instrument to visual conditions. There was significant concern expressed by the charting community present in the workgroup that depicting the final approach track beyond the MAP could imply that the path is safe to fly beyond the MAP ([slide 6](#)).

Rich brought this issue before the ACM to determine if it is desirable to revise the Interagency Air Committee (IAC) specifications so the final approach track is always charted on the airport sketch regardless of the location of the MAP in relation to the sketch boundary. He said this change does not include the current prohibition on depicting the final approach track on ILS Cat charts. He pointed out that NGA has filed an exception to the current IAC specification and the final approach track is depicted in the sketch on their charts regardless of MAP location.

Michael Stromberg, UPS-IPA, said he supports always depicting the final approach track because pilots use it for lining up to the runway regardless of where the missed approach point is.

Valerie Watson, FAA/AJV-A250, restated the concern that if the arrow is shown coming into the airport environment (see the bottom right example on [slide 7](#)), that's really not the angle the pilot will be flying at that point in his approach, so it may be deceptive. Rich said this helpful to pilots and it is something they can use to identify that there may be an offset. Valerie said perhaps the incoming track should be renamed "final approach track extended" to capture this idea.

Jeff Rawdon, FAA/AFS-420, asked if a safety review is done as part of the IAC specification change process. Valerie said Safety Management System (SMS) reviews are not done on IAC specification changes, so it would have to be done prior to that if deemed necessary. Jeff thinks valid safety concerns have been raised and that a safety review is necessary before moving forward with this recommendation.

Doug Willey, ALPA, does think the depiction is helpful for alignment to the runways and expressed support for this change. John Barry, FAA/AIR-622, agrees that it helps with alignment. He suggested it may be helpful to use a different line type for instances when the MAP occurs prior to the airport sketch boundary. Bill Tuccio, Garmin, expressed some concerns and said when the MAP is far away, showing the final approach track extended in the sketch can be misleading. Rich said one of the purposes of the airport sketch is to transition the pilot from instrument to visual conditions. Having the final approach track aids in that orientation.

There was general support for this recommendation, but some concerns were voiced. Valerie stated that Jeff Rawdon's position is that we shouldn't move forward with this recommendation until a safety risk analysis is done. Jeff said he didn't know which group would be responsible conducting the analysis, but there will be an FAA review of the recommendation to determine the next steps.

STATUS: OPEN

ACTION: Jeff Rawdon, FAA/AFS-420 will report back on the FAA's review of the recommendation to show the final approach track extended in the airport sketch including a determination regarding the necessity of a Safety Management System (SMS) review.

MEETING 22-01

Jeff Rawdon, FAA/AFS-420, said the ACM recommendation review group saw value in this proposal with minimal impact necessary to implement. There are concerns, however, that this change could introduce potential hazards. Pilots might be confused and think they have

operational allowance to continue beyond the missed approach point even if they are not visual over the runway. The group feels a Safety Management System (SMS) review may be necessary before moving forward with this change. Jeff said Flight Standards will continue to investigate this issue with consideration of a future SMS review.

STATUS: OPEN

ACTION: Jeff Rawdon, FAA/AFS-420, will report back on the Flight Procedures and Airspace Group's continued investigation into the recommendation to show the final approach track extended in the airport sketch including a determination regarding a Safety Management System (SMS) review.

MEETING 22-02

Jeff Rawdon, FAA/AFS-420, reported that Flight Standards will do a safety review of this recommendation along with the review for the Chart Modernization effort. He expects to be able to report the results of the safety review at the next meeting. Pending the outcome, work on an Interagency Air Committee (IAC) specification change can begin. It was agreed this effort can move forward independently of the Chart Modernization changes.

STATUS: OPEN

ACTION: Jeff Rawdon, FAA/AFS-420, will report on the safety review of the Airport Sketch Final Approach Track recommendation.

ACTION: Krystle Kime, FAA/AJV-A222, will draft an Interagency Air Committee (IAC) specification change pending a positive outcome of the safety review.

MEETING 23-01

Jeff Rawdon, FAA/AFS-420, reported that Flight Standards conducted a safety review and did not identify any hazards with this recommendation.

Jennifer Hendi, FAA/AJV-A250, reported that an Interagency Air Committee (IAC) specification change is in process. Kevin Carter, NGA, reported that the DoD is already doing this.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will report on the Interagency Air Committee (IAC) specification change at the next ACM.

MEETING 23-02

Jennifer Hendi, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) specification change for this item has been signed. The specifications have been updated to always depict the final approach course track in the airport sketch of Instrument Approach Procedures regardless of the location of the MAP in relation to the airport sketch boundary. The changes are being implemented day-forward beginning with the 30 November 2023 chart cycle. All actions are now complete, and this issue can be closed.

STATUS: CLOSED