

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 14-02 – October 28-29, 2014

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 14-02-282

Subject: VASI/PAPI Differences

Background/Discussion:

PAPI and VASI systems use different Obstacle Clearance Surfaces (OCS). Essentially the VASI is 4 NM and begins at the threshold. However, there are more PAPI installations than VASI installations and the obstacle evaluation area begins 300 feet in front of the PAPI location, roughly 700 feet from the threshold and only extends from this position another 4 SM as opposed to 4 NM with the VASI. If the pilot is using their DME or RNAV distance, the VASI will read 4 NM from the threshold while the PAPI will read OCS is roughly 3.4 NM when its indication will provide obstacle protection for the descent to the runway.

The VASI and PAPI distances are described in the AIM as 4 NM and 4 SM respectively from the threshold.

Recommendations:

Change the PAPI OCS to be 4 NM from the threshold instead of 4 SM from an offset in front of the threshold so that both the PAPI and VASI have the same protection.

Comments:

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Organization:

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Date: 04-14-14

MEETING 14-02

John Collins, GA Pilot, briefed the audience that PAPI and VASI systems utilize different Obstacle Clearance Surfaces (OCS). VASI systems are calibrated for obstacle clearance from the threshold to 4 NM, while PAPI systems are calibrated from runway end to 4 SM (3.25 NM). John believes the OCS should be the same for both lighting systems.

Bob Bonanni, AAS-100, provided some background information to explain the differences between the two systems. He stated that the reason for the difference is that VASI is a legacy system and that PAPI is a much newer system. The PAPI system was designed in harmonization with international standards.

Brad Rush, AJV-344, briefed that in preparing a response to Johns recommendation prior to the ACF, he reached out to the FAA office of responsibility, AJM-3222, for the Visual Guidance Lighting Systems Order, FAA Order 6850.2B, but has yet to receive a response. His intent is to encourage the Order to be changed so that the surfaces will be defined in the same manner. He also stated that the AIM language should be clarified to better explain the current differences.

STATUS: OPEN

ACTION: Bryant Welch, AFS-410 and Brad Rush, AJV-344, to investigate responsibility for the text regarding VASI and PAPI systems in the AIM and work to clarify AIM language.

ACTION: Brad Rush, AJV-344, to report on a response regarding FAA Order 6850.2B.

MEETING 15-01

Valerie Watson, AJV-553, briefed the issue. Valerie stated that Brad Rush, AJV-54, had taken the issue to the FAA office of Lighting Systems, which is responsible for Order 6850.2B governing Visual Guidance Lighting Systems. That office responded that changing the PAPI distance to 4 NM would be very costly because it would require that all existing PAPIs be resurveyed for compliance. Brad asked if the VASI could be changed to 4 SM. The Lighting Systems Office responded that they would have to do some research to look at the impacts of this change.

STATUS: OPEN

ACTION: Brad Rush, AJV-54, to report on his continued discussions with the Lighting Systems Office.

MEETING 15-02

Brad Rush, AJV-54, briefed the issue. Brad stated in his discussions with the FAA Lighting Systems Office, he was told that there will not be an update to the Order to change the VASI Obstacle Clearance Surface (OCS). The office stated that changing the VASI distance would require that all VASIs be resurveyed for compliance, and that would be too costly. Brad stated that he would continue to work with AFS-410 on revising the language on in the AIM to clarify the different surface areas.

Michael Stromberg, Air Wisconsin, asked if all new VASI systems could be installed using the PAPI OCS. Brad stated that the FAA no longer installs new VASI systems.

STATUS: OPEN

ACTION: Brad Rush, AJV-54, to report on work on revising the AIM language regarding PAPI and VASI Obstacle Clearance Surface definitions.

MEETING 16-01

Valerie Watson, FAA/AJV-553, reviewed the topic. Tony Lawson, FAA/AJV-5441, stated that Brad Rush, FAA/AJV-54, has submitted changes to the AIM language. The new language will describe the Obstacle Clearance Surfaces for both VASIs and PAPIs in terms of nautical mile vs the existing nautical/statue mile. The AIM language is in the process of finalized and should appear in the November 2016 release.

STATUS: OPEN

ACTION: Tony Lawson, FAA/AJV-5441, to update on the publication of revised AIM guidance.

MEETING 16-02

Valerie Watson, FAA/AJV-553, reviewed the topic. Tony Lawson, FAA/AJV-542, showed the audience the [draft Aeronautical Information Manual \(AIM\) guidance](#) that describes the Obstacle Clearance Surfaces for both VASIs and PAPIs in terms of nautical miles. The new guidance is scheduled to appear in the 10 November 2016 release.

STATUS: OPEN

ACTION: Tony Lawson, FAA/AJV-542, to update on the publication of the revised AIM guidance.

MEETING 17-01

Meeting was cancelled.

MEETING 17-02

Tony Lawson, FAA/AJV-553, briefed the issue and [showed the revised AIM wording](#) published in the March 2017 edition that references both VASI and PAPI parameters in terms of nautical miles. There was agreement to close this item.

STATUS: CLOSED