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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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 the 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.

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**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.