

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

Log 1021

ISSUED: March 16, 1979

Forwarded to:

Honorable Langhorne M. Bond
Administrator
Federal Aviation Administration
Washington, D. C. 20591

SAFETY RECOMMENDATION(S)
A-79-9 and -10 *NOT TO REPORT*

On May 8, 1978, a National Airlines B-727 crashed into Escambia Bay while executing an airport surveillance radar (ASR) approach to runway 25 at Pensacola Regional Airport. The National Transportation Safety Board determined that the probable cause of this accident was the flightcrew's unprofessionally conducted nonprecision instrument approach, in that the captain and the crew failed to monitor the descent rate and altitude, and the first officer failed to provide the captain with the required altitude and approach performance callouts.

The Safety Board believes that this accident illustrates a lack of redundancy between flightcrews and air traffic controllers with respect to altitude management. The current ASR procedures in FAA's Air Traffic Control Handbook 7110.65, paragraph 1194, Final Approach Guidance, require controllers to inform flightcrews of aircraft distance from the runway, airport, or missed approach point at each mile on final approach. Paragraph 1190 requires controllers to provide recommended altitudes on final approach only if pilots request them, and the National crew did not request them. If both elements of aircraft position and recommended altitude information are provided, routinely and without request, flightcrews can compare their actual altitude for each mile on final with the recommended minimum altitude. These comparisons will allow the flightcrew to assess the need to correct rate of descent and airspeed. Most importantly, the flightcrew would be made aware of gross excursions from minimum safe altitudes by the controller's distance and recommended altitude advisories.

The Safety Board reviewed the Airman's Information Manual (AIM), "Basic Flight Information and ATC Procedures," and noted in the discussion of Pilot/Controller Roles and Responsibilities the following:

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"In order to maintain a safe and efficient air traffic system, it is necessary that each party fulfill his responsibilities to the fullest.

"The responsibilities of the pilot and the controller intentionally overlap in many areas providing a degree of redundancy. Should one or the other fail in any manner, this overlapping responsibility is expected to compensate, in many cases, for failures that may affect safety."

The controller procedures specified for an ASR approach in the AIM, and the Pilot/Controller Glossary are consistent with the controller's Handbook, except that they do not recommend that pilots request altitudes on final approach. A lack of guidance to pilots in this area is not consistent with the philosophy put forth in the Roles and Responsibilities discussion.

The Pensacola ASR approach plate did not, nor was it required to, depict or tabulate the location of the final approach fix and those minimum altitudes known to the controller for each mile on final approach. Therefore, there was no critical altitude information available to the crew to periodically and independently determine the stability of their approach when the controller advised the crew of their position on final.

By mandating controllers to provide altitudes and distance advisories, pilots would associate ASR approaches with the more common VOR/DME approach procedures, which provide both distance and minimum altitude information on approach plates.

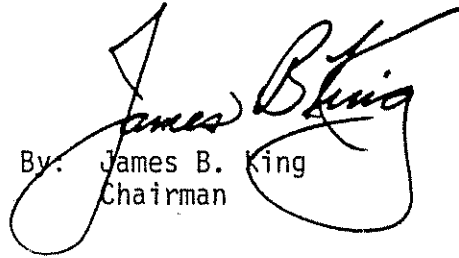
The Board is aware that the FAA did request industry views of paragraph 1190, Altitude Information, 15 months before the Escambia Bay accident and that most respondents elected to retain the current procedures. In light of the Escambia Bay accident and the infrequent use of ASR approaches, the Safety Board believes that controllers should provide altitude information on ASR approaches as a standard practice.

Accordingly, the National Transportation Safety Board recommends that the Federal Aviation Administration:

- Revise Air Traffic Control Handbook 7110.65, paragraph 1190 to require controllers to provide recommended altitudes to pilots on airport surveillance radar (ASR) approaches without pilot request.
- Revise the Airman's Information Manual, Pilot/Controller Glossary, and other operating and training documents that describe ASR approaches to reflect the revised controller procedures. (Class II - Priority Action) (A-79-9)

Develop, with industry, requirements for depicting final approach fixes and minimum altitudes for each mile on final approaches on ASR instrument approach procedures. (Class II - Priority Action) (A-79-10)

KING, Chairman, DRIVER, Vice Chairman, McADAMS and HOGUE, Members concurred in the above recommendations.


By: James B. King
Chairman