



Federal Aviation Administration

Policy Guidance

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To: All Regional Airports Division Managers

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Subject: Clarification of Declared Distances for Non-Turbine Powered Airplanes

PURPOSE:

This policy guidance document provides clarification to the Airports Division Regional (RO) and Airports District Office (ADO) Program Managers (PMs), Planners, and Engineers on the use of declared distances for non-turbine powered airplanes.

If you have any questions, please contact Carlton Lambiasi or Kent Duffy.

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BACKGROUND:

Guidance on declared distances is contained in Advisory Circular (AC) 150/5300-13, Airport Design. Declared distances represent the maximum distances available and suitable for meeting takeoff, failed or rejected takeoff, and landing distance performance requirements. Currently the aforementioned AC applies the publication of declared distances only to runways whose critical aircraft is a turbine powered airplane. Turbine-powered include turbojets or turboprop powered airplanes.

Recent field inquiries resulted in the Airport Data and Airspace Branch (AAS-120) and the Airport Planning and Environmental Division (APP-400) evaluating the applicable use of declared distances when the runway's critical aircraft is not a turbine-engine powered airplane. AAS/APP's evaluation included coordination with the Flight Standards Office (AFS).

CLARIFICATION:

Federal regulations apply declared distances to the certification and operation of turbine-engine powered transport category airplanes operating under 14 CFR Parts 91, 121, and 135. Specific provisions apply for takeoff distance, takeoff run (with or without the use of a clearway), accelerate stop distance (with or without the use of a stopway), and landing distance available. While there are not similarly stringent operating rules applicable to non-turbine (e.g., piston) airplane types, the declared distances are useful as advisory information to assist pilots with becoming familiar with all available information concerning the intended flight (see 14 CFR 91.103).

While piston airplane pilots are not required by regulation to calculate their accelerate stop distance, many do as a best practice in the interest of flight safety. Moreover, on a runway where the critical aircraft is a piston powered airplane, the publication of declared distances is useful to the occasional turbine airplane pilot in their flight planning for both takeoff or landing. Runway ends with published C and D approach categories at airports that sell Jet A fuel are likely to have occasional usage by turbine airplanes.

Declared distances are also appropriate to use on runways that are planned to be improved to meet design standards at some later date, but have design deficiencies in their existing state. In these circumstances, the publication of declared distances for the existing state is warranted to satisfy airport design requirements and as an operational imperative so that pilots have accurate runway length information for flight planning.

For these reasons, implementing declared distances could be a reasonable alternative to mitigate existing shortcomings and thus better meet design standards, even when the critical airplane is not a turbine-engine powered, transport category airplane. A point of emphasis is that airport operators still need to review all reasonable alternatives in their master planning efforts, and not immediately choose declared distances because it is the most cost-effective solution.

Often, the use of declared distances is an interim condition that is meant to ensure flight safety until future improvements can be made to the runway. ADOs are expected to periodically review existing published declared distances or identify the need for declared distances with airport operators, particularly during updates to the ALP. ADOs should assess, in collaboration with the airport operator, if runway improvements can be made that would reduce or eliminate the need for declared distances that are less than the full pavement length (i.e. unbalanced). In this way incremental progress can be made to achieve declared distances that are equal (i.e. balanced) to the full runway length. The full operational use of the paved runway is the optimum state, so that declared distances do not limit the usable length available for airplane takeoff and landing operations.

ARP recognizes that at many airports where it is not feasible or practicable to improve the runway beyond its current state, the permanent use of declared distances is expected and acceptable. In addition, at certain uniquely constrained airports, it is acceptable to build runway improvements that incorporate the use of declared distances to ensure safe use of the available runway pavement. Technical assistance is available from APP-400 and AAS-100 on the planning and design considerations, respectively, for these constrained development scenarios.