



# Federal Aviation Administration

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## Memorandum

Date: June 29, 2022

To: Office of Airports Regional Directors, AXX-600s  
Regional Airport Planning & Programming, AXX-610s  
Airports District Office Managers, XXX-ADOs

From: Robert J. Craven, Director, Airport Planning and Programming, APP-1  
John R. Dermody, P.E., Director, Airport Safety and Standards, AAS-1

Subject: PGL 22-01: Guidance on discount rate application for cost effectiveness for airfield pavement projects.

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Robert John Craven  
JOHN DERMODY

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Date: 2022.06.29 12:10:04 -04'00'

Digitally signed by JOHN DERMODY  
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This Program Guidance Letter (PGL) serves to clarify and provide guidance on which discount rates apply to airfield pavement projects for cost effectiveness, also known as Life Cycle Cost Analysis (LCCA), during design phase as well as procurement. A benefit cost analysis applies when adding infrastructure, such as a new/additional runway or taxiway. The benefit cost analysis determines the investment feasibility of a singular project by comparing expected benefits against expected costs. In contrast, a cost effectiveness analysis compares two solutions (such as using either asphalt or concrete for the runway pavement), based on relative costs, to determine the most economical solution to repair or replace existing infrastructure. A cost effectiveness analysis is appropriate to determine which pavement type is the most economical solution to repair or replace existing infrastructure.

### Background

In the past two years, industry has expressed concern with the discount rate applicable to airfield pavement projects, specifically as defined in Appendix U, Table U-8 of the Airport Improvement Program (AIP) Handbook, FAA Order 5100.38D.<sup>1</sup> The FAA Office of Airport Planning and Programming (APP) and the Office of Airport Safety and Standards (AAS) convened a working group to discuss discount rates applicable to airfield pavement projects.

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<sup>1</sup> [https://www.faa.gov/airports/aip/aip\\_handbook/media/AIP-Handbook-Order-5100-38D-Chg1.pdf](https://www.faa.gov/airports/aip/aip_handbook/media/AIP-Handbook-Order-5100-38D-Chg1.pdf)

In the current AIP Handbook, Appendix U, Table U-8 “Procurement By Sealed Bids”, Section (8) is titled Life Cycle Cost Analysis (LCCA). However, in item (8)(d), the Handbook cites the OMB Circular A-94 guidance for Benefit-Cost Analysis, instead of the guidance for cost effectiveness in the same OMB Circular. This handbook citation has resulted in the instruction that a discount rate of seven percent (7%) must be used to evaluate the cost effectiveness of equivalent pavement alternatives. The working group concluded that the AIP Handbook citation of a 7% discount rate is not the appropriate rate to use for pavement cost effectiveness analysis (during pavement design or pavement procurement), and concurred with the industry concern that using an inappropriate discount rate in the engineering economic analysis for pavement design may bias a desired pavement alternative.

## Guidance

The appropriate real discount rate used for cost effectiveness analysis, during the design phase of a project, should follow guidance in Advisory Circular (AC) 150/5320-6G,<sup>2</sup> Airport Pavement Design and Evaluation, issued on June 7, 2021. AC 150/5320-6G, sub-subsection 1.6.3.5, states that for cost effectiveness determinations, real discount rates from the latest OMB Circular A-94 Appendix C<sup>3</sup> should be used in accordance with the time period chosen. OMB Circular A-94, Paragraph 8.c. states that for cost effectiveness the Appendix C rates should be used. The OMB Circular A-94 Appendix C is updated annually.

The working group also agreed that the analysis period for cost effectiveness analysis would follow guidance in AC 150/5320-6G. The latest version allows the sponsor, designer, and FAA to agree on an assessment period considering pavement functional life at a location and does not mandate 20 years.

This PGL does not change guidance on the discount rate to use for a benefit cost analysis, which remains at 7%.

## Moving Forward

The FAA will update the AIP Handbook (including Table U-8) in the future and will include more detailed clarification about when to use benefit cost analysis versus cost effectiveness analysis, as well as which discount rates to use. The FAA also will clarify guidance related to the cost effectiveness assessment period in the updated AIP Handbook.

If you have any questions related to grant activities please contact your Regional point-of-contact. If you have any questions related to the technical aspects please contact the AAS-110 Airfield Pavement Engineers, Harold Honey ([Harold.honey@faa.gov](mailto:Harold.honey@faa.gov), 202-267-4689) or Jeff Crislip ([jeffrey.d.crislip@faa.gov](mailto:jeffrey.d.crislip@faa.gov), 609-485-9553)

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<sup>2</sup> [https://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150-5320-6G-Pavement-Design.pdf](https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5320-6G-Pavement-Design.pdf)

<sup>3</sup> [https://www.whitehouse.gov/wp-content/uploads/2020/12/2020\\_Appendix-C.pdf](https://www.whitehouse.gov/wp-content/uploads/2020/12/2020_Appendix-C.pdf)