Office of Airport Safety and Standards Update

To: IESALC

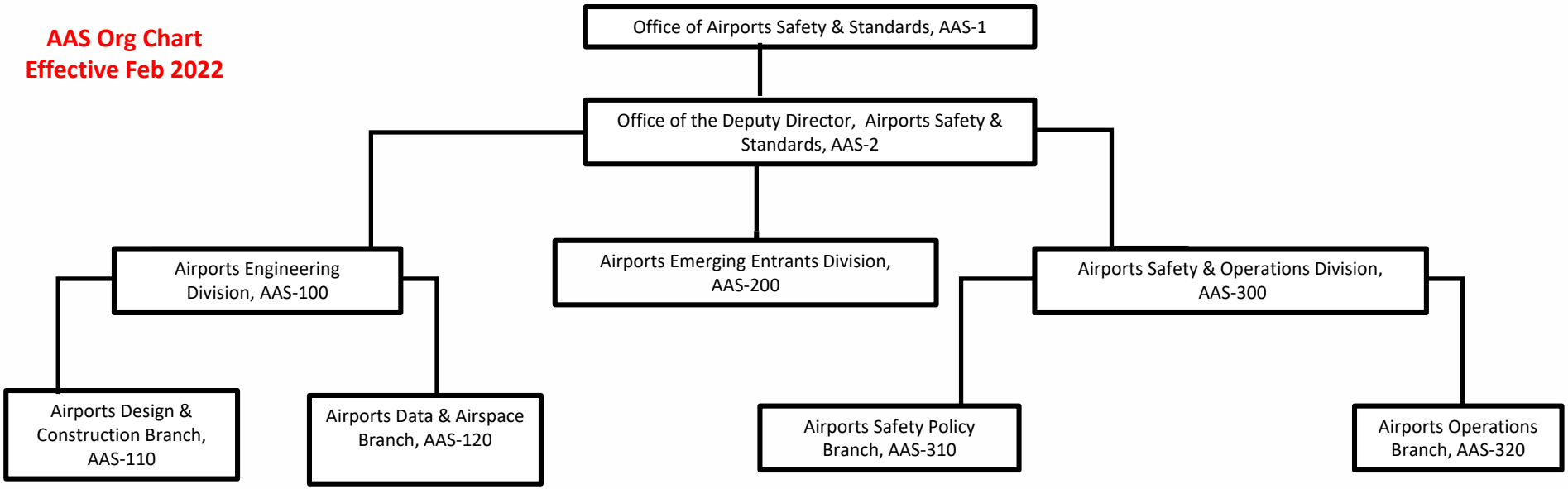
April 20, 2022

By: Robert Bassey

We are Airports

FAA Office of Airports

AAS Org Chart
Effective Feb 2022



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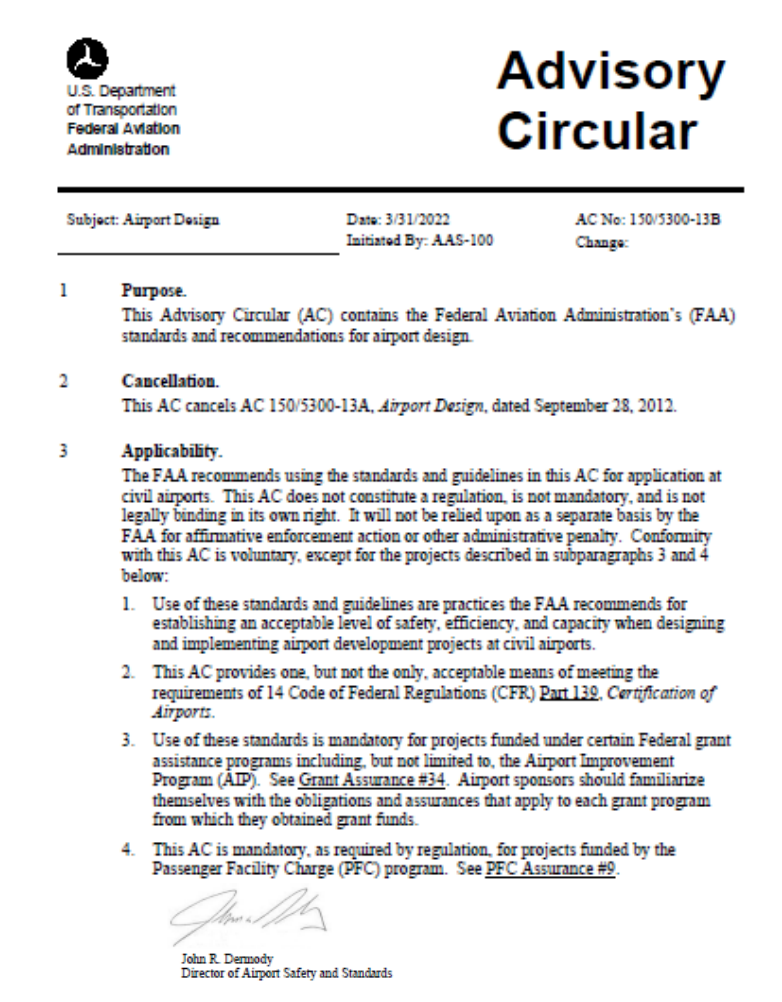
AAS-100 Publications

- Advisory Circulars
- Engineering Briefs
- Orders



U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Airport Design | Date: 3/31/2022 | Initiated By: AAS-100 | AC No: 150/5300-13B | Change:

1 **Purpose.**
This Advisory Circular (AC) contains the Federal Aviation Administration's (FAA) standards and recommendations for airport design.

2 **Cancellation.**
This AC cancels AC 150/5300-13A, *Airport Design*, dated September 28, 2012.

3 **Applicability.**
The FAA recommends using the standards and guidelines in this AC for application at civil airports. This AC does not constitute a regulation, is not mandatory, and is not legally binding in its own right. It will not be relied upon as a separate basis by the FAA for affirmative enforcement action or other administrative penalty. Conformity with this AC is voluntary, except for the projects described in subparagraphs 3 and 4 below:

1. Use of these standards and guidelines are practices the FAA recommends for establishing an acceptable level of safety, efficiency, and capacity when designing and implementing airport development projects at civil airports.
2. This AC provides one, but not the only, acceptable means of meeting the requirements of 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*.
3. Use of these standards is mandatory for projects funded under certain Federal grant assistance programs including, but not limited to, the Airport Improvement Program (AIP). See Grant Assurance #34. Airport sponsors should familiarize themselves with the obligations and assurances that apply to each grant program from which they obtained grant funds.
4. This AC is mandatory, as required by regulation, for projects funded by the Passenger Facility Charge (PFC) program. See PFC Assurance #9.

John R. Dermody
Director of Airport Safety and Standards

More than publications:

Engineering tools and videos

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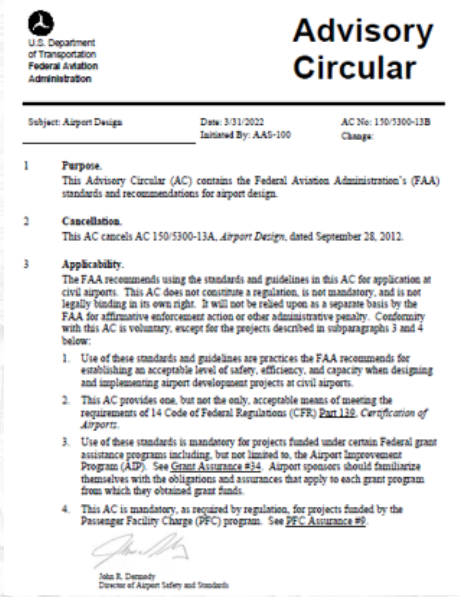
When , How, What, triggers AC updates

- Changes in Aircraft performance/characteristics;
- Progress in technology (AI/Machine Learning);
- Research performed by/ at the Tech Center (ATR);
- Feedback received from:
  - Part 139 ACSIs & State Agencies
  - Region/ADOs
  - Industry (MOS, AC comments etc)
- Can it be addressed in:
  - Errata;
  - Change Set ie change 1; or
  - Engineering Brief



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John R. Dennedy
Director of Airport Safety and Standards

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AAS-100 Publications

- First Phase – The draft is prepared and submitted for internal coordination and discussion (HQ, RO, ADO, and other LOBs)

- 2nd Phase – The updated draft is posted on the FAA website for Industry Review and Comments

- 3rd Phase – The updated draft (QA/QC Review) is submitted to AGC (Legal)
  - They are looking for no over-reaching regulatory authority.
  - "Must" versus "should"
  - "Requirement" versus" recommended", or even" best practice"
- Final "Final" Sr. Management discussion: presented to (AAS-1 & AAS-2) and sometimes to ARP-1 & ARP-2

- Final Version/Package is prepared for AAS-1 signature, website publication and industry notification.

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Recently Published Advisory Circulars

- **AC 150/5300-13B**, Airport Design, Published March 2022.
- **AC 150/5335-5D**, Standardized Method of Reporting Airport Pavement Strength – PCR, Published April 2022
- **AC 150/5390-2D**, Heliport Design, Published January 2023
- **AC 150/5300-20 (New),** Submission of On-Airport Proposals for Aeronautical Study, Published April 2023

Advisory Circulars "In The Works" (150 Series)

- **5300-18D** - General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards Document Information
- **5345-42K** - Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories (Industry Review)
- **5345-44L** – Specifications of Runway and Taxiway Signs (Industry Review)
- **5345-46F** - Specification for Runway, Taxiway, Heliport, and Vertiport Light Fixtures (Industry Review)

Advisory Circulars
"Proposed Revision"

- **5340-1N** Standards for Airport Markings
  - Enhancement of graphics
  - Optimizing of content organization
- **5370-2H** Operational Safety on Airports During Construction
  - Emphasis on early collaboration and communication
  - Enhancement of graphics

Engineering Briefs “Recently Published

- **EB 103**, EMAS Retroreflective Markers **(3/22)**

- **EB 105**, Vertiport Design **(9/22)**

Engineering Briefs “In The Works”

- **EB 89A**, Taxiway Nomenclature Convention
- **EB 104**, Supplemental Guidance to AC 5345-44K, Specification for Runway and Taxiway Signs (will soon be out for Industry Review)
- **EB XXX**, Specifying Blended Cements to Address Carbon Reduction
- **EB-XXX**, Aeronautical Surveys of Heliports
- EB-XXX, Aeronautical Surveys of Vertiports

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Solar Power - Overview

- FAA Airport Technology Research and Development Branch (ATR) is examining solar powered lights as an alternative to standard lighting at General Aviation (GA) airports
- ATR is evaluating:
  - Suitability and reliability of solar powered lighting systems
  - Compliance with safety standards
  - Mitigation strategies and optimum siting requirements
- 5 geographical areas targeted:
  - Cape May (Prototype)
  - Central Upstate New York (Penn Yan Airport)
  - Central Arizona
  - Pacific Northwest
  - Central Oklahoma
- FAA guidance will be provided on the installation and use of solar powered light systems

Program Accomplishments

- Laboratory Testing at Intertek & RPI
- Cape May “Prototype” Installation
- Data Acquisition formally began on Feb. 1, 2021
- Site Survey Report for candidate sites in Upstate NY Delivered on Dec. 31, 2020
- Interim (~30% submittal) field test data report delivered on Dec. 31, 2020
- Penn Yan (PEO) Installation on Sept. 30, 2021
- Data Acquisition formally began on Nov. 5, 2021

Project Status

In Progress

- Site Survey for 3 candidate airports in Arizona
- Procurement of equipment for Arizona test array
- Updated Data Analysis report reflecting 1 year of data collected at Cape May

Next Steps

- Selection of candidate airport in Arizona region
- Installation of test array at selected Arizona Airport
- Selection of next test sites: Oklahoma & Washington State

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Low Current Airfield Lighting Architecture (LCALA)

- Draft performance requirements have been developed for this architecture
- The LCALA supports three modes of operation
  - Frequency Shift Keying, or FSK
  - Amplitude Shift Keying or ASK
  - Legacy Mode
- Draft Engineering Brief (EB) will be developed in FY22 based on the performance requirements

Questions?