

Office of Airport Safety and Standards Update

To: IESALC

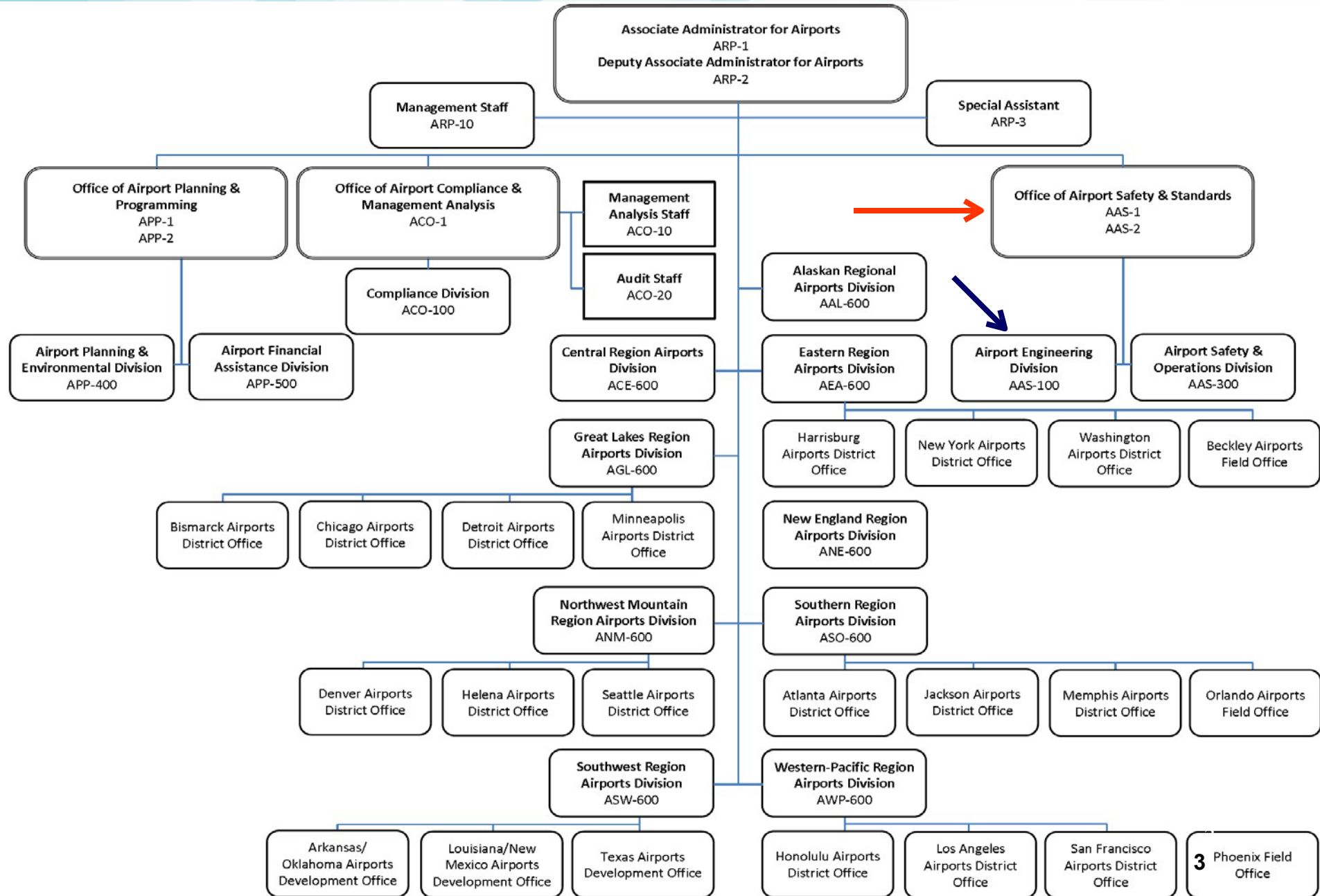
April 19, 2022

By: Robert Bassey



FAA
Office of Airports

FAA OFFICE OF THE ASSOCIATE ADMINISTRATOR FOR AIRPORTS



Airport Engineering Division

- **Maintain over 80 of the airport series (150/5xxx) advisory circulars**
 - Standards for airport design, safety, construction, equipment, airfield lighting, signage and marking, and airfield pavements that are required for projects using AIP funds
 - Global leadership in international standards through ICAO
 - Maintain engineering briefs for additional guidance for airport projects.
 - Approves requests for modification of design or construction standards for individual projects.

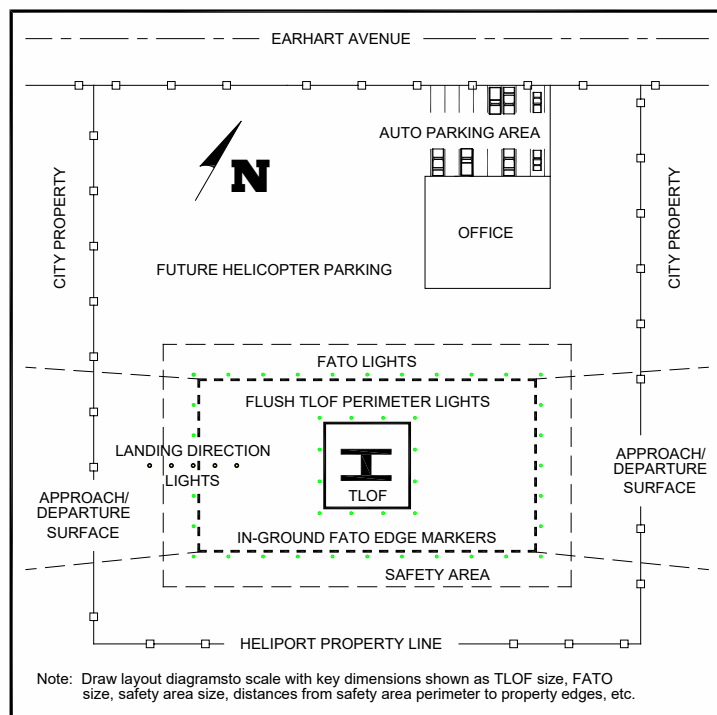
AC 150/5390-2D Heliport Design

Summary of Changes to Heliports AC

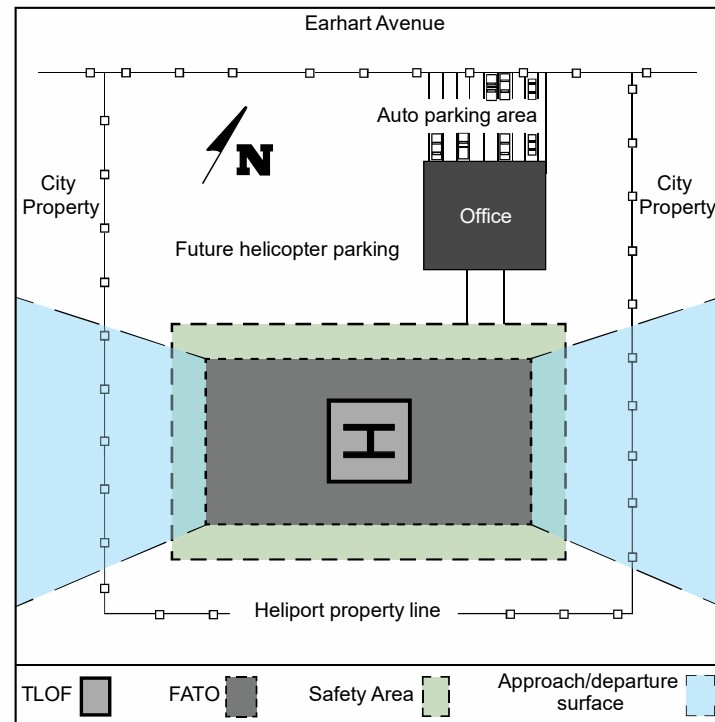
1. Separate chapters on General Aviation, Transport and Hospital Heliports are now consolidated into one chapter
2. Eliminate redundant information
3. Add separate chapters for Taxiways / Heliport Marking and Lighting
4. Incorporate Engineering Brief #87, Heliport Perimeter Light for Visual Meteorological Conditions, into this AC to address specific heliport lighting requirements.
5. Improve figures
6. Include Hyperlinks

Enhanced/Simplified Figures

Current AC figure



New AC figure



Example of Consolidated Figures and Tables

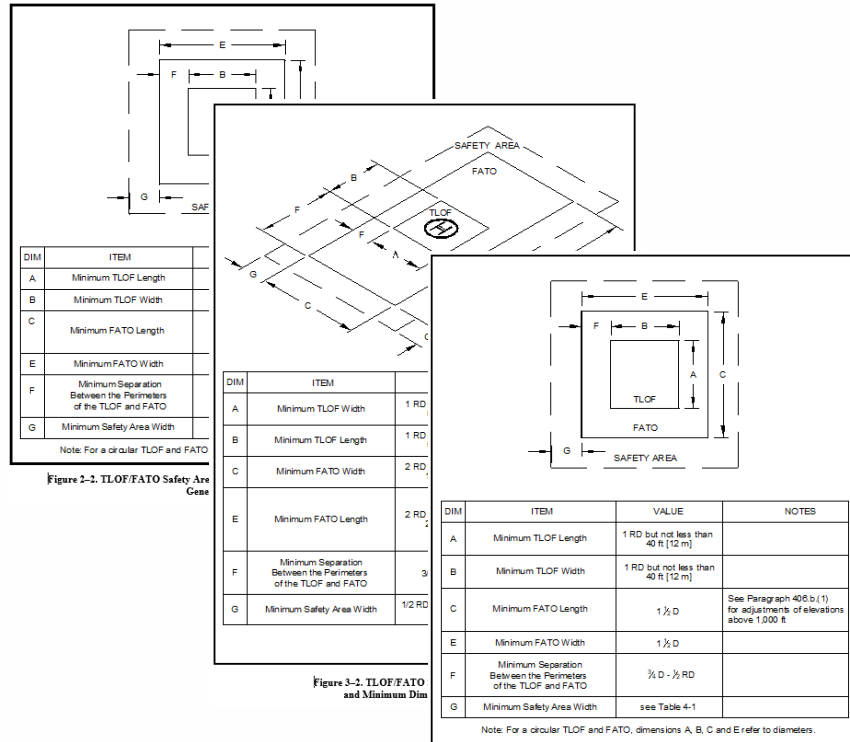
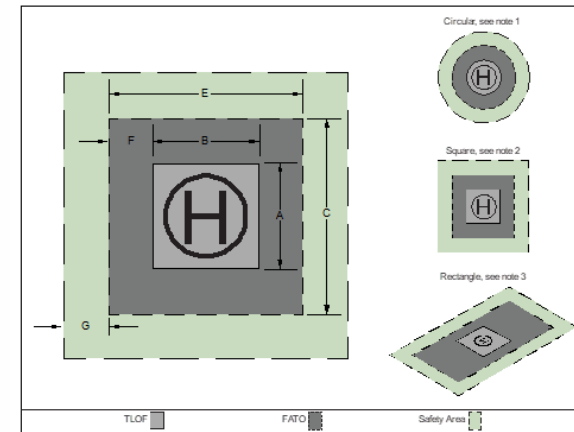


Figure 2-2. TLOF/FATO Safety Area Relationships and Minimum Dimensions

Figure 4-2. TLOF/FATO Safety Area Relationships and Minimum Dimensions: Hospital

Figure 2-4. TLOF/FATO/Safety Area Relationships and Minimum Dimensions



Note 1: For a circular TLOF and FATO, dimensions A, B, C, and E refer to diameters.
Note 2: For a square TLOF and FATO, dimension E = dimension C and dimension A = dimension B.
Note 3: For a rectangular TLOF and FATO, dimension E = dimension C and dimension A = dimension B.

Table 2-1. TLOF/FATO Minimum Dimensions

Dim	Item	GA	TRANSPORT	HOSPITAL
A	TLOF Length	1 RD	1 RD but not less than 50 ft (15 m)	1 RD but not less than 40 ft (12 m)
B	TLOF Width	1 RD	1 RD but not less than 50 ft (15 m)	1 RD but not less than 40 ft (12 m)
C	FATO Length	1 ½ D ¹	2 RD but not less than 200 ft (60 m) (a)	1 ½ D ¹
E	FATO Width	1 ½ D	2 RD but not less than 100 ft (30 m)	1 ½ D
F	Separation between TLOF and FATO perimeters	¾ D - ½ RD	¾ D - ½ RD	¾ D - ½ RD
G	Safety Area Width	See	¾ RD but not less than 30 ft (9 m)	See

Note 1: See paragraph 2.8.4 and Figure 2-8 for adjustments for heliport elevations above 1000' MSL.

Perimeter Lighting

- FATO lighting will be specified as "optional" to allow FATO lighting to be used where beneficial.

Approximate Timeline for Completion of Draft AC

1. Complete final draft AC (*August 2021*)
2. Legal review (*Pending – Draft Submitted November 2021*)
3. Adjudication of Legal Review comments (*Spring 2022*)
4. Publish final AC (*FY 2022*)

AC 150/5345-26E, FAA Specification for L-823 Plug and Receptacle, Cable Connectors

- Reformatted figures in Appendix A.
- Updated reference documents to current revisions

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

Engineering Brief 105, Vertiport Design

Engineering Brief 105

- Defined as interim guidance for vertiport facilities based on the composite aircraft
 - Anticipated use for existing infrastructure and new vertiport sites
 - Emphasis on safety-critical areas
 - Outline:
 - Introduction
 - Vertiport Design/Geometry
 - Marking, Lighting, Visual Aids
 - Charging/Electric (support from NREL)
 - On-Airport Vertiports
 - Site Safety Elements
- Comments period closed April 18, 2022
- Emailed to: vertiports@faa.gov

Engineering Brief 105

- TLOF - Touchdown and liftoff area
- FATO - Final approach and takeoff area
- Safety Area

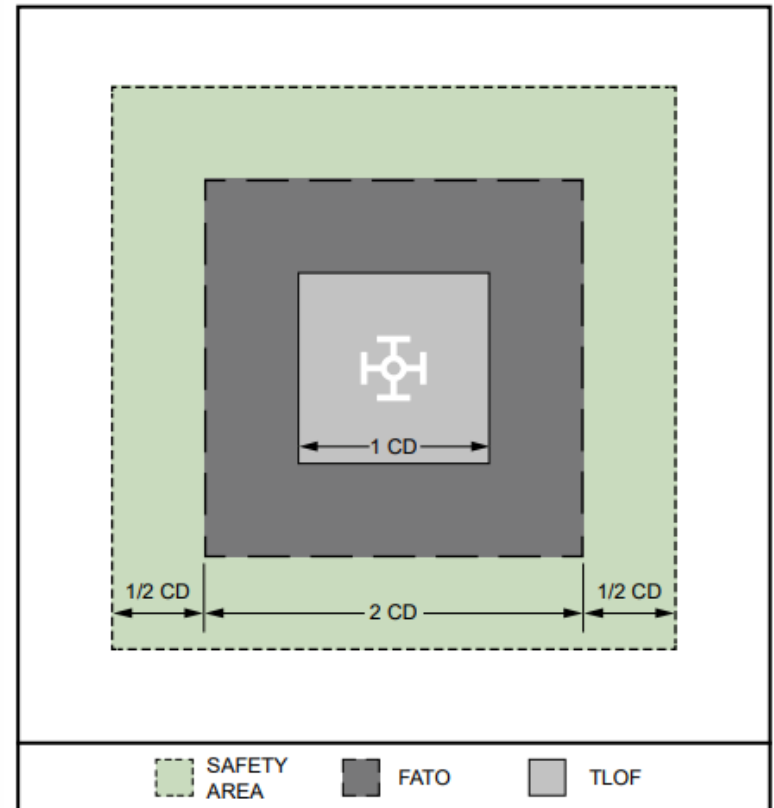
Vertiport EB Recommendation

TLOF: 1 CD

FATO: 2 CD

Safety Area: 3CD
($\frac{1}{2}$ CD to each side)

Size for 50 ft aircraft: 150 ft



Next Steps

- FAA will develop a performance-based AC on vertiport design
 - Will address autonomy, different propulsion methods, high tempo facilities and instrument flight rules (IFR) capability.
 - VTOL aircraft using alternative fuel sources
 - VTOL aircraft with MTOW over 7,000 pounds
 - Late 2024/Early 25
- Update to engineering brief likely following additional research and performance/operational data
 - Late 2023/Early 24

Questions?