



**U.S. DEPARTMENT OF TRANSPORTATION**  
**FEDERAL AVIATION ADMINISTRATION**  
Air Traffic Organization Policy

**ORDER**  
**JO 6900.25**

Effective Date:  
11/13/2018

**SUBJ:** Lightning and Surge Protection, Grounding, Bonding and Shielding (LPGBS) Policy

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**1. Purpose of This Order.** This order establishes policy for procurement, design, installation, implementation, operation, and maintenance of Lightning and Surge Protection, Grounding, Bonding and Shielding (LPGBS) systems, and assigns responsibilities for protection of people, sensitive electronic equipment, and structures of the National Airspace System (NAS) operational facilities.

**2. Audience.** This order is for all Federal Aviation Administration (FAA) employees and managers who are involved in LPGBS systems design, installation, and operation. This includes Service Areas, Engineering Services, Environmental Support Unit Personnel, engineers and managers who review and/or approve designs including those from non-FAA engineering entities.

**3. Where Can I Find This Order.** You can find an electronic copy of this order on the Directives Management System (DMS) website at [https://my.faa.gov/tools\\_resources/orders\\_notices/](https://my.faa.gov/tools_resources/orders_notices/). Or, go to the MyFAA Employee website, select 'Tools and Resources' then select 'Orders and Notices'.

This order may also be found on the Power Services Group, Orders, Standards and Specifications webpage at

[https://my.faa.gov/org/linebusiness/ato/operations/facilities\\_engineering/power\\_services/sys\\_eng\\_team/stand\\_specs.html](https://my.faa.gov/org/linebusiness/ato/operations/facilities_engineering/power_services/sys_eng_team/stand_specs.html)

**4. Cancellation.** This order replaces all references to Order 6950.19A, Practices and Procedures for Lightning Protection Grounding, Bonding, and Shielding Implementation (administratively cancelled on May 6, 2006) and to Order 6950.20, Fundamental Considerations of Lightning Protection, Grounding, Bonding, and Shielding (administratively cancelled on May 9, 2006).

**5. Responsibilities.**

**a.** All Technical Operations Services organizations shall incorporate LPGBS requirements in accordance with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, into facility designs, installation and implementation efforts, and maintenance activities.

**b.** All Program Management Organization (PMO) programs shall specify and procure equipment and systems that incorporate LPGBS requirements in accordance with FAA-STD-019, and shall perform installation and implementation activities to integrate equipment and systems with facility LPGBS systems in cooperation with Technical Operations Services organizations, in accordance with the above section 5a.

c. The LPGBS design and implementation shall be performed by qualified engineers who are familiar with the FAA LPGBS design and implementation principles, policies and procedures. Training and familiarization for FAA LPGBS design principles and implementation are provided by the FAA Academy and the Power Services Group.

**6. Policy.** All NAS facilities and facility modifications shall comply with the version of FAA-STD-019 in force at the time the facility (or facility modification) design is contracted. All NAS equipment and systems procurement will be specified to comply with the version of FAA-STD-019 in force at the time the procurement is contracted. The LPGBS requirements given in FAA-STD-019 take precedence over all other LPGBS documents and industry standards. The LPGBS practices and procedures given in FAA-HDBK-010 and fundamental considerations given in FAA-HDBK-011 will be used to supplement and realize the requirements given in FAA-STD-019.

## **7. Implementation.**

All Technical Operations Services organizations and PMO programs will procure, design, install, implement, operate and maintain NAS facilities, systems, and equipment, in accordance with FAA-STD-019, the National Electrical Code®, also known as National Fire Protection Association (NFPA) 70™, and NFPA-780, Standard for the Installation of Lightning Protection Systems. This task shall be accomplished:

- a. As part of the procurement package for both facility and/or equipment.
- b. As part of the design package for both facility and/or equipment.
- c. Whenever existing facilities are undergoing major modifications as defined in Order 6950.27, Power System Analysis: Load Flow Calculations, Short Circuit Analysis, Protective Device Coordination Studies, and Arc Flash Hazard Assessment.
- d. Whenever new equipment or replacement equipment is brought into existing facilities.

**8. Distribution.** This order will be distributed electronically.

**9. Background.** The existing industry standards (e.g. Underwriters Laboratories and the National Fire Protection Association) are not designed for the structure, equipment, and environments of FAA's air traffic operation. This LPGBS order is established to enhance the industry standards to suit FAA environments by defining the minimum requirements for all FJFJFAA operational facilities. By applying this Order, NAS operational facilities will meet the minimum FAA requirements as well as

complying with industry standards to ensure protection of people, sensitive electronic equipment, and structures from lightning, electromagnetic interference, and other transient sources.

**10. Authority to Change This Order.** The Air Traffic Control Facilities and Engineering Services directorate issues changes to this order that do not set policy, delegate authority, or assign responsibility.

A handwritten signature in cursive script, reading "Teri L. Bristol".

Teri L. Bristol  
Chief Operating Officer  
Air Traffic Organization