

**SECTION 26 41 13**  
**LIGHTNING PROTECTION**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SECTION INCLUDES**

- A. Strike (air) terminals and interconnecting conductors.
- B. Grounding and bonding for lightning protection.

**1.03 RELATED REQUIREMENTS**

- A. Surge Protection for Wiring Systems: Specified in individual system requirements.

**1.04 REFERENCE STANDARDS**

- A. NFPA 780 - Standard for the Installation of Lightning Protection Systems; 2023.
- B. UL 96 - Lightning Protection Components; Current Edition, Including All Revisions.

**1.05 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination with Concrete Work: Coordinate the embedding of lightning protection components in concrete.
- B. Coordination with Roofing Work: Ensure adequate attachment of strike terminals and conductors without damage to roofing.
- C. Preinstallation Meeting: Convene a meeting at least at least two weeks prior to commencement of any work affected by lightning protection system requirements to discuss prerequisites and coordination required by other installers; require attendance by representatives of installers whose work will be affected.

**1.06 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate location and layout of air terminals, grounding electrodes, and bonding connections to structure and other metal objects. Include terminal, electrode, and conductor sizes, and connection and termination details.
  - 1. Where conductors or grounds are to be embedded or concealed in other construction, submit shop drawings at least 30 days prior to start of construction.
  - 2. If concrete-encased grounds are to be used and are not shown in Contract Documents, provide sufficient data to determine concrete encasement dimensions and location.
  - 3. Include data on actual ground resistance determined by field measurement in accordance with NFPA 780.
  - 4. Include engineering analysis of equalization of potential to metal bodies within the structure.
  - 5. Include access panels, test holes, and disconnecting means for maintenance.
- C. Product Data: Provide dimensions and materials of each component, indication of testing agency listing, and installation instructions.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Installation Certification: Submit copy of certification agency's approval.
- F. Operation and Maintenance Data: Provide recommended inspection and testing plan, including recommended intervals, to achieve periodic maintenance as recommended in NFPA 780; provide customized plan reflecting actual installation configuration with specific installed components identified.

- G. Project Record Documents: Record actual locations of air terminals, grounding electrodes, bonding connections, and routing of system conductors in project record documents.

## **1.07 QUALITY ASSURANCE**

- A. Maintain one copy of each referenced system design standard on site.
- B. Manufacturer Qualifications: Company specializing in lightning protection equipment with minimum three years documented experience.
- C. Designer Qualifications: Person or entity, employed by installer, who specializes in lightning protection system design with minimum three years documented experience.
- D. Installer Qualifications: Capable of providing the specified certification of the installed system.
- E. Products: Listed, classified, and labeled as suitable for the purpose intended.
- F. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Lightning Protection Components:
  - 1. allG Fabrication; \_\_\_\_\_: [www.allgfab.com/#sle](http://www.allgfab.com/#sle).
  - 2. Harger Lightning and Grounding: [www.harger.com/#sle](http://www.harger.com/#sle).
  - 3. National Lightning Protection Corporation: [www.theprotectionsource.com/#sle](http://www.theprotectionsource.com/#sle).
  - 4. Robbins Lightning, Inc: [www.robbinsslighning.com/#sle](http://www.robbinsslighning.com/#sle).
  - 5. thermOweld, subsidiary of Continental Industries; division of Burndy LLC: [www.thermoweld.com/#sle](http://www.thermoweld.com/#sle).
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 LIGHTNING PROTECTION SYSTEM**

- A. Lightning Protection System: Provide complete system complying with NFPA 780, including air terminals, bonding, interconnecting conductors and grounding electrodes.
  - 1. Provide system that protects:
    - a. The entire structure.
    - b. Open air areas within 100 feet (30 meters) of exterior walls at grade level.
    - c. Open air areas within building footprint.
  - 2. Coordinate with other grounding and bonding systems specified.
  - 3. Treat isolated non-grounded protruding metal items as specified by NFPA 780 for heavy-duty stacks.
  - 4. Determine ground resistance by field measurement.
  - 5. Provide copper, bronze, or stainless steel components, except where aluminum is allowed by NFPA 780.
  - 6. Provide disconnecting means and access panels or similar devices to allow complete periodic inspection and testing as described by NFPA 780 Annex D.
  - 7. Provide system certified by Underwriters Laboratories or the Lightning Protection Institute.
- B. Strike Terminals: Provide strike (air) terminals on the following:
  - 1. Roofs.
  - 2. Penthouse roofs.
  - 3. Parapets.
  - 4. Roof mounted equipment.
  - 5. Stacks.

### **2.03 COMPONENTS**

- A. All Components: Complying with applicable requirements of UL 96.
- B. Strike (Air) Terminals: Aluminum, solid, with adhesive bases for single-ply roof installations.

- C. Grounding Rods: Solid copper.
- D. Ground Plate: Copper.
- E. Conductors: Aluminum cable.
- F. Connectors and Splicers: Aluminum.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that field measurements are as indicated on shop drawings.
- B. Coordinate work with installation of roofing and exterior and interior finishes.

#### **3.02 INSTALLATION**

- A. Install in accordance with referenced system standards and as required for specified certification.
- B. Connect conductors using exothermic welding process; protect adjacent construction elements and finishes from damage.

#### **3.03 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.
- B. Perform visual inspection as specified in NFPA 780 as if this were a periodic follow-up inspection.
- C. Perform continuity testing as specified in NFPA 780 as if this were testing for periodic maintenance.
- D. Obtain the services of the specified certification agency to provide inspection and certification of the lightning protection system, including performance of any other testing required by that agency.

**END OF SECTION**

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