

SECTION 13100  
LIGHTNING PROTECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Air terminals and interconnecting conductors
- B. Grounding and bonding for lightning protection

1.2 REFERENCES

- A. LPI-175 - Lightning Protection Installation Standard; Lightning Protection Institute; 2004
- B. NFPA 780 - Standard for the Installation of Lightning Protection Systems; National Fire Protection Association; 2004
- C. UL 96 - Lightning Protection Components; Underwriters Laboratories Inc.; 2005
- D. UL 96A - Installation Requirements for Lightning Protection Systems; Underwriters Laboratories Inc.; 2001

1.3 SYSTEM DESCRIPTION

- A. Lightning Protection System
  - 1. Conductor system consisting of air terminals on roofs, roof-mounted mechanical equipment, chimneys and stacks, steeple, parapets, penthouse roofs, and other equipment
  - 2. Bonding of structure and other metal objects
  - 3. Grounding electrodes
  - 4. Interconnecting conductors

1.4 SUBMITTALS

- A. See Division 1 - General Requirements, for submittal procedures
- B. Shop Drawings
  - 1. Indicate layout of air terminals, grounding electrodes, and bonding connections to structure and other metal objects
  - 2. Provide terminal, electrode, and conductor sizes, and connection and termination details
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements

#### D. Project Record Documents

1. Record actual locations of air terminals, grounding electrodes, bonding connections, and routing of system conductors in project record documents.

### 1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with NFPA 780 and UL 96A and provide UL Master Label
- B. Manufacturer Qualifications: Company specializing in lightning protection equipment with minimum ten years documented experience
- C. Installer Qualifications: Authorized installer of manufacturer with minimum five years documented experience

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

#### A. Lightning Protection

1. Harger Lightning and Grounding: [www.harger.com](http://www.harger.com)
2. National Lightning Protection Corporation: [www.theprotectionsource.com](http://www.theprotectionsource.com)
3. Robbins Lightning, Inc: [www.robbsinlightning.com](http://www.robbsinlightning.com)
4. Heary Brothers, Inc.

### 2.2 COMPONENTS

- A. Air Terminals: Copper, except Aluminum where indicated, solid. Base mounting compatible with roof construction or equipment to which terminals are mounted
- B. Air Terminal for Chimney: Lead-coated copper
- C. Grounding Rods: Solid copper or copper clad
- D. Ground Plate: Copper
- E. Conductors: Aluminum where exposed to corrosive atmosphere, otherwise copper. All underground and concealed conductors shall be copper
- F. Connectors and Splices: Bronze, copper or aluminum as suitable for the conductor or device attached.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

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

### 3.2 INSTALLATION

- A. Install in accordance with NFPA 780, UL 96A, and LPI-175
- B. Connect conductors using exothermic welding process. Protect adjacent construction elements and finishes from damage
- C. Bond exterior metal bodies on building to lightning protection system

### 3.3 FIELD QUALITY CONTROL

- A. Obtain the services of Underwriters Laboratories, Inc. to provide inspection and labeling of the lightning protection system

END OF SECTION