

## SECTION 26 41 00 - FACILITY LIGHTNING PROTECTION

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Base Bid:
  - 1. Electrical Contractor provide lightning protection system consisting of:
    - a. Air terminals.
    - b. Interconnecting conductors.
    - c. Grounding and bonding.
    - d. UL Master Label.

#### 1.2 REFERENCES

- A. Lightning Protection Institute:
  - 1. LPI 175 - Standard of Installation.
- B. National Fire Protection Association:
  - 1. NFPA 780 - Standard for the Installation of Lightning Protection Systems.
- C. Underwriters Laboratories Inc.:
  - 1. UL 96 - Lightning Protection Components.
  - 2. UL 96A - Installation Requirements for Lightning Protection Systems.

#### 1.3 SYSTEM DESCRIPTION

- A. Description: Lightning Protection System consisting of air terminals, conductors and grounding/bonding system protecting the entire building (IDOT 128-0001). The Lightning Protection System shall bear a UL Master Label.

#### 1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with NFPA 780.
- B. Perform Work in accordance with UL 96A and furnish Master Label.
- C. Perform Work in accordance with LPI-175 and furnish LPI Certification.

#### 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in lightning protection equipment with minimum three years documented experience and member of Lightning Protection Institute.
- B. Installer: Authorized installer of manufacturer with minimum three years documented experience and certified by Lightning Protection Institute.

- C. Inspection Agency: Company or individual specializing in lightning protection inspecting with minimum three years documented experience and member of Lightning Protection Institute.

## 1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

## 1.7 COORDINATION

- A. Section 01 12 16 – Construction sequence: Coordination and project conditions.
- B. Coordinate locations of all air terminals and routing of down conductors with CDB's Representative.
- C. Coordinate Work with roofing and exterior and interior finish installations.

## PART 2 PRODUCTS

### 2.1 COMPONENTS

- A. Product Listing: UL 96.
- B. Air Terminals:
  - 1. Material: Aluminum.
  - 2. Configuration: Solid.
  - 3. Use adhesive base for single-ply roof installations.
  - 4. Air Terminal for Chimney: Lead-coated copper.
  - 5. Grounding Rods: Solid copper
  - 6. Ground Plate: Copper.
  - 7. Conductors:
    - a. Material: Aluminum.
    - b. Configuration: Cable.
  - 8. Conduit: PVC, Schedule 40.
- C. Connectors and Splicers: Aluminum.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install in accordance with the more stringent of NFPA 780, UL 96A, and LPI-175.
- B. Connect conductors using exothermic welding process. Protect adjacent construction elements and finishes from damage.
- C. Conductors shall be concealed within building finishes.

- D. Bond exterior metal bodies on building to lightning protection system and provide intermediate level interconnection loops 60 feet on center.

### 3.2 FIELD QUALITY CONTROL

- A. Perform inspection and testing in accordance with UL 96A.

END OF SECTION.