

**SECTION 26 41 00
FACILITY LIGHTNING PROTECTION**

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the furnishing and installation of a complete master labeled lightning protection system, complying with NFPA 780, UL 96 and UL 96A.

1.2 RELATED WORK

- A. Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: General electrical requirements that are common to more than one section of Division 26.
- B. Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS: Requirements for personnel safety and to provide a low impedance path to ground for possible ground faults.

1.3 SUBMITTALS

- A. In accordance with Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, submit the following:
 - B. Shop Drawings:
 - 1. Isometric and plan views showing layout and connections to the required metal surfaces.
 - 2. Show the methods of mounting the system to the adjacent construction.
 - C. Qualifications: Submit proof that the installer of the lightning protection system has had suitable and adequate experience installing other lightning protection systems, and is capable of installing the system as recommended by the manufacturer of the equipment.
 - D. Certification: Two weeks prior to final inspection, submit four copies of the following certifications to the Resident Engineer:
 - 1. Certification that the lightning protection system has been properly installed and tested.
 - 2. Certification that the lightning protection system has been inspected by a UL representative and a letter of findings has been provided by UL without variation.

1.4 APPLICABLE PUBLICATIONS

- A. Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by designation only.
- B. National Fire Protection Association (NFPA):
 - 70-02.....National Electrical Code (NEC)

780-00.....Standard for the Installation of Lightning
Protection Systems

C. Underwriters Laboratories, Inc. (UL):

96-94.....Lightning Protection Components

96A-01.....Installation Requirements for Lightning
Protection Systems

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Attach master labels "A" or "B" to each item by its manufacturer as evidence that the materials have been manufactured in conformance with the UL Standards for master label lightning protection materials.
- B. In addition to conformance to UL 96, the component material requirements are as follows:
 - 1. Conductors: Electrical grade copper.
 - 2. Air terminals: Solid copper, not less than 9 mm (3/8 inch) diameter, with sharp nickel-plated points.
 - 3. Tubing: Stiff copper or brass.
- C. Anchors and fasteners: Bolt type which are most suitable for the specific anchor and fastener installations.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install the conductors as inconspicuously as practical and with the proper bends.
- B. Make connections of dissimilar metal with bimetallic type fittings to prevent electrolytic action.
- C. Use the exothermic welding type connections that form solid metal joints.
- D. Connect exterior metal surfaces, located within 900 mm (three feet) of the lightning protection system conductors, to the lightning protection system conductors to prevent flashovers.
- E. Grounding: Test the ground resistance to earth by standard methods and conform to the ground resistance requirements specified in Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS.
- F. When the lightning protection systems have been installed, have the systems inspected by a UL representative. Obtain and install a UL numbered master label "C" for each of the lightning protection systems at the location directed by the UL representative and the Resident Engineer.
- G. Where the drawings show the new lightning protection system connected to an existing lightning protection system without a UL master label, the

new portion of the lightning system still requires inspection and labels as specified above for new work.

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