

SECTION 260553-IDENTIFICATION FOR ELECTRICAL SYSTEMS**PART 1 GENERAL****1.1 SUMMARY**

- A. Section includes:
 - 1. Nameplates.
 - 2. Labels.
 - 3. Wire markers.
 - 4. Conduit markers.
 - 5. Underground Warning Tape.
 - 6. Lockout Devices.
- B. Related Sections:
 - 1. Section 099000 - Paints and Coatings: Execution requirements for painting specified by this section.

1.2 SUBMITTALS AND QUALITY ASSURANCE

- A. Section 013300 - Submittal Procedures: Submittal procedures.
- B. Product Data:
 - 1. Submit manufacturer's catalog literature for each product required.
 - 2. Submit electrical identification schedule including list of wording, symbols, letter size, color coding, tag number, location, and function.
- C. Samples:
 - 1. Submit two tags, actual size.
 - 2. Submit two labels, actual size.
 - 3. Submit two nameplates, 4 x 4 inch in size illustrating materials and engraving quality.
- D. Manufacturer's Installation Instructions: Indicate installation instructions, special procedures, and installation.

1.3 CLOSEOUT SUBMITTALS

- A. Section 017700 – Closeout Procedures.
- B. Project Record Documents: Record actual locations of tagged devices; include tag numbers.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with State standard.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

- B. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Accept identification products on site in original containers. Inspect for damage.
- C. Accept materials on site in original factory packaging, labeled with manufacturer's identification, including product density and thickness.
- D. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Section 016000 - Product Requirements: Environmental conditions affecting products on site.
- B. Install labels and nameplates only when ambient temperature and humidity conditions for adhesive are within range recommended by manufacturer.

1.8 EXTRA MATERIALS

- A. Section 017700 – Closeout Procedures.

1.9 CERTIFICATION

- A. Equipment Identification shall be in accordance with ASTM E A13.1

PART 2 PRODUCTS

2.1 NAMEPLATES

- A. Product Description: Laminated three-layer plastic with engraved white letters on black contrasting background color.
- B. Letter Size:
 - 1. **1/8 inch** high letters for identifying individual equipment and loads.
 - 2. **1/4 inch** high letters for identifying grouped equipment and loads.
- C. Minimum nameplate thickness: **1/8 inch**.

2.2 LABELS

- A. Labels: Riveted engraved phenolic, with **3/16 inch** white letters on black background.

2.3 WIRE MARKERS

- B. Description: Split sleeve or tubing type wire markers.
- C. Legend:
 - 1. Power and Lighting Circuits: Branch circuit or feeder number as indicated on Drawings.
 - 2. Control Circuits: Control wire number as indicated on schematic interconnection diagrams and Drawings.

2.4 CONDUIT AND RACEWAY MARKERS

- A. Description: Nameplate fastened with adhesive or Labels fastened with adhesive.
- B. Color:
 - 1. Medium Voltage System: White lettering on black background.
 - 2. 480 Volt System: Black lettering on white background.
 - 3. 208 Volt System: Black lettering on white background.
 - 4. Fire Alarm System: Red lettering on white background.
 - 5. Telephone System: Blue lettering on white background.
- C. Legend:
 - 1. Medium Voltage System: HIGH VOLTAGE.
 - 2. 480 Volt System: 480 VOLTS. HIGH VOLTAGE.
 - 3. 208 Volt System: 208 VOLTS.
 - 4. Fire Alarm System: FIRE ALARM.
 - 5. Telephone System: TELEPHONE.

2.5 UNDERGROUND WARNING TAPE

- A. Description: **4 inch** wide plastic tape, detectable type, colored red with suitable warning legend describing buried electrical lines.

2.6 LOCKOUT DEVICES

- A. Lockout Hasps: Anodized aluminum hasp with erasable label surface; size minimum **7-1/4 x 3 inches**.

PART 3 EXECUTION

3.1 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.
- B. Prepare surfaces in accordance with Section 099000 for stencil painting.

3.2 INSTALLATION

- A. Install identifying devices after completion of painting.
- B. Nameplate Installation:

1. Install nameplate parallel to equipment lines.
 2. Install nameplate for each electrical distribution and control equipment enclosure with corrosive-resistant mechanical fasteners, or adhesive.
 3. Install nameplates for each control panel and major control components located outside panel with corrosive-resistant mechanical fasteners, or adhesive.
 4. Secure nameplate to equipment front using screws or adhesive.
 5. Secure nameplate to inside surface of door on recessed panelboard in finished locations.
 6. Install nameplates for the following:
 - a. Switchboards.
 - b. Panelboards.
 - c. Transformers.
 - d. Service Disconnects and starters
- C. Label Installation:
1. Install label parallel to equipment lines.
 2. Install label for identification of individual control device stations.
 3. Install labels for permanent adhesion and seal with clear lacquer.
- D. Wire Marker Installation:
1. Install wire marker for each conductor at panelboard gutters, pull boxes, outlet and junction boxes and each load connection.
 2. Mark data cabling at each end. Install additional marking at accessible locations along the cable run.
 3. Install labels at data outlets identifying patch panel and port designation as indicated on Drawings.
- E. Conduit/Raceway Marker Installation:
1. Install conduit/raceway marker for each conduit/raceway longer than **6 feet**.
 2. Conduit/Raceway Marker Spacing: **20 feet** on center.
 3. Raceway Painting: Identify conduit using field painting in accordance with Section 099000.
 - a. Paint colored band on each conduit longer than **6 feet**.
 - b. Paint bands **20 feet** on center.
 - c. Color:
 - 1) 480 Volt System: Orange.
 - 2) 208 Volt System: Yellow.
 - 3) Fire Alarm System: Red.
 - 4) Telephone System: Blue.
- F. Underground Warning Tape Installation:
1. Install underground warning tape along length of each underground conduit, raceway, or cable **6 to 8 inches** below finished grade, directly above buried conduit, raceway, or cable.

END OF SECTION 260553