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Operations
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26 05 13_MEDIUM VOLTAGE CABLES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Medium voltage cable.
- B. Cable terminations.

1.2 SUMMARY

- A. This standard includes Medium Voltage Cables, and Terminations used for electrical distribution.
- B. The intent of these standards is to provide input to the design team on the University's preference of manufacturers, design, equipment options, and quality assurance to maintain the longevity of its assets.

1.3 REFERENCE STANDARDS

- A. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.4 DESIGN REQUIREMENTS

- A. All underground installations shall meet the following requirements:
 - 1. Raceway: 4" Schedule 40 PVC
 - a. PVC conduit runs over 250 feet shall have manufactured rigid galvanized steel 90-degree elbows if used.
 - b. Use 4" rigid galvanized steel conduit where exiting duct bank or ground cover.
 - 2. Encasement: 3" minimum of concrete surrounding the conduits, 6000 PSI compressive strength under vehicular areas, 3000 PSI under lawn or landscaping areas.
 - 3. Marking: Red dye at surface not less than 2" in concrete pour.
 - 4. Exposed Locations: 4" rigid galvanized steel conduit. Conduit shall be painted red in all exposed interior locations.
 - 5. A #2 stranded THHN/THWN conductor shall be installed in each service conduit, terminated at each end to the system grounding points.
- B. Disconnects shall be installed at all service points, including pole risers at university,

and serving utility demarcation point. (At the property line)

- C. IMC conduit is not permitted in exposed locations or underground.
- D. Medium voltage cables are not permitted to be spliced.
- E. Provide cable labels as specified in Section 26 05 53.

1.5 CABLE DESIGN REQUIREMENTS

A. Cable Specification:

1. Voltage Rating: 15kV
2. UL Type: MV-90
3. Cable Size/Material: Minimum #2 AWG, 7 strand copper. Aluminum is not permitted.
4. Drain/Shield: Copper wire shield
5. Insulation: Cross-Link polyethylene, 175 mil thickness, 100% insulation level
6. Jacket: Sunlight-resistant PVC
7. Temperature Rating: 90 deg C

B. Manufacturers

1. Prysmian
2. Okonite
3. Southwire

1.6 TERMINATIONS, SPLICES, LOAD BREAK ELBOWS

- A. Use Load Break elbows with test points.
- B. Dead Break elbows are not permitted.
- C. Manufacturers

1. Cooper
2. Elastimold
3. RTE
4. 3M

1.7 SUBMITTALS

- A. Product Data: Provide for Cable, Cable Terminations, and Accessories.
- B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- C. Maintenance Data: Include instructions for testing and cleaning cable and accessories.

1.8 QUALITY ASSURANCE

- A. Products: Listed, classified, and labeled as suitable for the purpose intended.

PART 2 END OF SECTION