

University Contact: Electrical Services, Maintenance &
Operations
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26 12 00_MEDIUM VOLTAGE TRANSFORMERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Liquid-filled pad-mounted distribution transformers.

1.2 SUMMARY

- A. This standard includes Medium Voltage Transformers 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. Basis of Design: Square D
- B. Transformer vaults shall only be utilized when all other options have been evaluated and written approval by the University is granted. All transformer vaults shall be provided with emergency lighting originating with the building emergency lighting system.
 - 1. The emergency lights shall be unswitched, and not on a timer.
- C. All distribution transformers shall be dead-front, liquid filled. Liquid shall be environmentally friendly.
 - 1. All new transformers and services shall be 12,470 volt or 34,500-volt primary specifically approved by the City of Newark.
 - 2. All transformer coils shall be copper wound.
- D. All pad mount transformers shall be loop feed with internal lightning arrestors and provided with 5-point hex head closure bolts on the primary, and secondary compartment doors.

- E. All transformer vaults shall be grounded and bonded.
 - 1. A ground rod shall be driven thru the bottom of the vault to ground.
- F. Refer to SPCC requirements applicable to transformers. Provide spill containment around transformer pad.
- G. Dry type transformers are not permitted outdoors.
- H. Concrete shall be a minimum of 3000 psi and have turndown frost legs and stone containment.
- I. Prior to selecting a site for pad mounted transformers, research shall be conducted to determine if the site is in the Flood Plain or in a location of high-water table. If the conditions exist, the transformer site shall be relocated, or the transformer raised to three feet above the water table or above the flood plain with wave action height (if applicable). Raising the elevation of the transformer shall require University approval.

1.5 SUBMITTALS

- A. Product Data: Provide electrical characteristics and connection requirements, standard model design tests, and options.
- B. Manufacturer's Installation Instructions.
- C. Maintenance Data: Include maintenance instructions for cleaning methods; cleaning materials recommended; procedures for sampling and maintaining fluid.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Square D
 - 1. Schneider Electric; Square D Products: www.schneider-electric.us.
 - 2. ABB: www.abb.com

PART 3 END OF SECTION