

Western Michigan University Campus Facilities

Design Guidelines for Construction:

DESIGN GUIDELINE DG16-10 Electrical Trades – Preferred Manufacturers List

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I. GENERAL

The Electrical Trades Preferred Manufacturers List identifies manufacturers that are known to produce good quality products meet the University's quality level, specification and schedule requirements, provide technical support, and provide service after the sales. This List is intended to standardize product quality and electrical designs, and to reduce inventory of spares and replacements, not to limit competition.

This List shall be used by A/E's when selecting electrical products for specification in electrical designs. A/E's may specify electrical products not on this List to satisfy project requirements, BUT ONLY AFTER OBTAINING UNIVERSITY APPROVAL IN ADVANCE.

This List shall NOT be used by Contractors to justify making substitutions for products specified in the construction documents. CONTRACTORS SHALL PROVIDE THE PRODUCT'S SPECIFIED IN THE CONSTRUCT DOCUMENTS UNLESS THE UNIVERSITY APPROVES THE SUBSTITUTIONS PRIOR TO

THE TIME OF BID IN ACCORDANCE WITH THE STANDARD GENERAL CONDITIONS.

II. ELECTRICAL SYSTEMS & COMPONATES

A. Medium Voltage (above 600 volts)

For details on this Substation equipment see the Design Guideline DG16-4)

1. Substation Assemblers (Using components from Preferred Manufacturers only)
 - Siemens
 - General Electric
 - Square D
2. 15kV Metal Clad Switchgear and/or Switches
 - Siemens
 - General Electric
 - Square D
3. Transformers
 - Siemens
 - ABB
 - General Electric
 - Square D
4. Metering
 - Siemens – Series 9650-DC-100-ONZZZ A (See DG16-8)
 - PML/ION 7550-BO-O-B-6-EO-E-OA
6. Primary Fuses
 - S & C Type SM-5SS Expulsion type (with high interrupting capacity adapter)
7. Secondary Lineup – Draw-out type Circuit Breakers
 - Siemens – Type WL, w/ETU 776 (Main) & ETU 745 (on rest of Breakers)
 - General Electric -
 - Square D -

B. 600 Volts and Below

1. Cable, Conduits, Raceways and Accessories:

Products of all manufacturers are acceptable, as long as the product is labeled for the application. IMC may only be used when tools specifically designed for IMC are used.

When PVC conduit/raceway is used it shall be Schedule 80.

2. Surface Wireways
 - Panduit
 -
 - Wiremold
 - Wireway(Walker)
3. Devices
 - Cooper (Arrow Hart)
 - Hubbell
4. Switchboards, Panelboards, Transformers, Capacitors for Power Factor Correction, Bus Ducts, and Circuit Breakers
 - General Electric
 - Siemens
 - Square D
5. Motor Controls (MCC's, Starters, Contactors, Disc. Switches and Control Devices)
 - Allen-Bradley
 - General Electric
 - Siemens
 - Square D
6. Cable Trays-Center Spline and Wall Mount Types
 - B-Line
 - Thomas & Betts
 - Wiremold
 - Mono Systems
7. Cable Trays – Ladder Type
 - B-Line
 - Globetray (GS Metals)
 - Husky
 - Mono-Systems
 - Thomas & Betts
8. Fuses (600 Volts and Below)
 - Bussmann
 - Ferraz-Shawmut
 - Littlefuse
9. Surge Protective Devices Current Technology
 - Intermatic (for protection of individual loads and receptacle panels only)
 - LEA. Dynatech
 - Leviton (for protection of individual loads and receptacle panels only)
 - Liebert
 - Square D

- GE
 - Siemens
10. Cord Reels
 - Appleton
 - Hubbell
 - Reel-O-Matic Systems
 11. Electric Heat Tracing Cables
 - Raychem
 - Raychem Chemelex
 - Thermon

III. LIGHTING

A. Lamps

- General Electric
- Sylvania
- Osram

B. Lighting Controls

1. Class Room Dimming
 - Lutron Grafik Eye.0
2. Theater/Stage/Gallery Space's Dimming
 - Strand (stage lighting only)
 - ETC (Stage or gallery lighting only)
3. Occupancy Sensors
 - Sensor Switch
 - Watt Stopper
 - Hubbel/Mytech
4. Dimmer Switches
 - Leviton (incandescent type only)
 - Lithonia (incandescent and fluorescent types)
 - Lutron (incandescent and fluorescent types)
5. Photoelectric Lighting Controls
 - Crouse-Hinds
 - Holophane
 - Hubbell
 - Intermatic
 - Tork

C. Ballasts

1. Fluorescent Ballasts
 - Advance
 - Universal
2. Ballasts (Electronic Dimming)
 - Advance Mark X (5% dimming type)
 - Lutron Hi-Lume (1% dimming type)
 - Lutron ECO-IO (10% dimming type)
3. Ballasts (H.I.D.)
 - Advance
 - Universal
 - Sure-Lites

D. Fixtures

1. Outdoor Parking Lot and Roadway with Poles
 - Gardco
 - Holophane
 - Lithonia Hi-Tek
 - McGraw-Edison
 - Wide-Lite
2. Outdoor Pedestrian Area with Poles
 - Architectural Area Lighting – Spectra Fixtures
3. Pedestrian-Bollards
 - Architectural Area Lighting – Spectra Fixtures

IV. ALTERNATIVE POWER SYSTEMS

A. Engine-Generator Sets

- Onan
- Kohlar
-

B. Automatic and Manual Transfer Switches

- Onan (closed Transition)
- Kohlar
-

C. Uninterruptible Power Supply Systems

- MGE
- Liebert

V. SPECIAL SYSTEMS

A. Security/Alarms

1. Card Access Control Systems
 - Lenel System connected to the Police Station Server.
2. Intrusion Alarm Systems
 - Radionics (for small systems only) Must connect to the Lenel system.
3. Video Surveillance Systems
 - Lenel connected to the Police Station Server.
4. Equipment Alarms
 - All alarms shall be connected to the Lenel System.

B. Fire Alarm Systems

1. Fire Alarm Systems
 - Simplex Time Recorder system, 4100U addressable system panels only, connected to the Graphic Command Center in the Police Station.
2. Fire Pumps
 - Peerless
 - Aurora
 - Allis-Chalmers
3. Fire Pump Controllers
 - Firetrol
 - Metron
 - Joslyn Clark

C. Emergency/Life Safety

1. Exit Signs
 - Green LED
2. Emergency Power Ballasts (Electronic Rapid Start Fluorescent)
 - Bodine (for emergency lighting only)
 - Lithonia

VI TESTING, STARTUP & COMMISSIONING

A. ACCEPTANCE TESTS

1. Nationally Recognized Testing Laboratories Services
 - Factory Mutual
 - UL (Northbrook, IL)
 - InterNational Electrical Testing Association

2. Testing Services
 - Northern Electrical Testing
 - Utilities Instrumentation Services
 - Solaris Power Services, LLC.

B. COMMISSIONING

To be determined

End of Design Guideline