DESIGN GUIDELINE 8.4
ELECTRICAL PREFERRED MANUFACTURERS LIST

SCOPE

The Electrical Trades Preferred Manufacturers List identifies manufacturers and suppliers who are known to provide good quality products, meet specification and schedule requirements, provide technical support, and provide service after the sales. This list is intended to regulate product quality, standardize electrical designs, and simplify maintenance activities. It is not intended to limit competition. It is not all inclusive. It is a list of manufacturers whose products are well known to the University due to their frequent and successful use.

This List shall be used by A/E’s when selecting manufacturers for specification in electrical designs. **A/E’S SHALL SPECIFY ONLY THE LISTED MANUFACTURERS THAT MEET THEIR PROJECT’S REQUIREMENTS, AND SHOULD SPECIFY A MINIMUM OF THREE MANUFACTURERS WHENEVER POSSIBLE.** A/E’s may specify manufacturers not on this list to satisfy project requirements, but shall obtain 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 PRODUCTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS UNLESS THE UNIVERSITY APPROVED THEIR PROPOSED SUBSTITUTIONS AT THE TIME OF BID IN ACCORDANCE WITH THE PROJECT’S STANDARD GENERAL CONDITIONS.**

**THIS LIST DOES NOT APPLY** to purchases by the University Plant Department of replacement electrical products required to match or maintain existing installations.

This List is revised as needed. Before using it, check the AEC Website for the latest revision.

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SECTION 260513 - MEDIUM, LOW & CONTROL VOLTAGE CABLES

Cables (Medium Voltage)
- General Cable
- Kerite
- Okonite
- Prysmian

Cables and Wire (600 Volts)
- Alan Wire
- Alan Wire and Cable
- American Insulated Wire
- Cerro Wire
- Encore
- General Cable
- Republic Wire
- Rockbestos-Surprenant
- Service Wire
- Southwire
- United Copper Industries

Type MC Cables (600 Volts)
- AFC
- Encore
- Kaf-Tech
- Rockbestos-Surprenant
- Service Wire
- Southwire
- United Copper Industries

2-Hour Fire Rated Cables (600 Volts)
- Pyrotenax Mineral Insulated (Type MI) by Pentair

Control Cables and Wire
- Belden
- Coleman

Cable Splices for Medium Voltage Cable
- Raychem

Cable Terminations for Medium Voltage Cable
- Raychem

SECTION 260526 - GROUNDING & BONDING FOR ELECTRICAL

Ground Connections
- Burndy Hyground (Proper dies must be used)
- Cadweld
- Harger Lightning & Grounding
- Thermoweld
- Thomas & Betts Blackburn (Above grade only)
SECTION 260533 - ELECTRICAL MATERIALS AND METHODS

Cable Trays - Center Spline and Wall Mount Types (Use only where ladder and wire basket trays cannot be used, and only with ITCS (Campus projects) or MCIT (UMHHC projects) approval)

- B-Line
- Legrand Cablofil
- Mono-Systems
- Thomas & Betts

Cable Trays - Ladder Type

- B-Line
- Chalfant
- Cope
- Globetray (GS Metals)
- Legrand Cablofil
- Mono-Systems
- MP Husky
- Thomas & Betts

Cable Trays – Wire Basket Type (Use only with ITCS (Campus projects) or MCIT (UMHHC projects) approval)

- B-Line
- Chalfant
- Cope
- Legrand Cablofil
- Mono-Systems
- MP Husky
- WBT

Conduits, Raceways and Accessories -
EMT, liquid-tight flexible metallic conduit, and/or non-liquid-tight flexible metallic conduit/raceway; plus associated accessories, fittings, junction and pull boxes, and related products

Products of all manufacturers are acceptable as long as they are electro-galvanized steel, have a smooth interior, and are NRTL labeled for the application.

Rigid (galvanized metal), and IMC (intermediate metal) conduits/raceway, plus associated accessories, fittings, junction and pull boxes, and related products

Products of all manufacturers are acceptable, as long as they are hot-dipped galvanized steel inside and out, have a smooth interior, and are NRTL labeled for the application. Boxes shall be cast, not formed. IMC may only be used when tools specifically designed for IMC are used.

PVC conduit/raceway (Type DB, Schedule 40, and Schedule 80), plus associated accessories, fittings, junction and pull boxes, and related products

Products of all manufacturers are acceptable as long as they are sunlight resistant, and NRTL labeled for the application. Products from manufacturers making both the conduit and the fittings are preferred whenever possible.

Fiberglass Reinforced Epoxy (FRE) conduit/raceways, accessories, fittings, and related products

- Champion
- FRE

Cord Reels

- Appleton
Hubbell
Reel-O-Matic Systems
Woodhead

**Electrical Enclosures**
Carlon (For use with PVC raceways)
Hammond
Haoffman
Park Metal
Rittal

**Fire Stop Compounds**
A. D. Fire Protection Systems
Flame Safe
Hilti
Nelson
STI SpecSeal
3M Company

**Structural Support Materials**
Aickinstrut (Fiberglass)
B-Line
Champion (Fiberglass)
Hilti
Powerstrut
Unistrut

**Surface and Underfloor Wireways**
Carlon
Hubbell
Legrand Evolution Floor Boxes
Legrand Wiremold
Panduit

**SECTION 260543 - UNDERGROUND SERVICES FOR ELECTRICAL**
Underground Hand Holes, Junction Boxes and Pull Boxes
Carson-Brooks
CDR Systems
Quazite

**SECTION 260800 - ELECTRICAL ACCEPTANCE TESTS**
Nationally Recognized Testing Laboratory Services
CSA
ETL
MET Laboratories
UL (Northbrook, IL)

**Testing Services**
Bisbee Infrared Services (Penny Wilson, (517) 787-4620)
Northern Electrical Testing (Lyle Detterman, (810) 689-8980)
Utilities Instrumentation Services (David Wheeler, (734) 482-1450)
SECTION 261100 - UNIT SUBSTATIONS

Non-Current Limiting Fuses (Primary)
- Eaton/Cutler-Hammer Type RBA-400 (With high interrupting capacity adapter)
- S & C Type SM-5SS (With high interrupting capacity adapter)

Current Limiting Fuses (Primary)
- Eaton/Cutler-Hammer Type CLE
- Ferraz-Shawmut, Type CL-14
- General Electric Type EJO

KWHR/Demand Meters
- Schneider Electric PowerLogic ION8650 (With options per Master Spec 261100)

15 kV Fused and Unfused Primary Switches (5kV rated switches may only be used for 5 kV (4,160 volt) class motors)
- Eaton/Cutler-Hammer
- Powercon
- Square D

15kV Metal Clad Switchgear and/or Circuit Breakers (5kv rated circuit breakers may only be used for 5 kV (4,160 volt) class motors)
- Eaton/Cutler-Hammer
- Square D

Circuit Breakers for 600-volt Class Secondary Switchgears and Switchboards
- ABB (ASEA Brown Boveri)
- Eaton/Cutler-Hammer
- Square D

Transformers
- ABB (ASEA Brown Boveri)
- Eaton/Cutler-Hammer
- MGM
- Olsun
- Square D

Substation Assemblers (Using components from Preferred Manufacturers only)
- ABB (ASEA Brown Boveri)
- Controlled Power Corporation
- Eaton/Cutler-Hammer
- Electrical Product Sales
- Park Metal
- Pederson Power Products
- Powercon
- Shallbetter
- Square D

Addresses of above Assemblers
- ABB (ASEA Brown Boveri)
  12040 Regency Parkway
  Cary, North Carolina 27518
Phone: 919 856 2360
FAX: 919 807 5022

ABB Distributor
Galco Industrial Electronics
26010 Pinehurst
Madison Heights, MI 48071
Phone: 248 336 4546

Controlled Power Corporation
295 Wetmore Ave SE
Massillon, Ohio 44646
Phone: 800 321 0414
FAX: 330 834 3201

Eaton/Cutler-Hammer
McNaughton-McKay Electric Co.
4670 Runway Blvd, Ann Arbor, MI 48108
Phone: 734-327-6251
Fax: 734-327-6285

Eaton/Cutler-Hammer
Service Electric Supply Co.
15424 Oakwood Drive, Romulus, MI 48174
Phone: 734-229-9100
Fax: 734-229-9101

Electrical Product Sales
Dick Stone
(248) 583-6100

Olsun Electrics
HEK Inc.
6083 Lafayette
Ann Arbor, MI 48103
Phone: (734) 995-0900

Park Metal
19197 Sherwood Street, Detroit, MI 48234
Phone: 313-366-2200
Fax: 313-366-1540

Pederson Power Products
1521 Eden Gardens Drive, Fenton, MI 48430
Phone: 810-750-3032
Fax: 810-750-9557

Powercon/Woodlyn Sales
9357 General Drive - Suite 102, Plymouth, MI 48170
Phone: 734-453-2754
Fax: 734-453-2759
SECTION 262000 - LOW VOLTAGE ELECTRICAL DISTRIBUTION

Bus Ducts
Eaton/Cutler-Hammer
General Electric
Siemens
Square D

Fuses (600 Volts and Below)
Bussmann
Mersen Electrical Power (formerly Ferraz-Shawmut)
Littlefuse

Surge Protective Devices
Current Technology
Eaton/Cutler-Hammer-Tycor
Intermatic (For protection of individual loads and receptacle panels only)
Leviton (For protection of individual loads and receptacle panels only)
Liebert
L.E.A. Dynatech
Square D

Switchboards, Panelboards and Circuit Breakers
Eaton/Cutler-Hammer (Only with U of M Lugs - confirm on shop drawings)
General Electric
Industrial Electrical Manufacturing (For custom and retrofit applications only)
Siemens
Square D

Time Switches
Intermatic
Paragon
Sangamo
Tork
Transformers (Liquid Filled and Dry Pad-Mounted Type)
Eaton/Cutler-Hammer
General Electric
Olsun Electrics
Pennsylvania
Pioneer

Transformers (Distribution Dry Type)
Acme
Eaton/Cutler-Hammer
General Electric
Hammond Power Systems
Hevi-Duty
MGM
Olsun Electrics
Siemens
Square D

SECTION 262726 - WIRING DEVICES
Dimmer Switches
Leviton
Lithonia
Lutron

Occupancy Sensors (Infrared, Ultrasonic, Combination Infrared/Microphonic Dual Technology and Combination Infrared/Ultrasonic Dual Technology)
Cooper Controls (Eaton)
Hubbell
Legrand WattStopper
Leviton
Lutron
Sensor Switch
Tork

Pin & Sleeve Connectors
Crouse-Hinds
Hubbell
Killark
Legrand Pass & Seymour
Leviton

Power Poles
Hubbell
Legrand Wiremold
Mono-Systems
Steelcase

120-volt, 20-ampere Receptacles and Plugs
Arrow Hart (Cooper)
Bryant
Hubbell
Legrand Pass & Seymour
Leviton

120-volt, 20-ampere Receptacles (GFCI, Hospital Grade, TVSS & Child Resistant)
- Arrow Hart (Cooper)
- Bryant
- Hubbell
- Legrand Pass & Seymour
- Leviton

Special Power Receptacles and Plugs
- Arrow Hart (Cooper)
- Bryant
- Hubbell
- Legrand Pass & Seymour
- Leviton

USB Charging Port Receptacles
- Arrow Hart (Cooper)
- Bryant
- Hubbell
- Legrand Pass & Seymour
- Leviton

120/277 Volt, 20-Ampere Light Switches
- Arrow Hart (Cooper)
- Bryant
- Hubbell
- Legrand Pass & Seymour
- Leviton

SECTION 262900 - MOTOR CONTROLS
Capacitors for Power Factor Correction
- Aerovox
- Eaton/Cutler-Hammer
- General Electric
- Myron Zucker
- Siemens
- Square D

Motor Controls (MCC’s, Starters, Contactors, Disc. Switches and Control Devices)
- Allen-Bradley
- Eaton/Cutler-Hammer
- General Electric
- Siemens
- Square D

Motor Starters (Electronic Soft Starter Type)
- Allen-Bradley
- Eaton/Cutler-Hammer
- Sprecher & Schuh
SECTION 263000 - ENGINE-GENERATOR SYSTEMS
Natural Gas Fired Engine-Generator Sets
   Caterpillar
   Cummins
   Generac Industrial Power
   Kohler
   Olympian

Automatic and Manual Transfer Switches (Open and Closed Transition Types)
   ASCO
   Cummins
   Eaton/Cutler-Hammer
   GE Zenith Controls
   Kohler

Automatic Transfer Switches (Soft-Loading Type)
   ASCO
   Eaton/Cutler-Hammer
   Kohler

Resistive Load Banks
   Avtron
   Sephco
   Simplex

SECTION 263300 - BATTERY EQUIPMENT
Batteries
   C & D Technologies
   Chloride Plante
   Enersys
   Johnson Controls

Battery Chargers
   C & D Technologies
   Enersys
   Hi-Tran
   LaMarche
   SCI

Uninterruptible Power Supply Systems (Battery type)
   A.P.C
   Best (Individual small load units only)
   Controlled Power
   Liebert
   MGE
   Mitsubishi (Totally solid-state)
   Toshiba

Rotary UPS Systems
   Designed Power Solutions International (DPSI)
SECTION 264100 - FACILITY LIGHTNING PROTECTION
Lightning Protection Services
Guardian Equipment, Novi, MI (248) 449-5200
Harger Lightning & Grounding (via distributor Young & Champagne, 313-491-6500)
Michigan Lightning Protection, Grand Rapids, MI (616) 453-1174
Orion Services, Wixom, MI (248) 624-2120

SECTION 265100 - INTERIOR LIGHTING
Lighting Representatives
Each of the following lighting representatives serves over one hundred lighting manufacturers. After the Design Development phase, the lighting designer shall send a copy of the lighting fixture schedule to each of the lighting representatives below to request comments and recommended equivalents. The lighting designer shall evaluate the proposed recommendations to ensure design compliance and then incorporate equivalents into the lighting fixture schedule. The proposed lighting equivalents shall meet or exceed the design requirements as well as any other requirements in the U of M Design Guidelines.

Clarus Lighting & Controls
Madison Heights, MI
Paul Brennan, 248-677-0850
www.clarus-lighting.com

Gasser Bush Associates
Livonia, MI
Randy Stowers, 734-266-6705
www.gasserbush.com

Michigan Lighting Systems – East
Troy, MI
Shawn Schiappacasse, 248-542-2200
www.mls.lighting

Resource Lighting Group
Berkley, MI
Shawn Stevenson, 248-545-9555
www.resourcelightinggroup.com

Ballasts (Electronic Compact Fluorescent)
- Aculite
- Advance Smart Mate
- Lightolier
- Prescolite

Ballasts (Electronic Rapid Start T-8 Fluorescent)
- Advance Optanium
- Bodine (For emergency lighting only)
- Osram/Sylvania Quicktronic Professional
- Universal AccuStart

Ballasts (Electronic Dimming T-8 Fluorescent)
- Advance Mark X (5% dimming type)
- Lightolier (1% dimming type)
- Osram/Sylvania (10% dimming type)
Emergency Power Ballasts (Electronic Rapid Start T-8 Fluorescent)
Bodine (For emergency lighting only)
Lithonia

Ballasts (H.I.D.)
Advance
MagneTek
Universal

Dimming Systems
AMX
Crestron Electric, Inc.
E.T.C.
Leviton (Small single room systems only)
Lithonia
Lutron
Strand (Stage lighting only)

Emergency Lights
Chloride
Dual-Lite
Emergi-Lite
Exide Lightguard
Lightalarms
Lithonia
Sure-Lite

Exit Signs (LED)
Chloride
Dual-Lite
Emergi-Lite
Exide Lightguard
Lightalarms
Lithonia
LSI Industries
Morlite (High abuse areas) (Philips)
Prescolite
Sure-Lites

Lamps
General Electric Ecolux
Osram/Sylvania Ecologic
Philips Alto
Venture (H.I.D. only)

Lighting Fixtures (Fluorescent)
Alkco (Philips)
Bartco
Columbia
Cooper (Metalux)
Day-Brite (Philips)
Fail-Safe (Cooper)
Kenall
Kirlin
Lightolier (Philips)
Linear Lighting
Lithonia (Acuity)
LSI Industries
Finelite
Focal Point
Guth (Philips)
Harris
Holophane (Acuity)
Hubbell
Keene

Lighting Fixtures (H.I.D.)
Best
Crouse-Hinds (Cooper)
Day-Brite (Philips)
Fail-safe (Cooper)
General Electric
Guth (Philips)
Harris
Holophane
Hubbell

Lighting Fixtures (Compact Fluorescent and Incandescent)
Globe
Gotham (Acuity)
Halo
Harris
Kenall
Kirlin
Lightolier (Philips)

Lighting Fixtures (LED)
LED fixtures with a DesignLights Consortium (DLC) listing
LED fixtures with a U.S. Department of Energy (DOE) “LED Lighting Facts” label
LED fixtures with a U.S. Environmental Protection Agency (EPA) ENERGY STAR label
CREE
Man-D-Tec (Elevator cab lighting)

SECTION 265600 - EXTERIOR LIGHTING
Lighting Fixtures (Outdoor Building, Parking Lot and Roadway with poles by fixture supplier)
BEGA (Conditional Approval)
Gardco
Holophane
Kim (Hubbell) (Conditional Approval)
Lithonia Hi-Tek
LSI Industries
McGraw-Edison
Sterner
Wide-Lite (Philips)

Lighting Fixtures (Outdoor Pedestrian Area with poles by fixture supplier)
Lumec

Photoelectric Lighting Controls
Crouse-Hinds
SECTION 273523 – EMERGENCY RESPONDER RADIO COVERAGE

Emergency Responder Radio Services
Advance Wireless Telecommunications (Joe Campbell, 248-295-4600)
Comsourse Inc. (Mike Hilverding, 248-853-5430)
Continental Wireless (Breogan Link, 800-527-2000)
RF Connect (Pat Rhatigan, 734-891-5950)
Motor City Technologies, a division of Motor City Electric Co. (David Krausman, 313-957-3459)

Emergency Responder Radio Signal Survey
JDRM Engineering (Dave DesJardins, 419-824-2400)

SECTION 275116 - PUBLIC ADDRESS & MASS NOTIFICATION SYSTEMS

Public Announcement and Sound Systems
Aiphone Communications Systems
Atlas/Soundolier
Dukane
Rauland-Borg

SECTION 275126 - ASSISTIVE LISTENING SYSTEM

Hearing Assistance Systems
Phonic Ear (for classroom applications)
Sound Associates (for auditorium and theater applications)

SECTION 275313 - CLOCK SYSTEMS

Central Clock Systems
Primex (GPS synchronous wireless)
Simplex Time Recorder (through Simplex/Grinnell)

Clocks (Battery Powered)
Edwards
Franklin
Howard Miller
Primex (GPS synchronous wireless)

SECTION 281300 - ACCESS CONTROL & MONITORING SYSTEMS

Card Access Control Systems
Diebold/CBORD (for Housing facilities)
Software House (for Campus buildings)

Card Access Control System Designers/Installers
Cabling Concepts (Tim Grady, 248-363-4200)
Siemens (Phil Bowen, 734-233-5728)
Simplex/Grinnell (John Keith, 248-427-5050)
SECTION 281600 - SECURITY SYSTEMS
Security Camera Systems
Refer to the University of Michigan Division of Public Safety and Security (DPSS) web site http://www.dpss.umich.edu/topics/cameras/ for technical requirements and a compatible hardware list.

Security Systems
ADT Security Systems
Faraday
Radionics (For small systems only)
Simplex Time Recorder

SECTION 283100 - FIRE DETECTION & ALARM SYSTEMS
Fire Alarm Systems
EST (through Riverside Fire and Security only)
Honeywell (UMHHC only)
National Time & Signal
Notifier
Siemens
Simplex (Tyco SimplexGrinnell)
VESDA by Xtralis (for smoke sampling systems only; subsidiary of Honeywell)