DEPARTMENT OF LABOR AND INDUSTRY

Electrical maintenance work for electrical and technology systems

(This bulletin is intended for registered electrical employers, not licensed electrical and technology contractors.)

Employees and electrical maintenance

Except when the supervision is provided by a power limited technician, which limits the maintenance work to technology circuits and systems, examples of work allowed within the scope of a maintenance electrician include:

- Replacement of receptacle outlets of any voltage, phase, system, or amperage with devices having identical characteristics.
- Replacement of manual lighting switches of any voltage with devices having identical characteristics.
- Replacement of motors of any voltage, phase, system, or horsepower, as a singular unit, or as part of a machine or apparatus, with a motor having the same characteristics.
- Repair of manual, magnetic, or electronic motor controllers using replacement parts, including sub-assemblies, that are identified as factory replacement parts for the specific assembly.
- Repair or replacement of defective circuit breakers and switch assemblies in switchboards and panelboards with factory parts or replacements that are identified by the manufacturer as suitable.
- Repair or replacement of defective bus duct switches using factory replacement parts or identical replacement assemblies.
- Repair of defective lighting fixtures using approved replacement parts.
- Bench repair of electrical equipment.

Examples of work not allowed within the scope of a maintenance electrician include:

- Extension of any electrical wiring, including technology circuit and system wiring, whether existing or new.
- Installation of wiring for, or connection of, new equipment or apparatus.
- Installation of replacement or new conductors in existing raceways.
- Replacement of damaged wiring methods (raceways, cables, flexible connections, etc.).
- Replacement of existing lighting fixtures with new or repaired units.
- Installation of temporary wiring of any type or for any purpose.
- Replacement of any component or subassembly with an item that is not identical to that being replaced.
- Modification of lighting fixtures as part of a lighting retrofit project.
- Building automation systems, including power limited systems.

Electrical work not within the scope of "maintenance work" may be performed by an unlicensed, registered maintenance person where the responsible individual is licensed as a Class A Master Electrician and the maintenance person is provided with direct supervision by a person licensed as either a Class A Master or Class A Journeyworker electrician and both are employees of the same employer.

Electrical maintenance work and minor repair work are exempt from mandatory inspection in accordance with Minnesota Statutes section 326B.36 Subd. 1. All other electrical work, unless specifically exempt under Minnesota Statutes section 326B.36 Subd. 5 is subject to inspection. An active Request for Electrical Inspection must be on file whenever electrical wiring that is required to be inspected is being performed. All electrical wiring must be inspected prior to being concealed in any manner, including by burial, insulation, encapsulation, or concealment by floor, wall or ceiling covering or sheathing.

The exemption from mandatory inspection requirements does not exempt the performed electrical work, including maintenance or minor repair work, from the applicable safety standards as identified in Minnesota Statutes section 326B.35, generally the latest edition of the National Electrical Code.

Definitions

The term "electrical work" is defined in Minnesota Statutes section 326B.31, subdivision 17 as "the installing, altering, repairing, planning, or laying out of electrical wiring, apparatus, or equipment for light, heat, power, or other purposes. The installing, altering, repairing, planning, or laying out of electrical wiring, apparatus, or equipment for light, heat, power, or other purposes includes, but is not limited to, the performance of any work governed by the standards referred to in section 326B.35."

“Technology circuits or systems” means class 2, class 3, or class 4 circuits or systems for, but not limited to, remote control, signaling, control, alarm, and audio signal, including associated components as covered by National Electrical Code, and which are isolated from circuits or systems other than class 2, class 3, or class 4 by a demarcation and are not process control circuits or systems; antenna and communication circuits or systems as covered by the National Electrical Code; and circuitry and equipment for low-voltage lighting limited to class 2 or class 3 power supply covered by the Low-Voltage Lighting article in the National Electrical Code. The planning, laying out, installing, altering, and repairing of technology circuits or systems must be performed in accordance with the applicable requirements of the National Electrical Code pursuant to section 326B.35.

The term "maintenance electrician" is defined in Minnesota Rules 3800.3500, Subp. 7 as "a person having the necessary qualifications, training, experience, and technical knowledge to properly maintain and repair electrical wiring, apparatus, and equipment, who is licensed by the department, or is exempt from licensing by the Minnesota Electrical Act, Minnesota Statutes, sections 326B.31 to 326B.399."

A "maintenance electrician" must be either licensed by us or be registered and provided with supervision in accordance with Minnesota Statutes section 326B.33, Subdivision 12. The required supervision is general and is not the "direct supervision" defined in Minnesota Statutes section 326B.31, subdivision 16. A maintenance electrician licensed by the department possesses the qualifications, training, experience, and technical knowledge as verified through the examination and licensing process. In the case of a registered maintenance electrician who is exempt from licensing, the determination that the employee's qualifications are adequate to perform the necessary electrical maintenance work is the responsibility of the supervising person.

Minnesota Statutes section 326B.33, subdivision 21 exempts a maintenance electrician from personal licensure where "supervised by the responsible master electrician for an electrical contractor who has contracted with the maintenance electrician's employer to provide services for which an electrical contractor license is required or by a master electrician or an electrical engineer registered with the department and who is an employee of an employer and is engaged in the maintenance and repair of electrical equipment, apparatus, and facilities owned or leased by the employer, and performed within the limits of property which is owned or leased and operated and maintained by said employer." Minnesota Statutes section 326B.33, subdivision 7 also allows maintenance of technology circuits and systems where supervised by a power limited technician who is an employee of the employer.

The work within the scope of a maintenance electrician is defined in Minnesota Rules 3800.3500, Subpart 8 as "the adjustment or repair or replacement of worn or defective parts of electrical equipment and replacement of defective receptacle outlets and manual switches for lighting control, but does not include the installation of new wiring, apparatus, and equipment or additions, alterations, or extensions to existing wiring, apparatus, or equipment." With appropriate qualification, either personal licensure or supervision by the responsible certified person, a maintenance electrician may repair or replace parts of, or make adjustments to, installed electrical equipment. In addition, a maintenance electrician may replace electrical outlets and manual lighting switches that are part of the general wiring of the structure. The connection of new apparatus, and equipment is not included in this scope. Similarly, the installation of new wiring, or additions, alterations, or extensions to existing wiring, apparatus, or equipment is outside this scope.

Questions?

Contact us at dli.electricity@state.mn.us.