Second Draft Supplement
Proposed reorganized WAC 296-46B-920(2)(f)
v9.29.23

Preface

Some may find the significantly reorganized scope of work for HVAC/refrigeration specialties in the Second Draft difficult to read. This document is intended to be a "clean" version.

For ease of reading, only text that introduces something new is underlined in the attached. A few housekeeping changes to be included in the Third Draft appear in Blue.

The bulk of the reorganization consisted of relocating information in current WAC 296-46B-920(2)(f)(iii)(A) through (D) that applies to both the (06A) and (06B) HVAC/refrigeration specialties.

As reorganized, that information in its entirety is relocated, it now is present within the scope of work for the (06A) specialty and within the scope of work for the (06B) specialty.

End

(f) **HVAC/refrigeration specialties:**

(i) See WAC 296-46B-100 for specific HVAC/refrigeration definitions.

(ii) For the purposes of this section when a component is replaced, the replacement must be like-in-kind or made using the equipment manufacturer's authorized replacement component.

(iii) HVAC/refrigeration **(06A):**

(A) The (06A) specialty is not limited by voltage, phase, or amperage except as limited by (f)(iii)(A)(IX) and (X) of this subsection. No unsupervised electrical trainee can install, repair, replace, or maintain any part of a HVAC/refrigeration system that contains any circuit rated over 600 volts whether the circuit is energized or deenergized. This specialty may:

(I) Install, repair, replace, and maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in all residential occupancies;

(II) Install, repair, replace, and maintain line voltage components within HVAC/refrigeration equipment. Such line voltage components include product illumination luminaires

installed within and powered from the HVAC/refrigeration system (e.g., reach-in beverage coolers, frozen food cases, produce cases, etc.) and new or replaced factory authorized accessories such as internally mounted outlets;

(III) Repair, replace, or maintain the internal components of the HVAC/refrigeration equipment disconnecting means or controller so long as the disconnecting means or controller is not located within a motor control center or panelboard;

(IV) Install, repair, replace, and maintain short sections of raceway to provide physical protection for low-voltage cables. For the purposes of this section a short section cannot mechanically interconnect two devices, junction boxes, or other equipment or components; and

(V) Repair, replace, or maintain line voltage flexible supply whips not over six feet in length, provided there are no modifications to the characteristics of the branch circuit/feeder load being supplied by the whip other than a reduction in the HVAC unit's rated maximum overcurrent protection size. There is no limitation on the whip raceway method (e.g., metallic replaced by nonmetallic).

(VI) Install repair, replace, and maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in other than residential occupancies:

That have no more than three stories on/above grade; or

Regardless of the number of stories above grade if the installation:

- Is made in a previously occupied and wired space; and
- Is restricted to the HVAC/refrigeration system;

(VII) Repair, replace, and maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in all occupancies regardless of the number of stories on/above grade.

(VIII) Install a bonding conductor for metal gas piping to an existing accessible grounding electrode conductor or grounding electrode only when terminations can be made external to electrical panelboards, switchboards, or other distribution equipment.

(IX) For mini-split HVAC/refrigeration systems installed for one- and two-family dwellings, or multifamily dwellings of

types III, IV, or V construction when there are not more than six stories of multifamily dwellings of types III, IV, or V construction above grade or above types I or II construction or installed for other than residential occupancies that have no more than three stories on/above grade, install, repair, replace, and maintain: Single-phase branch circuits not exceeding 250 volts or 20 amps when those circuits are supplied from outdoor compressor/condensers units and distribution controllers of mini-split HVAC/refrigeration systems; wiring for condensate pumps connected to single-phase branch circuits allowed under this subsection when wiring is connected in accordance with the manufacturer's instructions for the mini-split HVAC/refrigeration system; disconnect switches and device, pull, and junction boxes, conduit bodies, and fittings when used for single-phase branch circuits allowed under this subsection; and raceway/conduit systems for single-phase branch circuits allowed under this section when the raceway/conduit system is installed outside of a building or when the raceway/conduit system is no more than six feet in length when connected to equipment located indoors provided that all the following

conditions are met: HVAC/refrigeration equipment installed is certified for use as a system by an electrical product testing laboratory accredited by the department; manufacturer's instructions are provided for the system that include specifications for type and size of wiring between outdoor compressor/condenser units, distribution controllers, and indoor evaporators.

(X) Install, repair, replace, and maintain a single overcurrent device and branch circuit conductors connected to the load terminals of that device when used to supply replacement gas or oil fired HVAC/refrigeration equipment provided that all the following conditions are met: The replacement gas or oil fired HVAC/refrigeration equipment is installed in the same location as the gas or oil fired HVAC/refrigeration equipment it replaced; the overcurrent protection for the existing gas or oil fired HVAC/refrigeration equipment circuit exceeds the maximum overcurrent protection allowed for the replacement gas or oil fired HVAC/refrigeration equipment; the branch circuit suppling the HVAC /refrigeration equipment does not exceed 125 volts; the rating of the device

does not exceed 20 amperes; the device is installed within sight of and within six feet of the gas or oil fired HVAC/refrigeration equipment it supplies; raceways/conduits used to connect the device to the gas or oil fired HVAC/refrigeration equipment do not exceed six feet in length; the device is not installed within a panelboard or switchboard;

(XI) Install, repair, replace, and maintain devices that provide HVAC/refrigeration equipment one or more of the following: Surge protection, undervoltage protection, overvoltage protection provided that all of the following conditions are met: The device(s) is installed on or within the HVAC/refrigeration equipment, or at the disconnecting means nearest the HVAC/refrigeration equipment it serves; raceways/conduits used to connect the device(s) to HVAC/refrigeration equipment do not exceed six feet in length; the point of connection for the device(s) is not within a panelboard, switchboard, or motor control center external to the HVAC/refrigeration equipment.

(B) The (06A) HVAC/refrigeration specialty may not:

(I) Install line voltage controllers or disconnect switches external to HVAC/refrigeration equipment except disconnect switches allowed by (f)(iii)(A)(IX) of this subsection;

Exception: If HVAC/R equipment is being replaced, this specialty may remove and replace a disconnecting means enclosure mounted on the surface of the HVAC/R equipment with a like-in-kind disconnecting means enclosure rated not more than 20 amperes and 120 volts using the existing wiring method. When performing this work, this specialty may install up to ten feet of raceway to provide physical protection for nonmetallic cables, but the raceway may not terminate in a panelboard.

(II) Install, repair, replace, or maintain:

• Integrated building control systems, other than HVAC/refrigeration systems;

• Single stand-alone line voltage equipment or components (e.g., heat cable, wall heaters, radiant panel heaters, baseboard heaters, contactors, motor starters, and similar equipment) unless the equipment or component:

Is exclusively controlled by the HVAC/refrigeration system and requires the additional external connection to a mechanical system(s) (e.g., connection to water piping, gas piping, refrigerant system, ducting for the HVAC/refrigeration system, gas fireplace flume, ventilating systems, etc. (i.e., as in the ducting connection to a bathroom fan)). The external connection of the equipment/component to the mechanical system must be

required as an integral component allowing the operation of the HVAC/refrigeration system; or

Contains a HVAC/refrigeration mechanical system(s) (e.g., water piping, gas piping, refrigerant system, etc.) within the equipment (e.g., "through-the-wall" air conditioning units, self-contained refrigeration equipment, etc.);

• Luminaires that serve as a building or structure lighting source, even if mechanically connected to a HVAC/refrigeration system (e.g., troffer luminaire used as a return air device, lighting within a walk-in cooler/freezer used for personnel illumination);

• Raceway/conduit systems, except as allowed for the (06A) specialty by (f)(iii)(A)(IX), (X), and (XI) of this subsection;

• Line voltage: Service, feeder, or branch circuit conductors, except as allowed for the (06A) specialty by (f)(iii)(A)(IX) and (X) of this subsection. However, if a structure's feeder/branch circuit supplies HVAC/refrigeration equipment containing a supplementary overcurrent protection device(s), this specialty may install the conductors from the supplementary overcurrent device(s) to the supplemental

HVAC/refrigeration equipment if the supplementary overcurrent device and the HVAC/refrigeration equipment being supplied are located within sight of each other; or

• Panelboards, switchboards, or motor control centers external to HVAC/refrigeration system.

(III) Install, repair, replace, or maintain: Any electrical wiring governed under article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations) located outside the HVAC/refrigeration equipment.

(iv) HVAC/refrigeration - Restricted **(06B):**

(A) The (06B) HVAC/refrigeration specialty may not perform any electrical work where the primary electrical power connection to the HVAC/refrigeration system exceeds: 250 volts, single phase, or 120 amps or electrical work outlined in (f)(iv)(B) of this subsection. The (06B) HVAC/refrigeration specialty may:

(I) Install, repair, replace, and maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in all residential occupancies;

(II) Install, repair, replace, or maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in other than residential occupancies that have no more than three stories on/above grade;

(III) Install, repair, replace, and maintain line voltage components within HVAC/refrigeration equipment. Such line voltage components include product illumination luminaires installed within and powered from the HVAC/refrigeration system (e.g., reach-in beverage coolers, frozen food cases, produce cases, etc.) and new or replaced factory authorized accessories such as internally mounted outlets;

(IV) Repair, replace, or maintain the internal components of the HVAC/refrigeration equipment disconnecting means or controller so long as the disconnecting means or controller is not located within a motor control center or panelboard;

(V) Install, repair, replace, and maintain short sections of raceway to provide physical protection for low-voltage cables. For the purposes of this section a short section cannot mechanically interconnect two devices, junction boxes, or other equipment or components; and

(IV) Repair, replace, or maintain line voltage flexible supply whips not over six feet in length, provided there are no modifications to the characteristics of the branch circuit/feeder load being supplied by the whip other than a reduction in the HVAC unit's rated maximum overcurrent protection size. There is no limitation on the whip raceway method (e.g., metallic replaced by nonmetallic).

(B) The (06B) HVAC/refrigeration specialty may not:

(I) Install line voltage controllers or disconnect switches external to HVAC/refrigeration equipment;

Exception: If HVAC/R equipment is being replaced, this specialty may remove and replace a disconnecting means enclosure mounted on the surface of the HVAC/R equipment with a like-in-kind disconnecting means enclosure rated not more than 20 amperes and 120 volts using the existing wiring method. When performing this work, this specialty may install up to ten feet of raceway to provide physical protection for nonmetallic cables, but the raceway may not terminate in a panelboard.

(II) Install, repair, replace, or maintain:

• Integrated building control systems, other than HVAC/refrigeration systems;

• Single stand-alone line voltage equipment or components (e.g., heat cable, wall heaters, radiant panel heaters, baseboard heaters, contactors, motor starters, and similar equipment) unless the equipment or component:

Is exclusively controlled by the HVAC/refrigeration system and requires the additional external connection to a mechanical system(s) (e.g., connection to water piping, gas piping, refrigerant system, ducting for the HVAC/refrigeration system, gas fireplace flume, ventilating systems, etc. (i.e., as in the ducting connection to a bathroom fan)). The external connection of the equipment/component to the mechanical system must be required as an integral component allowing the operation of the HVAC/refrigeration system; or

Contains a HVAC/refrigeration mechanical system(s) (e.g., water piping, gas piping, refrigerant system, etc.) within the equipment (e.g., "through-the-wall" air conditioning units, self-contained refrigeration equipment, etc.);

• Luminaires that serve as a building or structure lighting source, even if mechanically connected to a HVAC/refrigeration system (e.g., troffer luminaire used as a return air device, lighting within a walk-in cooler/freezer used for personnel illumination);

• Raceway/conduit systems;

• Line voltage: Service, feeder, or branch circuit conductors. However, if a structure's feeder/branch circuit supplies HVAC/refrigeration equipment containing a supplementary overcurrent protection device(s), this specialty may install the conductors from the supplementary overcurrent device(s) to the supplemental HVAC/refrigeration equipment if the supplementary overcurrent device and the HVAC/refrigeration equipment being supplied are located within sight of each other; or

• Panelboards, switchboards, or motor control centers external to HVAC/refrigeration system.

(III) Install, repair, replace, or maintain:

• The allowed telecommunications/low-voltage HVAC/refrigeration wiring in a conduit/raceway system; or

• Any electrical work governed under article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations).