

STATE BUILDING CODE INTERPRETATION I-20-07

August 22, 2007

The following is offered in response to your August 4, 2007 request for a formal interpretation of the provisions of the 2005 National Electrical Code (NEC) portion of the 2005 State Building Code as it pertains to disconnecting means for heating and cooling equipment.

Question 1: In a new multi-family dwelling as defined by the NEC (three dwelling units or more), there is a mechanical equipment room on each floor serving the dwelling units on that floor but the equipment is not located within the dwelling units. The heating and cooling equipment is installed out of sight of the panel serving the equipment. Is a second disconnecting means required within sight of the equipment?

Answer 1: That depends on the appliance rating and/or size of the motor. Article 422.31 (A) allows the branch-circuit overcurrent device to serve as the disconnecting means for permanently connected appliances rated at *not over* 300 volt-amperes or 1/8 hp. This article does not specify that the overcurrent device be in sight of the appliance. On the other hand, 422.31 (B) states that permanently connected appliances rated *over* 300 volt-amperes or 1/8 hp are permitted to utilize the branch-circuit switch or circuit breaker as the disconnecting means only where the switch or circuit breaker is in sight of the appliance or is capable of being locked in the open position. Article 422.32 goes on to require that the switch that serves as the disconnecting means for a permanently connected motor-driven appliance of more than 1/8 hp be located within sight from the motor controller and comply with Part IX of Article 430. I should note that the Exception to 422.32 does not apply in your situation since the equipment is not installed within the dwelling unit.

Question 2: With respect to Question 1, is it appropriate to classify this type of equipment as appliances regulated by Article 422?

Answer 2: Yes. Although the definition of appliance found in Article 100 sounds more as though it applies to toasters and window air conditioning units, 422.10 specifically mentions water heaters and steam boilers; motor operated appliances such as air conditioning and refrigeration equipment; and central heating equipment, indicating that Article 422 is intended to regulate permanently installed central heating and air conditioning equipment. Air conditioning equipment that utilizes a hermetic refrigerant motor-compressor is regulated by Article 440. Even if this is the case, Article 440.14 requires the disconnecting means to be located within sight and readily accessible from the air conditioning equipment.

Question 3: In Article 422.3, there are references made to Articles 430 and 440 that are applicable "except as specifically amended". In NEC vernacular are the disconnect requirements of 430 IX and 440 II "specifically amended" by Article 422.32 where the motor is in excess of 1/8 hp?

Answer 3: Yes. Article 422.32 states that the disconnecting means for a permanently connected motor-driven appliance of more than 1/8 hp shall be located within sight from the motor controller as well as meeting the requirements of Part IX of Article 430. This means that even if Article 430 allows an exception to the located within sight requirement, Article 422.32 would not permit use of that exception.