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Public Service with integrity

Residential Finished Basement Requirements

Two sets of plans should show the existing walls and location of all existing elements such as stairs, appliances and panel box. Show the location of all steel columns and beams (beams are usually denoted by a dashed line) and show the height of the bottom of the beam above the finished floor. Plans need to indicate the proposed use of the rooms.

Draw in the new walls and doors. New walls should be highlighted in some way to differentiate them from the existing walls. Give all room designations and indicate the finished ceiling heights for all new rooms.

Provide a wall section indicating how the new walls will be supported and how the walls attached to the foundation wall will be insulated.

2019 Residential Code of Ohio (RCO)

303.8 Required Heating. When the winter design temperature in Table 301.2 (1) is below 60° F, every dwelling unit shall be provided with heating facilities capable of maintaining a room temperature of 68° F at a point 3 feet above the floor and 2 ft from the exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to archive compliance with this section.

1401.3 Heating and Cooling Equipment Sizing. Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.

1401.3 Commentary. Manual S' or other approved alternate methods (which can be obtained from most HVAC contractors), are required for finish basements to verify that the existing system is adequate to condition the new habitable spaces.

1701.1 Combustion Air. Solid fuel-burning appliances shall be provided with combustion air in accordance with the appliance manufacturer's installation instructions. Oil-fired appliances shall be provided with combustion air in accordance with NFPA 31. The methods of providing combustion air in this chapter do not apply to fireplaces, fireplace stoves and direct-vent appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in accordance with Chapter 24.

1305 Appliance Access. A 30-inch working space shall be provided in front of the control side to service an appliance. Appliance under floor shall comply with 1305.1.4.

310.1 - 310.2.1 Bedroom Egress. Sleeping Rooms shall have at least one operable emergency escape and rescue opening.

(Flip Over)

1306 Appliance Clearances. Appliances shall have clearances from combustible materials in accordance with the appliance label and the manufacturer installation instructions.

303.1 Habitable Rooms. All habitable rooms shall be provided with aggregate glazing area of not less than 8 percent of the floor area of such rooms to provide natural light.

Commentary: Since these new habitable rooms are located in the basement, and you are unable to comply with the requirement for natural lighting, you must provide a means of permanent artificial lighting. The artificial lighting shall be capable of providing 6 foot-candles of light measured 30 inches above the finished floor. The foot-candle rating of the lighting can be found by checking the manufactured specs.

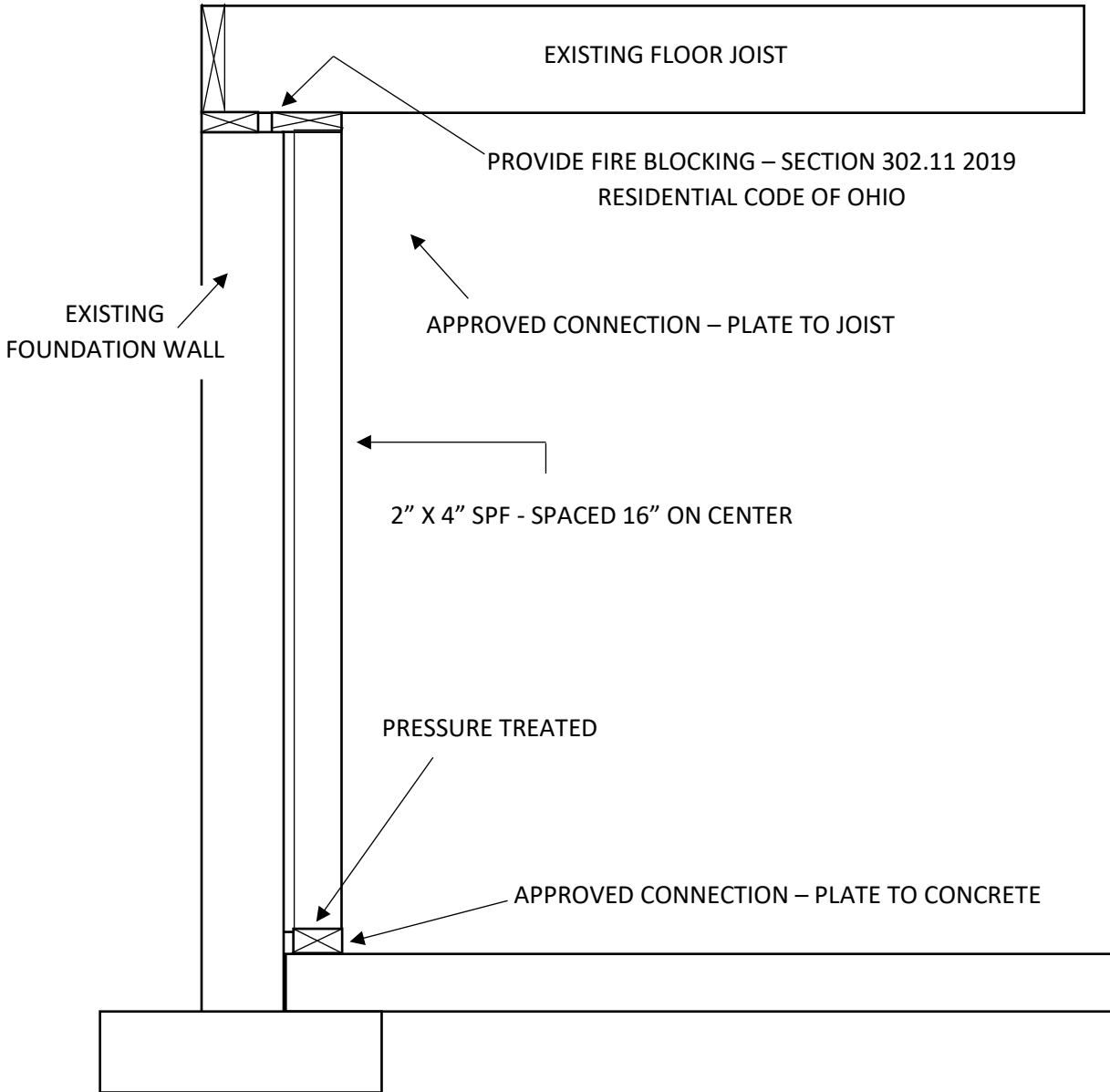
303.1 Exception 2. The glazed area may be omitted when an approved mechanical ventilation system is provided capable of producing 0.35 air change per hour in the room or a whole house mechanical ventilation system is installed capable of supplying outdoor ventilation air of 15 cfm per occupant and artificial light is provided capable of producing an average illumination of 6-foot candles over the area of the room, 30 inches above the floor.

302.7 Underside of Stairs. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side with ½-inch gypsum board.

4401.2 Receptacle Outlet Distribution. Electrical outlets shall be distributed per Section 210.52 of the 2017 National Electric Code (NEC). All new branch circuits added need to have Arc Fault combination type circuit breakers for habitable areas per Section 210.12.

9/20/2024

BASEMENT FINISH - WALL FRAMING GUIDELINES



Plans are to show all relevant information as Smoke/Carbon alarm location, door swings, stairs and ramps, windows, shafts, all portions of the means of egress, etc., and shall be sufficiently dimensioned to describe all relevant space sizes, and all rooms to be labeled for their use.

Description of the mechanical, plumbing and electrical systems, including materials; location and type of fixtures and equipment; material and sizes of all ductwork; location and type of heating, ventilation, air conditioning and mechanical equipment; and all lighting and power equipment.