
Information for finish or remodel of basements in dwellings.

EMERGENCY ESCAPE AND RESCUE REQUIRED – Basements with new habitable space(s) created and every bedroom/sleeping room shall have at least one operable emergency escape and rescue window or exterior door opening for emergency escape and rescue. Basement egress windows shall be provided with a minimum net clear opening of 5.7 square feet. If a compliant emergency escape and rescue opening does not exist one shall be installed. (for additional information please acquire and review our egress window guidelines.

HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

FLOOR PLAN Submit accurate floor plan for review and approval. Include:

- Location of existing walls, windows, stairs, mechanical room, electrical panel etc.
- Location of new walls to be constructed
- Label the proposed use of rooms created
- Dimension all rooms and spaces
- Size of all existing and proposed windows

TYPICAL CONSTRUCTION

- Drywall - walls: 3/8" limited to 16" oc studs, 1/2" or 5/8" limited to 24" oc studs; ceilings: 3/8" limited to 16" oc perpendicular to joists, 1/2" or 5/8" @ 16" oc either direction, 1/2" or 5/8" @ 24" oc perpendicular to joists
- Bottom plate in contact with concrete floor shall be of treated material.
- Wood stud walls set out from the foundation wall require a firestop at the top of the intersection of the wall and floor/ceiling joists, to prevent communication of the stud wall cavities and the floor/ceiling joist cavities. Openings through the top plate should be sealed with a listed firestop material.

ENERGY INFORMATION

- 1) Basement walls (install no vapor retarder or vapor barrier on 2 x 6 below grade framed walls)
 - a. R-15 continuous insulation on either the inside or outside of foundation walls, or
 - b. R-19 cavity insulation for the interior side frame walls, or (no vapor retarder or vapor barrier on below grade framed walls)
 - c. R-13 cavity insulation for the interior side frame walls and R-5 continuous insulation against the concrete foundation wall.

- 2) Windows: .32 U-Factor (max)

Note: **hanging 'bag type' insulation shall be removed prior to installation of any other insulation system**

GENERAL REQUIREMENTS

- Emergency escape and rescue opening is required (see opening paragraph)
- Ceiling height shall be minimum 7'.
- Area below stairs if enclosed and accessible must be drywalled.
- Sleeping rooms require an egress window and a hardwired dual-sensor smoke detector in the room and outside the room.
- Habitable rooms must contain at least one supply air duct and one return air duct or return grille note: grille(s) may not directly communicate sleeping and bath rooms with mechanical rooms.
- All basement receptacles shall be GFCI protected.
- Bathrooms shall have an exhaust fan vented to the exterior.
- Bathrooms shall have a separate dedicated 20 amp, GFCI protected receptacle.
- Bedroom, family room, rec room and similar area(s) receptacles require Arc-Fault protection.

- Electrical receptacles shall be tamper resistant.
- Plumbing fixtures shall be vented.
- Electrical junction boxes, plumbing cleanouts, valves, ductwork damper controls concealed behind drywall must remain accessible by installation of access panels.
- Electrical wiring must be protected (behind drywall, in conduit etc).
- Mechanical room enclosure must provide for clearance to combustibles (as shown on appliance nameplate rating), clear working space at each appliance (typically 30" minimum in front of control side) and combustion air must be provided as needed (louvered doors, grilles within 12" of the floor and ceiling etc). Combustion air may not be obtained from sleeping rooms, bathrooms or toilet rooms. Habitable rooms must be provided with supply and return air. Return air shall not be taken from a bathroom, furnace room or another dwelling.
- Electrical grounding system – if UFER (footing) ground is to be concealed within construction an access panel must be provided.

Smoke Detector Update Requirements

- Smoke alarms listed in accordance with UL 217 shall be installed in every bedroom, outside of and within ten feet from the center of each bedroom(s) door frame and on each floor level of the dwelling
- If existing wall and ceiling coverings are not removed then battery operated units OK
- A battery-operated smoke alarm listed in accordance with UL 217 must be powered by a nonreplaceable battery that powers the alarm for at least ten years.
- If new construction or existing wall and ceiling finishes are removed then hard-wired smoke detectors are required

Carbon Monoxide Alarm Update Requirements

- Carbon monoxide alarms listed in accordance with UL 2034 shall be installed outside of each separate sleeping area and within ten feet from the center of each bedroom(s) door frame

Combination Smoke and Carbon Monoxide Alarms

- Combination smoke and carbon monoxide alarms shall be permitted to be installed in lieu of smoke alarms. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 217 and UL 2034.

Arc Fault Circuit Interrupter Requirement

- Bedroom addition(s) receptacles or receptacles in a room(s) converted to a bedroom(s) as well as family room, rec room and similar area(s) shall be AFCI protected.

CSST – Corrugated Stainless Steel Tubing – Gas Piping

- Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system via listed clamp to rigid pipe or rigid component at any point along the gas line. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent. If bonding connection is to be concealed within construction an access panel must be provided.

ADDITIONAL PERMITS REQUIRED

- Separate Electrical, Mechanical, and Plumbing Permits are required for work performed in these trades. For example:
 - Electrical for branch circuits, AFCI & GFCI protection, wiring, lighting, grounding and bonding.
 - Plumbing for water supply, drain, waste and vent installations.
 - Mechanical if replacing appliances.
- Contractors licensed in the respective trade must obtain these permits and perform the work.
- A homeowner may qualify through testing to obtain electrical and plumbing permits and perform the respective work. Inquire at the Community Planning & Building Department.

INSPECTIONS REQUIRED

- Rough-in electrical prior to insulation or drywall.
- Rough-in plumbing (if applicable) prior to insulation or drywall.

- Rough-in mechanical (if applicable) prior to insulation or drywall.
- Framing prior to insulation or drywall.
- Final Inspection prior to use. **Certificate of Occupancy** is required.