

FINISHED BASEMENT

GENERAL BUILDING REQUIREMENTS

ROOM SIZES: Habitable rooms, excluding closets, hallways, laundries, storage spaces and bathrooms, shall have an area not less than 70s.f. and shall not be less than 7'-0" in any direction. Minimum required height is 7'0", 6'8" for bathrooms.

HALLWAYS: Hallways shall not be less than 36" in width.

BATHROOM VENTILATION: Bathrooms shall be equipped with a mechanical ventilation system vented directly to the outside. Mechanical ventilation is not required when a window is provided with aggregate glazing not less than 3 s.f. with a minimum opening of 1.5 s.f.

STAIR PROTECTION: Enclosed accessible space under stairs shall have walls and ceilings protected with ½" drywall on the enclosed side.

SMOKE ALARMS: Smoke alarms (smoke detectors) shall be installed in the basement and in each basement bedroom. New smoke alarms shall be interconnected so that when one is activated, all will sound. Smoke alarms must be hardwired with a battery backup.

BASEMENT WALL INSULATION: Installation of a minimum R-11 batted insulation (with the vapor barrier on the warm side of the wall) is recommended for the full height and width of the basement wall.

EMERGENCY EGRESS REQUIREMENTS:

WHERE REQUIRED: Emergency egress is required for all proposed finished basements regardless of when the house was originally constructed. Emergency egress is also required in all basement bedrooms. Basements with bedrooms are only required to have emergency egress in the bedrooms.

If your basement does not currently have one of the egress options below, then you must provide one. Cutting openings in existing basement walls is outside the scope of these details. Therefore a plan submission is required for the new opening,

EMERGENCY EGRESS OPTIONS:

- Escape window opening directly to the outside (walk-out basement condition).
- Escape window opening into a window well or areaway.
- Door opening directly to the outside (walk-out basement condition).
- Door opening to a bulkhead enclosure (Bilco or similar type door).

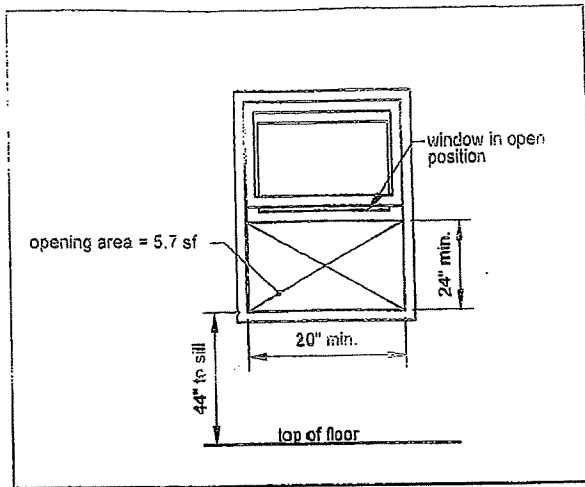


FIGURE 1: WINDOW EGRESS REQUIREMENTS

WINDOW WELL REQUIREMENTS: When grade conditions require the sill of the egress windows to be outside grade elevation, then a window well must be constructed. The required horizontal area of a window well is a minimum of 9 s.f. which is measured with the window in the open position (this is important when the window is a crank-out type). See Figure 2.

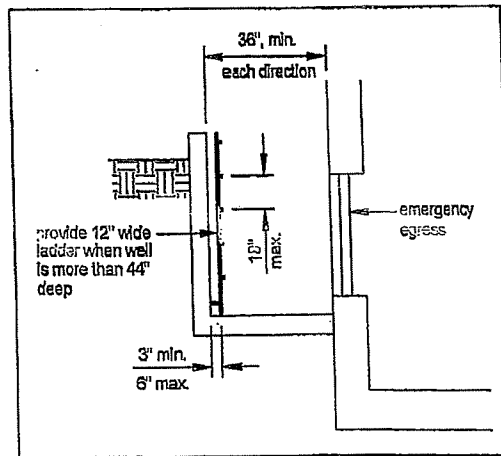


FIGURE 2: TYPICAL WINDOW WELL REQUIREMENTS

WINDOW WELL CONSTRUCTION: A plan submission is required for the construction of a new window well. If you choose to use a prefabricated window well, you must submit the manufacturer's specifications with your permit application.

FIRE BLOCKING: Fire blocking shall be provided to cut off all concealed draft openings and to form a protective fire barrier between stories. See Figure 3- Figure 6.

6. Fire blocking shall be provided in the following locations.
- In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor level and at 10'-0" intervals horizontally.
 - At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, packed out walls, and dropped ceilings.
 - In concealed spaces between stair stringers at the top and bottom of the run.

FIRE BLOCKING MATERIAL: Fire blocking shall consist of one of the materials listed below.

- 1/2" gypsum board.
- 2x lumber
- Two thicknesses of 1x lumber with staggered joints.
- One thickness of 23/32" of plywood or OSB with joints backed by the same material.
- One thickness of 3/4" particle board with joints backed with same material.
- 1/4" cement-based mill board.
- Batts or blankets of mineral wool or fiberglass.

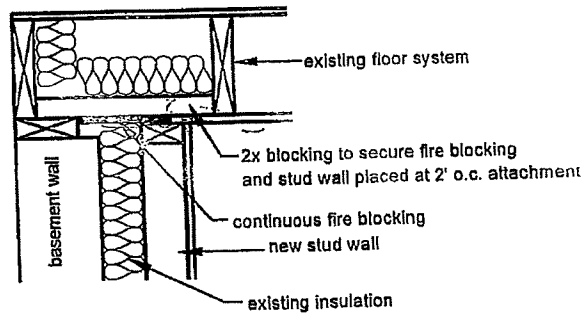


FIGURE 3: TYPICAL FIRE BLOCKING DETAIL WHEN STUDWALL IS OFFSET FROM BASEMENT WALL

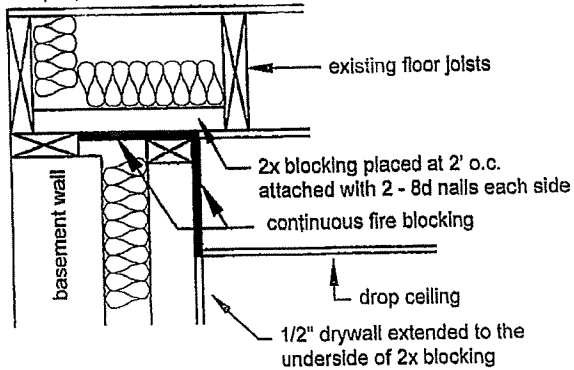


FIGURE 4: FIREBLOCKING AT DROP CEILING

MECHANICAL REQUIREMENTS

APPLIANCE ACCESS: Furnaces, hot water heaters and other appliances must be accessible without removing permanent construction and meet the following criteria.

- 30"x30" clear floor space at front/ control side.
- Doors to furnace rooms shall be 24" minimum and be of sufficient size to remove the largest appliance.

COMBUSTION AIR: Furnace rooms with fuel burning appliances must be provided with two permanent openings to adjacent spaces: one within 12" of the top and one within 12" from the bottom of the adjoining wall. Each opening must have a minimum free equal area to 1" square per 1,000 Btu/h input rating of all appliances in the furnace room, but not less 100" square. The openings are not required if a louvered door is provided or if the furnace room is greater than 50 cubic feet per 1,000 Btu/h input rating of all appliances installed in the room.

PLUMBING REQUIREMENTS:

SHOWERS: Showers and shower compartments must meet the following requirements.

- Showers compartments must have a minimum total area of 900" square and a minimum dimension of 30" in any direction.
- Hinged shower doors must open outward.
- All glass which encloses a shower must be safety glazed.
- Shower control valves must be scald resistant (In accordance with ASSE/ ANSI 1016) with a hot water limit of 120 degrees F.

FIXTURE CLEARANCES: Toilets, sinks, and showers shall have the minimum clearances listed below.

- 21" in front of sinks and toilets.
- 24" in front of shower stalls opening.
- 4" between sink and a toilet.
- 4" between sink and a wall.
- 2" between sink and a bathtub.
- 15" clearance from a toilet's centerline to an adjacent fixture or wall on each side.

DRAIN SIZE: Fixture drain size must meet the dimensions noted below. All drains must be equipped with a strainer and stopper.

MINIMUM DRAIN SIZE

<u>Fixture</u>	<u>Diameter</u>
Bathroom sink	1.25"
Bathtub	1.5"
Sinks (other than bathroom)	1.5"
Laundry tub	1.5"
Shower	2.0"

ELECTRICAL REQUIREMENTS

PANELBOARD (CIRCUIT BREAKER BOX): Panel boards must meet the requirements listed below.

- A workspace 30" wide and 36" deep from floor to ceiling with a minimum height of 6'6" must be provided in front of the panelboards.
- Panelboards must not be located in clothes closets or bathrooms.
- A light must be provided for the panelboard workspace.

BRANCH CIRCUITS: Branch circuits must meet the requirements below.

- Use a 15 to 20 ampere rated branch circuit for general use purposes such as lighting and outlets.
- One "plugged-in" electrical device shall not exceed 80% of the circuit rating.
- Hardwired appliances or equipment may be included in a general use circuit provided its rating does not exceed 50% of the circuit rating.
- A dedicated 20 ampere branch circuit must be provided to serve a single bathroom.
- A dedicated 20 ampere minimum branch circuit must be provided to serve laundry room outlets only.
- Circuits which serve bedroom outlets must have circuit breakers equipped as arc-fault circuit interrupters.

OUTLETS (RECEPTICLES): Outlets must meet the requirements listed below.

- Outlets shall be placed so that no location along the floor/wall line is more than 6'0" from an outlet.
- The minimum wall length which requires an outlet is 2'0".
- Knee walls, built-in bars, and other fixed room dividers must be included in wall length for outlet spacing.
- Hallways more than 10'0" long must have a minimum one outlet.
- Outlets installed for specific appliances must be within 6'0" of the appliance location.
- Bathrooms must have at least one outlet located on a wall adjacent and within 36" of the bathroom sink. All bathroom outlets must have ground fault circuit interrupter (GFCI) protection.
- At least one outlet must be provided to serve laundry appliances.
- Each unfinished portion of the basement is required to have at least one outlet.
- An outlet must be provided within 25'0" of HVAC appliances and equipment.
- All outlets shall be 125 volt, single phase, 15 or 20 ampere.

LIGHTING REQUIREMENTS: Lights must meet the requirements listed below.

- At least one switch controlled light must be provided in each room or hallway. A switch controlled outlet may be substituted in all rooms except bathrooms and hallways.
- At least one switch controlled or pull chain light must be provided in each storage area and at or near HVAC appliances and equipment.
- Lighting fixtures may not be installed within 3'0" horizontally and 8'0" vertically of a bathtub rim or shower stall threshold unless the fixture is rated as "suitable for wet locations".
- Light fixtures must be installed so that combustible materials are not subject to temperatures greater than 90 degrees F.