

## HELPFUL HINTS FOR FINISHING A BASEMENT AREA TO HABITABLE SPACE

(May not be a complete list)

1. Label each room or area for intended use. Draw plan of full basement showing finished rooms, stairs, windows, doors, furnace or boiler location, smoke detectors, closets, etc. supply a wall cross section, dimensions all areas.

2. Supply street address on plans.

3. Areas are NOT TO BE USED AS SLEEPING ROOMS unless constructed with that intent.

4. Sleeping rooms need an EMERGENCY ESCAPE OPENINGS (Section R-310.2.1) CT AMENDMENT Openings shall have a net clear opening of not less than 5.7 square feet. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. The net clear opening height shall not be less than 24" and the net clear opening width shall not be less than 20".

**Exceptions:**

1.) Grade Floor Openings 5 square feet.

2.) Existing buildings undergoing alterations or installation of replacement windows shall be permitted to utilize removable sash to achieve the required minimum net clear openings. Such removable sash shall be capable of being removed without the use of key or tool.

5. Emergency escape and rescue openings sill height shall not be more than 44" above the floor. (R310.2.2) CT Amendment

**Exception:** The 44" maximum sill height shall be permitted to be measured vertically above a fixed, permanent platform, step or steps whose minimum width shall equal or exceed the operable width of the opening and shall be centered on such opening .

6. NO egress doors to enter a garage from a bedroom (R-311.1)

7. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Doors from a garage are to be 1-3/8" solid wood (no raised panels) or 20 minute rated and self-closing (R-302.5.1).

8. Smoke and carbon monoxide detectors are required per (R-314).

9. Habitable space, hallways and portions of basements containing these spaces shall have a ceiling height of a not less than 7' feet. Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6'8".

Exception: Ceiling height in existing basements being converted to habitable space shall not be less than 6'8" clear except for under beams, girders, pipes, ducts or other obstructions where the clear height shall be a minimum of 6'4". (R-305) 2018 CT ADMENDMENT. Other portions of the basement not listed in R305.1 need a ceiling height of only 6'6" (R305.1.1) 2018 CT AMENDMENT

10. Hallways shall be not less than 3' (R311.6)

11. Stairways shall not be less than 36" in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4-1/2" on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31-1/2" where a handrail is installed on one side and 27" where handrails are installed on both sides.

**Exception:** The width of existing stairways serving existing unfinished attics or existing unfinished basements being converted to habitable space or replacement stairways within existing dwellings shall not be less than 32" in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4" on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 28" where a handrail is installed on one side and 24" where handrails on provided on both sides. (R311.7.1) CT AMENDMENT

12. The maximum riser height shall be 8 1/4 inches. The riser shall be measured vertically between leading edges of adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees from the vertical. Open risers are permitted provided that the opening between treads does not permit the passage of a 4-inch-diameter sphere. (R311.7.5.1) CT AMENDMENT

**Exceptions:**

1. The maximum riser height of existing stairs serving existing unfinished attics or existing unfinished basements being converted to habitable space or replacement stairs where the pitch or slope cannot be reduced because of existing construction shall be 9 inches, measured in accordance with Section R311.7.5.1.
2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches or less.

13. The minimum tread depth shall be 9 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. (R311.7.5.2) CT AMENDMENT

**Exception:** The minimum tread depth of existing stairs serving existing unfinished attics or existing unfinished basements being converted to habitable space or replacement stairs within existing dwellings shall be 8 inches, measured in accordance with Section R311.7.5.2.

14. Handrails shall be provided on not less than one side of each continuous run of treads or flight with four or more risers. (R311.7.8)

Handrail height measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches and not more than 38 inches. (R311.7.8.1)

Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches between the wall and the handrails. (R311.7.8.2)

Required handrails shall be the following type or provide equivalent graspability. Handrails with a circular cross section shall have an outside diameter of not less than 1 1/4 inches and not greater than 2 inches. If the handrail is not circular, it shall have a perimeter dimension of not less than 4 inches and not greater than 6 1/4 inches with a cross section of dimension of not more than 2 1/4 inches. Edges shall have a radius of not less than 0.01 inch. (R311.7.8.3)

15. Light switches are required at the top and the bottom of the stairs. (R311.7.8.4) (E3903.3)

16. Sheet rock with 1/2" under the stairs if enclosed for storage. (ex. closet) (R-302.7).

17. Fire blocking (R-302.11) required between concealed vertical and horizontal spaces such as soffits, Concealed spaces between stair stringers, openings around vents, pipes, ducts, cables and wires at ceiling and floor level and around chimney and fireplaces (302.11.1).

18. Insulation is required as per (N-1102).

19. Light and ventilation is min. 8% of the habitable floor area or use mechanical means (R-303).

20. If applies use 6 mil poly (plastic) placed on top of P T floor sleepers as a moisture barrier.

21. If applies Pressure treated wood sleepers and sill plates are to be used when in contact with concrete.

22. Heat is required (R-303.10) maintain a minimum of 68 degrees at 3' above the floor and 2' from exterior walls. The installation of one or more portable space heaters shall not be used to achieve compliance.

23. Combustion air for the heating appliances shall be per (M-1701), Solid fuel Burning Appliances (per manufacturer's instructions), Oil Fired Appliances in accordance with NFPA 31, Gas Fired Appliances (G-2407).

24. Supply min. of 3' feet in front, 30" left to right and 6-1/2' in height working space around electrical Panels. (E3405.2)

\*All existing and new electrical circuits to be Arc Fault Protected if making the basement area habitable. (E3902.16)

\*All receptacles to be tamper resistant. (E4002.14)

25. At least one wall switch-controlled lighting outlet shall be installed in every habitable room. (E3903.2)

26. No open incandescent light bulbs in closets.

Another hint to keep you from having to do a lot of fire blocking. Most framed exterior walls in basements to be finished go up to the top plate which is attached to the floor joists that are higher than the concrete foundation wall. This creates a void along the perimeter that needs to be fireblocked. To alleviate this space, place a strip of ½" drywall around the perimeter. The Drywall will extend from the pressure treated sill plate on top of foundation wall to a distance that will allow you to attach the upper plate of the interior perimeter wall. Plumb down and finish framing wall.

Now the perimeter is firestopped. Any questions please ask.