

BASEMENT INFORMATION

Town of East Lyme Building Department
108 Pennsylvania Avenue
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The applicant must submit a floor plan of the existing and proposed basement.

The proposed plan must show finished ceiling heights and head room over the stairs, rise and run of the stairs, stair width, use of rooms, and location of windows and doors, and location of appliances, electrical panels, water meter, etc.

Please note that Combustion Air must be provided to all fuel burning appliances in accordance with Chapter 17 of the 2009 International Residential Code (a copy is available for your review at the Land Use Counter).

Please see the included code sections on exits, headroom, stair dimensions, etc. We have included these code sections in an attempt to help the applicant understand the code requirements for a specific project.

This handout does not take the place of the building code, nor does it contain all of the information an applicant needs to build their structure.

Please note that Zoning, Building, and Wetlands review all applications.

If a Septic System serves your property, you will need to submit a second set of plans to Ledge Light Health District for approval. Please visit their offices within the Land Use area of the East Lyme Town Hall or contact them at (860) 448-4882.

Please note that this and other information is available at our website:

www.eltownhall.com

SECTION R310
EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue required. Basements with habitable space and every sleeping room within the dwelling shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining habitable areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2.

Exception:

1. Habitable basements without sleeping rooms are not required to have emergency escape and rescue openings when they are provided with two remote, code-complaint stairways.
2. In existing buildings, basements being converted to habitable space without sleeping rooms are not required to have emergency escape and rescue openings.

R310.1.1 Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m²).

Exception: Openings whose bottom edge is within 44 inches of exterior grade shall have a minimum net clear opening of 5 square feet.

R310.1.4 Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of a key or tool and the net clear opening dimensions shall be obtained by the normal operation of the opening from the inside.

Exception: 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 a key or tool.

R310.1.2 Minimum opening height. The minimum net clear opening height shall be 24 inches.

R310.1.3 Minimum opening width. The minimum net clear opening width shall be 20 inches.

R310.1.4 Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools.

R310.2 Window wells. The minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: the ladder or steps required by section R310.2.1 shall be permitted to encroach a maximum of 6 inches (152 mm) into the required dimensions of the window well.

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.5 and R311.6. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.

R310.3 Bulkhead Enclosures. Bulkhead enclosures shall provide direct access to the basement. The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1 Bulkhead enclosures shall also comply with Section R311.5.8.2

R310.4 Bars, grills, covers and screens. Bars, grills, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size complies with Sections R310.1.1 to R310.1.3, and

such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.

SECTION R 311 MEANS OF EGRESS

R311.1 General. Stairways, ramps, exterior exit balconies, hallways and doors shall comply with this section.

R311.2 Construction.

R311.2.1 Attachment. Required exterior exit balconies, stairs and similar exit facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces. Such attachment shall not be accomplished by use of toenails or nails subject with withdrawal.

R311.2.2 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with ½ inch gypsum board.

R311.3 Hallways. The minimum width of a hallway shall be not less than 3 feet.

R311.4 Doors.

R311.4.1 Exit Door Required. Not less than one exit door conforming to this section shall be provided for each dwelling unit. The required exit door shall provide for direct access from the habitable portions of the dwelling to the exterior without requiring travel through a garage. Access to habitable levels not having an exit in accordance with this section shall be by a ramp in accordance with Section R311.6 or a stairway in accordance with Section R311.5.

(Amd) **R311.4.2 Door type and size.** The required exit door shall be a side-hinged door not less than 3 feet in width and 6 feet 8 inches in height. Other doors shall be permitted to be side-hinged, swinging, sliding, bi-fold or revolving doors, shall not be required to comply with the minimum door width and shall be permitted to be not less than 6 feet 6 inches in height.

(Amd) **311.4.3 Landings at exterior doors.** There shall be a floor or landing a minimum of 3 feet in the direction of travel and 3 feet in width, or a width equal to the width of any adjacent stair, whichever is greater, on each side of each exterior door. The landing on the exterior side of doors shall not be more than 8 ¼ inches below the top of the threshold provided that the door, other than an exterior storm or screen door, does not swing over the landing. In the event that the door, other than an exterior storm or screen door, swings over the landing, the landing shall not be more than 1.5 inches below the top of the threshold.

Exception: At other than the required exit door, a landing is not required for the exterior side of the door where a stairway of three or fewer risers, including the top riser from the dwelling to the top tread, is located on the exterior side of a door.

(Amd) **R311.5.1 Width.** Stairways shall not be less than 36 inches in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches 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 31.5 inches where a handrail is installed on one side and 27 inches where handrails are provided on both sides.

Exceptions:

The width of spiral stairways shall be in accordance with Section R311.5.8.

The width of existing stairways serving existing unfinished attics or existing unfinished basements being converted to habitable space shall not be less than 32 inches in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4 inches 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 inches where a handrail is installed on one side and 24 inches where handrails are provided on both sides.

(Amd) **R311.5.2 Headroom.** The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.

Exception: The minimum headroom in all parts of existing stairways serving existing unfinished attics or existing unfinished basements being converted to habitable space shall be 6 feet 6 inches, measured as above.

(Amd) **R311.5.3.1 Riser height.** The maximum riser height shall be 8 ¼ inches. The riser shall be measured vertically between leading edges of adjacent treads.

Exception: The maximum riser height of existing stairs serving existing unfinished attics or existing unfinished basements being converted to habitable space shall be 9 inches, measured as above. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch.

(Amd) **R311.5.3.2 Tread depth.** 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.

Exception: The minimum tread depth of existing stairs serving existing unfinished attics or existing unfinished basements being converted to habitable space shall be 8 inches, measured as above. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Winder and circular stairway treads shall have a minimum tread depth of 9 inches measured as above at a point 12 inches from the sides where the treads are narrower. Winder treads shall have a minimum tread depth of 6 inches at any point. The greatest winder tread depth at the 12-inch walk line within any flight of stairs shall not exceed the smallest by more than 3/8 inch. The greatest circular tread depth at any walking line within any circular flight of stairs, measured at a consistent distance from a side of the stairway, shall not exceed the smallest by more than 3/8 inch.

R311.5.3.3 Profile.

The radius of curvature at the leading edge of the tread shall be no greater than 9/16 inch. A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors and landings. Beveling of nosing shall not exceed 1/2 inch (12.7 mm). Risers shall be vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 (0.51 rad) degrees from the vertical. Open risers are permitted, provided that the opening between treads does not permit the passage of a 4-inch diameter (102 mm) sphere.

Exceptions: 1. A nosing is not required where the tread depth is a minimum of 11 inches (279 mm).

2. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

R311.5.4 Landings for Stairways. There shall be a floor or landing at the top and bottom of each stairway.

Exception: A floor or landing is not required at the top of an interior flight of stairs, provided a door does not swing over the stairs. A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings. The width of each landing shall not be less than the stairway served. Every landing shall have a minimum dimension of 36 inches (914 mm) measured in the direction of travel.

R311.5.5 Stairway walking surface. The walking surface of treads and landings of stairways shall be sloped no steeper than one unit vertical in 48 inches horizontal (2-percent slope).

R311.5.6 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.5.6.1 Height. 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 (864 mm) and not more than 38 inches (965 mm).

(Amd) **R311.5.6.2 Continuity.** Handrails for stairways shall be continuous for the full length of each 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 to a wall or shall terminate in newel posts or safety terminations. Handrails adjacent to a wall shall have a space of not less than 1 ½ inch between the wall and the handrails.

Exceptions:

Handrails shall be permitted to be interrupted by a newel post at a level landing.

The use of a volute, turnout, starting easing or starting newel shall be permitted over the lowest tread.

R311.5.6.3 Handrail grip size.

All required handrails shall be of one of the following types or provide equivalent graspability.

Type I. Handrails with a circular cross section shall have an outside diameter of at least 1¹/₄ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102mm) and not greater than 6¹/₄ inches (160 mm) with a maximum cross section of dimension of 2¹/₄ inches (57 mm).

Type II. Handrails with a perimeter greater than 6¹/₄ inches (160mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3⁴/₄ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5¹/₁₆ inch (8mm) within 7⁸/₈ inch (22mm) below the widest portion of the profile. This required depth shall continue for at least 3⁸/₈ inch (10mm) to a level that is not less than 13⁴/₄ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1¹/₄ inches (32 mm) to a maximum of 23⁴/₄ inches (70 mm). Edges shall have a minimum radius of 0.01 inches (0.25 mm).