



Vermont Department of Public Safety DIVISION OF FIRE SAFETY

OFFICE OF THE STATE FIRE MARSHAL, THE STATE FIRE ACADEMY AND THE STATE HAZMAT TEAM



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firesafety.vermont.gov

Requirements for HANDRAILS and GUARDRAILS

CODE INFORMATION SHEET

Requirements of the Vermont Fire and Building Safety Codes

HANDRAILS

Handrail Details. [NFPA 101 SEC 7.2.2.4.5]

New handrails on stairs shall be not less than 34 in. and not more than 38 in. above the surface of the tread, measured vertically to the top of the rail from the leading edge of the tread.

Existing required handrails shall be not less than 30 in. and not more than 38 in. above the surface of the tread, measured vertically to the top of the rail from the leading edge of the tread.

The height of required handrails that form part of a guard shall be permitted to exceed 38 in., but shall not exceed 42 in., measured vertically to the top of the rail from the leading edge of the tread.

Additional handrails that are lower or higher than the main handrail shall be permitted.

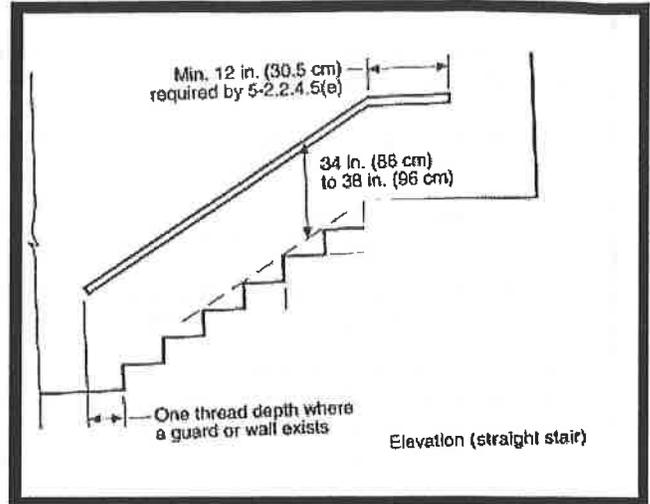
Required guards and handrails shall continue for the full length of each flight of stairs. At turns of new stairs, inside handrails shall be continuous between flights at landings. New handrail ends shall be returned to the wall or floor or shall terminate at newel posts

Handrails shall include the following features:

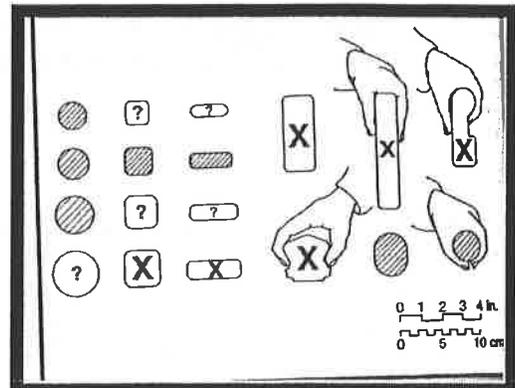
(1) A circular cross section with an outside diameter of not less than 1 1/4 in. and not more than 2 in.

(2) A shape that is other than circular with a perimeter dimension of not less than 4 in. but not more than 6 1/4 in., and with the largest cross-sectional dimension not more than 2 1/4 in. provided that graspable edges are rounded

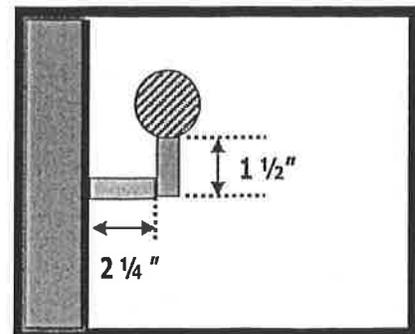
Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered to be obstructions to graspability.



NFPA 101 Figure A.7.2.2.4.5



NFPA 101 Figure



Guardrail Information on Back

2015

This sheet is designed to provide information to enhance the public safety of all Vermonters. This code information sheet is not an all-inclusive list of state laws or additional code requirements that may apply. This educational resource sheet does not carry the force of legal opinion and was developed by the Vermont Division of Fire Safety, with information provided by The U.S. Fire Administration and the National Fire Protection Association (NFPA). For additional information please visit www.firesafety.vermont.gov



Requirements of the Vermont Fire and Building Safety Codes

Code Requirements for a Guard

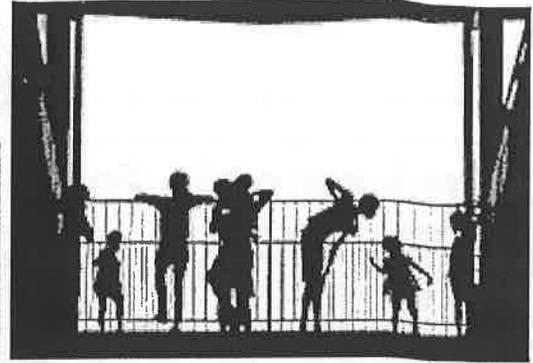
[NFPA 101 SEC 7.2.2.4.6]

Guards shall be provided at the open sides of means of egress that exceed 30 in. above the floor or grade below.

Guards shall be not less than 42 in. high, except as permitted by one of the following:

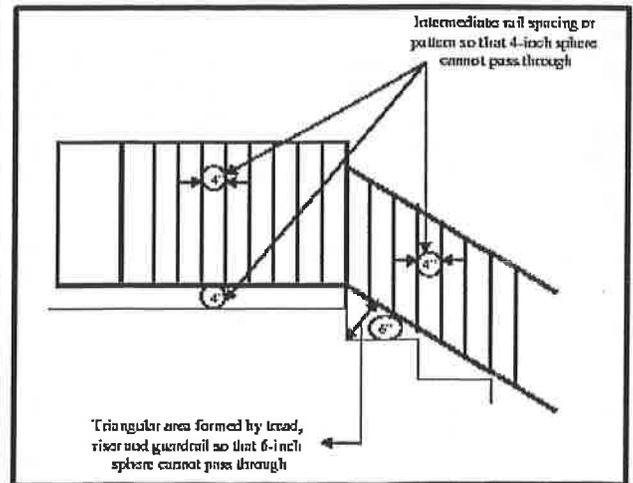
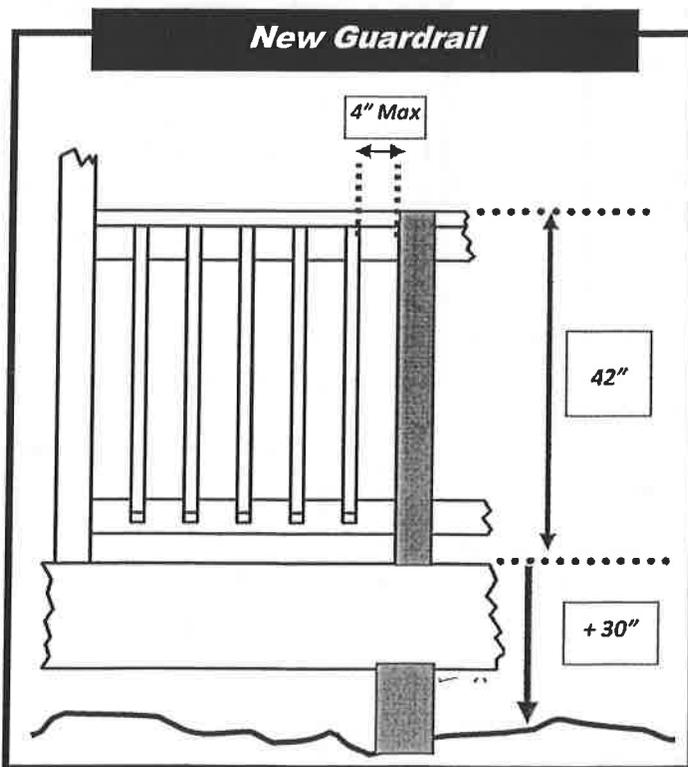
- (1) Existing guards within dwelling units shall be permitted to be not less than 36 in. high.
- (2) The requirement shall not apply in assembly occupancies where otherwise provided in the codes.
- (3) Existing guards on existing stairs shall be permitted to be not less than 30 in. high.

Open guards, other than approved, existing open guards, shall have intermediate rails or an ornamental pattern such that a sphere 4 in. in diameter is not able to pass through any opening up to a height of 34 in., and the following also shall apply:



(1) The triangular openings formed by the riser, tread, and bottom element of a guardrail at the open side of a stair shall be of such size that a sphere 6 in. in diameter is not able to pass through the triangular opening

(2) In detention and correctional occupancies, in industrial occupancies, in storage occupancies, and in storage occupancies, the clear distance between intermediate rails, measured at right angles to the rails, shall not exceed 21 in



NFPA 101 Figure