



CITY OF ANN ARBOR, MICHIGAN

Planning & Development Services

Issued December 1, 2004

STAIRS

If you are remodeling a house, or planning an addition, your plans may include new stairs. This information will help you understand some of the residential building codes for building a new staircase or updating an existing one.

Width

Stairways are to be a minimum of 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.

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.

Stair Treads and Risers

Riser heights are 8 1/4 inches maximum, 4 inches minimum. Tread depths are 9 inches minimum with a 1 inch nosing. There can be no more than a 3/8-inch difference in riser heights or tread depths in the total run of the stair.

Winders are permitted, provided that the width of the tread at a point not more than 12 inches from the side where the treads are narrower is not less than 10 inches and the minimum width of any tread is not less than 6 inches. The continuous handrail shall be located on the side where the tread is narrower.

Handrails

Stairs with four or more risers require a graspable handrail on at least one side.

The handrail must be between 34 to 38 inches in height above the stair nosing. Handrails must be continuous for the full length of the stairs, 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 post 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" between the wall and the handrail.

The handgrip portion of handrails shall have a circular cross section of 1 1/4" inches minimum to 2 inches maximum. Other handrail shapes that provide an equivalent grasping surface are permissible.

Guardrails

Raised floor surfaces more than 30" above floor or grade below must have a guardrail system not less than 36 inches above the deck surface for single family buildings. For commercial and multi family buildings, the guardrail must be a minimum of 42 inches in height.

Guardrail systems must be able to withstand a 200 lb. load in either direction.

Openings in the guardrail system (and handrail supports), must have a maximum opening of less than 4 inches. The triangular openings formed by a riser, tread and bottom rail of the guard at the open side of a stairway are permitted to be such that a 6 inch sphere cannot pass through.

