



CITY OF

WESTLAND

An All **AMERICAN** City
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Department of Building and Planning

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RESIDENTIAL DECK GUIDELINES **MICHIGAN RESIDENTIAL CODE 2006**

The following are a summary of the code requirements for residential decks. A building permit is required and you will need to submit 2 copies of structural drawings, mortgage survey or plot plan showing the location, a complete building permit application and a letter from your condo association, when applicable. An architect seal is not required.

R106.1.1 Information on construction documents; Construction documents shall be drawn upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.

R109.1 Types of inspections; For onsite construction, from time to time the building official, upon notification from the permit holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the permit holder or his or her agent wherein the same fails to comply with this code.

- 1) Post Hole, Min of 42" depth
- 2) Framing, for decks less than 20" off grade or less requires an open joist inspection
- 3) Final

SECTION R202 DEFINITIONS – DECK An exterior floor system supported on at least two opposing sides by an adjoining structure and/or posts, piers, or other independent supports.

R502.2 Design and construction; Floors shall be designed and constructed in accordance with the provisions of this chapter, Figure R502.2 and Sections R319 and R320 or in accordance with AF&PA/NDS.

R502.2.2 Decks, Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the deck.

R311.2.1 Attachment; Required exterior egress balconies, exterior exit stairways and similar means of egress components 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 to withdrawal.

R312.1 Guards, Porches, balconies, ramps or raised floor surfaces located more than 30 inches (762 mm) above the floor or grade below shall have guards not less than 36 inches (914 mm) in height. Open sides of stairs with a total rise of more than 30 inches (762 mm) above the floor or grade below shall have guards not less than 34 inches (864 mm) in height measured vertically from the nosing of the treads.

R312.2 Guard opening limitations; Required guards on open sides of stairways, raised floor areas, balconies and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches (102mm) or more in diameter.

Exceptions:

1. The triangular openings formed by the riser, tread and bottom rail of a guard at the open side of a stairway are permitted to be of such a size that a sphere 6 inches (152 mm) cannot pass through.
2. Openings for required guards on the sides of stair treads shall not allow a sphere 4 3/8 inches (107 mm) to pass through.

All stairs and handrails shall meet sections R311.5

R311.6 Ramps

R311.6.1 Maximum slope, Ramps shall have a maximum slope of one unit vertical in twelve unit's horizontal (8.3-percent slope).

Exception: Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 percent slope).

R311.4.3 Landings at doors; There shall be a floor or landing on each side of each exterior door. The floor or landing at the exterior door shall not be more than 1.5 inches (38 mm) lower than the top of the threshold. The landing shall be permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent).

R319.3 Fasteners. Fasteners for pressure-preservative and fire-retardant-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A 153.

Exceptions:

1. One-half-inch (12.7 mm) diameter or larger steel bolts.
2. Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, Class 55, minimum.

Page 3.

Electrical service must be min 10' above from deck walking service

SEE SECTION R319 FOR PROTECTION AGAINST DECAY

R403.1.4.1 Frost protection; Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.(1);
2. Constructing in accordance with Section R403.3;
3. Constructing in accordance with ASCE 32; or
4. Erected on solid rock.

Exceptions: 3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line

R319.1.2 Ground contact, All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be approved pressure-preservative-treated wood suitable for ground contact use, except untreated wood may be used where entirely below groundwater level or continuously submerged in fresh water.

The above is not meant to be a complete list of the codes and or ordinances that may apply to installing a deck. A licensed contractor or a design professional can be of great help.