

# CS-21 FINAL STRIKE BOLD DRAFT – EFFECTIVE JUNE 15, 2016

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

CONSTRUCTION SAFETY STANDARDS

Filed with the Secretary of State on

These rules become effective immediately upon filing with the Secretary of State unless adopted under section 33, 44, or 45a(6) of 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of licensing and regulatory affairs by sections 19 and 21 of 1974 PA 454 **154**, **MCL 408.1019 and 408.1021** and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

R 408.42101, R 408.42128, R 408.42150, R 408.42154, R 408.42156, and R 408.42157 of the Administrative Code are amended, and R 408.42110 is added, as follows:

## PART 21. GUARDING OF WALKING AND WORKING AREAS

R 408.42101 Scope.

Rule 2101. This **standard part** pertains to the construction and use of guardrails, stairways, ramps, and runways for the protection of employees during construction operations. It also applies to all stairways that are used in the construction, alteration, repair, including painting and decorating, and demolition of workplaces and when stairways are required to be provided.

**R 408.42110 Referenced standards.**

**Rule 2110. The following Michigan occupational safety and health standards (MIOSHA) are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at: [www.michigan.gov/mioshastandards](http://www.michigan.gov/mioshastandards). For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.**

**(a) Construction Safety Standard Part 12 “Scaffold and Scaffold Platforms,” R 408.42101 to R 408.42160.**

**(b) Construction Safety Standard Part 22 “Signals, Signs, Tags, and Barricades,” R 408.42201 to R 408.42243.**

R 408.42128 Stairway protection systems.

Rule 2128. Employers shall provide and install all stairway fall protection systems required by this **standard part** and shall comply with all other pertinent requirements of this **standard part** before employees begin the work that necessitates the installation and use of stairways and their fall protection systems.

R 408.42150 Guardrail specifications for scaffolding and catch platforms.

Rule 2150. (1) A guardrail for scaffolding and catch platforms shall consist of a top rail, intermediate rail, and supporting posts. The top rail shall have a smooth surface and shall be located not less than 36, nor more than 42, inches above the floor, ramp, platform, or runway. The intermediate rail shall be located halfway between the top rail and the floor, ramp, platform, or runway. The top rail shall not overrun the terminal posts unless such a projection does not constitute a hazard.

(2) A top rail and its supporting posts shall be constructed of wood ~~that which~~ is not less than 2- by 4-inch nominal size with a 1- by 6-inch or 2- by 4-inch nominal size intermediate rail. The construction and fastenings shall produce a guardrail capable of withstanding a 200-pound side thrust applied at the top rail. Other material may be used if the finished product has the 200-pound capability. A guardrail that is subject to additional loads shall be constructed of heavier stock and the supporting post shall be more closely spaced.

(3) Vertical supporting posts shall be placed not more than 8 feet apart.

(4) Banding steel shall not be used for guardrail construction.

(5) Welded ~~re-steel resteel~~ members shall not be used for guardrail construction.

R 408.42154 Runway and ramp specifications.

Rule 2154. (1) A ramp or runway that is used exclusively by employees as a means of access to or egress from a walking or working surface shall be in compliance with all of the following provisions:

(a) Be capable of supporting not less than 2 times the maximum intended load.

(b) Consist of a minimum of two 2-inch by 10-inch nominal size planks placed side by side or other material of equal width that provides equivalent strength if guardrails are not required.

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- (c) Consist of a minimum of three 2-inch by 10-inch nominal size planks placed side by side or other material of equal width that provides equivalent strength if guardrails are not required.
- (d) Not be constructed steeper than the ratio of 1 foot of vertical rise to 2 feet of horizontal run.
- (e) Have a slip-resistant surface or have cleats **that** ~~which~~ are not more than 2 inches by 4 inches nominal size and which are uniformly spaced not more than 24 inches apart.
- (f) Be constructed to avoid excessive deflection and springing action.
- (g) Be secured at each end to prevent displacement.
- (h) Not be used for the storage of materials or equipment.
- (i) Be maintained free of debris, other loose materials, and slip or trip hazards.
- (2) A ramp or runway used by employees with wheelbarrows shall be in compliance with both of the following provisions:
  - (a) Be constructed and used as prescribed in subrule (1)(a),(d),(e), (f), (g), (h), and (i) of this rule.
  - (b) Consist of three 2-inch by 10-inch nominal size planks placed side by side or other material of equal width that provides equivalent strength.
- (3) A ramp or runway used by concrete buggies, forklift trucks, or other motorized material handling equipment shall be in compliance with all of the following provisions:
  - (a) Be capable of supporting not less than 4 times the maximum intended load.
  - (b) Be not less than 5 feet wide.
  - (c) Be constructed and used as prescribed in subrule (1)(a),(d),(f), (g), (h), and (i) of this rule.
- (4) A ramp or runway constructed of 2 or more planks placed side by side shall have the planks securely fastened together.

## R 408.42156 Handrail specifications.

- Rule 2156. (1) A handrail shall be of a configuration that provides a handhold when grasped to avoid a fall and shall follow the slope of the stairway.
- (2) A handrail shall be vertically installed not more than 37, nor less than 30, inches above the front edge of the treads.
- (3) When the top edge of a stair rail system also serves as a handrail, the height of the top edge shall be not more than 37 inches **(94 cm)** ~~(94cm)~~ nor less than 36 inches **(91.5 cm)** ~~(91.5cm)~~ from the upper surface of the stair rail system to the surface of the tread and in line with the face of the riser at the forward edge of the tread.
- (4) A handrail shall have a smooth surface along the top and sides and the ends shall not present a projection hazard.
- (5) Handrails that will not be a permanent part of the structure being built shall have a minimum clearance of 3 inches **(3 cm)** ~~(3cm)~~ between the handrail and walls, stair rail systems, and other objects.
- (6) The ends of stair rail systems and handrails shall be constructed so as not to constitute a projection hazard.

## R 408.42157 Temporary stairways.

- Rule 2157. (1) All wooden components that are necessary to construct and guard a temporary stairway shall be of construction-grade lumber.
- (2) The minimum width of a temporary stairway shall be 22 inches.
- (3) The total vertical rise of a temporary stairway shall not be more than 12 feet, unless stair platforms are provided.
- (4) The rise shall be not less than 6 inches nor more than 8 inches.
- (5) The ratio of rise to tread width shall be uniform for all sets of stairs.
- (6) The sides of a temporary stairway shall be guarded as required by the provisions of R 408.42155 and R 408.42156, except that a stairway used as access to material storage trailers is required to be guarded on only 1 side.
- (7) If used during construction, permanent steel or other metal stairways and landings with hollow pan-type treads that are to be filled with concrete or other materials shall be filled to the level of the nosing with solid material. This requirement shall not apply during the period of actual construction of the stairways. Metal landings shall be secured in place before filling. Such temporary treads and landings shall be replaced when worn below the level of the top edge of the pan.
- (8) A stairway shall be free of hazardous projections, such as nails, sharp top rails, and handrail projections.
- (9) A stairway shall have a minimum vertical clearance of 7 feet from any overhead object, unless the overhead object is padded and caution signs or paint is used on the object, as prescribed in **Construction Safety Standard Part 22 “Signals, Signs, Tags, and Barricades,” as referenced in R 408.42110.** ~~Part 22. Signals, Signs, Tags, and Barricades, R 408.42201 et seq. of the Michigan Administrative Code.~~
- (10) Except during stairway construction, foot traffic is prohibited on skeleton metal stairs where permanent treads or landings are to be installed at a later date, unless the stairs are fitted with secured temporary treads and landings long enough to cover the entire tread or landing area.
- (11) Treads for temporary service shall be made of wood or other solid material and shall be installed the full width and depth of the stair.