



DEPARTMENT OF ENERGY, LABOR & ECONOMIC GROWTH DIRECTOR'S OFFICE CONSTRUCTION SAFETY STANDARDS

Filed with the Secretary of State on February 26, 1965, (as amended February 14, 1974) (as amended August 31, 1976) (as amended May 17, 1983) (as amended July 24, 1995) (as amended September 3, 1996) (as amended **July 30, 2002**)

These rules take effect 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of consumer and industry services by sections 19 and 21 of 1974 PA 154 and Executive Reorganization Order No. 1996-2, MCL 408.1019, 408.1021, and 445.2001) R 408.40114, 408.40128, 408.40132, and 408.40133 of the Michigan administrative Code are amended, and R 408.40134 is added to the Code, as follows:

PART 1. GENERAL RULES

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R 408.40101. Scope.

Rule 101. This part sets forth general rules for the safe use, operation, and maintenance of equipment, and for safe work practices pertaining to all employers and employees performing construction operations, except that where a specific rule is set forth in another part, the general rule is preempted.

R 408.40102. Definitions.

Rule 102. (1) **"Accident prevention program"** means the program by which an employer provides instruction and safety training to an employee in the recognition and avoidance of hazards.

(2) **"Aisle"** means a designated path of travel for equipment and employees.

(3) **"Approved"** means approval by the director of the department of consumer and industry services or by the director's duly designated representative.

(4) **"Confined space"** means a space, that, because of its physical construction, could be subject to the accumulation of loose materials or explosive, toxic, or flammable contaminants or could have an oxygendeficient atmosphere. All of the following are examples of confined spaces:

- (a) Storage tanks.
- (b) Process vessels.
- (c) Bins.
- (d) Boilers.
- (e) Ventilation ducts.
- (f) Sewers.
- (g) Underground utility vaults.
- (h) Tunnels after construction is completed.
- (i) Pipelines.

(5) **"Equivalent"** means an alternate design or feature that provides at least as effective degree of safety or a greater degree of safety.

(6) **"Hazard"** means a condition or procedure that is causing or is likely to cause serious physical harm or death to an employee.

(7) **"Potable water"** means water that is in compliance with the provisions of Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.

(8) **"Qualified employee"** means one who, by knowledge, training, and experience, has successfully demonstrated to the employer his or her ability to solve or resolve problems relating to the subject matter, the work, or the project.

R 408.40103 – R 408.40106. Rescinded.

R 408.40111 – R 408.40112. Rescinded.

R 408.40114. Employer responsibilities; accident prevention program.

Rule 114. (1) An employer shall develop, maintain, and coordinate with employees an accident prevention program, a copy of which shall be available at the worksite.

(2) An accident prevention program shall, at a minimum, provide for all of the following:

- (a) Designation of the qualified employee or person who is responsible for administering the program.
- (b) Instruction to each employee regarding the operating procedures, hazards, and safeguards of tools and equipment when necessary to perform the job.
- (c) Inspections of the construction site, tools, materials, and equipment to assure that unsafe conditions which could create a hazard are eliminated.
- (d) Instruction to each employee in the recognition and avoidance of hazards and the regulations applicable to his or her work environment to control or eliminate any hazards or other exposure to illness or injury.

- (e) Instruction to each employee who is required to handle or use known poisons, toxic materials, caustics, and other harmful substances regarding all of the following:
- (i) The potential hazards.
 - (ii) Safe handling.
 - (iii) Use.
 - (iv) Personal hygiene.
 - (v) Protective measures.
 - (vi) Applicable first aid procedures to be used in the event of injury.
- (f) Instruction to each employee if known harmful plants, reptiles, animals, or insects are present regarding all of the following:
- (i) The potential hazards.
 - (ii) How to avoid injury.
 - (iii) Applicable first aid procedures to be used in the event of injury.
- (g) Instruction to each employee who is required to enter a confined space regarding all of the following:
- (i) The hazards involved.
 - (ii) The necessary precautions to be taken.
 - (iii) The use of required personal protective equipment.
 - (iv) Emergency equipment.
 - (v) The procedures to be followed if an emergency occurs.
 - (h) Instruction in the steps or procedures to be followed in case of an injury or accident or other emergency.
- (3) This rule replaces OH rule 6601.

R 408.40115. Employer responsibilities generally.

Rule 115. (1) An employer shall identify as unsafe a machine, powered tool, or piece of equipment that is damaged or defective. The machine, tool, or equipment shall be locked out, made inoperable, or be physically removed from the jobsite.

- (2) An employer shall not permit any of the following:
- (a) The use of damaged or defective machinery, tools, materials, or equipment that could create a hazard.
 - (b) The operation of machinery, equipment, and special tools, except by a qualified employee.
 - (c) An employee other than the operator to ride any piece of moving equipment not covered by a specific standard, unless there is a seat or other safety feature provided for use by the employee. Acceptable safety features could include a guardrail, enclosure, or a seat belt.

(3) An employer shall not knowingly permit an employee to work while under the influence of intoxicating beverages or substances which could impair the employee's ability to perform a task in a safe manner.

(4) Employees not specifically covered by Part 16. Power Transmission and Distribution, Part 17. Electrical Installations, or Part 30. Telecommunications of the construction safety standards commission standards, being R 408.41601 et seq., R 408.41701 et seq., and R 408.43001 et seq. of the Michigan Administrative Code, shall not be allowed by the employer to work or be closer to energized electrical line, gear, or equipment exposed to contact than the minimum clearance prescribed in table 1.

- (5) Table 1 reads as follows:

TABLE 1

VOLTAGE	MINIMUM EMPLOYEE CLEARANCE
To 50 kv	10 ft.
Over 50	10 ft. + .4 inch per kv

(6) An employer shall comply with all the rules of this part.

R 408.40116. Employee responsibilities.

Rule 116. (1) An employee shall immediately report hazardous conditions or equipment to the employer.

- (2) An employee shall not do any of the following:
- (a) Engage in any act which would endanger another employee.
 - (b) Work while under the influence of intoxicating beverages or substances which would impair his or her ability to perform a task in a safe manner.
 - (c) Remove a guard or other safety device from a machine or equipment, except for authorized servicing purposes. The guard or other safety device shall be replaced or equivalent guarding shall be provided before the machine or equipment is returned to normal operation.

R 408.40118. Leased and rental equipment.

Rule 118. The employer of the operator is responsible for the condition and operation of rented, leased, or loaned equipment.

R 408.40119. Housekeeping and disposal of waste materials.

Rule 119. (1) Materials, including scrap and debris, shall be piled, stacked, or placed in a container in a manner that does not create a hazard to an employee.

(2) Garbage capable of rotting or becoming putrid shall be placed in a covered container. Container contents shall be disposed of at frequent and regular intervals.

(3) The floor of a work area or aisle shall be maintained in a manner that does not create a hazard to an employee.

(4) Combustible scrap and debris shall be removed in a safe manner from the work area at reasonable intervals during the course of construction. A safe means shall be provided to facilitate this removal.

(5) Material which may be dislodged by wind and that could create a hazard when left in an open area shall be secured.

R 408.40120. Work in hazardous spaces.

Rule 120. When an employee enters a hazardous space, such a bin, silo, hopper, or tank, that contains bulk or loose material which could engulf the employee, the employee shall wear a safety belt or a safety harness and a lanyard affixed by a rope grab to a lifeline, all components of which shall be in compliance with the requirements of Part 45. Fall Protection, being R 408.44501 et seq. of the Michigan Administrative Code. The uppermost elevation of the stored material shall not be higher than the shoulder height of the employee.

R 408.40121. Confined or enclosed spaces; testing; neutralizing hazard.

Rule 121. (1) An employee required to enter into confined or enclosed spaces shall be instructed as to the nature of the hazards involved, the necessary precautions to be taken, and in the use of required protective and emergency equipment. The employer shall comply with any specific rules that apply to work in dangerous or potentially dangerous areas.

(2) Before an employee enters a manhole, well, shaft, tunnel, or other confined space where the atmosphere might be hazardous due to a condition such as a deficiency of oxygen, or might be toxic in excess of the maximum allowable limits prescribed by the department of consumer and industry services, the atmosphere shall be tested and the results recorded. The records shall be maintained at the job site. If the atmosphere is hazardous, either sufficient ventilation to eliminate the hazard shall be provided or respiratory equipment prescribed by the department of consumer and industry services shall be worn.

(3) If an atmosphere is found to be explosive, sparks, flame, and other sources of ignition shall be prohibited, and

ventilation shall be provided until the hazard has been reduced and maintained at or below the maximum allowable limits prescribed by the department of consumer and industry services.

R 408.40122. Boilers and pressure vessels.

Rule 122. (1) The installation, inspection, testing, marking, and certification of a pressure vessel shall be as prescribed in section viii on unfired pressure vessels of the ASME boiler and pressure vessel code of 1989, which is adopted by reference in these rules and may be inspected at the Lansing office of the department of consumer and industry services. This code may be purchased at a cost as of the time of adoption of these rules of \$310.00 from either the American Society of Mechanical Engineers, Standards Department, United Engineering Center, 345 E. 47th Street, New York, New York 10017, or from the Michigan Department of Consumer and Industry Services, Safety Standards Division, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.

(2) An employer shall not use a boiler to perform construction operations unless the employer has a valid certification issued by the boiler division of the Michigan department of consumer and industry services.

R 408.40123. Guarding, belts, gears, pulleys, sprockets, and moving parts.

Rule 123. Means of power transmission, such as, but not limited to, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment, shall be guarded as prescribed in the general industry safety standards commission standard, Part 7. Guards for Power Transmission, being R 408.10701 et seq. of the Michigan Administrative Code, if the part is exposed to contact by an employee or otherwise constitutes a hazard.

R 408.40125. Aisles and floors.

Rule 125. When equipment and employees use the same aisle, dock, or doorway, clearances shall be provided and maintained to assure safe passage for the equipment and employees.

R 408.40126. Derailers, bumper blocks, and clearance signs.

Rule 126. (1) Where rolling railroad cars on a spur track could make contact with a rail car being loaded or unloaded, repaired, or serviced, or enter a building, work or traffic area, derailleurs, bumper blocks, a blue flag or blue light, or other equivalent protection shall be used.

(2) A visible "close clearance" sign shall be used to indicate close clearance between a rail car and an adjacent fixed object if the fixed object is located less than 8 ½ feet from the center of a straight track or less than 9 feet from the center of a curved track.

R 408.40127. Machine installations and guarding.

Rule 127. (1) A machine shall be located so that there will be space for an employee to handle the material and operate the machine without interference to or from another employee or machine.

(2) A machine installed on a bench, table, or stand shall be designed or secured to prevent unintentional movement or tipping.

(3) The power source of any machine that is to be repaired, serviced, or set up, where unexpected motion or an electrical or other energy source would cause injury, shall be locked out by each employee doing the work, except when motion is necessary during setup, adjustment, or troubleshooting. Any residual pressure shall be relieved before and during the work. A machine connected by a cord and plug to an electric power source shall be considered in compliance

if the plug is disconnected and tagged and the disconnection is within view of the operation.

(4) Where 1 or more crews are working on the same machine with a single energy source, 1 of the following provisions shall be complied with:

- (a) Each employee shall place his or her lock as prescribed in subrule (3) of this rule.
- (b) An authorized employee of each crew shall be responsible for placing the lock required in subrule (3) of this rule and for ascertaining that his or her crew is clear of the machine before removing the lock.
- (c) A supervisor shall place a departmental lock for which he or she has the only key, and he or she shall ascertain that all crews are clear from the machine before removing the lock.

(5) The tagging referred to in subrule (3) of this rule shall be as prescribed in Part 22. Signals, Signs, Tags, and Barricades, being R 408.42201 et seq. of the Michigan Administrative Code.

(6) When unexpected motion would cause injury, provision shall be made to prevent a machine from automatically restarting upon restoration of power after a power failure.

(7) Blades of a fan which is located within 8 feet of a floor or working level and which is used for ventilation or cooling of an employee, shall be guarded with a firmly affixed or secured guard. Any opening in the guard shall have not more than 1 of its dimensions more than 1 inch, and the distance to the blade shall be not less than that prescribed in table 2.

(8) An employee shall not place his or her body beneath equipment such as a machine, or materials, that is supported only by a jack, overhead hoist, chain fall, or any other temporary single supporting means, unless safety stands, blocks, or another support system that is capable of supporting the total imposed weight is used to protect the employee if the temporary single supporting means fails.

(9) Table 2 reads as follows:

TABLE 2

SMALLEST DIMENSION IN GUARD (INCHES)	MINIMUM DISTANCE FROM GUARD TO BLADE
0 Up to and including 1/4 of an inch	1/2 of an inch
More than 1/4 of an inch up to and including 3/8 of an inch	1 1/2 inches
More than 3/8 of an inch up to and including 1/2 of an inch	2 1/2 inches
More than 1/2 of an inch up to and including 3/4 of an inch.	4 inches
More than 3/4 of an inch up to and including 1 inch	6 times the smallest dimension

R 408.40128. Sanitation.

Rule 128. (1) All of the following provisions apply to potable water:

- (a) A supply of potable water shall be available to employees in all places of employment.
- (b) A container used to distribute drinking water shall be constructed of impervious nontoxic materials, shall be clearly marked as to its contents, and shall not be used for any other purpose. Containers shall be serviced so that sanitary conditions are maintained.
- (c) A portable container used to dispense drinking water shall be closed and equipped with a tap.
- (d) Dipping water from a container or drinking from a common cup is prohibited.
- (e) Where single-service cups (cups to be used once) are supplied, a sanitary container for the unused cups shall be provided. A receptacle for disposing of used

cups shall be provided and emptied as often as is necessary.

(2) Both of the following provisions apply to nonpotable water:

- (a) An outlet for nonpotable water, such as water for industrial or fire fighting purposes only, shall be identified by signs that are in compliance with the requirements of construction safety standard, part 22. Signals, Signs, Tags, and Barricades, being R 408.42201 et seq. of the Michigan Administrative Code, to indicate clearly that the water is not to be used for drinking, washing, or cooking purposes.
- (b) There shall be no connection between a system furnishing potable water and a system furnishing nonpotable water.
- (3) This rule replaces OH rule 6615.

R 408.40129. Toilets at construction sites.

Rule 129. (1) Toilets at construction sites shall be provided for employees as follows:

- (a) 1 to 20 employees – 1 toilet.
- (b) 21 to 40 employees – 2 toilets.
- (c) 41 or more employees – 1 additional toilet for each additional 40 or less employees.

(2) A jobsite that is not provided with a sanitary sewer shall be provided with 1 of the following toilet facilities, unless prohibited by local codes:

- (a) A privy, if use of the privy will not contaminate groundwater or surface water.
- (b) A chemical toilet.
- (c) A recirculating toilet.
- (d) A combustion toilet.

(3) The requirements of this rule for sanitation facilities shall not apply to a mobile crew that has transportation readily available to nearby toilet facilities.

(4) To assure sanitation, a toilet shall be serviced and maintained on a regular basis.

- (5) A toilet shall be supplied with toilet paper.

R 408.40130. Washing facilities.

Rule 130. An employer shall supply washing facilities for employees who are engaged in the application of paint, coatings, herbicides, or insecticides or in other operations where contaminants may be harmful to employees. The facilities shall be in close proximity to the worksite and shall be equipped to enable employees to remove paint, coatings, herbicides, insecticides, or other harmful contaminants.

R 408.40131. Food handling.

Rule 131. All employee food service facilities and operations shall be in compliance with the provisions of part 129 of the food service and sanitation requirements of Act No. 368 of the Public Acts of 1978, as amended, being §333.12901 et seq. of the Michigan Compiled Laws. The food service and sanitation requirements are available from the Michigan Department of Agriculture, 611 W. Ottawa St., P.O. Box 30017, Lansing, Michigan 48909, at no charge as of the time of adoption of this rule.

R 408.40132. Medical services and first aid.

Rule 132. (1) An employer shall ensure the availability of medical personnel for advice and consultation on matters of occupational health.

(2) Before beginning a project, provision shall be made for prompt medical attention in case of serious injury.

(3) A person who has a valid certificate in first aid training shall be present at the worksite to render first aid. A certificate is valid if the requirements necessary to obtain the certificate for first aid training meet or exceed the requirements of the United States bureau of mines, the American red cross, the guidelines for basic first aid training programs, or equivalent training.

(4) Where a remote location or a single employee worksite exists, an employer shall provide a written plan that includes alternate methods of assuring available treatment for employees at a remote location or single-employee worksite. The plan shall be communicated to all affected employees.

(5) An employer shall assure that there are first aid supplies at each jobsite and that the supplies are readily accessible.

(6) The contents of a first aid kit shall be approved by a consulting physician. First aid kit supplies shall be sealed in individual packages, stored in a weatherproof container, and checked by an employer or designated person before being sent out on each job and at least weekly on each job to ensure that expended items are replaced.

(7) An employer shall provide proper equipment for the prompt transportation of an injured person to a physician or hospital and a communication system for contacting the necessary emergency service. The telephone numbers of a physician, hospital, or emergency service shall be conspicuously posted at the jobsite.

- (8) This rule replaces OH rule 6610.

R 408.40133. Illumination.

Rule 133. (1) A minimum illumination intensity of 10 footcandles shall be provided on a jobsite where construction work is being performed.

(2) A minimum illumination intensity of 5 footcandles shall be provided to areas on a jobsite where work is not being immediately performed but where workers may pass through.

(3) A minimum illumination intensity of 50 footcandles shall be provided for first aid stations and infirmaries.

(4) For areas or operations not covered by subrules (1) to (3) of this rule, refer to the American National Standard A11.1-1965, R 1970, Practice for Industrial Lighting, for recommended values of illumination. ANSI Z11.1-1965, R 1970, is adopted by reference in this rule. Printed copies of ANSI Z11.1-1965, R 1970, are available from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, telephone number 1-800-854-7179, website: www.global.ihs.com, at a cost as of the time of adoption of these amendatory rules of \$54.00 or is available for inspection at the Michigan Department of Consumer and Industry Services, Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan 48909.

- (5) This rule replaces OH rule 6605.

R 408.40134 Temporary sleeping quarters.

Rule 134. (1) When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

- (2) This rule replaces OH rule 6615.

The Department of Energy, Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need assistance with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

