

SECTION THREE – CONSTRUCTION CODES

CHAPTER 36: Construction Codes in Michigan

Purpose and Applicability of Regulations

Manufacturing facilities and other businesses must be designed according to code in terms of the actual structure, plumbing, electrical, and mechanical systems. The purpose of the code is to ensure the safety and welfare of building inhabitants. This chapter highlights various aspects of the code, including permits to which industry must comply.



Agencies and Their Laws and Rules

The Bureau of Construction Codes of the Michigan Department of Licensing and Regulatory Affairs (DLARA) is responsible for the administration and enforcement of the following:

- Michigan Construction Code, Public Act 230 of 1972, as amended, (Act 230).
- Boiler Act, Public Act 290 of 1965, as amended (Act 290).
- Elevator Safety Board, Public Act 227 of 1967, as amended (Act 290).
- Licensing laws for electricians, plumbers, and mechanical contractors.
- Barrier Free Design, Public Act 1 of 1966, as amended (Act 1).
- Building Officials and Inspectors Registration Act, Public Act 54 of 1986, as amended (Act 54).

The bureau enforces building, electrical, plumbing, and mechanical codes in areas of the state that don't have local building, electrical, plumbing, or mechanical departments. In addition, the bureau registers local code officials, plan reviewers, and inspectors in the areas of building, electrical, mechanical, and plumbing inspections as required by Act 54. The law gives the bureau authority to approve instructors, courses, and tests for education and training programs. The bureau is also responsible for examination and licensing in the boiler, electrical, elevator, mechanical, and plumbing fields, as well as investigating consumer complaints against licensees.

In this Chapter:

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SECTION THREE: Construction Codes

36.1 Building Permits

Act 230 of 1972 allows a local unit of government to legally adopt and enforce the state building code at the local level. The respective building departments are generally listed in the telephone book as Building Safety Departments in the city, township, or county in which the building is located.



In areas without a local building department, you may contact the Bureau of Construction Codes, Building Division at 517-241-9317.

The purpose of the building code is to ensure public health, safety, and welfare by protecting life and property from all hazards related to the design, erection, repair, removal, demolition, or use and occupancy of buildings, structures, or premises. This is in relation to structural strength, adequate egress facilities, sanitary equipment, light and ventilation, and fire safety.

Building permits are required for any of the following:

- Construction or alteration of a structure.
- Construction of an addition.
- Demolition or movement of a structure.
- A change of occupancy.
- Installation or alteration of any equipment that is regulated by the code.
- Moving a lot line which affects an existing structure.

A building permit may be obtained by the owner or the owner's builder, architect, engineer, or agent. A builder's license is not necessary to secure a building permit for a commercial building.

Plans and specifications, signed and sealed by a Michigan licensed architect or engineer, must accompany the application for a building permit, except for minor alterations and repair work.

36.1.1 Existing Structures

A permit is not required for ordinary repairs. Ordinary repairs to structures may be made without permit, but such repairs do not include:

- The cutting away of any wall, partition, or portion thereof.
- The removal or cutting of any structural beam or bearing support.
- The removal or change of any required means of egress, or rearrangement of parts of a structure affecting the exit requirements.

This document has been designed to complete online, print, SIGN, and mail to the bureau with the appropriate permit fee.

Application for Building Permit
Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Building Division
P.O. Box 20055
Lansing, MI 48909
517/241-9317

Print Clear 120

Address: 517/241-9317
Contact: Building Division
Email: bcd@mlg.state.mi.us

Note: Separate Applications Must Be Completed for Plumbing, Mechanical, and Electrical Work Permits

I. PROJECT INFORMATION
PROJECT NAME: _____ ADDRESS: _____
CITY: _____ TOWNSHIP: _____ COUNTY: _____ ZIP CODE: _____
SUBJECT: _____ AGE: _____

II. IDENTIFICATION

A. OWNER OR LESSEE
NAME: _____ ADDRESS: _____
CITY: _____ STATE: _____ ZIP CODE: _____ RESPHONE NUMBER: _____

B. ARCHITECT OR ENGINEER
NAME: _____ ADDRESS: _____
CITY: _____ STATE: _____ ZIP CODE: _____ RESPHONE NUMBER: _____
CERTIFICATION: _____ EXPIRATION DATE: _____

C. CONTRACTOR
NAME: _____ ADDRESS: _____
CITY: _____ STATE: _____ ZIP CODE: _____ RESPHONE NUMBER: _____
EXPIRES: _____ EXPIRES DATE: _____

INDICATE APPROXIMATE NUMBER OF SQUARE FEET OF WORK:
APPROXIMATE SQUARE FOOTAGE OF WORK: _____
INDICATE NUMBER OF FLOORS TO BE WORKED ON: _____

III. TYPE OF IMPROVEMENT AND PLAN REVIEW

A. TYPE OF IMPROVEMENT
 NEW BUILDING REPAIRS DEMOLITION REVISION ONLY RELOCATION SPECIAL INSPECTION
 ALTERATION REPAIR REPAIR WORK ONLY RECONSTRUCTION SPECIAL INSPECTION

B. PLAN REVIEW REQUIRED:
Plans must be submitted with an Application for Plan Examination and the appropriate fee before a permit can be issued, except as listed below.
Plans are not required for alterations and repair work determined by the building official to be of a minor nature.
Plans and specifications are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1999 PA 239 and shall bear the architect's or engineer's seal and signature.
Plan Review Submission No. _____

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Ordinary repairs do not include addition to, alteration of, and replacement or relocation of:

- Any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent, or similar piping.
- Electric wiring.
- Mechanical or other work affecting public health or general safety.

Section 3401.2 of the code establishes the owner's responsibility to keep the building maintained and repaired. Additionally, fire protection and safety systems in existing structures are to remain in place and be maintained.

When adding on to your building, the addition shall conform to the requirements for a new structure without requiring the existing structure to comply with new construction requirements of the code. Any existing structure plus additions must comply with the height and area requirements of the code.

A change in occupancy to an existing structure may change the level of inherent hazards initially addressed by the code. If you are buying a building that previously had a different use, a change of occupancy must not be made to the structure without approval of the code official. For example, if the existing or previous business was mercantile (display and sales) and you are changing it to a business use, the use Group B (business) provisions are applicable to all portions of the structure where the occupancy has changed or which are affected by the change. The use Group B provisions may not have applied in the past, so the structure may not be fully in compliance. Therefore, building modifications may be necessary before the business opens.

36.2 Electrical Permits

Act 230 of 1972 allows a local unit of government to legally adopt and enforce the state electrical code at the local level. The purpose of the electrical code is to provide practical safeguards to persons and property from hazards arising from the use of electricity. The code contains provisions considered necessary for safety. For further information on regulations pertaining to electrical safety standards, see Chapter 31.



Local electrical inspection department telephone numbers are generally listed in telephone books as Building Safety or Electrical Safety Departments in the city, township, or county in which the building is located.

Electrical permits are required for any of the following:

- Before equipping a building with electrical equipment.
- Making an alteration or addition to electrical equipment in excess of \$100.

Electrical permits for commercial buildings may be obtained by an electrical contractor who is licensed by a municipality or by the State Electrical Administrative Board. An electrical contractor's license is required to secure an electrical permit for any of these types of facilities.

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Plans and specifications, signed and sealed by a Michigan licensed architect or engineer, must accompany the application for an electrical permit. Exceptions to this are alterations and repair work determined by the electrical official to be minor and wiring or alteration to an electrical system rating which does not exceed 400 amps in a building that is not over 3,500 square feet in area.



In areas without an electrical inspection department, you may contact the Bureau of Construction Codes, [Electrical Division](#), at 517-241-9320.

36.3 Mechanical Permits

Act 230 of 1972 allows a local unit of government to legally adopt and enforce the state mechanical code at the local level. The purpose of the mechanical code is to ensure for the safe installation of all mechanical equipment in order to protect the public health, safety, and welfare. The code sets forth comprehensive regulations for this, where in the past, great reliance was placed on accepted practice and engineering standards.

The respective mechanical inspection department telephone numbers are generally listed in telephone books as Building Safety or Mechanical Safety Departments in the city, township, or county in which the building is located.

Mechanical permits are required for the installation and alteration of the following equipment:

- Air pollution control systems
- Appliances that use gas, liquid, or solid fuel
- Barbecues
- Chimneys and vents
- Cooling systems
- Crematories
- Fireplaces
- Fire suppression systems
- Heating systems
- Incinerators
- Mechanical refrigeration systems
- Process piping
- Residential boilers and pressure vessels
- Steam and hot water systems
- Systems utilizing solar or geothermal energy as an energy source
- Ventilating systems
- Water heaters



A state mechanical contractor's license is required to secure a mechanical permit for a commercial building.

Plans and specifications, signed and sealed by a Michigan licensed architect or engineer, must accompany the application for a mechanical permit. Exceptions to this are alterations and repair work determined by the mechanical official to be of a minor nature, and business, mercantile, and storage buildings having heating, ventilation, and air conditioning (HVAC) equipment only, with one fire area not more than 3,500 square feet.



In areas without a local mechanical inspection department, you may contact the Bureau of Construction Codes, [Mechanical Division](#), at 517-241-9325.

36.4 Plumbing Permits

Act 230 of 1972 allows a local unit of government to legally adopt and enforce the state plumbing code at the local level. The purpose of the plumbing code is to protect public health, safety, and welfare by regulating the installation of systems used for storm drainage, furnishing potable water, and disposing of sanitary sewage.

Local plumbing inspection department telephone numbers are generally listed in telephone books as Building Safety or Plumbing Safety Departments in the city, township, or county in which the building is located.

Plumbing permits are required for the installation and alteration of the following equipment:

- Sanitary facilities
- Sanitary piping
- Water services
- Storm and sanitary sewers



An authorized master plumber licensed by the State Plumbing Board must obtain a plumbing permit for a commercial facility. The only exemptions from permits are building sewers, private sewers, or water service.

Plans and specifications, signed and sealed by a Michigan licensed architect or engineer, must accompany the application for a plumbing permit. There are exceptions for alterations and repair work determined by the plumbing official to be of a minor nature, as well as exceptions for assembly, business, mercantile, and storage buildings that have a required plumbing fixture count of less than 12.



In areas without a local plumbing inspection department, you may contact the Bureau of Construction Codes, [Plumbing Division](#), at 517-241-9330.

36.5 Boiler Permits

The Boiler Act, Public Act 290 of 1965, as amended (Act 290), requires that all permits for boilers installed and repaired in commercial, public, and multiple dwelling units of six or more be obtained from the DELEG, Bureau of Construction Codes, Boiler Division. Boilers installed in private residences are permitted in accordance with the mechanical code.

Boiler permits are required when a boiler is installed, reinstalled, or repaired anywhere other than a private residence or the City of Detroit. All persons applying for a permit to install, reinstall, or repair a boiler must have a license to do so from the DELEG, Bureau of Construction Codes, Boiler Division. Boiler issues within the City of Detroit are handled by the City's Building & Safety Engineering.

The State Boiler Code regulates installation and repair of boilers and requires periodic inspection of them to assure public safety from the catastrophic results of a boiler failure.

A plan review is not necessary for the installation of a boiler. However, a plan review for the system connected to the boiler is necessary.

The Boiler Act requires an annual inspection of power, process and high temperature, and high pressure boilers. Low pressure steam or vapor heating boilers, hot water heaters, and hot water supply boilers must be inspected every two years. Inspections are also required any time a new boiler is installed or a used boiler is reinstalled. Inspections may also be required during or after repairs to boilers, depending on the type of repair.

The Boiler Act only requires annual servicing or once every two years, depending on the type of boiler. However, a boiler should be examined daily during operation to assure that it is operating properly and safely. It only takes a few minutes for a boiler with a malfunctioning control or safety device to reach critical pressure and fail with devastating results.



You may contact the Bureau of Construction Codes, [Boiler Division](#), at 517-241-9334 for further information.



Contact the City of Detroit, Building & Safety Engineering at 313-224-3212 for more information regarding the installation of a boiler within the City of Detroit.

36.6 Elevator Permits

Public Act 227 of 1967 states that an elevator shall not be installed or altered without first obtaining a permit from the DELEG, Bureau of Construction Codes, Elevator Safety Division. A permit shall be issued only to a person, firm, or corporation licensed by the director as an elevator contractor.

The State Elevator Code regulates the installation, alteration, repair, and testing of elevators. It also regulates the licensing of elevator contractors, journey persons, special inspectors, and general inspectors.



Any holder of a certificate of operation must notify the DELEG within 48 hours of every accident involving personal injury or damage to an elevator. The department may investigate all such accidents.

All elevators must be inspected by a general elevator inspector in accordance with the following schedule:

- Passenger, freight, barrier free lifting devices, and special elevating devices must be inspected at least once every 12 months.
- Escalators, moving walks, inclined lifts, dumbwaiters, one-person elevators (hand-powered), one-person elevators (electric-powered), wheelchair elevating devices in buildings other than private residences, and sidewalk elevators must be inspected at least once every 24 months.
- Personal hoists must be inspected at least once every 30 days. Elevating devices in private residences shall be inspected only at the discretion of the department or owner.
- Detailed plans and specifications must be submitted in triplicate with each installation permit and shall be approved by the department before a permit is issued.
- A power elevator, except a private residence elevator, must be serviced and examined for defects at least once every 90 days by a licensed elevator journey person.



You may contact the DLARA, Bureau of Construction Codes, [Elevator Safety Division](#), at 517-241-9337 for further information about elevators.



Contact the City of Detroit, Building & Safety Engineering, Elevator Division, at 313-224-3704 for more information regarding the installation of elevators within the City of Detroit.

36.7 Michigan's Barrier Free Design Law

Barrier Free Design, Public Act 1 of 1966, as amended (Act 1), is intended to assure that buildings in Michigan are accessible and usable for all citizens. This includes elderly persons, wheelchair users, and persons with permanent or temporary conditions that reduce coordination or mobility or make walking difficult or insecure. Barrier free design is also intended to ensure that persons with visual or hearing impairments will be able to use facilities safely.



When barrier free design was implemented as public policy in 1966 by Act 1, the law applied almost exclusively to government-owned buildings and facilities. In the mid-1970s, in response to demands made by handicappers devoted to living independently rather than in institutional settings, the law was amended to require barrier free design in buildings where employment opportunities existed and where services to the public were available (e.g., schools, retail stores, restaurants, churches, hotels, etc.). There were considerable differences of opinion about what, if anything, should be done regarding existing buildings.

Michigan lawmakers compromised the differences by stating in law that when an existing building undergoes a change in use group, occupancy load, or an alteration, some accessibility changes will be required. If the change affects less than 50 percent of the existing floor area, only the affected area and a barrier free route to it (from and including the nearest entrance) must be barrier free. If the change affects 50 percent or more of the existing floor area, the entire facility must become barrier free.

At the time this standard was enacted, Michigan lawmakers recognized potential hardship to building owners. To address this, the legislature also created the Barrier Free Design Board (BFDB) and authorized it as the only entity in the state with the authority to grant exceptions (variances) to the barrier free design requirements.

Created in 1975, the BFDB consists of a nine-member citizen panel appointed by the Governor with the advice and consent of the Senate. Act 1 specifically prohibits any person, local unit of government, state department, or agency other than the BFDB from granting an exception to the barrier free design requirements. To request an exception (variance), you must submit a formal application to the BFDB. For additional information on the exception process, or for an application, contact the Plan Review Division at 517-241-9328.

The BFDB can grant exceptions or variances from the barrier free design requirements, require alternatives when exceptions are granted, and allow an exception for a stated time period or upon stated conditions. The Board has established criteria which is taken into consideration when reviewing a request for an exception. A person requesting an exception must demonstrate a compelling need to warrant the exception. Compelling need can include structural limitations, site limitations, economic limitations, technological limitations, and jurisdictional conflicts.

An administrative process, which includes a formal hearing before an administrative law judge, gives the person seeking an exception the opportunity to fully explain the details surrounding the request. The judge then makes a recommendation to the BFDB. The Board may then accept or modify the law judge's opinion. The Board's final decision can be appealed to the Circuit Court of the county in which the project is located.

Michigan law requires the Board to follow the provisions of the Michigan Administrative Procedures Act and that a hearing be conducted in accordance with the provisions of that act. The act establishes the hearing procedure so that all persons are treated in a fair and equitable manner and their due process and equal protection rights are assured.

36.8 Americans with Disabilities Act

The Americans with Disabilities Act (ADA) became effective January 26, 1992, for places of public accommodation, i.e., commercial facilities. This was also the due date to complete the removal of barriers for existing facilities. The ADA public accommodation requirements are similar to, and cover many of the same areas as, the State of Michigan's Barrier Free Design law provisions.

36.9 High-Hazard Materials

The building code, at the time of construction or alteration to a building, specifies the maximum quantities of high-hazard materials allowed per control area before having to classify a part of (or the entire) building as a high-hazard use group.

The high-hazard use group classification relates to those facilities where the storage of materials or the operations are deemed to be hazardous to life and property, especially when they involve the use of significant amounts of highly combustible, flammable, or explosive materials, regardless of their composition. Although they are not explosive or highly flammable, other hazardous materials - such as corrosive liquids, highly toxic materials, and poisonous gases, still present an extreme hazard to life. Many hazardous materials possess multiple hazards, whether physical and/or health related.

It is important to isolate industrial or storage operations that pose the greatest dangers to life and property and reduce such hazards by providing systems or elements of protection through the regulatory provisions of the building codes.

Examples of systems and elements of protection that may be required are:

- Fire separation assemblies
- Explosive venting
- Monitor control equipment
- Fire suppression systems
- Spill control, drainage, and containment
- Type of construction and height limitations
- Ventilation.



For further information on regulations pertaining to the storage of high-hazard materials, see Chapters 4, 6, 34, and 37.

WHERE TO GO FOR HELP

SUBJECT: Building, electrical, mechanical, and plumbing codes

CONTACT: Contact the relevant local unit of government building, electrical, mechanical, and/or plumbing departments if you have questions or need information about applicable codes.

If your local unit of government does not have one or more of these departments or you are not sure who to call, contact the Bureau of Construction Codes, at one of the phone numbers listed below.

- Building Division – 517-241-9317
- Electrical Division – 517-241-9320
- Mechanical Division – 517-241-9325
- Plumbing Division - 517-241-9330

www.michigan.gov/bcc

PUBLICATION:

1. Building Permit and Plan Examination (BCC-324)
2. Electrical Permit Application (BCC-339)
3. Mechanical Permit Application (BCC-9)
4. Plumbing Permit Application (BCC-327)

SUBJECT: Installation or repair of boilers*

CONTACT: Bureau of Construction Codes and, Boiler Division
517-241-9334

www.michigan.gov/bcc (select “Divisions”)

*If installing or repairing a boiler within the City of Detroit, contact Building & Safety Engineering, Boiler Division, 313-224-3210, and Mechanical Division, 313-224-3211.

SUBJECT: Barrier free design

CONTACT: Bureau of Construction Codes, Plan Review Division
517-241-9328

www.michigan.gov/bcc (select “Divisions”)

SUBJECT: Installation, alteration, repairs, and testing of elevators*

CONTACT: Bureau of Construction Codes, Elevator Safety Division
517-241-9337

www.michigan.gov/bccfs (select “Divisions”)

*If installing or repairing an elevator within the City of Detroit, contact the City of Detroit, Buildings, Safety Engineering, and Environmental Department, Construction Division, 313-224-3202.

SUBJECT: Detroit elevator codes

CONTACT: City of Detroit, Buildings, Safety Engineering, and Environmental
Department, Construction Division
313-224-9401

www.detroitmi.gov/Government/Departments

