
This pamphlet is a compilation of some of the standard requirements based on the State Building Code and City Ordinance for projects of this type. This information packet does not contain all of the specific codes for construction and should only be used as a guide. The permittee is responsible to meet all code requirements applicable to each project.

Permits

A building permit is required to finish all single family basements. The basement finish permit issued by the City will also cover plumbing and heating system modifications to existing or roughed-in systems if the homeowner(s) does the work themselves. If subcontractors are hired to do specific work such as heating, plumbing or electrical work, they are required to obtain separate permits for the work they do and they will be responsible for code compliance.

In all cases a separate electrical permit will be required.

Basement finishing permit fees are \$200.00, plus state surcharge, not including the electrical permit.

**Plan Submittal
Required**

You must submit some kind of sketch showing all intended work to be done, type of materials used dimensions and sizes along with your application for permit. Two (2) copies of the plans are required. You may draw the plans yourself - provide as much construction detail as you can.

**Typical Code
Requirements
For Finished
Basements**

A hardwired smoke detector with battery backup must be installed in all newly constructed areas of the basement. These detectors must be placed in each sleeping room and in the hallway serving the sleeping room(s). Smoke detectors must be installed in the remaining portions of the house in each sleeping room, hallways serving sleeping rooms and on each floor level (these may be battery operated). These must be installed and be operational for final inspection. **IRC R313** A carbon monoxide detector must also be installed within 10 feet of each bedroom.

An egress window with a clear opening of 5.7 square feet and within 44" of the floor must be provided in the basement and in each bedroom. See the inspector for more details. **IRC R310.1**

All rigid foam insulation must be covered with 1/2" gypsum board or an approved finish material. **IRC R314**

Habitable space shall not have a ceiling height of less than 7'0". Habitable rooms shall have a floor area of not less than 70 Square feet and not be less than 7 feet in any horizontal direction. **IRC R304 and R305**

All wood in direct contact with concrete or masonry is to be pressure treated or wood of natural resistance to decay. Fasteners for treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. **IRC R319**

If using a paneling material less than 1/4" thick it must be applied over gypsum. **IRC R702.5**

If finishing space under stairs for use as storage or a closet the entire space must be sheet rocked with 1/2" gypsum board. **IRC R311.2.2**

Bathrooms that do not have a window that can be opened must have mechanical ventilation vented to the outside. **IRC R303.3**

Cement, fiber-cement and glass mat gypsum shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas. **IRC R702.4.2**

See Fireplace Handout for requirements of fireplaces

All new concealed gas piping must be air tested at 25# for 12 hours. **IFGC 406.4**
No mechanical gas pipe joint may be concealed.

All electrical, plumbing and heating work must be installed in accordance with appropriate State Codes.

A 4 mil poly moisture barrier must be placed against all concrete or block exterior foundation walls prior to applying furring strips, when installing fiberglass insulation. Another 4 mil poly vapor barrier must be placed over the warm side of the insulation prior to covering with finish materials. **State Energy Code Requirement**

Every room should have a warm air supply and return air register, except closets, bathrooms, and utility rooms are prohibited from having return air openings. **MN Mechanical Code section 918**

FINISHING BASEMENT INSPECTIONS REQUIRED BY LAW:

1. **Plumbing Rough-In Inspection** before concealing – if applicable
2. **Heating Rough-In Inspection** before concealing – if applicable
3. **Electrical Wiring Rough-In Inspection** before framing inspection and before concealing (call Mr. Patrick McMullen at 612-866-1979 between 7:00 a.m. and 8:30 a.m., Monday through Friday, for electrical inspections).
4. **Framing Inspection**
5. **Insulation and Vapor Barrier Inspection**
6. **Final Plumbing, Heating, Electrical Inspections** – if applicable
7. **Final Occupancy Inspection**

A violation of the Code is a misdemeanor. **Minnesota Statute 16B.69 and Minnesota Rules, Chapter 1300**

The person doing the work authorized by a permit shall notify the building department that the work is ready for inspection. **MN 1300.0210 Subp. 4**

Work shall not be covered or concealed before the inspection is made and the work approved. **MN1300.0210 Subp. 5**

Electrical Inspector – Patrick McMullen

Inspection Office Hours 7-8:30 am Monday-Friday
612-866-1979

Inspections are normally made the same day they are called in.

Please have your permit number ready when you call for inspection.

Rough-In Inspection

This inspection must be done before any wiring is covered by insulation, sheetrock, paneling, etc. Underground wiring must be inspected before the trench is covered.

- At all boxes, there must be minimum wire length of six inches including the grounding conductors.
- The outer cable jacket must extend at least ¼” into the box.
- All splicing of ground wires and other wires must be completed with approved splicing devices when calling for inspection.
- In receptacle boxes with more than one cable in the box, the ground wires must be spliced with a wire tail to be attached to the ground screw on the receptacle or switch, as only one conductor is permitted under a terminal screw.
- All metal boxes and equipment must be grounded.
- The volume of boxes must be sufficient for the number of conductors and other items contained in the Box. (See NEC art. 314-16 for box sizing)
- Do not install junction boxes in attic or conceal them in walls.
- All junctions and splices should be made in boxes that are used for fixtures, switches, or receptacles. If a regular box is too small, use a larger volume box. (See NEC 314-16)
- Plastic cable must be stapled at intervals not exceeding 4 & ½’, and within 8” of plastic boxes.
- Plastic cable must not be installed within 1 & ¼” of the face of studs, joists, strips, or any framing members. This applies to cables installed through bored holes or cables strapped to the sides of studs or strips. Cables closer than 1 & ¼” must be protected with metal plates or sleeve a minimum of 1/16” thick.
- Outlet boxes may not be used as sole support of ceiling fans. Special approved fan boxes should be used for support of ceiling fans.
- Ground fault circuit interrupters must be used for receptacles located in bathrooms, garages, outside locations, within 6’ of kitchen or bar type sinks, and unfinished areas of basements. (see NEC 210-8 for further details of GFI protection requirements)
- Recessed lighting fixtures installed in insulated areas must be IC rated. All recessed lighting fixtures must be installed as per the manufactures instructions. (Some are not approved for wiring with plastic cable.)
- See NEC 201.12 for required use of ARC/Fault protection.
- See NEC 406.12 for required use of tamper resistant receptacles

Final Inspection

The law requires that the final inspection be made on wiring for all new homes, additions, and remodeling. It is unlawful to occupy a new home before all wiring is completed, inspected and approved.

It is the responsibility of the permit holder to call for the final inspection when all devices and fixtures have been installed, and wiring is entirely completed including the cover plates.

Other Information

All electrical equipment must be listed and labeled by a testing laboratory such as UL, ETL, MET, CSA, or several others recognized by the Minnesota State Board of Electricity.

The above information covers common mistakes made by homeowners doing their own wiring. Additional information and knowledge will be needed to install the wiring properly. Wiring by owners must comply with the same standards as required of Electrical contractors.

The code we are enforcing is the 2011 National Electric Code. You can find a copy at the public library.

State law prohibits planning, laying out, or doing electrical work by anyone other than the resident owner or a licensed electrical contractor.