

Electrical Tech Note — 107

Biosystems & Agricultural Engineering Department Michigan State University

Understanding the Construction Code Rules, Part 5 & 8¹

Based on the 2017 NEC[®] and the 2015 MRC

The State of Michigan is operating under the 2017 edition of the *National Electrical Code*[®] as amended by the *Construction Code Act, Parts 5 & 8* of *Public Act 230 of 1972.* A copy can be obtained from the Bureau of Construction Codes and Fire Safety, P.O. Box 30254, Lansing, MI 48909. The purpose of this document is to explain how the *Michigan Electrical Code (MEC)* differs from the 2017 *National Electrical Code (NEC*[®]), and when the *Michigan Residential Code (MRC)* is to be used in place of the *MEC* for wiring installations. To access official information on the internet, go to the web site www.michigan.gov/bcc (517.241.9320). The electrical portion of the *Construction Code Act, Public Act 230 of 1972*, is *Part 8* for occupancies not covered by the *MRC*, and *Part 5* for single- and two-family dwellings and structures covered by the *MRC*. This Tech Note is not an official document.

Rule 801: This rule adopts the 2017 NEC[®] with some sections omitted and some rewritten. Article 547 dealing with agricultural buildings, not used for retail sales, was omitted. Annex H dealing with administrative and enforcement rules was adopted, but the following sections were not adopted; 80.2, 80.5, 80.15, 80.21, 80.27, 80.29, 80.31, 80.33, and 80.35. Only three of the Annex H sections, 80.9, 80.11, and 80.17 were accepted exactly as they were printed in the 2017 NEC. All of the others that were accepted were drastically revised and are printed in the State web site copy of the Part 8 Rules. Section 90 of the 2017 NEC was not accepted because formal interpretations of a Code rule is directed first to the electrical inspector and then to an appeals board if an agreement cannot be reached. This makes up what is known as the Michigan Electrical Code (MEC), which is basically the 2017 NEC except for two revised sections which will be discussed later in this document.

Previously this Rule 801 had an exception that authorized use of the *Michigan Residential Code* (*MRC*) for wiring of one-family and two-family dwellings and outbuildings on the same property. Now there is a new Part 5 to the Construction Code Act, Public Act 230 of 1972 that deals with wiring of one-family and two-family dwellings. Rule 501 of Part 5 authorizes the use of the 2015 edition of the *International Residential Code* for wiring of one-family and two-family dwellings in Michigan with some sections revised. Those revisions are printed in *chapters 34 through 43* of Part 5 of Public Act 230. The 2015 MRC electrical sections are based on the *2014 NEC* and have been in effect since June, 2015.

The previous edition of the 2014 MEC deleted section 110.24 from the 2014 NEC, but Section 110.24 is not deleted from the 2017 NEC. Section 110.24 requires all services, except dwellings, to be marked with the available fault current at the time of installation or modification. It will be necessary to obtain this information from the electric utility. Other changes are discussed later in this document.

Administration and Enforcement: The 2017 NEC Annex H provides administration and enforcement rules that are available for governmental jurisdictions to adopt. Michigan has adopted three of the sections, not adopted many of them, and did a major revision to several others. The State has not published a revised version of the Part 8 rules like they have in the past. The good news is that there are only a few actual changes with respect to the previous set of Part 8 rules. The following are the major differences in the administrative and enforcement rules that have occurred. Part 8 is the portion of the Construction Code Act, Public Act 230 of 1972 that deals with electrical wiring of all buildings and structures in Michigan except one-family and two-family dwellings. The administrative and enforcement rules that apply to all electrical installations in Michigan are contained in Part 8 of Public Act 230. There is now a new Part 5 of Public Act 230 that deals with all aspects of construction of one-family and two-family

¹ Developed by the Electrical Technology staff of the Biosystems & Agricultural Engineering Department of Michigan State University, East Lansing, MI 48824-1323. For a copy of this Tech Note and other educational papers, visit the <u>Electrical</u> <u>Technology</u> web site at <u>http://www.egr.msu.edu/bae/et/.</u>

dwellings including building, plumbing, electrical, energy, etc.

The following is a brief explanation of those sections of the Part 8 Rules that are different than the Part 8 Rules prior to 2019.

Rule 80.13 Authority: Paragraph (1) of this rule deals with the situation where electrical equipment or its installation is found to be dangerous to human life or property. Notice shall be placed on the equipment or installation listing the causes, and notice shall be given within 24 hours to the owners or the occupants.

Rule 80.19(a): The electrical permit was required to be posted at the job site, but now there is an option that a copy of the permit can be carried by a person at the job site.

Rule 80.19(b): This is not a change but clearly states that a permit expires after 180 days. The change is in **80.19(e)**. In the past if an application for a permit extension was granted it was an extension for only 90 days. There was no limit to the number of permit extensions that could be requested. Now only one permit extension will be granted and that extension is for 180 days.

Rule 80.19(c): An annual permit is common for a firm or corporation where one or more electricians perform installation, alterations, or maintenance of electrical equipment in buildings or on the premises owned by the firm or corporation. A record of the electrical work is required, but the change is that this record is required to be <u>periodically transmitted</u> to the electrical inspection agency having jurisdiction.

Rule 80.25: Paragraph (a) probably is not a change and deals with the case where work is being performed under a permit or where due to dangerous circumstances power has been ordered to be disconnected. It is unlawful for any person to make connection to a source of power without being authorized to do so by the electrical inspector.

Paragraph (b) deals with the case where due to an emergency situation the electric utility is requested to make connection of power to a service. The utility is authorized to make connection to power if the repair is performed by a licensed electrical contractor. Here is the change. The electrical contractor is required to obtain a permit for the service repair the next business day following completion of the service repair.

Substitutions and Additions

This next part of the Part 8 rules is where the Michigan Electrical Code (MEC) substitutes alternate language to sections of the 2017 National Electrical Code. There is now only one actual altered Code section and that is 334.10 uses permitted for nonmetallic sheathed cables. There is one addition that is not in the 2017 NEC and that is a new 250.104(B) paragraph (2) which is a bonding requirement for corrugated stainless steel tubing (CSST). Following is an explanation and illustration of these changes to the 2017 NEC for electrical installations in Michigan.

334.10(2): The uses permitted for nonmetallic-sheathed cable is modified for use in Michigan. The first modification deals with *334.10(2)*. In the *2017 NEC* there is a reference to Type III, IV, and V construction of multifamily dwellings which in Michigan has been deleted. The significance of this revision is that in Michigan nonmetallic sheathed cable is permitted to be installed in any multifamily dwelling regardless of the type of construction of the building. This is illustrated in Figure 1.

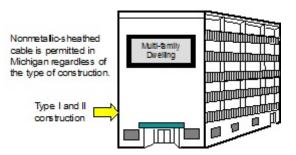


Figure 1. Nonmetallic-Sheathed Cable is permitted to be installed in multifamily dwellings of any type of construction in Michigan.

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334.10(3): The 2017 NEC limits the installation of nonmetallic-sheathed cable in non-dwellings. It is required to be run concealed within walls, floors, or ceilings with a 15-minute finish fire rating. The wording of 334.10(3) has been changed for applications in Michigan. Nonmetallic-sheathed cable is permitted to be installed as surface wiring or concealed within walls, floors, and ceilings that do not have a 15-minute finish fire rating provided the building is not more than one floor in height. This is illustrated in Figure 2. When the building exceeds one floor in height, nonmetallic sheathed cable is required to be concealed in walls, floors, or ceilings that provide a 15-minute finish fire rating.



Figure 2. Nonmetallic-Sheathed Cable is permitted to be installed as surface wiring or concealed except for buildings of two or more floors and then it must be installed concealed within walls, floors, or ceilings with a 15-minute finish fire rating.

250.104(B): There have been concerns about possible lightning damage to corrugated stainless steel tubing (CSST) gas piping in buildings. The 2017 *NEC* does not have a rule with respect to bonding of CSST. The Michigan Electrical Code adds a rule that requires bonding of CSST to the service grounding electrode system unless the CSST is specifically listed as not requiring such bonding. The bonding conductor is required to be sized not smaller than the equipment grounding conductor of any circuit that potentially could energize the CSST as required by 250.122. In any case the bonding conductor size is not permitted to be smaller than 6 AWG copper. The points of connection to the service grounding electrode system are listed in 250.104(B). Starting at the point where the gas piping enters the building, the bonding connection is to be made to either a metal gas pipe or the first CSST fitting.

Figure 3 illustrates installations where the CSST begins at a gas meter. The bonding connection is required to be made at the first CSST fitting in this case. The CSST may begin at some point inside the building in which case the bonding connection is required to be made at the first CSST fitting or to a metal gas pipe prior to the origination of the CSST. This rule also applies to CSST installed in one-family and two-family dwellings as stated in E3609.7.1 which is printed on page 652 of the MRC.

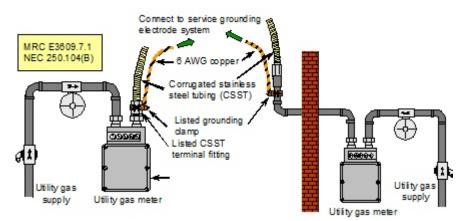


Figure 3. Both the MEC and the MRC require a bonding connection to a section of rigid gas piping or to a CSST terminal connector closest to the gas meter or point of entrance to a building when corrugated stainless steel tubing is installed as a part of the gas piping system in a building unless listed as not requiring bonding.

Past Rules No Longer Required: The previous Part 8 rules deleted *2014 NEC* Exception 3 of 230.40. The deleted exception applied in the case of a single-family dwelling and permitted an outbuilding as well as the dwelling to be supplied directly from a single service drop or lateral similar to Figure 4. It would have been required to originate the feeder to the outbuilding from the dwelling service panel or a disconnect adjacent to the service panel. This procedure is now permitted in Michigan.



Figure 4. It is now permitted to directly supply an outbuilding from a single-family dwelling service drop or lateral.

250.118: The previous edition of the Part 8 rules deleted 250.118 (5) and (6) from the *Michigan Electrical Code* which prohibited the use of flexible metal conduit and liquidtight flexible metal conduit to be used as an equipment grounding conductor. These two paragraphs are no longer deleted from 250.118 so it is permitted to use FMC and LFMC as an equipment grounding conductor as permitted in paragraphs (5) and (6). The present edition of the Michigan Residential Code is based on the *2014 NEC* and paragraphs (5) and (6) remain deleted, but it is permitted to follow the *Michigan Electrical Code* for one-family and two-family dwelling wiring so even though FMC and LFMC are not permitted to be used for equipment grounding in E3908.8 it is permitted according the *MEC* in 250.118. See Figure 5 and Figure 6 for examples.

348.60: Flexible metal conduit (FMC) is now permitted to serve as an equipment grounding conductor in Michigan as described in 250.118 (5). This was the rule for many years but now Michigan follows what is printed in the *2017 NEC*. An equipment grounding conductor is no longer required to be run in or on the outside of the FMC. There is a caution and that is the *NEC* requires the fittings to be "listed." Be careful, not all FMC fittings are listed to be used as an equipment grounding conductor. An example of an application where the FMC can be used as an equipment grounding conductor, provided the fittings are listed for the purpose, is shown in Figure 5.

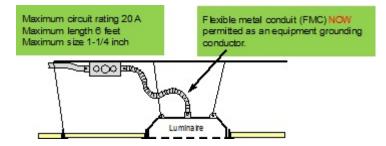


Figure 5. Flexible Metal Conduit (FMC) is **now** permitted to be used as an equipment grounding or bonding conductor in Michigan. A bonding jumper no longer required to be installed in all cases to provide a satisfactory fault current path from one end to the other of Flexible Metal Conduit. Make sure the fittings are listed for the purpose.

350.60: Liquidtight flexible metal conduit (LFMC) is now permitted to serve as an equipment grounding conductor in Michigan as described in 250.118 (6). This was the rule for many years but now Michigan follows what is printed in the *2017 NEC*. An equipment grounding conductor is no longer required to be run in or on the outside of the LFMC. There is a caution and that is the *NEC* requires the fittings to be

"listed." Be careful, not all LFMC fittings are listed to be used as an equipment grounding conductor. An example of an application where the LFMC can be used as an equipment grounding conductor, provided the fittings are listed for the purpose, is shown in Figure 6.

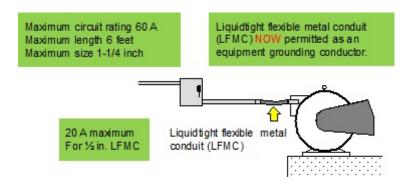


Figure 6. Liquidtight Flexible Metal Conduit is **now** permitted to be used as equipment grounding or bonding conductor in Michigan. A bonding jumper is no longer required to be installed in all cases to provide a satisfactory fault current path from one end to the other of Liquidtight Flexible Metal Conduit. Make sure the fittings are listed for the purpose.

Skilled Trades Regulation Act, Public Act 407 of 2016: This Act replaces Public Act 217 of 1956 which was called the Electrical Administrative Act. This legislation provides one set of uniform rules for five skilled trades including electricians. This Act provides uniform regulations for persons working as electricians, plumbers, mechanical workers, boiler workers, building officials, and inspectors. Requirements for licensing are covered. An example of an important rule is identification of licensed trades workers on a job site. This rule is found in Section 201, paragraph (3) and states at the request of a building official, inspector, or employee of an enforcing agency, a licensed person (journey or master electrician) can be required to present proof of license and government-issued photo identification such as a drivers license.

Michigan Residential Code: One-family dwelling, two-family dwellings, and townhouses consisting of multiple single-family dwellings not more than three floors in height and having means of egress from each dwelling unit are permitted to have wiring installed according to the 2015 *Michigan Residential Code*. Multi-family dwellings consisting of individual living units are to have wiring installed according to the *Michigan Electrical Code* which consists of the 2017 *National Electrical Code* as amended by *Part 8* of the *Construction Code Act*. Those amendments were discussed earlier in this Tech Note. The following discussion compares several differences that exist for one- and two-family dwellings between the 2015 *Michigan Residential Code* and the 2017 *NEC*.

E3401.5 to E3401.8 Dwelling Photovoltaic Installations: Installation of photovoltaic modules and arrays at a single-family dwelling or a two-family dwelling location are permitted to be roof mounted or ground-level mounted. In either case there are several references in the *Michigan Residential Code* (*MRC*) where installation requirements are found. In addition to this reference in the electrical section of the *MRC* there are other requirements found in R324 dealing with general installation rules, R902 for fire rating requirements, and R907 roof mounted photovoltaic systems. With respect to the installation of electrical wiring and components of the system those rules are found in Article 690 of the 2017 edition of the *National Electrical Code*.

Figure 7 shows a roof installation of a photovoltaic array on a dwelling roof. For locations in Southern Michigan it is recommended the photovoltaic array face South and be tilted at an angle of about 50 degrees (14.5 inch rise in 12 inches) from horizontal. This should provide maximum power production during winter months and the high angle will help prevent snow build-up on the modules. Roof structure must be capable of supporting the weight and if a supporting structure is used, it is required to be constructed of non-combustible materials or if of wood it is required to be fire-retardant treated wood. Other mounting instructions are found in the listed "R" and "E" sections of the *MRC*.

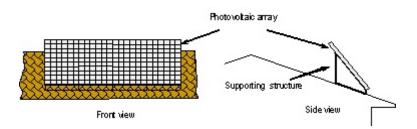


Figure 7. A dwelling roof mounted photovoltaic array if with a supporting structure shall be constructed of non-combustible or fire-retardant materials on a roof rated for the weight to be supported.

E3405.2 Ex. 1 Minimum Headroom: In the case of the 2017 NEC for an existing dwelling and in 110.26(A)(3) Exception 1 for an existing dwelling, headroom for a service panel or panelboard is permitted to be less than 6.5 feet. There is no minimum stated in the 2017 NEC. For existing dwellings in Michigan (215 MRC) the minimum headroom for a service panel or panelboard is five feet.

E3601.6.3 Separate outdoor electric space conditioning equipment. This is a service equipment rule that is in the *MRC* but not in the *NEC*. This rule permits the service disconnecting means for space conditioning equipment to be separated from the service disconnecting means for the remainder of the dwelling when the space conditioning equipment is separately metered by the utility. Figure 8 shows a dwelling with separately metered space conditioning equipment located outside the dwelling. Since the space conditioning equipment is separately metered it requires a separate service disconnect. The issue is that the Code requires separate service disconnects to be grouped thus requiring the space conditioning disconnect to be located adjacent to the dwelling service disconnect. Since the space conditioning equipment is located outside the dwelling it is desirable to also locate the space conditioning service disconnect outside. This arrangement requires a provision in the Code.

The space conditioning service disconnect is required to be located adjacent to the meter. A plaque is required at the disconnect indicating the location of the dwelling service disconnect. At the dwelling service disconnect a plaque is required indicating the location of the space conditioning service disconnect. It is also required to provide a grounding electrode system for the space conditioning service disconnect. A grounding electrode system can be provided. If a separate grounding electrode system is provided, it is required to be bonded to the dwelling service grounding electrode system.

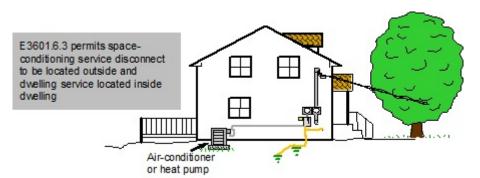


Figure 8 In the case of a one-family or two-family dwelling, it is permitted to provide a separate disconnecting means on the outside of the dwelling for separately metered space conditioning equipment service disconnect, but a grounding electrode system is also required.

E3601.6.4 Electric vehicle charging system service disconnect. This is a service equipment rule that is in the *MRC* but not in the *NEC*. This rule permits the service disconnecting means for the electric vehicle (EV) charging station to be separated from the service disconnecting means for the remainder of the dwelling when the EV charging station is separately metered by the utility. Figure 9 shows a dwelling

with a separately metered electric vehicle charging station located outside the dwelling. Since the electric vehicle charging station is separately metered it requires a separate service disconnect. The issue is that the Code requires separate service disconnects to be grouped thus requiring the electric vehicle charging station disconnect to be located adjacent to the dwelling service disconnect. Since the electric vehicle charging station is located outside the dwelling it is desirable to also locate the electric vehicle charging station service disconnect outside. This arrangement requires a provision in the Code.

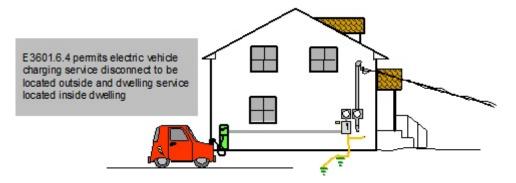


Figure 9 In the case of a one-family or two-family dwelling, it is permitted to provide a separate disconnecting means on the outside of the dwelling for a separately metered electric vehicle charging station service disconnect, but a grounding electrode system is also required.

The electric vehicle charging station service disconnect is required to be located adjacent to the meter. A plaque is required at the disconnect indicating the location of the dwelling service disconnect. At the dwelling service disconnect. A main bonding jumper is required at the EV charging station service disconnect. A main bonding jumper is required at the EV charging station service disconnect. It is also required to provide a grounding electrode system for the electric vehicle charging station service disconnect. A grounding electrode conductor can be run to the dwelling service grounding electrode system, or a separate grounding electrode system can be provided. If a separate grounding electrode system is provided, it is required to be bonded to the dwelling service grounding electrode system. See the example in Figure 9.

E3604.2.1 Ex 2 Clearance of Service Conductor Height above Roof: This is the case where a service mast passes through a roof overhang and extends up above a pitched roof. If the mast is located such that the service conductors could be within 3 feet of a window that can be opened, the minimum height of the service conductors above the roof must be not less than 8 feet.

E3608.1.2 Verification of Concrete Encased Electrode: A concrete encased electrode in order to be used as the grounding electrode for a dwelling service must be inspected and tagged as meeting the requirements of reinforcement bar of not less than ½ inch diameter and a minimum length of 20 feet. The length is not required to be one solid 20 foot length, but is permitted to be connected to other reinforcement bars using approved methods. This section states that in the case of a dwelling the inspection is permitted to be made by either an electrical inspector or a building inspector. The person conducting the inspection must be approved by the governmental jurisdiction.

E3609.7.1 Corrugated stainless steel tubing (CSST): Whenever corrugated stainless steel tubing (CSST) gas piping is run inside a one-family or two-family dwelling, unless it is listed by the manufacturer as not requiring grounding, it is required to be grounded to the dwelling service grounding electrode system with a bonding conductor not smaller than 6 AWG copper. Starting at the gas meter or entrance to the building, the grounding connection is to be made to a metal gas pipe or CSST fitting at the closest point to the supply where the run of CSST begins. For more details, refer to the discussion of 250.104(B) on page 3 of this tech note, or the exact wording of 250.104(B) as printed in the *Michigan Part 8 Rules*. Also refer to Figure 3 in this tech note.

E3901.11 Dwelling Foyer: If the foyer of a dwelling has an area that exceeds 100 ft², then a receptacle is required to be installed on any wall section of the foyer that is 3 feet or more in length such as shown in Figure 10. The *2017 NEC* sets the foyer area at 60 ft². If the foyer area is less than this limit then no wall receptacle outlets are required.

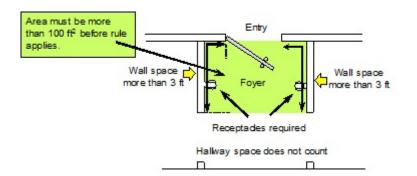


Figure 10. A receptacle outlet is required to be installed on any wall section that is 3 feet or greater only if the area of the foyer is greater than 100 ft^2 .

E3902 Arc-Fault Circuit-Interrupters: The AFCI requirement for protection of dwelling bedroom outlets supplied by 120 volt circuits rated 15- or 20-amperes was deleted in the 2015 MRC which remains in effect. The requirements of *2017 NEC* 210.12 for the installation of AFCIs are permitted in one-family and two-family dwellings but they are not required.

E3908.8.1 Use of Flexible Metal Conduit for Equipment Grounding: This section of the MRC states that FMC is not permitted to be used for equipment grounding based on the MEC Part 8 Rules. Those are the previous MEC Part 8 Rules and are no longer in effect. Even though FMC is not listed in E3908.8 as an being permitted to be used in some cases as an equipment grounding conductor it is permitted according to 250.118 (5) of the *2017 NEC*. As printed, E3908.8.1 is no longer valid. Flexible metal conduit is permitted to be used in a dwelling for equipment grounding as stated in 250.118 (5). Please refer to Figure 5 and note that fittings must be listed for equipment grounding.

E3908.8.2 Use of Liquidtight Flexible Metal Conduit for Equipment Grounding: This section of the MRC states that LFMC is not permitted to be used for equipment grounding based on the MEC Part 8 Rules. Those are the previous MEC Part 8 Rules and are no longer in effect. Even though LFMC is not listed in E3908.8 as being permitted to be used in some cases as an equipment grounding conductor it is permitted according to 250.118 (6) of the *2017 NEC*. As printed, E3908.8.2 is no longer valid. LFMC is permitted to be used in a dwelling for equipment grounding as stated in 250.118 (6). Please refer to Figure 6 and note that fittings must be listed for equipment grounding.

E4002.16 Replacement of Non-grounding Receptacles: Several conditions are described in this section, but one is to install a GFCI receptacle as a replacement for a non-grounding receptacle. The *2017 NEC* in 406.4(D) has an additional requirement that is not in the MRC. The *2017 NEC* requires the GFCI receptacle to be installed such that it is "readily accessible." This may not be practical in the case of a one- or two-family dwelling, so the readily accessible requirement is not in the MRC and does not apply.

E4101.8 Frames of Ranges and Clothes Dryers: This is the situation of an existing electric range or electric clothes dryer that does not have a separate equipment grounding conductor and uses the grounded circuit conductor (neutral) for equipment grounding. The grounded circuit conductor of this existing circuit is permitted to also serve as the equipment grounding conductor as described in this section but only if the circuit is 120/240 volts, 3-wire. The deviation from 250.140 exception is that the 2017 NEC permits this practice even for circuits that are 208/120 volt, 3-wire from a 3-phase system. The MRC does not permit this practice for one-family and two-family dwellings, and townhouses if the circuit is 208Y/120 volts, 3-wire.

R302.11 Fireblocking: In combustible construction, fireblocking shall be provided to cut off all concealed draft openings both vertical and horizontal and to form an effective fire barrier between stories, and between a top story and the roof space. This rule applies to electrical installations as well as other trade installations. More information about dwelling fireblocking, smoke alarm and carbon monoxide detection and alarm installations can be found in Tech Note 252. This publication can be accessed at the web site www.egr.msu.edu/bas/et . This rule is summarized in Figure 11.

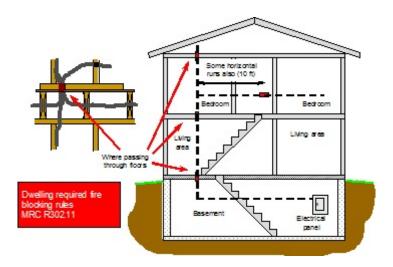


Figure 11. Fire blocking is required when cables or receway pass from one floor to the next or from the to floor to attic space. Also fire blicking is requires from horizontal runs that exceed 10 feet.

R314 Smoke Alarms: Smoke alarms are required to be installed in each bedroom of a dwelling with an additional smoke alarm outside the bedrooms in the bedroom area. At least one smoke alarm is required to be installed on each habitable floor such as a basement used only for recreation and/or storage and utility appliances and equipment. This also includes any floor that does not have sleeping spaces. Helpful information about dwelling smoke alarm placement can be found in *Tech Note 252*. When alterations to a dwelling are made that require a permit, smoke alarms are to be installed meeting the requirements of new construction. For exceptions review this reference in the *MRC* or contact the local building code enforcing agency. Figure 12 is a side view of a two story dwelling with a basement.

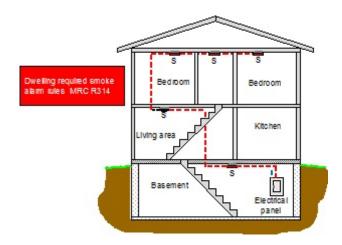


Figure 12. Smoke alarms are required to be installed in every sleeping room, outside in the area of sleeping rooms, and on all other floors including the basement.

R315 Carbon monoxide: Carbon monoxide alarms are required to be installed in the area outside of sleeping rooms, in the area of all fuel-fired appliances such as a gas range, gas clothes dryer and gas furnace, and installed within the dwelling near the door to an attached garage. This information as to the actual location to install a carbon monoxide alarm is not found in the *MRC*. Instead it is found in the *Construction Code Act, Public Act 230 of 1972 in Section 125.1504f(1)*. Helpful information about dwelling carbon monoxide alarms and their placement can be found in *Tech Note 252*. When alterations to a dwelling are made that require a permit, carbon monoxide alarms are to be installed meeting the requirements of new construction. For exceptions review this reference in the *MRC* or contact the local building code enforcing agency. A plan view of a dwelling is shown in Figure 13 with an attached garage, a gas range in the kitchen, but an electric clothes dryer in the utility room.

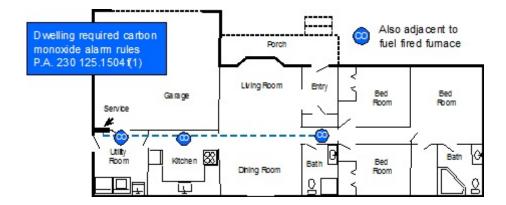


Figure 13. Carbon monoxide alarms are required to be installed in the area of sleeping rooms and in all other areas adjacent to fuel burning appliances. Another is required to be installed inside the dwelling adjacent to the entrance from an attached garage.