

CHARTER TOWNSHIP OF CHESTERFIELD – BUILDING DEPARTMENT

47275 Sugarbush, Chesterfield Township, MI 48047 Phone: (586) 949-0400 Fax: (586) 949-4780

APPLICATION FOR BUILDING PERMIT, ZONING COMPLIANCE

PERMIT AND PLAN EXAMINATION

Authority: P.A. 230 of 1972, as amended Completion: Mandatory to obtain permit Penalty: Permit will not be issued	<h2 style="margin: 0;">Permit #</h2>
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In order to avoid delay all forms must be completely filled out and plans must contain required information.
 NOTE: Separate applications must be filled out for electrical, mechanical and plumbing permits.

I. PROJECT INFORMATION

Address	Lot Number	Subdivision
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II. PROJECT DESCRIPTION/TYPE OF IMPROVEMENT

Detailed Description of Project <div style="border: 1px solid black; padding: 5px; font-size: 1.2em; font-family: cursive;">Swimming Pool</div>	Estimated Cost of Construction \$
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III. DIMENSIONS AND DATA FOR NEW CONSTRUCTION

Square Footage -	# of Bedrooms _____	Fees:
1 st Story _____	# of Bathrooms _____	_____
2 nd Story _____	Full _____	_____
Basement _____	Half _____	_____
Garage _____	Finishing Basement _____	_____
TOTAL _____	- Yes/No	_____

IV. IDENTIFICATION

Owner Information			
Name	Address	Phone	
City	State	Zip Code	Fax
Contractor/Architect			
Name	Address	Phone	
City	State	Zip Code	Fax
Builders License Number		Expiration Date	

V. APPLICANT INFORMATION

Name(print)	Address		
City	State	Zip Code	Phone
Drivers License Number		Date of Birth	
I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the Charter Township of Chesterfield and the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.			
Section 23a of the state construction code act 1972, 1972 PA 230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or residential structure. Violators of section 23a are subject to civil fines.			
Signature of Applicant - Must be signed by Homeowner or Contractor (Homeowner Signature Indicates compliance with Section VI, Homeowner Affidavit)			Date

VI. HOMEOWNER AFFIDAVIT

I hereby certify the building work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Building Code and shall not be enclosed, covered, used, or put into operation until it has been inspected and approved by the Building Inspector. I will cooperate with the Building Inspector and resume responsibility to arrange for necessary inspections.
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Chesterfield Township Building Department

47275 Sugarbush Rd, Chesterfield Township MI 48047 Phone: (586)949-0400 ext 2 Fax: (586)949-4780

Mechanical Permit Application

Authority: P.A. 230 of 1971, as amended
 Completion: Mandatory to obtain permit
 Penalty: Permit cannot be issued

I. PROJECT LOCATION

Street address and job location (street number and name)	Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required		
Name of Owner/Agent	Phone #	Lot #	Subdivision

II. APPLICATION INFORMATION (Contractors must complete shaded section)

<input type="checkbox"/> Contractor	Name	Phone	Fax	
<input type="checkbox"/> Homeowner				
Address		City	State	Zip Code
Drivers License #	Date of Birth	Contractors License #		Expiration Date
Federal Employer ID # (or reason for exemption)		Workers Comp. Insur. Carrier (or reason for exemption)	MESC Employer # (or reason for exemption)	

III. PROJECT DESCRIPTION

Project Use <input type="checkbox"/> Single Family <input type="checkbox"/> Multi-family <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other - Explain:
Describe Project and Building use in detail <div style="text-align: center; font-size: 1.5em; font-family: cursive;">Heater</div>

IV. APPLICANT SIGNATURE

I here by certify that the proposed work is authorized by the owner of record and that I have authorization from the owner to make this application as his/her authorized agent, and we agree to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the Charter Township of Chesterfield and the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.

Section 23a of the state construction code act of 1972, 1972 PA 230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Violators of section 23a are subject to civil fines.

Signature of Licensee or Homeowner (Homeowner signature indicates compliance with Section V. Homeowner Affidavit)	Date
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V. HOMEOWNER AFFIDAVIT

I hereby certify the mechanical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Mechanical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Mechanical Inspector. I will cooperate with the Mechanical Inspector and assume responsibility to arrange for necessary inspections.

VI. NOTICE TO APPLICANT

GENERAL: Mechanical work shall not be undertaken until an Mechanical permit is issued. All installations shall be in conformance with the Mechanical Code. **No work shall be concealed until it has been inspected and approved.**

EXPIRATION OF PERMIT: A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A permit will be cancelled when no inspections are requested and conducted within six months of the date of issuance of the date of a previous inspection. Cancelled permits cannot be refunded or reinstated.**

COMPLETE THE REMAINING SECTIONS ON BACK SIDE OF APPLICATION

**CHESTERFIELD TOWNSHIP BUILDING DEPARTMENT
MECHANICAL PERMIT APPLICATION**

(Continued)

VII. PROJECT FEE ITEMS – Enter the quantity of items being installed, repaired or altered below.

DESCRIPTION	FEE	#	TOTAL
Base Application Fee	\$35.00	1	\$35.00
Final Inspection	\$35.00		
Registration Fee	\$20.00		
Re-inspection Fee*	\$35.00		
Specialty/Safety Inspection	\$35.00		
Underground Inspection**	\$30.00		
Mobile Home	\$30.00		
Res New Construction 2-Bath***	\$162.00		
A/C or Heat Pump	\$30.00		
Air Handler	\$25.00		
Boilers	\$30.00		
Chiller	\$30.00		
Commercial Hoods(includes duct & exhaust fan)	\$85.00		
Commercial Clothes Dryer	\$25.00		
Electronic Air Cleaner	\$10.00		
Furnace	\$30.00		
Gas Logs	\$10.00		
Generator(includes gaspipe)	\$25.00		
Humidifiers	\$10.00		
Pool Heater(includes gaspipe)	\$55.00	1	\$55.00
Pre-Manufactured Fireplace-Gas	\$25.00		
Pre-Manufactured Fireplace-Solid Fuel	\$50.00		

DESCRIPTION	FEE	#	TOTAL
Refrigeration-All Types	\$20.00		
Roof Top HVAC Unit	\$60.00		
Solar Equipment	\$20.00		
Space Heater	\$20.00		
Spray Booth (includes duct & exhaust fan)	\$90.00		
Unit/Radiant Heater	\$20.00		
Water Heater-Commercial	\$30.00		
Water Heater-Domestic	\$20.00		
Baseboard/Radiant Piping-per appliance	\$20.00		
Chimney Type I, B, Liner	\$25.00		
Dryer Vent	\$6.00		
Duct-Alteration (add/relocate up to 3 supplies or R/A's)**	\$10.00		
Duct-Complete (per appliance)**	\$30.00		
Duct Zoning 4 Zones or less	\$10.00		
Exhaust Vent Fan 1000 CFM or less	\$15.00		
Exhaust Vent Fan 1000 CFM or more	\$30.00		
Fresh Air Damper	\$6.00		
Gas Outlets	\$5.00		
Gas Pipe Main 2" Diameter or less	\$20.00		
Gas Pipe Main 2" Diameter or more	\$40.00		
Fire Suppression System	See Worksheet		

Make Check Payable to "Chesterfield Township"

TOTAL FEES	\$90.00
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***Re-Inspection Fee Schedule**

- First re-inspection of violations noted on original inspection No Charge
- Work not ready/no entry \$35.00
- Each additional inspection requested for new construction requiring multiple inspections, due to work done in stages \$35.00

**Duct work installed underground or under sleepers, that requires a separate inspection in addition to the scheduled rough inspection will be required to pay an underground inspection fee.

*****Residential New Construction**

\$162.00 2-Bathroom House – This fee is based on a house with up to 2 bathrooms/2 bedrooms. It does not include the air conditioner, humidifier or electronic air cleaner. Houses with more bathroom/bedrooms may require additional furnace, duct, damper and exhaust fan permits.

Work started prior to obtaining a permit is subject to **ADMINISTRATIVE FEES**

Chesterfield Township Building Department

47275 Sugarbush Rd, Chesterfield Township MI 48047 Phone: (586)949-0400 ext 2 Fax: (586)949-4780

Electrical Permit Application

Authority: P.A. 230 of 1971, as amended Completion: Mandatory to obtain permit Penalty: Permit cannot be issued

I. PROJECT LOCATION

Street address and job location (street number and name)		Has a building permit been obtained for this project?	
		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	
Name of Owner/Agent	Phone #	Lot #	Subdivision

II. APPLICATION INFORMATION (Contractors must complete shaded section)

<input type="checkbox"/> Contractor	Name		Phone	Fax
<input type="checkbox"/> Homeowner				
Address		City	State	Zip Code
Drivers License #	Date of Birth	Contractors License #		Expiration Date
Master		Masters License #		Expiration Date
Federal Employer ID # (or reason for exemption)	Workers Comp. Insur. Carrier (or reason for exemption)	MESC Employer # (or reason for exemption)		

III. PROJECT DESCRIPTION

Project Use
<input type="checkbox"/> Single Family <input type="checkbox"/> Multi-family <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other - Explain:
Describe Project and Building use in detail
Pool

IV. PLAN REVIEW REQUIREMENTS

Plans and specifications must be submitted when the wiring or alteration to an electrical system is over 400 amps and the building is in excess of 3,500 square feet in area; or the project is of unusual design. Such plans shall be prepared or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal.	
Indicate the rating of the service or feeder in ampere	Indicate the size of the building in square feet
Indicate if plans are being submitted along with this application	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required <input type="checkbox"/> Submitted with building permit application	
Note: Required plans shall be submitted prior to the issuance of a permit	

V. APPLICANT SIGNATURE

I here by certify that the proposed work is authorized by the owner of record and that I have authorization from the owner to make this application as his/her authorized agent, and we agree to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the Charter Township of Chesterfield and the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.	
Section 23a of the state construction code act of 1972, 1972 PA 230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Violators of section 23a are subject to civil fines.	
Signature of Licensee or Homeowner (Homeowner signature indicates compliance with Section VI. Homeowner Affidavit)	Date

VI. HOMEOWNER AFFIDAVIT

I hereby certify the electrical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Electrical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Electrical Inspector. I will cooperate with the Electrical Inspector and assume responsibility to arrange for necessary inspections.

COMPLETE THE REMAINING SECTIONS ON BACK SIDE OF APPLICATION

**CHESTERFIELD TOWNSHIP BUILDING DEPARTMENT
ELECTRIC PERMIT APPLICATION
(Continued)**

VII. PROJECT FEE ITEMS – Enter the quantity of items being installed, repaired or altered below.

DESCRIPTION	FEE	#	TOTAL
Base Application Fee	\$35.00	1	\$35.00
Services, service changes, subpanels			
-Up to 200 Amp	\$15.00		
-Over 200 Amp – 400 Amp	\$20.00		
-Over 400 Amp – 600 Amp	\$25.00		
-Over 600 Amp – 800 Amp	\$30.00		
-Over 800 Amp – 1000 Amp	\$40.00		
-Over 1000 Amp	\$50.00		
Circuits			
-first new/extended	\$10.00		
-each additional	\$5.00		
Lighting fixtures			
-first 25	\$10.00		
-each additional 25	\$5.00		
Range, water heater, disposal, dryer, sump pump etc.			
-first	\$10.00		
-each additional	\$5.00		
Swim pool (2 insp max-includes trench)	\$40.00	1	\$40.00
Hot tub	\$40.00		
Feeders-bus duct-etc			
-first 100'	\$15.00		
-each additional 100'	\$10.00		
Furnace-Electric heater	\$10.00		
Smoke detectors			
-first	\$5.00		
-each additional	\$4.00		

DESCRIPTION	FEE	#	TOTAL
Air cond - HVAC Res/Com	\$35.00		
Sign (circuit only)	\$20.00		
Sign connection	\$35.00		
Fire alarms			
-up to 10 devices	\$50.00		
-11 to 20 Devices	\$100.00		
-each device over 20	\$5.00		
Motors-Transformers (KVA)			
- ¼ to 10 hp (KVA)	\$12.00		
-11-30 hp (KVA)	\$15.00		
-31-50hp (KVA)	\$25.00		
-51hp and over (KVA)	\$35.00		
Special inspections			
-Service/temp service insp	\$35.00		
-Generator	\$35.00		
-Trench/underground	\$40.00		
-Festival/carnival/event/etc	\$40.00		
-Christmas tree lot	\$30.00		
-Mobile home connection	\$40.00		
-Bonding insp (comm, indust)	\$30.00		
-Final inspection	\$35.00		
-Additional rough inspection	\$35.00		
-Repairs	\$35.00		
-Re-inspection fee	\$35.00		
Registration fee	\$20.00		

Make Check Payable to "Chesterfield Township"

TOTAL FEES	\$ 75.00
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VIII. NOTICE TO APPLICANT

GENERAL: Electrical work shall not be undertaken until an electrical permit is issued. All installations shall be in conformance with the Electrical Code. **No work shall be concealed until it has been inspected and approved.**

EXPIRATION OF PERMIT: A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A permit will be cancelled when no inspections are requested and conducted within six months of the date of issuance of the date of a previous inspection. Cancelled permits cannot be refunded or reinstated.**

Work started prior to obtaining a permit is subject to **ADMINISTRATIVE FEES**

CHESTERFIELD TOWNSHIP SWIMMING POOL & SPA REQUIREMENTS

LOCATION OF OUTDOOR POOLS:

A Building permit and Electrical permit is required for a swimming pool containing 24" inches or more of water at any point or has a filter. A Building bond is also required for compliance. A Building permit will be issued by the Building Department upon the applicant complying with Appendix G of the One and Two Family Dwelling Code and the following requirements:

1. There shall be a distance of not less than ten (10') feet between the outside of the pool wall and any building including the main structure. **NOTE:** Spas on decks may be located anywhere on an approved deck permit which meets all live and dead load requirements.
2. There shall be a distance of not less than three (3') feet between the outside of the pool wall and the side property line.
3. A swimming pool shall be located at least one (1') foot off any easement or seven (7') feet off the rear lot line.
4. Outside faucets shall have a vacuum breaker when a yard hose is used for filling the pool. This is to prevent pool water from backing up into the water system.
5. Pool dimensions, depths, volume in gallons, plus type of filter system and size is required to accompany the information for a permit.
6. Call **Miss Dig (1-800-482-7171)** for reference as to the location of the under ground electric prior to any excavation for pools or spas (**pools shall not be located over any such service and can not be located within 10' feet of any overhead wires**).
7. **All pools** less than 48" inches in height from grade shall be completely enclosed by a fence or barrier not less than four (4') feet in height for protection of the general public. The gates shall swing away from pool area and have a self-closing and self-locking device with latches placed 54" above grade on the outside of the gate to comply with locally adopted code.
8. Spas shall be equipped with a lockable cover.
9. All doors with direct access to the pool shall be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened, and the sound of the alarm shall be distinctive from other household sounds such as smoke alarms, telephone, and door bells. Such deactivation shall last for not more than 15 seconds. The deactivation touch pads or switches shall be located at least 54 inches (1372mm) above the threshold of the door.
10. Pools may be equipped with an approved power safety cover - submit all supporting documentation.
11. Where an above ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and a means of access is a fixed or removable ladder or steps, the ladder or steps shall be surrounded by a barrier which includes requirements of 1 through 10. A removable ladder shall not constitute an acceptable alternative to enclosure requirements.

ELECTRICAL REQUIREMENTS:

Electrical permits are required for swimming pools. Electrical work shall conform to the National Electrical Code and the work is to be done by a qualified person. Ground Fault interrupters (G.F.I.) shall be required on all pools. Over head electrical conductors, swimming pools, including diving structures, observation stand (decks included) towers, and platforms shall be located at least ten (10') feet measured horizontally from any service drop or any other open overhead wiring. Underground wires shall maintain a 5' foot distance from pool wall.

All metal fences , enclosures or railing near or adjacent to swimming pools to which bathers have access, which may become electrically charged as a result of contact with a broken over-head conductors or from any other causes, **shall be grounded**. Pool grounding must be to rigid pipe on pool plug 680-22C. Trenched under ground pool leads shall be a minimum of 18" below grade.

***APPLICATION FOR POOL PERMITS- REQUIREMENTS:**

1. Complete application as homeowner and sign Home Owners Affidavit or if a pool company is involved have the agent submit an application along with a copy of there builders and drivers license and workmans comp & liability insurance.
2. Submit two copies of plot plan (mortgage survey) showing reference to pool location, distances to property lines and structures.
3. Show all easements on plot plan.
4. Show location of overhead and under ground cables and distances to pool.
5. Show enclosures (fences) and details of fence openings. Note all gate openings shall open away from pool areas.
6. Indicate the location of electrical and pump filter.
7. Show location of well and septic systems if applicable.

REQUIRED INSPECTIONS:

1. Steel inspection for in ground
2. Trench for electrical & heating (conduit installed)
3. Final electrical & heating
4. Final pool (Inspections in this order)

NOTE: USE OF POOL WITH NO FINAL IS STRICTLY PROHIBITED!

THE FOLLOWING PAGES INCLUDE BUILDING & ELECTRICAL CODE REQUIREMENTS

The fees for pool permits are as follows:

Above Ground Pool Fees:

Fee: \$ 55.00
Bond: \$100.00 (5% administrative Fee)
Electric: \$ 75.00

In ground Pools Fees:

Fee: \$200.00
Bond: \$300.00 (5% administrative Fee)
Electric: \$ 75.00
Heating: \$ 90.00

MICHIGAN
Residential
Building
Code

2009
2009

**SECTION 3109
SWIMMING POOL ENCLOSURES AND
SAFETY DEVICES**

3109.1 General. Swimming pools shall comply with the requirements of this section and other applicable sections of this code.

3109.2 Definition. The following word and term shall, for the purposes of this section and as used elsewhere in this code, have the meaning shown herein.

SWIMMING POOLS. Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and fixed-in-place wading pools.

3109.3 Public swimming pools. Public swimming pools shall be completely enclosed by a fence at least 4 feet (1290 mm) in height or a screen enclosure. Openings in the fence shall not *permit* the passage of a 4-inch-diameter (102 mm) sphere. The fence or screen enclosure shall be equipped with self-closing and self-latching gates.

3109.4 Residential swimming pools. Residential swimming pools shall comply with Sections 3109.4.1 through 3109.4.3.

Exception: A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346.

3109.4.1 Barrier height and clearances. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

3109.4.1.1 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

3109.4.1.2 Solid barrier surfaces. Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

3109.4.1.3 Closely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed $1\frac{3}{4}$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm) in width.

3109.4.1.4 Widely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm) in width.

3109.4.1.5 Chain link dimensions. Maximum mesh size for chain link fences shall be a $2\frac{1}{4}$ inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than $1\frac{3}{4}$ inches (44 mm).

3109.4.1.6 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than $1\frac{3}{4}$ inches (44 mm).

3109.4.1.7 Gates. Access doors or gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1008.1.9 and 1109.12. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate at least 3 inches (76 mm) below the top of the door or gate, and the door or gate and barrier shall have no opening greater than $\frac{1}{2}$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

3109.4.1.8 Dwelling wall as a barrier. Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

1. Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. In dwellings not required to be *Accessible units, Type A units* or *Type B units*, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings required to be *Accessible units, Type A units* or *Type B units*, the deactivation switch(es) shall be

located at 54 inches (1372 mm) maximum and 48 inches (1219 mm) minimum above the threshold of the door.

2. The pool shall be equipped with a power safety cover that complies with ASTM F 1346.
3. Other means of protection, such as self-closing doors with self-latching devices, which are *approved*, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Section 3109.4.1.8, Item 1 or 2.

3109.4.1.9 Pool structure as barrier. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

3109.4.2 Indoor swimming pools. Walls surrounding indoor swimming pools shall not be required to comply with Section 3109.4.1.8.

3109.4.3 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

3109.5 Entrapment avoidance. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

POOL MECHANICAL REQUIREMENTS

This document only serves as a general overview and basic guide. All gas line and pool heater installations must comply with the following:

1. *Michigan mechanical code*
2. *International fuel gas code*
3. *Manufacturers installation specifications*
4. *Local ordinances*

GAS PIPING INSTALLATION

- The minimum burial depth shall be 12 inches
- An appliance shutoff valve is required, and must be installed within 6 feet of the heater.
- All gas piping shall be properly sized by the load demand, type of material used, and the total length of piping to be installed.

The piping materials listed below are approved, providing all conditions and limitations followed.

- Steel-(scheduled 40) metallic piping and fittings above ground and exposed to the elements must be weather proofed with a protective coating. Metallic piping installed underground is required to be wrapped/coated, but must be approved and applied by the manufacturer.
- Copper-(type K or L) a protective sleeve is recommended at the point at which the tubing enters and exits the ground.
- Plastic-(ASTM D2513) for outside underground use only. Cannot be installed under a slab, must terminate above ground with a anodeless riser or service head. A minimum 18 awg yellow tracer wire is also required.
- Corrugated stainless tubing-(ansi/aga) tubing must be sleeved passing thru any foundation wall. Must be installed within a conduit, and sealed at both ends 18" install underground.

POOL HEATERS

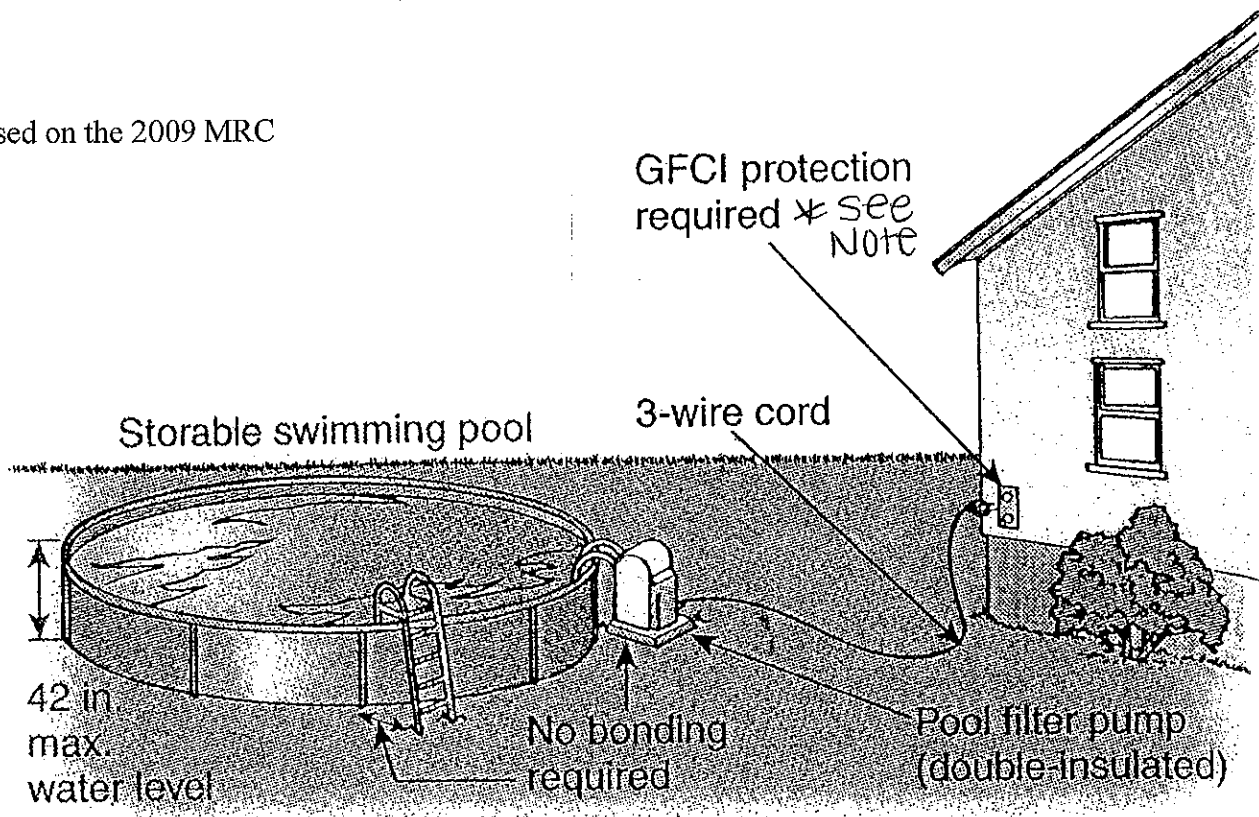
- All heaters must be equipped with a pressure/temperature relief valve.
- Where an integral bypass is not provided as a part of the heater, a bypass shall be installed.
- Heaters shall not be installed under decks.
- A minimum distance of 5 feet must be maintained from the inside wall of a pool, unless separated by a barrier,
- Heaters must maintain a minimum of 4 feet distance from any window or fresh air intake, and 3 feet distance from a clothes dryer vent.

Requirements are in most manufacturers installation spec's.

STORABLE SWIMMING OR WADING POOL

Those are constructed on or above the ground and are capable of holding water to a maximum depth of 42", or pool with nonmetallic, molded polymeric walls or inflated fabric wall regardless of the dimension.

Based on the 2009 MRC



STORABLE POOLS ONLY The type of pump suitable for use with storable pools has a 25 foot flexible cord and attachment plug. It is Marked: "This pump is for use with storable pools only. DO NOT USE with permanently installed pools. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage." Cords may NOT be shortened nor shall attachment caps be changed to a different type. If a listed double insulated pump motor comes with a shorter cord, the assembly must be located so that the cord will reach an electrical outlet at least ten feet away from the pool.

LISTING MARK The UL Listing Mark for these products accompanies the product name "Underwater Lighting Fixture for Above Ground Storable Swimming Pool."

DOUBLE INSTALLTION Pumps with a minimum 25 foot supply cord are double insulated and have inaccessible metal parts grounded with the equipment grounding conductor terminated at the attachment plug. These pumps do not have a bonding connector.

GFCI These units are intended for connection to circuits protected by ground fault circuit interrupts and are marked, "WARNING – Risk of electric shock. Connect only to a grounding type receptacle protected by a ground fault circuit interrupter (GFCI)."

*NOTE: Outlet will require a raintite while in use cover.
Distance from the pool to receptacle shall be at least 10 feet.

PERMANENTLY INSTALLED ABOVEGROUND POOLS NON-STORABLE SWIMMING POOLS

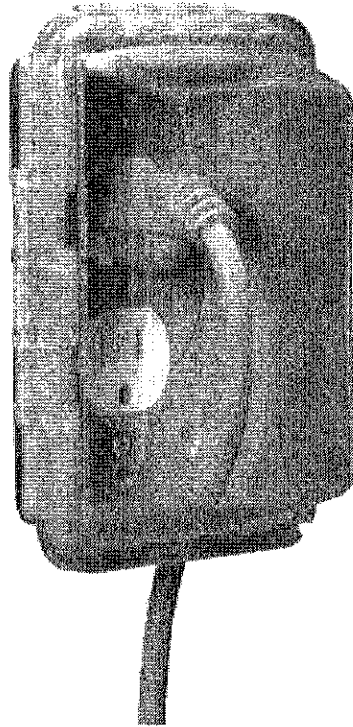
With the exception noted below, all equipment described under “Permanently Installed In-Ground Swimming Pools” is also suitable for this type of installation.

ELECTRICAL EQUIPMENT AND ASSOCIATED MARKINGS

GENERAL These fixtures are intended only for permanent installation through or in the wall of an aboveground non-storable pool. They are intended to be installed with the top of the lens not less than eight or more than ten inches below the top of the pool wall, unless the fixture is otherwise marked. These fixtures are intended to be serviced from the outside of the pool. They are intended to be permanently connected to the supply with conduit. They may for installation, maintenance, or servicing –employ a length of jacked flexible cord permanently connected between integral components of the fixture.

LISTING MARK The UL Listing Mark for these products accompanies the product name “Underwater Lighting Fixture for Above Ground Non Storable Swimming Pool.”

Better Outdoor Receptacle Covers



Outdoor Receptacles have watertight covers on them, right? But if the watertight cover is open, and the receptacle has a cord plugged into it, rain can flow directly into the receptacle. The end result could be a short, which can cause a fire.

The NEC (article 410-57) requires a watertight, while in use cover to be installed on outdoor receptacles in areas that are exposed to rain and have equipment permanently plugged into the receptacle. An exception is made for temporary use of portable equipment, such as electric hedge clippers or bug lights. Many electrical contractors figure that the exception covers most outdoor receptacles and that they need not provide any special covers. The problem with this logic is that the homeowner may plug in his low-voltage transformer for his lawn lights, sprinkler system, Christmas decorations or pool pump. These items could keep the cover open for an extended period of time.

SPECIFICATIONS OF POOL ENTRY SYSTEM

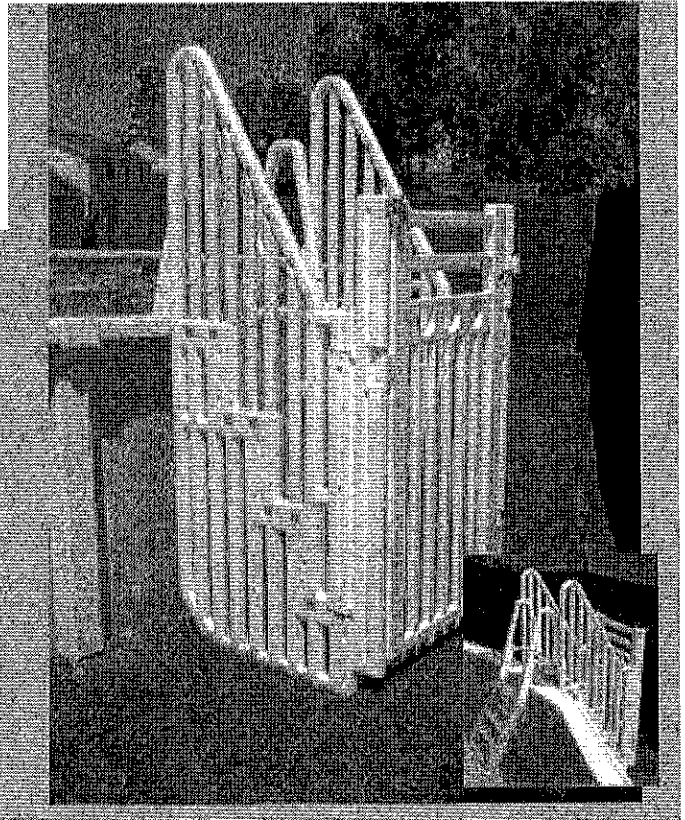
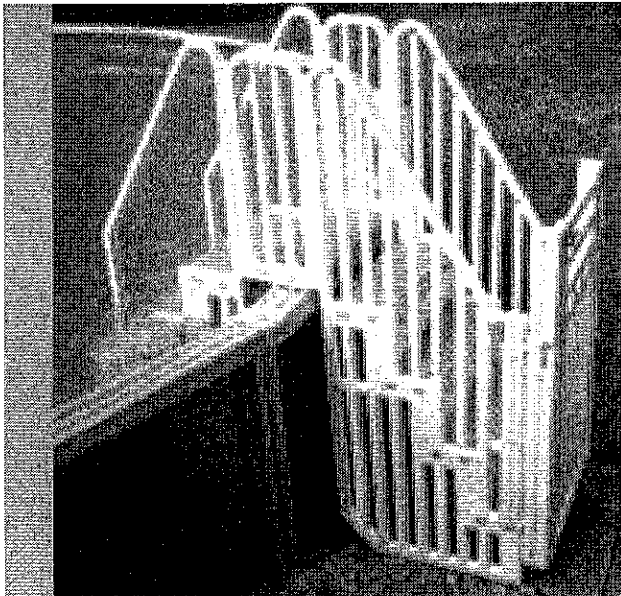
- * Overall Projection into pool - 36"
- * Overall height - 81" (plus up to 6" adjustability)
- * Overall width - 31"
- * Step - 10" x 27"
- * Top Platform - 12" x 27"
- * Handrail height (from top step) - 32"
- * Riser height - 11"

SPECIFICATIONS OF GATE

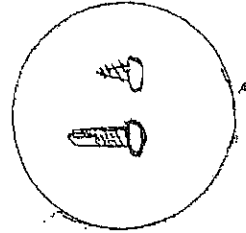
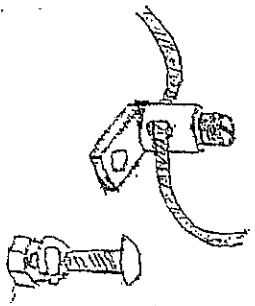
- * Height of Gate - 58"
- * Width of Gate - 27"
- * Height of Latch - 57"
- * Gate Is Self-Closing & Self-Latching
- * Includes Padlock

SPECIFICATIONS OF GATE

- * Height of Gate - 58"
- * Width of Gate - 27"
- * Height of Latch - 57"
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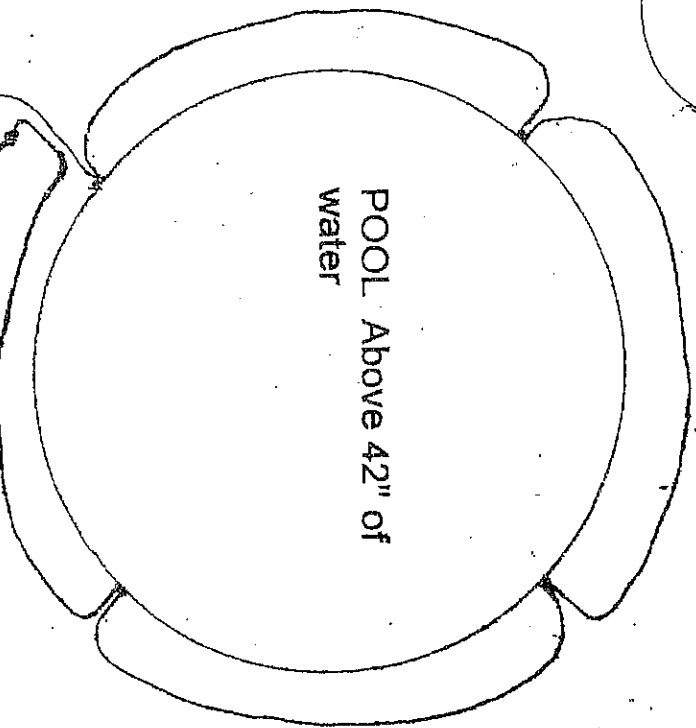
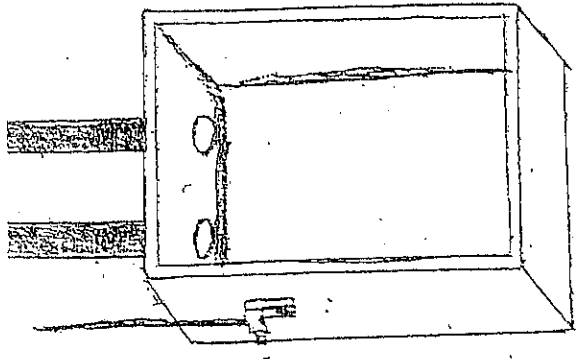
DO NOT USE



2009 Michigan Residential Code
Permanant Pool Bonding &
Grounding #8 Solid Bare
Copper, 18"-24" from pool 4"-6"
deep

Lugs and hardware to be nonferrous metal (stainless steel, bronze, brass, copper) Lugs to be listed for Direct Burial. Machine screws only.

Metal WP Box



Bond all Metal within 5' of Pool to Bonding Grid

PERMANENT SWIMMING POOL WIRING

2009 MRC

CONDUIT OR REGULAR BUILDING WIRING ON OR INSIDE DWELLING

NOTE: MOST GARAGE WIRING CANNOT BE USED FOR THE POOL SYSTEM.

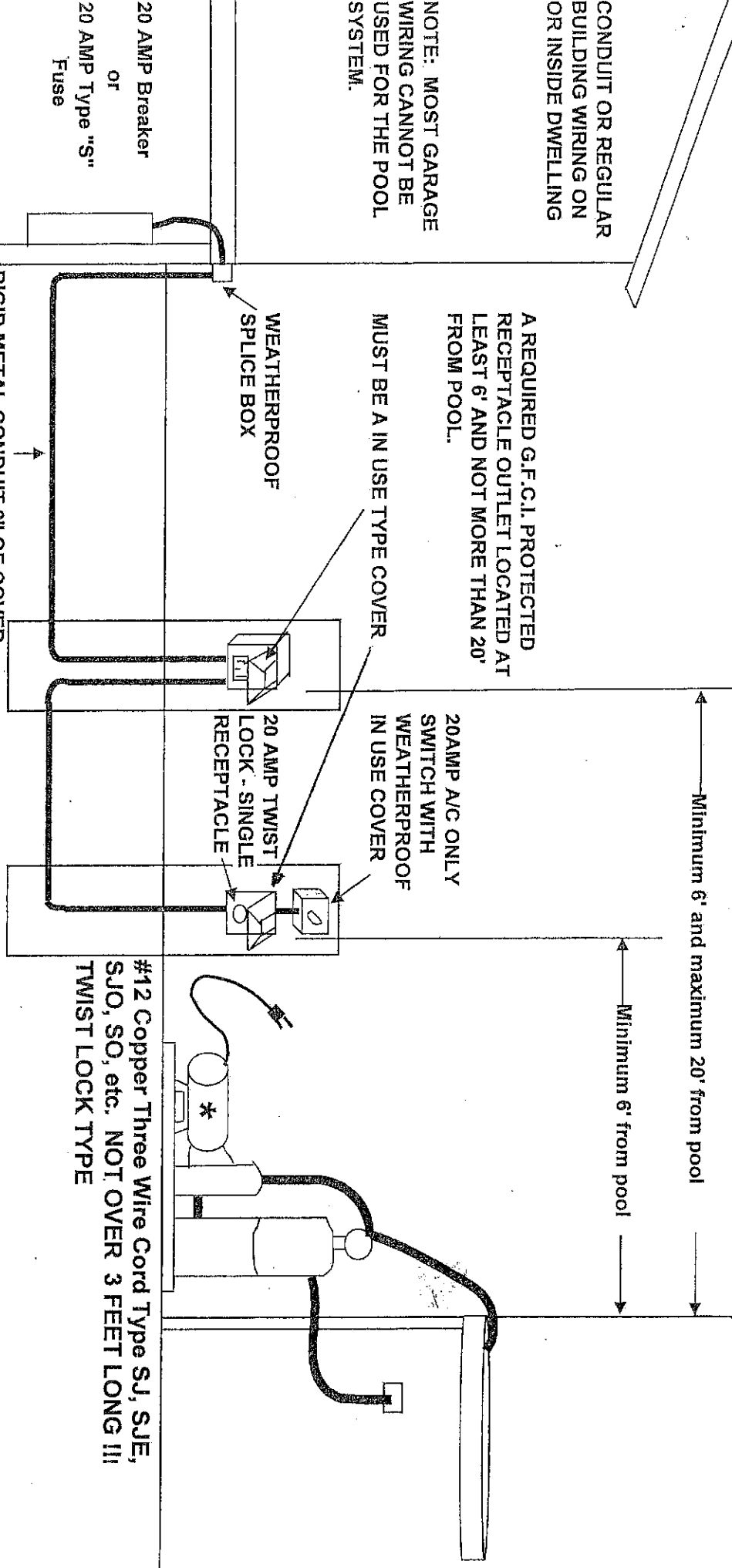
A REQUIRED G.F.C.I. PROTECTED RECEPTACLE OUTLET LOCATED AT LEAST 6' AND NOT MORE THAN 20' FROM POOL.

MUST BE A IN USE TYPE COVER

20AMP A/C ONLY SWITCH WITH WEATHERPROOF IN USE COVER

Minimum 6' and maximum 20' from pool

Minimum 6' from pool



20 AMP Breaker
or
20 AMP Type "S"
Fuse

WEATHERPROOF
SPLICE BOX

20 AMP TWIST
LOCK - SINGLE
RECEPTACLE

RIGID METAL CONDUIT 6" OF COVER

INTERMEDIATE METAL CONDUIT 6" COVER
ELECTRICAL P.V.C. CONDUIT 18" COVER
UNDER DRIVEWAYS ALL CONDUIT 18" COVER
DO NOT USE THIN WALL - TYPE E.M.T. CONDUIT!

USE THREE #12 CONDUCTORS TYPE: TW, THW, THWN OR XHHW - 1 GREEN - 1 WHITE - 1 BLACK

Individual wires in conduit
DO NOT USE MULTICONDUCTOR CABLES!

#12 Copper Three Wire Cord Type SJ, SJE, SJO, SO, etc. NOT OVER 3 FEET LONG !!! TWIST LOCK TYPE

20 AMP TWIST LOCK RECEPTACLE AND CAP G.F.C.I. PROTECTED WITH COVER WHICH IS RAIN TIGHT WHILE IN USE. SECURE BOXES TO A SUBSTANTIAL STRUCTURE OR USE TWO RIGID OR INTERMEDIATE METAL CONDUITS.

* U.L. LISTED SWIMMING POOL PUMP MOTOR FOR PERMANENT POOLS.
DO NOT USE A MOTOR LISTED FOR STORABLE POOLS!!!

MUST ALSO COMPLY WITH BONDING REQUIREMENTS ON NEXT PAGE

INDOOR SWIMMING POOLS

Lighting Fixtures and Ceiling Suspended Paddle Fans

Lighting Fixtures and Ceiling Suspended Paddle Fans that are over or within 5 feet of the pool are acceptable if located 12 feet or more above the maximum water level. G.F.C.I. protection not required.

Or

Fixtures and Ceiling Suspended Paddle Fans that are of the totally enclosed type and have G.F.C.I. protection for the branch circuit are acceptable providing the distance from the Fixture or Paddle is not less than 7 feet 6 inches above the maximum water level.

And

Existing lighting fixtures (not ceiling suspended paddle fans) that are located within 5 feet of the pool must be at least 5 feet above the maximum water level and be rigidly attached to the existing structure. G.F.C.I. protection must be provided for the branch circuit.

And

Light fixtures that are installed between 5 feet and 10 feet from the pool must be G.F.C.I. protected unless they are not less than 5 feet above the maximum water level and are rigidly attached to the structure.

Important!

Light fixtures in the wall of the pool must comply with the Michigan Residential Code or the NEC if a Commercial Installation.

See the instructions that accompany the fixture and install according to the type of pool being wired either a permanent or storable type