

**OXFORD TOWNSHIP BUILDING DEPARTMENT
SWIMMING POOL PLAN REVIEW**

ADDRESS _____ DESCRIPTION _____ SQFT. _____

PLANS: DENIED

APPROVED WITH NOTES

APPROVED

INFORMATION REQUIRED ON PLANS:

1. _____ PLOT PLAN WITH SETBACK DIMENSIONS & EXISTING EASEMENTS, OVER HEAD WIRES, SEPTIC FIELD, WELL LOCATIONS, FLOOD ELEVATION FOR INGROUND POOLS
2. _____ SOIL EROSION PERMIT REQUIRED FOR INGROUND POOL (2ND PLOT PLAN REQUIRED)
3. _____ BARRIER SHALL COMPLY WITH ALL APPLICABLE PARTS OF THE MRC 2009 APPENDIX G.
4. _____ FENCE AND GATE'S LABELED ON PLANS
5. _____ DOORS IN WALLS USED AS BARRIER REQUIRED TO BE ALARMED
NOTE: SOMEBODY REQUIRED TO BE HOME OR HAVE ACCESS TO HOUSE
6. _____ ENTRAPMENT PROTECTION DETAILS PER ANSI/APSP -7-2006
7. **NOTE** _____ MECHANICAL PERMIT REQUIRED (HEATED UNITS ONLY)
NOTE: HAS TO COMPLY TO MICHIGAN ENERGY CODE 2009
8. **NOTE** _____ ELECTRICAL PERMIT REQUIRED
9. _____ INGROUND POOLS TO COMPLY WITH ANSI/NSPI-5
10. _____ ABOVE GROUND POOLS TO COMPLY WITH ANSI/NSPI-4
11. _____ OTHER: _____

CALL AT LEAST ONE DAY IN ADVANCE---248-628-9787

INGROUND POOLS

REQUIRED INSPECTION

ABOVE GROUND

1. STEEL WALL OR OPEN HOLE, WITH DRAINS INSTALLED
2. BONDING \ ROUGH ELECTRIC
3. MECHANICAL INSPECTION IF REQ.
4. FINAL ELECTRICAL
5. FINAL BUILDING
6. OTHER

1. ROUGH ELECTRICAL
2. MECHANICAL INSPECTION IF REQ.
3. FINAL ELECTRICAL
4. FINAL BUILDING
5. OTHER

I have read the above requirements, submitted all necessary information and agree to comply with the Michigan Residential Code 2009 as required by the Charter Township of Oxford Building Department.

Signed _____ Date _____

CHARTER TOWNSHIP OF OXFORD

Grading Permit # _____

P O BOX 3, 300 DUNLAP ROAD

Building Permit # B _____

Zoning Permit # _____

OXFORD, MICHIGAN 48371

Stakes Ready YES NO

1-248-628-9787 FAX 1-248-628-8139

Date: _____

www.oxfordtownship.org

Application for Zoning Compliance and Building Permit

PROPERTY LOCATION

ADDRESS: _____

PARCEL #: _____

LOT #: _____

SUBDIVISION: _____

CURRENT PROPERTY OWNER

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____

ZIP: _____ PHONE: _____

IS THIS A HOMEOWNER PERMIT? YES NO

CONTRACTOR INFORMATION

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____

ZIP: _____ PHONE: _____

CONTACT: _____

CONTACTS PHONE #: _____

LICENSE INFORMATION

LICENSE #: _____

EXPIRATION DATE: _____

MESC #: _____

FED ID #: _____

INSURANCE COMPANY: _____

POLICY #: _____

EXPIRES: _____

PROJECT DESCRIPTION: _____

DIRECTIONS TO SITE: _____

NATURE OF WORK: _____

COMMENTS: _____

APPROXIMATE SQUARE FOOTAGE OF PROJECT: _____ CONSTRUCTION VALUE OF PROJECT: _____

TYPE OF IMPROVEMENT

- NEW BUILDING
- ALTERATION
- ADDITION
- DEMOLITION
- MOVING
- SIGN(S)
- GARAGE
- REPAIR, REPLACEMENT
- FOUNDATION ONLY
- SHELL ONLY
- SHED
- DECK
- POOL
- OTHER _____

PROPOSED USE

- RESIDENTIAL
 - ONE FAMILY
 - TWO OR MORE FAMILY
 - HOTEL, MOTEL
- COMMERCIAL
- INDUSTRIAL
- RECREATIONAL
- OTHER _____

CURRENT ZONING OF PROPERTY

Section 23a of the State of Michigan 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 residential structure.

AFFIDAVIT REGARDING ZONING- I agree the statements made above are true, and if found not to be true, any zoning permit that may be issued may be void. Further, I agree to comply with the conditions and regulations provided with any permit that may be issued. Further, I agree the permit that may be issued is with the understanding all applicable sections of the Charter Township of Oxford Zoning Ordinance will be complied with. Further, I agree to notify the Oxford Township Zoning Administrator for inspection before the start of construction and when locations of proposed uses are marked on the ground. Further, I agree to give permission for officials of the Charter Township of Oxford, Oakland County, and the State of Michigan to enter the property subject to this permit application for purposes of inspection. Finally, I understand this is a zoning permit (not a permit) and that a zoning permit, if used, conveys only land use rights and does not include any representation or conveyance of rights in any other statute, building code, deed restriction, or other property rights.

Signature of Owner: _____

Date: _____

Signature of Applicant: _____

Date: _____

REQUIRED CONSTRUCTION DOCUMENTS

NOTE: Failure to include all required documents will delay the review process.

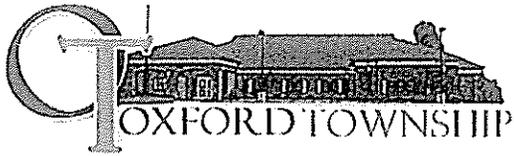
The Following items and documents are required to be submitted along with a completed application for ZONING COMPLIANCE AND BUILDING PERMIT. except as noted

- ▶ 1 Copies of the **CURRENT TAX STATEMENT** marked paid *Required for all applications.*
- ▶ 2 Two (2) complete folded sets of **CONSTRUCTION PLANS with Grading Plan (New Residential).**
Required for all applications
- ▶ 3 A complete **PLOT PLAN** showing the dimensions to all property lines (setbacks). as well as the locations of the proposed structure(s) and distances from property lines Include all easements
- ▶ 4 A **DRIVEWAY PERMIT** (Application with a date stamp), if on a public road Required for new curb cuts to county or state highways
ROAD COMMISSION FOR OAKLAND COUNTY
Permits Division
2420 Pontiac Lake Road
Waterford, MI 48328
248-858-4835
- ▶ 5 A **SEPTIC PERMIT**, if not on a public sewer system Required for new home, new commercial and new industrial construction
OAKLAND COUNTY HEALTH DIVISION
Department of Human Services
Health Division Building
1200 N Telegraph Road
Pontiac MI 48341-0432
248-858-1312
- ▶ 6 A **SOIL EROSION PERMIT**, if applicable
OAKLAND COUNTY WATER RESOURCES COMMISSIONER
One Public Works Drive
Building 95 West
Waterford, MI 48328-1907
248-858-0958
- ▶ 7 **ENGINEERED TRUSS DRAWINGS**, if applicable, prior to installation of trusses
- ▶ 8 A check or cash in the amount of **\$125.00 for Grading Plan Review (All New Residential)** and \$125 00 for Zoning Compliance Permit = \$250 00 Total
- ▶ 9 **NOTE:** Address must be posted at the driveway or at the road for inspectors to locate the property. (NO ADDRESS - NO INSPECTION AND YOU WILL BE SUBJECT TO A RE-INSPECTION FEE)

STAKE INSPECTION PROCEDURE

Required:

- 1 A Certificate of survey from a State of Michigan Registered Land Surveyor, for all NEW Construction Mortgage survey with proposed structures drawn in with setback information can be substituted for garages, decks, pools, sheds, etc
- 2 Actual stakes shall be tagged or painted as follows:
RED For property corners, these stakes are to be set next to the surveyor's iron set at the property corners
YELLOW For buildings, additions or accessory structures
- 3 Road Right-of-Ways Property corner stakes shall indicate the actual location of the right-of-way (Where the property abuts the road right-of-way).
- 4 Easements- The location of all easements located on the property shall also be staked and identified as such



CHARTER TOWNSHIP OF OXFORD

300 Dunlap Road
P.O. Box 3
Oxford, MI 48371-0003
(248) 628-9787 (phone)
(248) 628-8139 (fax)

CONTRACTOR REGISTRATION

(Please Print)

Name of Company / Contractor: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Qualifying Officer: _____

License Number: _____

Comments: _____

List of all authorized persons to pull permit under your license:

- 1. Need copy of License and ID
- 2. \$15.00 for Building
- 3. \$15.00 for Mechanical
- 4. \$15.00 for Electrical
- 5. \$15.00 for Plumbing

Signature: _____ Date: _____

(Contractor)

3.7 Schedule of District Regulations.

District	Minimum Lot Area ^{A, B}	Mini. Lot Width ^{C, D}	Minimum Yard Setback ^E			Maximum Bldg. Height ^{F, G}	Maximum Lot Coverage ^H	Additional Regulations
			Front ^{I, J}	Side ^J	Rear			
AG, Agriculture	20 acres	600 ft.	50 ft.	60 ft.	75 ft.	35 ft. ^K	10%	See §3.8(A)
SF-3, Suburban Farms	10 acres	330 ft.	50 ft.	50 ft.	60 ft.	35 ft.	15%	See §3.8(A)
SF-2, Suburban Farms	5 acres	300 ft.	40 ft.	50 ft.	50 ft.	35 ft.	15%	See §3.8(A)
SF-1, Suburban Farms	2.5 acres	200 ft.	40 ft.	50 ft.	50 ft.	35 ft.	20%	See §3.8(A)
R-3, Single-Family Residential	1 acre	150 ft.	35 ft.	15 ft.	30 ft.	35 ft.	25%	See §3.8(A)
R-2, Single-Family Residential	25,000 s.f.	120 ft.	30 ft.	12.5 ft.	25 ft.	35 ft.	30%	See §3.8(A)
R-1, Single-Family Residential	12,000 s.f.	80 ft.	25 ft.	10 ft.	20 ft.	35 ft.	35%	See §3.8(A)
R-1A, Single-Family Residential	6,000 s.f.	60 ft.	25 ft.	7.5 ft.	20 ft.	35 ft.	40%	See §3.8(A)
RM, Multiple-Family Residential	See §3.8(B)	200 ft.	35 ft.	20 ft.	40 ft.	45 ft. ^L	40%	See §3.8(B)
MHC, Manufactured Housing Community	10 acres	330 ft.	40 ft.	20 ft.	35 ft.	25 ft. ^L	35%	See §3.8(C)
C-1, Local Commercial	10,000 s.f.	100 ft.	35 ft.	20 ft. ^M	25 ft.	35 ft.	30%	-
C-2, General Commercial	1 acre	150 ft.	35 ft.	30 ft. ^M	30 ft.	35 ft.	30%	-
O, Office	10,000 s.f.	100 ft.	35 ft.	20 ft.	25 ft.	45 ft.	30%	-
RO, Research Office	1 acre	150 ft.	50 ft.	25 ft.	50 ft.	40 ft.	30%	-
I-1, Light Industrial	1 acre	150 ft.	50 ft.	25 ft.	50 ft.	40 ft.	35%	-
I-2, General Industrial	2 acres	200 ft.	75 ft.	50 ft.	75 ft.	50 ft.	40%	-
R, Recreation	5 acres	330 ft.	50 ft.	50 ft.	50 ft.	35 ft.	10%	-
G, Gravel and Sand Overlay	See Section 5.25							

CHAPTER 41

SWIMMING POOLS

SECTION E4101 GENERAL

E4101.1 Scope. The provisions of this chapter shall apply to the construction and installation of electric wiring and equipment associated with all swimming pools, wading pools, decorative pools, fountains, hot tubs and spas, and hydromassage bathtubs, whether permanently installed or storable, and shall apply to metallic auxiliary equipment, such as pumps, filters and similar equipment. Sections E4102 through E4106 provide general rules for permanent pools, spas and hot tubs. Section E4107 provides specific rules for storable pools. Section E4108 provides specific rules for spas and hot tubs. Section E4109 provides specific rules for hydromassage bathtubs.

E4101.2 Definitions.

CORD- AND PLUG-CONNECTED LIGHTING ASSEMBLY. A lighting assembly consisting of a cord and plug-connected transformer and a lighting fixture intended for installation in the wall of a spa, hot tub, or storable pool.

DRY-NICHE LUMINAIRE. A luminaire intended for installation in the wall of a pool or fountain in a niche that is sealed against the entry of pool water.

FORMING SHELL. A structure designed to support a wet-niche lighting fixture assembly and intended for mounting pool or fountain structure.

FOUNTAIN. Fountains, ornamental pools, display pools, and reflection pools. The definition does not include drinking fountains.

HYDROMASSAGE BATHTUB. A permanently installed bathtub equipped with a recirculating piping system, pump, and associated equipment. It is designed so it can accept, circulate and discharge water upon each use.

MAXIMUM WATER LEVEL. The highest level that water can reach before it spills out.

NO-NICHE LUMINAIRE. A luminaire intended for installation above or below the water without a niche.

PACKAGED SPA OR HOT TUB EQUIPMENT ASSEMBLY. A factory-fabricated unit consisting of water-circulating, heating and control equipment mounted on a common base, intended to operate a spa or hot tub. Equipment may include pumps, air blowers, heaters, luminaires, controls and sanitizer generators.

PERMANENTLY INSTALLED SWIMMING AND WADING POOLS. Those that are constructed in the ground or partially in the ground, and all others capable of holding water with a depth greater than 42 inches (1067 mm), and all pools installed inside of a building, regardless of water depth, whether or not served by electrical circuits of any nature.

POOLCOVER, ELECTRICALLY OPERATED. Motor-driven equipment designed to cover and uncover the water surface of a pool by means of a flexible sheet or rigid frame.

SELF-CONTAINED SPA OR HOT TUB. A factory-fabricated unit consisting of a spa or hot tub vessel with all water-circulating, heating and control equipment integral to the unit. Equipment may include pumps, air blowers, heaters, luminaires, controls and sanitizer generators.

SPA OR HOT TUB. A hydromassage pool, or tub for recreational or therapeutic use, not located in health care facilities, designed for immersion of users, and usually having a filter, heater, and motor-driven blower. They are installed indoors or outdoors, on the ground or supporting structure, or in the ground or supporting structure. Generally, a spa or hot tub is not designed or intended to have its contents drained or discharged after each use.

STORABLE SWIMMING OR WADING POOL. Those that are constructed on or above the ground and are capable of holding water with a maximum depth of 42 inches (1067 mm), or a pool with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension.

THROUGH-WALL LIGHTING ASSEMBLY. A lighting assembly intended for installation above grade, on or through the wall of a pool, consisting of two interconnected groups of components separated by the pool wall.

WET-NICHE LUMINAIRE. A luminaire intended for installation in a forming shell mounted in a pool or fountain structure where the luminaire will be completely surrounded by water.

SECTION E4102 WIRING METHODS FOR POOLS, SPAS, HOT TUBS AND HYDROMASSAGE BATHTUBS

E4102.1 General. Wiring methods used in conjunction with permanently installed swimming pools, spas, hot tubs or hydromassage bathtubs shall be installed in accordance with Table E4102.1 and Chapter 37 except as otherwise stated in this section. Storable swimming pools shall comply with Section E4107.

E4102.2 Flexible cords. Flexible cords used in conjunction with a pool, spa, hot tub or hydromassage bathtub shall be installed in accordance with the following:

1. For other than underwater luminaires, fixed or stationary equipment, rated at 20 amperes or less shall be permitted to be connected with a flexible cord to facilitate the removal or disconnection for maintenance or repair. For other than storable pools, the flexible cord shall not exceed 3 feet (914 mm) in length. Cords that supply swimming pool equipment, shall have a copper equipment grounding conductor not smaller than 12 AWG and shall be provided with a grounding-type attachment plug.

SECTION E4103 EQUIPMENT LOCATION AND CLEARANCES

E4103.1 Receptacle outlets. Receptacle outlets shall be installed and located in accordance with Sections E4103.1.1 through E4103.1.5. Distances shall be measured as the shortest path that an appliance supply cord connected to the receptacle would follow without penetrating a floor, wall, ceiling, doorway with hinged or sliding door, window opening, or other effective permanent barrier.

E4103.1.1 Location. Receptacles that provide power for water-pump motors or other loads directly related to the circulation and sanitation system shall be permitted to be located between 5 feet and 10 feet (1524 mm and 3048 mm) from the inside walls of pools and outdoor spas and hot tubs, and, where so located, shall be single and of the locking and grounding type and shall be protected by ground-fault circuit interrupters.

Other receptacles on the property shall be located not less than 10 feet (3048 mm) from the inside walls of pools and outdoor spas and hot tubs.

E4103.1.2 Where required. At least one 125-volt 15- or 20-ampere receptacle supplied by a general-purpose branch circuit shall be located a minimum of 10 feet (3048 mm) from and not more than 20 feet (6096 mm) from the inside wall of pools and outdoor spas and hot tubs. This receptacle shall be located not more than 6 feet, 6 inches (1981 mm) above the floor, platform or grade level serving the pool, spa or hot tub.

E4103.1.3 GFCI protection. All 125-volt receptacles located within 20 feet (6096 mm) of the inside walls of pools and outdoor spas and hot tubs shall be protected by a ground-fault circuit-interrupter.

E4103.1.4 Indoor locations. Receptacles shall be located not less than 5 feet (1524 mm) from the inside walls of indoor spas and hot tubs. A minimum of one 125-volt receptacle shall be located between 5 feet (1524 mm) and 10 feet (3048 mm) from the inside walls of indoor spas or hot tubs.

E4103.1.5 Indoor GFCI protection. One hundred twenty-five-volt receptacles located within 10 feet (3048 mm) of the inside walls of spas and hot tubs installed indoors shall be protected by ground-fault circuit-interrupters. One hundred twenty-five-volt receptacles located within 5 feet (1524 mm) of the inside walls of hydromassage bathtubs shall be protected by a ground-fault circuit-interrupter.

E4103.2 Switching devices. Switching devices shall be located not less than 5 feet (1524 mm) horizontally from the inside walls of pools, spas and hot tubs except where separated from the pool, spa or hot tub by a solid fence, wall, or other permanent barrier. Switching devices located in a room or area containing a hydromassage bathtub shall be located in accordance with the general requirements of this code.

E4103.3 Disconnecting means. An accessible disconnecting means to disconnect all ungrounded conductors for all utilization equipment, other than lighting, shall be provided and located within sight from all pools, spas, and hot tub equipment, and shall be located not less than 5 feet (1524 mm) from the inside walls of the pool, spa or hot tub.

E4103.4 Luminaires and ceiling fans. Lighting outlets, luminaires, and ceiling-suspended paddle fans shall be installed and located in accordance with Sections E4103.4.1 through E4103.4.5.

E4103.4.1 Outdoor location. In outdoor pool, outdoor spas and outdoor hot tubs areas, luminaires, lighting outlets, and ceiling-suspended paddle fans shall not be installed over the pool or over the area extending 5 feet (1524 mm) horizontally from the inside walls of a pool except where no part of the luminaire or ceiling-suspended paddle fan is less than 12 feet (3658 mm) above the maximum water level.

E4103.4.2 Indoor locations. In indoor pool areas, the limitations of Section E4103.4.1 shall apply except where the luminaires, lighting outlets and ceiling-suspended paddle fans comply with all of the following conditions:

1. The luminaires are of a totally enclosed type; and
2. A ground-fault circuit interrupter is installed in the branch circuit supplying the luminaires or ceiling-suspended (paddle) fans; and
3. The distance from the bottom of the luminaire or ceiling-suspended (paddle) fan to the maximum water level is not less than 7 feet, 6 inches (2286 mm).

E4103.4.3 Existing lighting outlets and luminaires. Existing lighting outlets and luminaires that are located within 5 feet (1524 mm) horizontally from the inside walls of pools and outdoor spas and hot tubs shall be permitted to be located not less than 5 feet (1524 mm) vertically above the maximum water level, provided that such luminaires and outlets are rigidly attached to the existing structure and ground-fault circuit-interrupter protection is provided for the branch circuit that supplies such luminaires and outlets.

E4103.4.4 Indoor spas and hot tubs.

1. Luminaires, lighting outlets, and ceiling-suspended paddle fans located over the spa or hot tub or within 5 feet (1524 mm) from the inside walls of the spa or hot tub shall be a minimum of 7 feet, 6 inches (2286 mm) above the maximum water level and shall be protected by a ground-fault circuit interrupter.

Luminaires, lighting outlets, and ceiling-suspended paddle fans that are located 12 feet (3658 mm) or more above the maximum water level shall not require ground-fault circuit interrupter protection.

2. Luminaires protected by a ground-fault circuit interrupter and complying with Item 2.1. or 2.2. shall be permitted to be installed less than 7 feet, 6 inches (2286 mm) over a spa or hot tub.

2.1. Recessed luminaires shall have a glass or plastic lens and nonmetallic or electrically isolated metal trim, and shall be suitable for use in damp locations.

2.2. Surface-mounted luminaires shall have a glass or plastic globe and a nonmetallic body or a metallic body isolated from contact. Such luminaires shall be suitable for use in damp locations.

E4103.4.5 GFCI protection. Luminaires and outlets that are installed in the area extending between 5 feet (1524 mm) and 10 feet (3048 mm) from the inside walls of pools and

an alternate means to eliminate voltage gradients that would otherwise be provided by unencapsulated bonded reinforcing steel.

2. All forming shells and mounting brackets of no-niche luminaires except where a listed low-voltage lighting system is used that does not require bonding.
3. All metal fittings within or attached to pool, spa and hot tub structures. Isolated parts that are not over 4 inches (102 mm) in any dimension and do not penetrate into the pool structure more than 1 inch (25.4 mm) shall not require bonding. The metal bands or hoops used to secure wooden staves for a hot tub or spa shall not be required to be bonded.
4. Metal parts of electrical equipment associated with pool, spa and hot tub water circulating systems, including pump motors and metal parts of equipment associated with pool covers, including electric motors. Metal parts of listed equipment incorporating an approved system of double insulation and providing a means for grounding internal nonaccessible, noncurrent-carrying metal parts shall not be bonded. Where a double-insulated water-pump motor is installed under the provisions of this section, a solid 8 AWG copper conductor that is of sufficient length to make a bonding connection to a replacement motor shall be extended from the bonding grid to an accessible point in the motor vicinity. Where there is no connection between the swimming pool bonding grid and the equipment grounding system for the premises, this bonding conductor shall be connected to the equipment grounding conductor of the motor circuit.
5. Metal-sheathed cables and raceways, metal piping and all fixed metal parts that are within 5 feet (1524 mm) horizontally of the inside walls of the pool, spa or hot tub and that are within 12 feet (3658 mm) above the maximum water level of the pool or any observation stands, towers or platforms, or from any diving structures, and that are not separated from the pool by a permanent barrier.

For pool water heaters rated at more than 50 amperes and having specific instructions regarding bonding and grounding, only those parts designated to be bonded shall be bonded and only those parts designated to be grounded shall be grounded.

E4104.2 Parts not required to be bonded. Small conductive surfaces not likely to become energized, such as towel bars, mirror frames, and air and water jets and drain fittings that are not connected to metallic piping, and similar equipment installed on or within indoor spas and hot tubs shall not be required to be bonded.

E4104.3 Methods of bonding. It shall not be the intent to require that the 8 AWG or larger solid copper bonding conductor be extended or attached to any remote panelboard, service equipment, or any electrode, but only that it shall be employed to eliminate voltage gradients in the pool area as prescribed. Bonding shall be accomplished by one or more of the following methods:

1. Common Bonding Grid. The parts specified in Section E4104.1 above shall be connected to a common bonding grid with a solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG. Connection shall be made

by exothermic welding or by pressure connectors or clamps that are labeled as being suitable for the purpose and that are made of stainless steel, brass, copper or copper alloy.

The common bonding grid shall be permitted to be any of the following:

- 1.1. The structural reinforcing steel of a concrete pool where the reinforcing rods are bonded together by the usual steel tie wires made up tight or the equivalent; or
 - 1.2. The wall of a bolted or welded metal pool; or
 - 1.3. A solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG.
2. For hot tubs and spas, metal to metal mounting on a common frame or base.
 3. The interconnection of threaded metal piping and fittings.

SECTION E4105 GROUNDING

E4105.1 Equipment to be grounded. The following equipment shall be grounded:

1. Wet-niche, dry-niche and no-niche underwater luminaires other than those low-voltage systems listed for the application without a grounding conductor.
2. All electrical equipment located within 5 feet (1524 mm) of the inside wall of the pool, spa or hot tub.
3. All electrical equipment associated with the recirculating system of the pool, spa or hot tub.
4. Junction boxes.
5. Transformer enclosures.
6. Ground-fault circuit-interrupters.
7. Panelboards that are not part of the service equipment and that supply any electrical equipment associated with the pool, spa or hot tub.

E4105.2 Luminaires and related equipment. Wet-niche, dry-niche, or no-niche luminaires shall be connected to an insulated copper equipment grounding conductor sized in accordance with Table E3808.12 but not smaller than 12 AWG. The equipment grounding conductor between the wiring chamber of the secondary winding of a transformer and a junction box shall be sized in accordance with the overcurrent device in such circuit. The junction box, transformer enclosure, or other enclosure in the supply circuit to a wet-niche or no-niche luminaire and the field-wiring chamber of a dry-niche luminaire shall be grounded to the equipment grounding terminal of the panelboard. The equipment grounding terminal shall be directly connected to the panelboard enclosure. The equipment grounding conductor shall be installed without joint or splice.

Exceptions:

1. Where more than one underwater luminaire is supplied by the same branch circuit, the equipment grounding conductor, installed between the junction boxes, transformer enclosures, or other enclosures in

and shall be equipped with provisions for conduit entries. Conduits shall extend from the forming shell to a suitable junction other enclosure located as provided in Section E4106.8. All parts of the luminaire and forming shell in contact with the pool water shall be of brass or other approved corrosion-resistant metal.

The end of flexible-cord jackets and flexible-cord conductor terminations within a luminaire shall be covered with, or encapsulated in, a suitable potting compound to prevent the entry of water into the luminaire through the cord or its conductors. In addition, the grounding connection within a luminaire shall be similarly treated to protect such connection from the deteriorating effect of pool water in the event of water entry into the luminaire.

Luminaires shall be bonded to and secured to the forming shell by a positive locking device that ensures a low-resistance contact and requires a tool to remove the luminaire from the forming shell.

E4106.6 Dry-niche luminaires. Dry-niche luminaires shall be provided with provisions for drainage of water and means for accommodating one equipment grounding conductor for each conduit entry. Junction boxes shall not be required but, if used, shall not be required to be elevated or located as specified in Section E4106.8 if the luminaire is specifically identified for the purpose.

E4106.7 No-niche luminaires. No-niche luminaires shall be listed for the purpose and shall be installed in accordance with the requirements of Section E4106.5. Where connection to a forming shell is specified, the connection shall be to the mounting bracket.

E4106.8 Junction boxes and enclosures for transformers or ground-fault circuit interrupters. Junction boxes for underwater luminaires and enclosures for transformers and ground-fault circuit-interrupters that supply underwater luminaires shall comply with the following:

E4106.8.1 Junction boxes. A junction box connected to a conduit that extends directly to a forming shell or mounting bracket of a no-niche luminaire shall be:

1. Listed and labeled for the purpose; and
2. Equipped with threaded entries or hubs or a nonmetallic hub listed for the purpose; and
3. Constructed of copper, brass, suitable plastic, or other approved corrosion-resistant material; and
4. Provided with electrical continuity between every connected metal conduit and the grounding terminals by means of copper, brass, or other approved corrosion-resistant metal that is integral with the box; and
5. Located not less than 4 inches (102 mm), measured from the inside of the bottom of the box, above the ground level, or pool deck, or not less than 8 inches (203 mm) above the maximum pool water level, whichever provides the greatest elevation, and shall be located not less than 4 feet (1219 mm) from the inside wall of the pool, unless separated from the pool by a solid fence, wall or other permanent barrier. Where used on a lighting system operating at 15 volts or less, a flush deck box shall be permitted provided

that an approved potting compound is used to fill the box to prevent the entrance of moisture; and the flush deck box is located not less than 4 feet (1219 mm) from the inside wall of the pool.

E4106.8.2 Other enclosures. An enclosure for a transformer, ground-fault circuit-interrupter or a similar device connected to a conduit that extends directly to a forming shell or mounting bracket of a no-niche luminaire shall be:

1. Listed and labeled for the purpose, comprised of copper, brass, suitable plastic, or other approved corrosion-resistant material; and
2. Equipped with threaded entries or hubs or a nonmetallic hub listed for the purpose; and
3. Provided with an approved seal, such as duct seal at the conduit connection, that prevents circulation of air between the conduit and the enclosures; and
4. Provided with electrical continuity between every connected metal conduit and the grounding terminals by means of copper, brass or other approved corrosion-resistant metal that is integral with the enclosures; and
5. Located not less than 4 inches (102 mm), measured from the inside bottom of the enclosure, above the ground level or pool deck, or not less than 8 inches (203 mm) above the maximum pool water level, whichever provides the greater elevation, and shall be located not less than 4 feet (1219 mm) from the inside wall of the pool, except where separated from the pool by a solid fence, wall or other permanent barrier.

E4106.8.3 Protection of junction boxes and enclosures. Junction boxes and enclosures mounted above the grade of the finished walkway around the pool shall not be located in the walkway unless afforded additional protection, such as by location under diving boards or adjacent to fixed structures.

E4106.8.4 Grounding terminals. Junction boxes, transformer enclosures, and ground-fault circuit-interrupter enclosures connected to a conduit that extends directly to a forming shell or mounting bracket of a no-niche luminaire shall be provided with grounding terminals in a quantity not less than the number of conduit entries plus one.

E4106.8.5 Strain relief. The termination of a flexible cord of an underwater luminaire within a junction box, transformer enclosure, ground-fault circuit-interrupter, or other enclosure shall be provided with a strain relief.

E4106.9 Underwater audio equipment. Underwater audio equipment shall be identified for the purpose.

E4106.9.1 Speakers. Each speaker shall be mounted in an approved metal forming shell, the front of which is enclosed by a captive metal screen, or equivalent, that is bonded to and secured to the forming shell by a positive locking device that ensures a low-resistance contact and requires a tool to open for installation or servicing of the speaker. The forming shell shall be installed in a recess in the wall or floor of the pool.

or hot tub equipment assembly, or a field-assembled spa or hot tub with a heater load of 50 amperes or less, shall be protected by a ground-fault circuit-interrupter.

A listed self-contained unit or listed packaged equipment assembly marked to indicate that integral ground-fault circuit-interrupter protection is provided for all electrical parts within the unit or assembly, including pumps, air blowers, heaters, luminaires, controls, sanitizer generators and wiring, shall not require that the outlet supply be protected by a ground-fault circuit interrupter.

A combination pool/hot tub or spa assembly commonly bonded need not be protected by a ground-fault circuit interrupter.

E4108.2 Electric water heaters. Electric spa and hot tub water heaters shall be listed and shall have the heating elements subdivided into loads not exceeding 48 amperes and protected at not more than 60 amperes. The ampacity of the branch-circuit conductors, and the rating or setting of overcurrent protective devices, shall be not less than 125 percent of the total nameplate load rating.

E4108.3 Underwater audio equipment. Underwater audio equipment used with spas and hot tubs shall comply with the provisions of Section E4106.9.

SECTION E4109 HYDROMASSAGE BATHTUBS

E4109.1 Ground-fault circuit-interrupters. Hydromassage bathtubs and their associated electrical components shall be protected in accordance with Section E4108. All 125-volt, single-phase receptacles not exceeding 30 amperes and located within 5 feet (1524 mm) measured horizontally of the inside walls of a hydromassage tub shall be protected by a ground-fault circuit interrupter(s).

E4109.2 Other electric equipment. Luminaires, switches, receptacles, and other electrical equipment located in the same room, and not directly associated with a hydromassage bathtub, shall be installed in accordance with the requirements of this code relative to the installation of electrical equipment in bathrooms.

E4109.3 Accessibility. Hydromassage bathtub electrical equipment shall be accessible without damaging the building structure or building finish.

E4109.4 Bonding. All metal piping systems, metal parts of electrical equipment, and pump motors associated with the hydromassage tub shall be bonded together using a copper bonding jumper, insulated, covered, or bare, not smaller than 8 AWG solid.

Metal parts of listed equipment incorporating an approved system of double insulation and providing a means for grounding internal nonaccessible, noncurrent-carrying metal parts shall not be bonded.

APPENDIX G

SWIMMING POOLS, SPAS AND HOT TUBS

SECTION AG101 GENERAL

AG101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- and two-family dwelling.

SECTION AG102 DEFINITIONS

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling or a one-family townhouse not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

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

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of said structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

SECTION AG103 SWIMMING POOLS

AG103.1 In-ground pools. In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section AG108.

AG103.2 Above-ground and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section AG108.

SECTION AG104 SPAS AND HOT TUBS

AG104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

AG104.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be provided with a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which 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 which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an aboveground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. 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 1.75 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the hori-

**SECTION AG107
ABBREVIATIONS**

AG107.1 General.

- ANSI—American National Standards Institute
11 West 42nd Street, New York, NY 10036
- ASTM—ASTM International
100 Barr Harbor Drive, West Conshohocken, PA 19428
- NSPI—National Spa and Pool Institute
2111 Eisenhower Avenue, Alexandria, VA 22314

**SECTION AG108
STANDARDS**

AG108.1 General.

ANSI/NSPI

- ANSI/NSPI-3-99 Standard for Permanently Installed Residential Spas AG104.1
- ANSI/NSPI-4-99 Standard for Above-ground/On-ground Residential Swimming Pools AG103.2
- ANSI/NSPI-5-99 Standard for Residential In-ground Swimming Pools AG103.1
- ANSI/NSPI-6-99 Standard for Residential Portable Spas AG104.2
- ANSI/ASME A112.19.8M-1987 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs and Whirlpool Bathing Appliances AG106.2

ASTM

- ASTM F 1346-91 (1996) Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs AG105.2, AG105.5

ASME

- ASME A112.19.17 Manufacturers Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool AG106.3

Oxford Township Building Department Fee Schedule

DESCRIPTION OR EXPLANATION OF FEE/CHARGE/RATE	AMOUNT OF FEE/CHARGE/RATE	
Building Permits: When required, the fees are based on project costs for all residential, commercial & industrial projects. (materials & labor shall be included in total costs) [See also Other Permits, Other Fees and Bond Fees that may apply per permit. Pg. 2 & 3.]	Value of Improvement \$0.00 - \$1,000.00	\$100.00
	\$1,000.01 - \$50,000.00	\$100.00 (Plus \$4.50 per thousand dollars of project cost, or portion thereof, in excess of \$1,000.00)
	\$50,000.01 - \$500,000.00	\$400.00 (Plus \$4.50 per thousand dollars of project cost, or portion thereof, in excess of \$50,000.00)
	\$500,000.01 and up	\$1,950.00 (Plus \$4.50 per thousand dollars of project cost, or portion thereof, in excess of \$500,000.00)
Trade Permits: Electrical, plumbing & mechanical.	Residential: Single/multi-family (Per single living unit)	0 - 1,500 Sq. Ft. = \$175.00 per each trade
		1,501 - 3,000 = \$195.00 per each trade
		3000 and up = \$215.00 per each trade
	Commercial/Industrial: Multi-tenant commercial spaces shall be treated as individual units and per square footage.	0 - 3,000 Sq. Ft. = \$250.00 per each trade
		3,001 - 8,000 = \$350.00 per each trade
		8,001 - 13,000 = \$450.00 per each trade
		13,001 - 20,000 = \$550.00 per each trade
20,001 and up = \$750.00 per each trade		
Building Code Compliance Plan Review: Residential, Commercial and Industrial.	Total project cost \$0.00 - \$500,000.00	0.0013 of project cost but not less than \$100.00.
	Over \$500,000.00	\$650.00 plus 0.0005 of project cost over \$500,000.00
Trades Code Compliance Plan Review:	Electrical Plumbing Mechanical	25% of Building Code Compliance Plan Review Fee.
Note: The Building Official may waive plan review fees if the review is deemed unnecessary based on the projects minor nature.		
Re-inspection / Misc. Trade Inspection:	All Trades	\$50.00 per inspection and to be pre-paid.
Mileage:		\$5.00 per inspection and to be pre-paid.

Other Permits

DESCRIPTION OR EXPLANATION	AMOUNT OF FEE/CHARGE/RATE	
Demolition: (Plus trade permits at \$50.00 per inspection)	\$100.00	
Land Improvement:	Application Fee	\$120.00
	Mileage Zoning Fee	\$5.00
	Total Cost	\$125.00
Mobile Home: (Plus trade permits at \$50.00 per inspection)	Single wide	\$200.00
	Double wide	\$250.00
Moving Structure:	\$350.00	
Pool: (Plus trade permits at \$50.00 per inspection)	Above ground	\$150.00
	Below ground	\$200.00
Sign: (Plus electrical permit at \$50.00 per inspection)	\$100.00	
Sewer Permit:	County Fee	\$125.00
	Township Fee	\$50.00
Water Permit:	Township Fee	\$50.00
Zoning Permit:	Application Fee	\$120.00
	Mileage Zoning Fee	\$5.00
	Total Cost	\$125.00

Other Fees

DESCRIPTION OR EXPLANATION	AMOUNT OF FEE/CHARGE/RATE
Administrative:	\$40.00 Non-Refundable and to be pre-paid
Sewer Connection:	\$3,500.00
Water Tap-In:	\$6,075.00
Water Construction:	\$100.00

BONDS

DESCRIPTION OR EXPLANATION		AMOUNT OF FEE/CHARGE/RATE
New Residential:		960 - 2000 Sq. Ft. = \$300.00
		2001 - 3000 = \$400.00
		3001 - 4000 = \$500.00
		Over - 4001 = \$700.00
New Commercial/ Industrial:		0 - 2000 Sq. Ft. = \$500.00
		2001 - 3000 = \$800.00
		3001 - 4000 = \$1000.00
		4001 - 5000 = \$1500.00
		Over - 5001 = \$2000.00
Miscellaneous Residential/ Commercial/ Industrial:	Accessory Structures - Garage, Pole Barn, Shed, Porch, Deck, etc.	\$100.00
	Additions / Attached Garage	\$200.00
	Remodel	\$100.00
	Moving A	\$2,000.00

CHARTER TOWNSHIP OF OXFORD

Check Permit Type

- Electrical
- Mechanical
- Plumbing

300 Dunlap Road - P.O. Box 3
 Oxford, Michigan 48371
 248-628-9787 Fax 248-628-8139
 www.oxfordtownship.org

Date / /

Permit #

PROPERTY LOCATION	
ADDRESS	_____
TAX ID #	_____
LOT #	_____
SUBDIVISON:	_____

CURRENT PROPERTY OWNER	
NAME	_____
ADDRESS	_____
CITY	_____ STATE _____
ZIP	_____ PHONE _____

IS THIS A HOMEOWNER PERMIT? YES NO

CONTRACTOR INFORMATION	
COMPANY NAME	_____
ADDRESS	_____
CITY	_____ STATE _____
ZIP	_____ PHONE _____
CONTACT	_____

LICENSE INFORMATION	
LICENSE #	_____
CERTIFICATION TYPE	_____
MESC #	_____
FED ID #	_____
INSURANCE COMPANY	_____
POLICY #	_____ EXPIRES <u> </u> / <u> </u> / <u> </u>

**** Please circle all appropriate fees ****

SINGLE FAMILY RESIDENTIAL

0 TO 1500 SQ. FT.	\$175 00
1501 TO 3000 SQ. FT.	\$195 00
3001 SQ. FT. AND OVER	\$215 00

ADDITIONAL FEES FOR RES./ COMM./ IND.

AC UNIT	\$50 00
BURGLAR ALARM	\$50 00
CAR CHARGER	\$50 00
DEMOLITION INSPECTION	\$50 00
DUCT WORK (Extension)	\$50 00
FACTORY BUILT FIREPLACE (PFP Permit)	\$100 00
FURNACE / Boiler / Woodstove (Additional or Replace)	\$50 00
GAS PIPING	\$50 00
GENERAL INSPECTION	\$50 00
GENERATOR	\$50 00
HOOD SYSTEM (Per Hood)	\$50 00
LAWN SPRINKLER	\$50 00
LP TANK	\$50 00
MOBILE HOME HOOKUP	\$50 00
REINSPECTION	\$50 00
SERVICE / TEMPORARY SERVICE	\$50 00
SIGNS (Per Circuit)	\$50 00
SWIMMING POOL (Above or In Ground)	\$50 00
UNDERGROUND	\$50 00
WATER HEATER / SOFTNER (Additional or Replace)	\$50 00
LICENSE REGISTRATION	\$15.00
NUMBER OF INSPECTIONS REQUIRED	_____ x \$5.00 *

(* Mileage cost per inspection)

COMMERCIAL/INDUSTRIAL

0 TO 3000 SQ. FT.	\$250 00
3001 TO 8000 SQ. FT.	\$350 00
8001 TO 13000 SQ. FT.	\$450 00
13001 TO 20000 SQ. FT.	\$550 00
20001 AND OVER	\$750 00

<u>FIRE ALARM SYSTEMS (COMM./ IND. ONLY)</u>			
PULL STATION/BOX	_____	@	\$15 00 _____
SIGNAL DEVICE	_____	@	\$15 00 _____
MASTER PANEL	_____	@	\$15.00 _____

<u>FIRE SUPPRESSION SYSTEM (COMM./ IND. ONLY)</u>			
# OF HEADS	_____	@	\$3 00 _____
UNDERGROUND			\$50 00

NOTES:

PERMIT FEES: \$ _____

REGISTER LICENSE \$ _____

MILEAGE CHARGE \$ _____

TOTAL: \$ _____

Section 23a of the State of Michigan 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 are subject to civil fines.

Applicants Signature

Date

Inspections are done on Tuesdays, Wednesdays, and Thursdays between 9AM - 6PM. You MUST call in by 3PM the day before the desired inspection date. Make sure to have your permit number, type of inspection requested, job address and lock box or access information available. All inspections rejected are subject to a \$50.00 re-inspection fee.

ELECTRICAL

Residential Above Ground Pools:

Circuit Requirements:

1. 20 amp dedicated branch circuit
2. # 12 copper wire w/insulated ground conductor
3. GFI protection for pump motor receptacle

Underground wiring Requirements:

1. Wiring must be in conduit from house to pump motor receptacle. Non metallic conduit, (pvc), or rigid metal conduit.
2. Conduits must be at least 18" below ground level or 12" if branch circuit conductors are GFI protected. Conductors inside of conduit must be #12 THHN type. UF cable or Romex is not approved.

Receptacles:

1. Receptacle required for connection of pump motor. Must be located at least 5' from edge of pool wall.
2. Pump motor receptacle must be 3-wire twist lock type.
3. An "in use" type cover must be used. Cover must close while plugged in.
4. A general purpose GFI protected receptacle must be located between 10' and 20' from pool wall. This receptacle may be connected to any general purpose branch circuit.

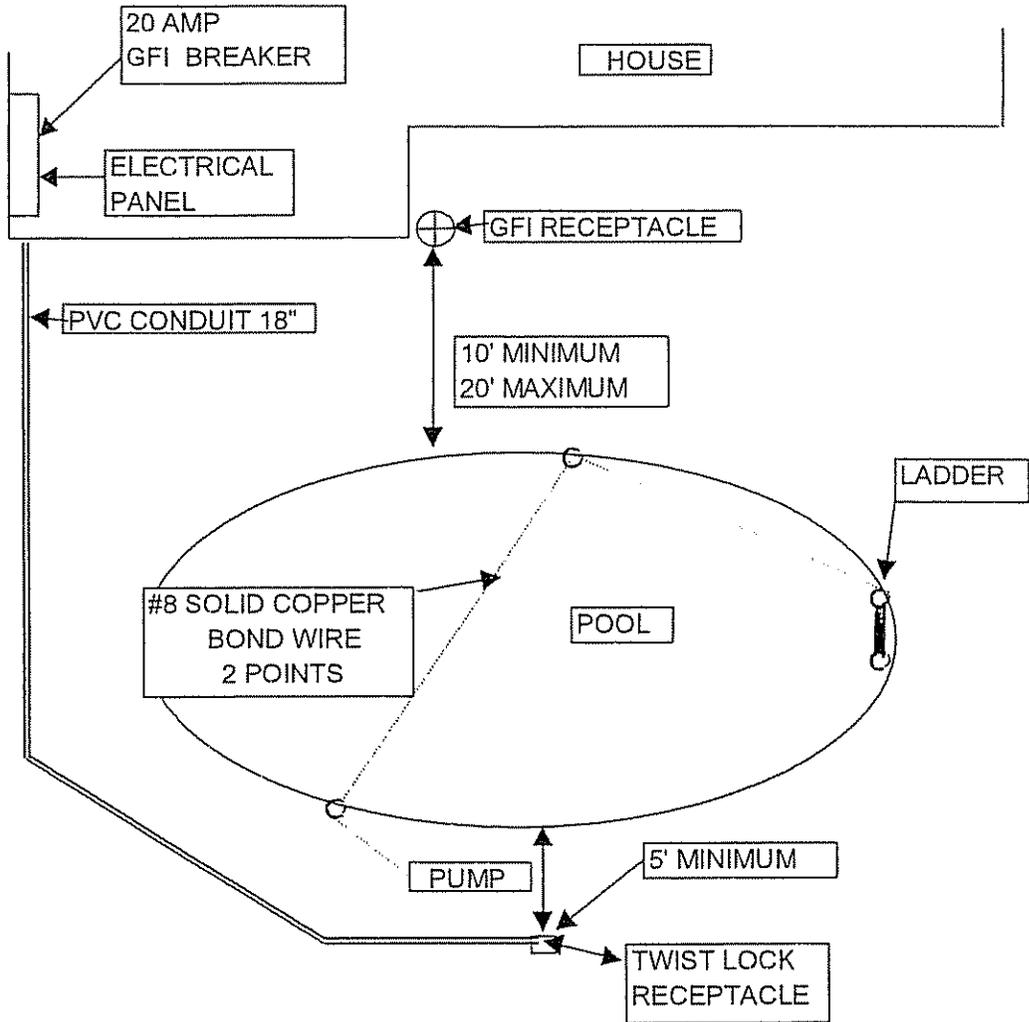
Bonding:

1. Bonding of all metal objects within 5' of pool wall is required to eliminate gradient voltages (static electricity).
2. Bonding conductor must be at least #8 solid copper, insulated or bare. Stranded wire is not acceptable.
3. Pump motor is to be bonded to pool wall (metal) ladders, fences, and all metal objects within 5' of pool wall.
4. Bonding conductor must not be spliced and shall be continuous.
5. It is not necessary to connect bonding conductor to any circuit panel or disconnect devices.

All electrical devices must not be located within 5' of pool wall. All devices located within 20' of pool wall must be GFI protected.

Overhead Wiring:

1. See attached diagram.



ELECTRICAL WIRING GUIDELINES FOR ABOVE GROUND POOLS

Table 680-8. Clearances

	Insulated Supply or Service Drop Cables, 0-750 Volts to Ground, Supported on and Cabled Together with an Effectively Grounded Bare Messenger or Effectively Grounded Neutral Conductor	All Other Supply or Service-Drop Conductors Voltage to Ground	
		0-15 kV	Greater than 15-50 kV
A Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	22 ft (6.7 m)	25 ft (7.62 m)	27 ft (8.23 m)
B Clearance in any direction to the diving platform or tower	14 ft (4.27 m)	17 ft (5.2 m)	18 ft (5.49 m)
C Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in (1) and (2) but not less than 10 ft (3.05 m).		

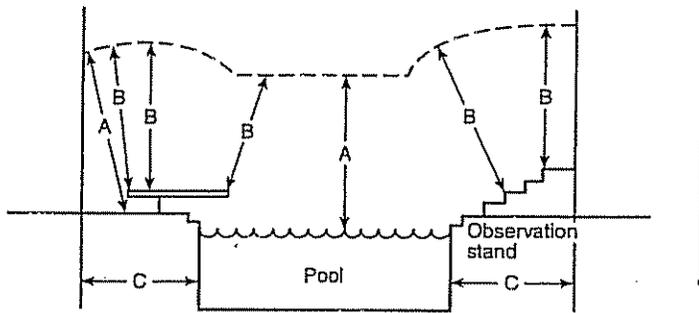


Figure 680-8.

Community antenna system coaxial cables complying with Article 820 and the supporting messengers shall be permitted at a height of not less than 10 ft (3.05 m) above swimming and wading pools, diving structures, and observation stands, towers, or platforms.