



G O D F R E Y

ILLINOIS

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BUILDING & ZONING

**ABOVE GROUND POOL PERMIT
ATTACH DRAWING AND DESCRIPTION OF POOL
Must have PART A & B**

DATE: _____

TOTAL PERMIT FEE: \$75.00

NAME OF POOL COMPANY: _____

ADDRESS: _____

PHONE: _____

RETAIL VALUE: _____

NAME OF HOMEOWNER: _____

ADDRESS: _____

PHONE: _____

SETBACKS:

10 feet from house

5 feet from underground electric

15 feet overhead electric

Part A must be submitted with Part B before any permits are issued. Homeowners can submit applications if all information is completed on Parts A and B.

ABOVE GROUND POOL BONDING APPLICATION

PART B

Bonding needs to be done before setup and water is in pool.

DATE: _____

NAME OF HOMEOWNER: _____

ADDRESS: _____

PHONE: _____

PERSON/COMPANY DOING THE BONDING: _____

ATTACH DRAWING OF POOL AND IDENTIFY LOCATIONS WHERE IT WILL BE BONDED.
ATTACH LIST OF APPROVED BONDING SUPPLIES TO BE USED (examples in packet).
If you do not use bonding equipment list, a new list must be submitted before inspection.

Contractors that have done pool bonding in Godfrey:

Bickle Electric	618-259-4499
Franks Electric	618-465-4573
Camp Electric	618-462-9287
Wood-N-Electric	217-723-4413
Jerrco Electric	618-972-1273
J.A. Electric	618-791-3898
Wegman Electric	618-258-1130

Section 60.211. - Swimming pools.

No swimming pool, whether public or private, shall be located in any front yard. All swimming pools of more than two feet in depth shall have appropriate fencing installed which shall be not less than four feet in height around the pool to limit access to it unless, upon application, the zoning administrator, subject to review by the planning and zoning commission, approves a different, but equivalent, means of limiting access to the swimming pool. Unless otherwise approved by the zoning administrator upon application, subject to review by the planning and zoning commission, no fence installed around a private swimming pool may exceed a height of eight feet. A permit from the building and zoning administrator is required for all new swimming pool construction or renovation. The construction must comply with all building code requirements and the 2011 NEC as adopted by the Village of Godfrey. The electrical and bonding must be done by a certified electrician and he/she must sign the building permit along with the property owner or general contractor.

(Ord. No. 07-2009, 3-3-2009; Ord. No. 18-2017, § 2, 9-19-2017)

2012 INTERNATIONAL PROPERTY MAINTENANCE CODE

SECTION 303

SWIMMING POOLS, SPAS AND HOT TUBS

303.1 Swimming pools. Swimming pools shall be maintained in a clean and sanitary condition, and in good repair.

303.2 Enclosures. Private swimming pools, hot tubs and spas, containing water more than 24 inches (610 mm) in depth shall be completely surrounded by a fence or barrier at least 48 inches (1219 mm) in height above the finished ground level measured on the side of the barrier away from the pool. Gates and doors in such barriers shall be self-closing and self-latching. Where the self-latching device is a minimum of 54 inches (1372 mm) above the bottom of the gate, the release mechanism shall be located on the pool side of the gate. Self-closing and self-latching gates shall be maintained such that the gate will positively close and latch when released from an open position of 6 inches (152 mm) from the gatepost. No existing pool enclosure shall be removed, replaced or changed in a manner that reduces its effectiveness as a safety barrier.

Exception: Spas or hot tubs with a safety cover that complies with ASTM F 1346 shall be exempt from the provisions of this section.

GENERAL NOTES:

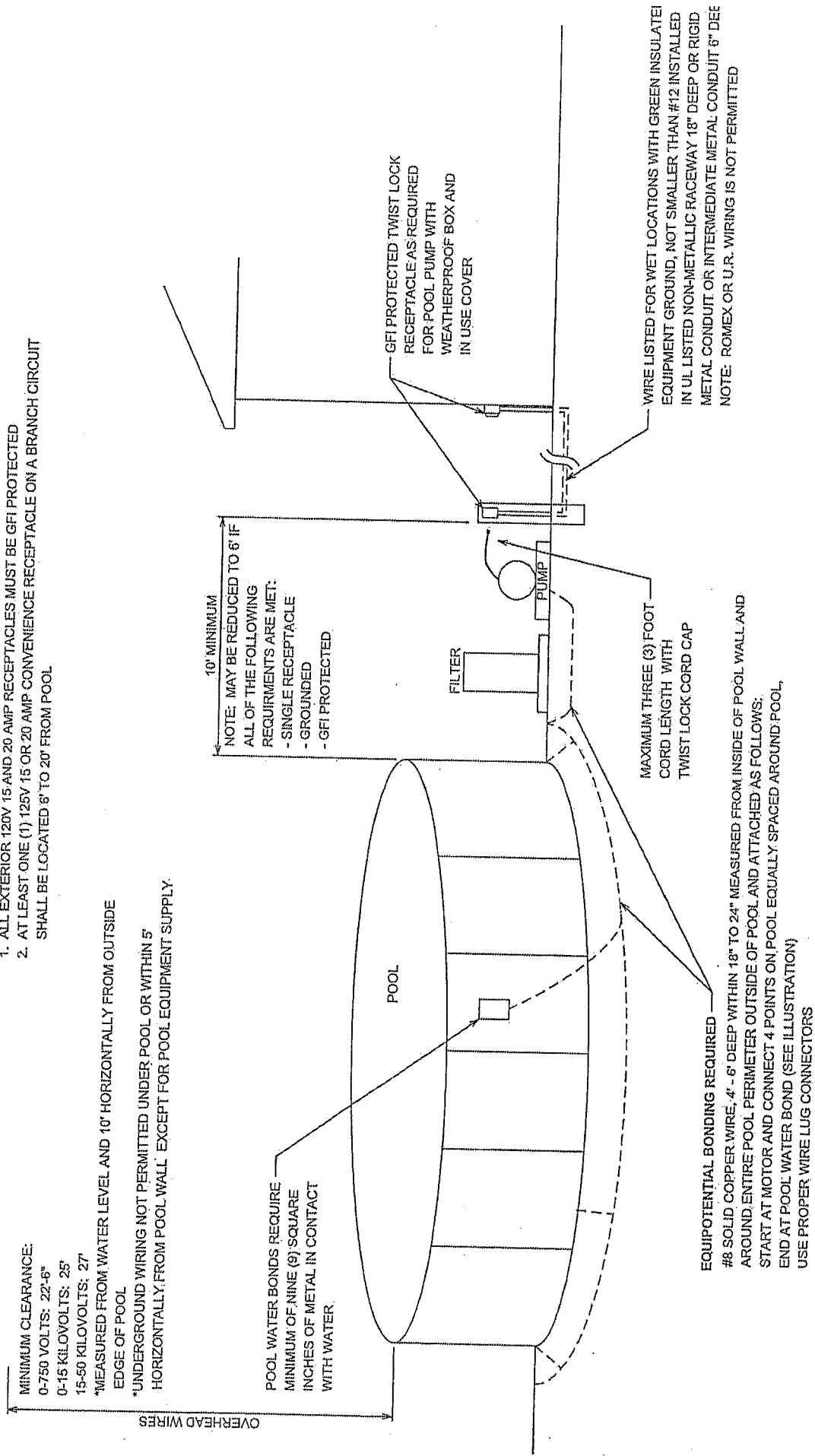
1. ALL EXTERIOR 120V 15 AND 20 AMP RECEPTACLES MUST BE GFI PROTECTED
2. AT LEAST ONE (1) 125V 15 OR 20 AMP CONVENIENCE RECEPTACLE ON A BRANCH CIRCUIT SHALL BE LOCATED 6" TO 20" FROM POOL

MINIMUM CLEARANCE:
 0-750 VOLTS: 22'-6"
 0-15 KILOVOLTS: 25'
 15-50 KILOVOLTS: 27'

*MEASURED FROM WATER LEVEL AND 10" HORIZONTALLY FROM OUTSIDE EDGE OF POOL

*UNDERGROUND WIRING NOT PERMITTED UNDER POOL OR WITHIN 5' HORIZONTALLY FROM POOL WALL EXCEPT FOR POOL EQUIPMENT SUPPLY.

POOL WATER BONDS REQUIRE MINIMUM OF NINE (9) SQUARE INCHES OF METAL IN CONTACT WITH WATER.



WIRE LISTED FOR WET LOCATIONS WITH GREEN INSULATED EQUIPMENT GROUND, NOT SMALLER THAN #12 INSTALLED IN UL LISTED NON-METALLIC RACEWAY 18" DEEP OR RIGID METAL CONDUIT OR INTERMEDIATE METAL CONDUIT 6" DEE

EQUIPOTENTIAL BONDING REQUIRED
 #8 SOLID COPPER WIRE, 4' - 6' DEEP WITHIN 18" TO 24" MEASURED FROM INSIDE OF POOL WALL AND AROUND ENTIRE POOL PERIMETER OUTSIDE OF POOL AND ATTACHED AS FOLLOWS:
 START AT MOTOR AND CONNECT 4 POINTS ON POOL EQUALLY SPACED AROUND POOL, END AT POOL WATER BOND (SEE ILLUSTRATION)
 USE PROPER WIRE LUG CONNECTORS

NOTE: ROMEX OR U.R. WIRING IS NOT PERMITTED

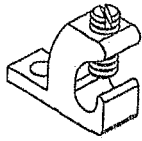
POOL PARTS LIST FOR INSTALLATION TO CODE

SAMPLE LIST

<u>PART #</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
GND588CU	GROUND ROD COPPER 5/8X8 (NOT ALL POOLS)	1
BLAJAB58H	BLKBRN JAB58H 5/8 GRND ROD CLP	2
BARE8SOL	WIRE 8-SD-SOL BARE COPPER	170
M1BU3802	MILB U3802 NON-FUSE AC DISC	1
1DE30030	IDEAL 30-030 NOALOX BOTL 8-OZ	1
LEV2310	LEV 2310 LKG FLUSH RECEPTACLE	1
LEV14512W	LEV 1451-2W WHT SP QUIET SW	1
BURKS20	BURNDY KS20 5STR SOLDERLESS	10
BLAL70	BKJBRB K70 14-4 CU SCR LUG	10
APPWSL150	EGS WSL150 1-GANG WPRF BOX 4-1	1
APPWSM175	EGS WSM175 1-GANG WPRF BOX 3-3	1
DOTFG1100C	DOTTIE FG1100C CLR 2-1/2 WP RC	2

SAMPLE

Pool Grounding & Bonding Components

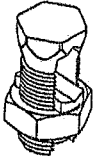


UL Listed 486
UL Listed 467

1 - One-Hole Tinned Copper Lay-In Lug

Part No.	Conductor Range (AWG)	Bolt Hole Size
TCL1414DB	4 - 14	#10

• Suitable for direct burial.

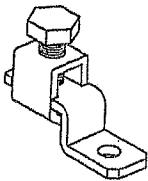


UL Listed 486
UL Listed 467

2 - Copper Split Bolt

Part No.	Range for Equal Main (AWG)	Minimum Tap
GESB6	4 Sol. - 8 Sol.	16 Sol.

• Suitable for direct burial.

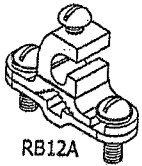


UL Listed 486

3 - Copper Offset Terminal Lug

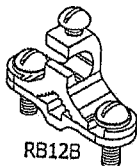
Part No.	Conductor Range (AWG)	Bolt Hole Size
GEOL2	14 Str. - 6 Str.	#8

• Not suitable for direct burial.



RB12A

UL Listed 467



RB12B

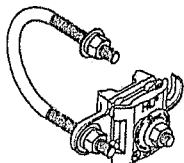
4 & 5 - Rebar & Water Pipe Ground Clamps

Part No.	Pipe & Rebar Range	Conductor Range (AWG)
RB12A	3/8" - 1"	10 Sol. - 2 Str.
RB12B	3/8" - 1"	10 Sol. - 2 Str.

• Suitable for direct burial.

UL Listed 486

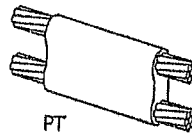
UL Listed 467



6 - CPC Pipe Clamps

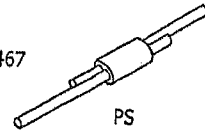
Part No.	Material	Nom. Pipe Size Range	Pipe Outside Diameter
CPC1.5/2	Tinned Bronze	1.5" - 2"	1" - 2.4"
CPC2.5/3	Tinned Bronze	2.5" - 3"	2.25" - 3.5"

• Suitable for direct burial.
• Conductor Range #6 - 250 MCM.
• Other sizes available.



PT

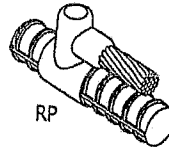
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PS

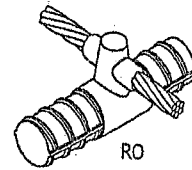
7 & 8 - Cable to Cable Ultraweld Exothermic Connection Molds

Part No.	Weld Metal		Required Handle
	UltraShot	NUWTUBE	
PT8S8SB	US25	NUWTUBE25	MH1
PS8S8SL	US25	NUWTUBE25	MH3 (Included)
PS8S6SL	US25	NUWTUBE25	MH3 (Included)



RP

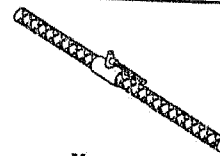
UL Listed 467



RO

9 & 10 - Cable to Rebar Ultraweld Exothermic Connection Molds

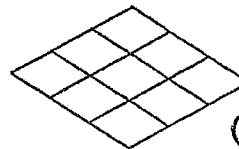
Part No.	Weld Metal		Required Handle	Packing Mat'l No.
	UltraShot	NUWTUBE		
RP38SB	US25	NUWTUBE25	MH1	WRPSLV
RP4L8SA	US25	NUWTUBE25	Included	CERPM1
RO38SB	US65	NUWTUBE65	MH1	WRPSLV
RO48SB	US65	NUWTUBE65	MH1	WRPSLV
RO58SB	US65	NUWTUBE65	MH1	WRPSLV



11 - Rebar Grounding Assembly

Part No.	Rebar Size	Conductor Type (AWG)	Conductor Length (ft.)
RB3GA8SX5	3	8 Sol.	5

• Prefabricated rebar grounding assembly with exothermically welded connection.
• Standard 24" long rebar.
• Can be wire tied or welded to rebar cage prior to concrete pour.



UL Listed 467

12 - UL Listed Prefabricated #8 Solid Copper Ground Mesh

Part No.	Width (ft.)	Length (ft.)	Conductor Spacing (In.)	Approx. Wt. (lbs.)
GM350812	3	50	12	32
GM375812	3	75	12	42
GM3100812	3	100	12	51

• Other mesh sizes and wire gauges available.

Pool Grounding & Bonding Technical Notes

TECHNICAL NOTES:

• 680.26 Equipotential Bonding* (Summarized)

(A) Performance. The equipotential bonding required by this section shall be installed to reduce voltage gradients in the pool area.
(B) Bonded Parts. The parts specified in 680.26(B)(1) through (B)(7) shall be bonded together using solid copper conductors, insulated covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal. Connections to bonded parts shall be made in accordance with 250.8**. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to remote panelboards, service equipment, or electrodes.

(1) Conductive Pool Shells. Bonding to conductive pool shells shall be provided as specified in 680.26(B)(1)(a) or (B)(1)(b).
Poured concrete, pneumatically applied or sprayed concrete, and concrete block with painted or plastered coatings shall all be considered conductive materials due to water permeability and porosity. Vinyl liners and fiberglass composite shells shall be considered to be nonconductive materials.

(a) Structural Reinforcing Steel. Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent. Where structural reinforcing steel is encapsulated in a nonconductive compound, a copper conductor grid shall be installed in accordance with 680.26(B)(1)(b).

(b) Copper Conductor Grid. A copper conductor grid shall be provided and shall comply with (b)(1) through (b)(4).
(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing. The bonding shall be in accordance with 250.8 or approved means.

(2) Conform to the contour of the pool and the pool deck.

(3) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.).

(4) Be secured within or under the pool no more than 150 mm (6 in.) from the outer contour of the pool shell.

(2) Perimeter Surfaces. The perimeter surface shall extend for 1 m (3 ft.) horizontally beyond the inside walls of the pool and shall include unpaved surfaces as well as poured concrete surfaces and other types of paving. Perimeter surfaces less than 2 m (3 ft) separated by a permanent wall or building 1.5 m (5 ft) in height or more shall require equipotential bonding on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a) or (2)(b) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four (4) points uniformly spaced around the perimeter of the pool. For nonconductive pool shells, bonding at four points shall not be required.

(a) Structural Reinforcing Steel. Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).

(b) Alternate Means. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met:

(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.

(2) The conductors shall follow the contour of the perimeter surface.

(3) Only listed splices shall be permitted.

(4) The required conductor shall be 450 to 600 mm (18 to 24 in.) from the inside walls of the pool.

(5) The required conductor shall be secured within or under the perimeter surface 100 to 150 mm (4 in. to 6 in.) below the subgrade.

(3) Metallic Components. All metallic parts of the pool structure, including reinforcing metal not addressed in 680.26(B)(1)(a), shall be bonded. Where reinforcing steel is encapsulated with a nonconductive compound, the reinforcing steel shall not be required to be bonded.

(4) Underwater Lighting.

(5) Metal Fittings.

(6) Electrical Equipment.

(7) Fixed Metal Parts. All fixed metal parts shall be bonded including, but not limited to, metal-sheathed cables and raceways, metal piping, metal awnings, metal fences, and metal door and window frames.

Exception No 1: Those separated from the pool by a permanent barrier that prevents contact by a person shall not be required to be bonded.

Exception No 2: Those greater than 1.5 m (5 ft.) horizontally of the inside walls of the pool shall not be required to be bonded.

Exception No 3: Those greater than 3.7 m (12 ft.) measured vertically above the maximum water level of the pool, or as measured vertically above any observation stands, towers, or platforms, or any diving structures, shall not be required to be bonded.

(C) Pool Water. An intentional bond of a minimum conductive surface area of 5600 mm² (9 in.²) shall be installed in contact with the pool water. This bond shall be permitted to consist of parts that are required to be bonded in 680.26(B).

• 250.8 Connection of Grounding and Bonding Equipment**

(A) Permitted Methods. Equipment grounding conductors, grounding electrodes conductors, and bonding jumpers shall be connected by one of the following means:

(1) Listed pressure connectors

(2) Terminal bars

(3) Pressure connectors listed as grounding and bonding equipment

(4) Exothermic welding process

(5) Machine screw-type fasteners that engage not less than two threads or are secured with a nut

(6) Thread-forming machine screws that engage not less than two threads in the enclosure

(7) Connections that are part of a listed assembly

(8) Other listed means

(B) Methods Not Permitted. Connection devices or fittings that depend solely on solder shall not be used.

*NEC 2011 Equipotential Bonding Article 680.26

**NEC 2011 Connection of Grounding and Bonding Equipment Article 250.8



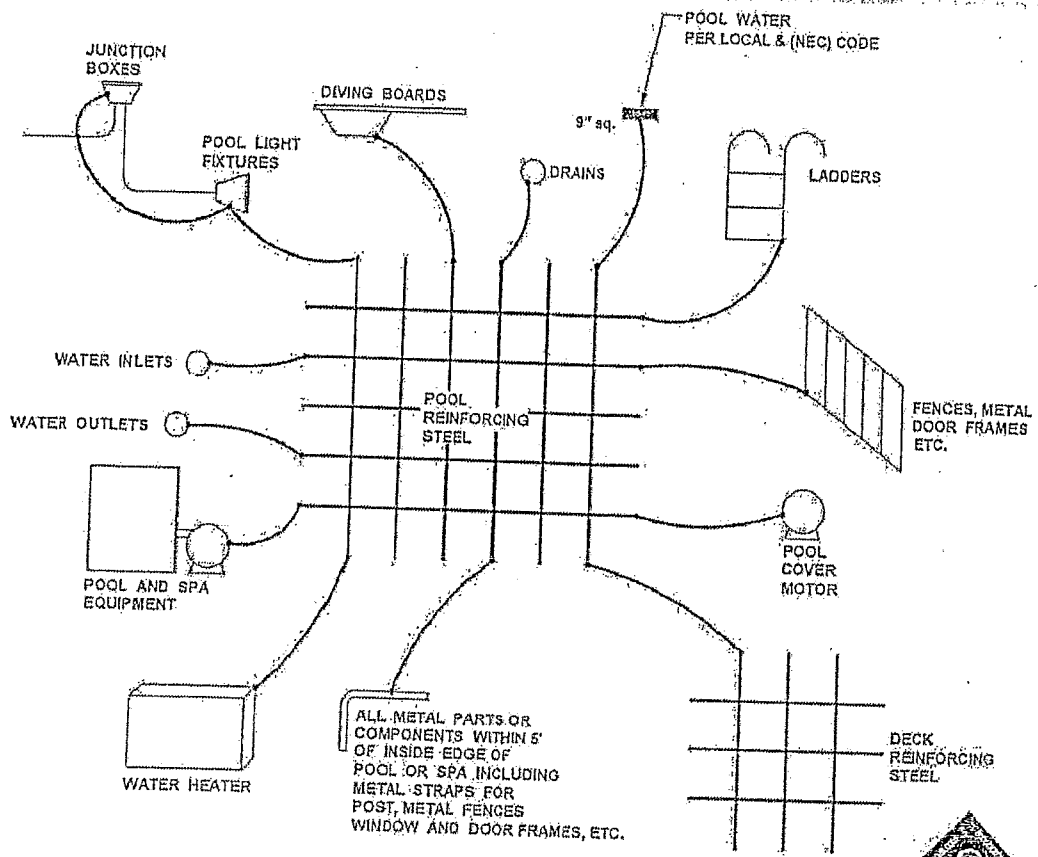
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PGBL-12.12



POOL AND SPA BONDING DETAIL

GENERAL NOTES:

- 1.) ALL CONNECTIONS WILL BE MADE BY EXOTHERMIC WELDING OR BY PROVIDING A LISTED PRESSURE CONNECTOR OR CLAMPS THAT ARE SUITABLE FOR THE REQUIRED PURPOSE AND ARE MADE OF STAINLESS STEEL, BRASS OR COPPER
- 2.) ALL BONDING CONNECTIONS WILL BE #8
- 3.) WHERE AS STEEL REINFORCEMENT IS NOT INSTALLED THEN ALL ITEMS WILL BE BONDED TOGETHER WITH #8 COPPER

NTS

680.26(B)(6) Bonding of Electrical Equipment

Note: EGCs (green) and equipotential bonding jumpers (copper) shown

