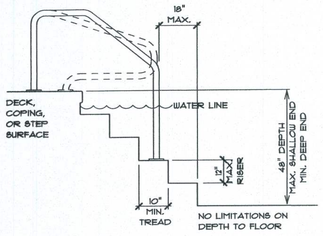
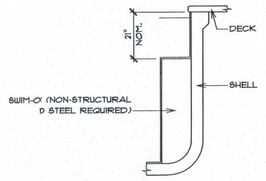


STEPS SECTION

NOT TO SCALE



SWIM-OUT SECTION

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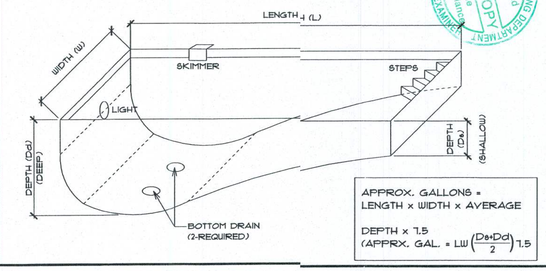
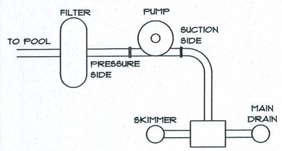
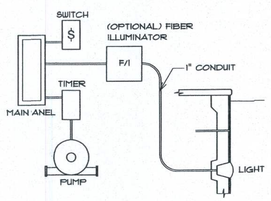


TYPICAL POOL SHELL

NOT TO SCALE

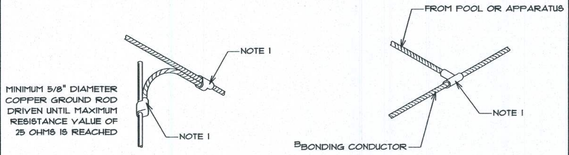


TYPICAL PLUMBING DIAGRAM



(DTE: AS PER N.E.C. AND LOCAL CODES)

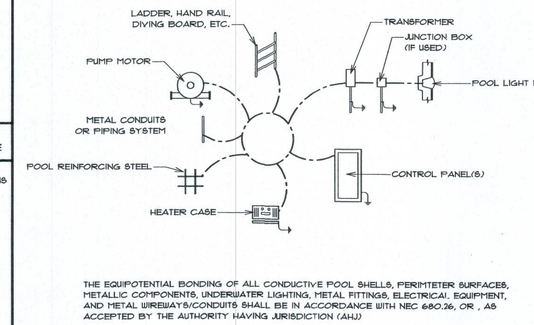
TYPICAL WIRING DIAGRAM



NOTES

1. SPLICES (WELDED OR MECHANICAL) SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. CONNECTIONS TO POOL SHELL CAN BE MADE VIA JUMPER OR LOOPING OF THE GROUNDING CONDUCTOR.

TYPICAL BONDING TYPES



THE EQUIPOTENTIAL BONDING OF ALL CONDUCTIVE POOL SHELLS, PERIMETER SURFACES, METALLIC COMPONENTS, UNDERWATER LIGHTING, METAL FITTINGS, ELECTRICAL EQUIPMENT, AND METAL WIREWAYS/CONDUITS SHALL BE IN ACCORDANCE WITH NEC 680.26, OR , AS ACCEPTED BY THE AUTHORITY HAVING JURISDICTION (AHJ)

TYPICAL POOL BONDING SCHEMATIC

NOT TO SCALE

1. BONDING CONDUCTOR SHALL BE #8 AWG BARE SOLID COPPER WIRE BURIED TO A MINIMUM DEPTH OF 4"-6" BELOW SUBGRADE, AND 18"-24" FROM INSIDE WALL OF POOL OR SPA.
2. ALL UNDERGROUND OR UNDER SLAB CONNECTIONS SHALL BE BY LISTED MEANS PER NEC 250.8. BONDING CABLES UNDER SLAB SHALL BE PLACED AT THE BOTTOM OF EXCAVATION.
3. WHEN REBAR IS UTILIZED FOR THE CONSTRUCTION OF PLANTERS AND FOOTERS ADJACENT TO THE POOL (WITHIN 5') THIS REBAR SHALL BE BONDED USING #8 AWG BARE SOLID COPPER CONDUCTOR BY LISTED MEANS PER NEC 250.8 TO THE BONDING CONDUCTOR.
4. LOCATION OF COPPER BONDING CONDUCTOR, BONDING JUMPERS, AND CONNECTIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE TO DETERMINE EXACT LOCATION. BONDING CONDUCTOR SHALL CONFORM TO THE SHAPE OF THE POOL WHILE MAINTAINING SMOOTH RADIAL CURVES - NO 90 DEGREE RADIUS SHALL BE PERMITTED.
5. RESISTANCE OF THE GROUND SYSTEM SHALL NOT EXCEED 25 OHMS.
6. WHERE REQUIRED BY THE AHJ (NOT BY NEC), ALL GROUND RODS SHALL BE 5/8" COPPER CLAD STEEL, 8' LONG AND DRIVEN TO A DEPTH OF 18" BELOW FINISHED GRADE, MINIMUM, AND WHERE USED, SHALL BE BONDED USING #8 AWG BARE SOLID COPPER CONDUCTOR BY LISTED MEANS PER NEC 250.8 TO THE BONDING CONDUCTOR.
7. SPECIAL CASES MAY INCLUDE, BUT ARE NOT LIMITED TO, VANISHING EDGE POOLS, POOLS WITH PERIMITERS OF VARYING (VERTICAL) GRADES, DIMINISHED PERIMITER SURFACES LIKE EDGE PLANTERS, STOP/RETAINING WALLS, AND ZERO-LOT LINES. IN THESE CASES, THE BONDING CONDUCTOR SHALL BE INSTALLED IN ACCORDANCE WITH NEC 680.26, NOTE 1 (ABOVE), AND DIRECTION FROM THE AUTHORITY HAVING JURISDICTION (AHJ). THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE BONDING WITH THE AHJ IN THE DETERMINATION OF ITS APPLICATION OF THE NEC.
8. COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE POOL AND SPA REBAR AS SHOWN, 4 LOCATIONS, MINIMUM AT EACH SEPARATE BODY OF WATER, USING A #8 AWG BARE SOLID COPPER CONDUCTOR. FOR NON-CONDUCTIVE POOL SHELLS, BONDING AT 4 POINTS SHALL NOT BE REQUIRED.
9. COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE EQUIPMENT GROUND OF THE POOL PUMP MOTOR AND OTHER ELECTRICAL COMPONENTS AS REQUIRED BY NEC 680.26 (VERIFY LOCATIONS) USING #8 AWG BARE SOLID COPPER WIRE.
10. COPPER BONDING CONDUCTOR SHALL BE BONDED TO ALL METALLIC COMPONENTS OF THE POOL AND SPA, AND METAL STRUCTURES, INCLUDING, BUT NOT LIMITED TO, ALL HANDRAILS, DIVING BOARDS, AND LADDER GRABRAILS IN THE POOL AND SPA AND INCLUDE ALL METAL WIRING AND ALL FIXED METAL PARTS THAT ARE WITHIN 5' HORIZONTALLY OF THE INSIDE WALL OF THE POOL (SPA) AND 12' VERTICALLY ABOVE THE MAXIMUM WATER LEVEL OF THE POOL USING #8 AWG BARE SOLID COPPER WIRE.
11. ALL POOL AND SPA LIGHTING NICHES SHALL BE BONDED TO POOL AND SPA REBAR PER NEC 680. THE COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE REBAR AT BOTH THE POOL AND THE SPA, PER NOTE 8, ABOVE, WHICH SHALL, IN TURN PROVIDE BONDING OF THE LUMINAIRE NICHES.
12. ELECTRICAL CONTRACTOR SHALL CALL FOR THE INSPECTION OF THE BONDING OF THE POOL AND ATS PERIMITER SURFACES PRIOR TO COVER-UP OF THESE AREAS.

POOL BONDING NOTES

AMERICAN NATIONAL STANDARDS INSTITUTE

ANSI/NSPI - 3 1999 PERMANENTLY INSTALLED RESIDENTIAL SPAS

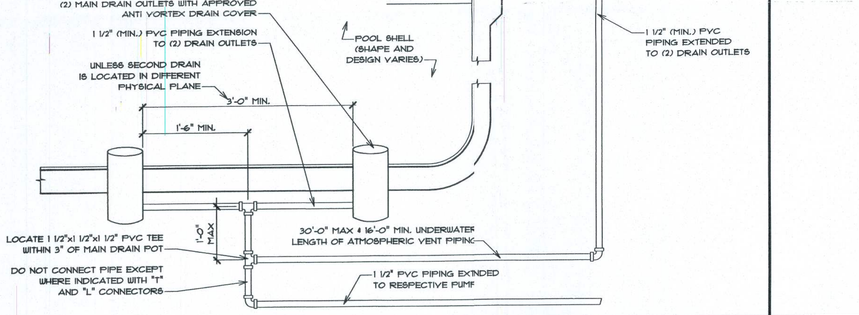
ANSI/NSPI - 5-03 STANDARD FOR RESIDENTIAL INGROUND SWIMMING POOLS

AMERICAN NATIONAL STANDARDS INSTITUTE
AMERICAN SOCIETY OF MECHANICAL ENGINEERS

2005 NATIONAL ELECTRICAL CODE

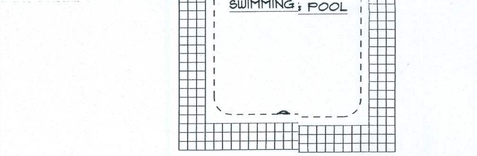
2004 FLORIDA RESIDENTIAL CODE - SECTION R4101.6

APPLICABLE CODES



DUAL MAIN DRAIN ATMOSPHERIC VENT

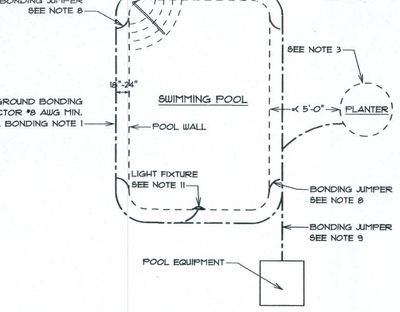
SCALE: 1/2" = 1'-0"



1. BONDING GRID MATERIAL TO BE #3 OR LARGER REBAR TIED IN PLACE A MINIMUM OF 12" O.C. OR 6x6x10 W.W.M. PLACED A MINIMUM OF 3'-0" FROM WATERS EDGE.
2. BONDING GRID TO SUPPORTED ON CHAIRS W/1 1/2" MIN. GROUND CLEARANCE.
3. BONDING GRID TO BE BONDED TO #8 GROUND WIRE.
4. PER NEC680.26(C)

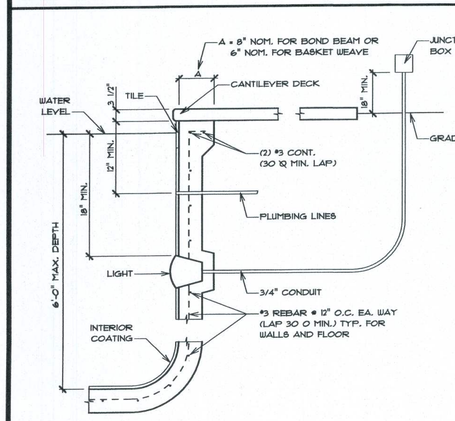
OPTIONAL POOL BONDING GRID

NOT TO SCALE



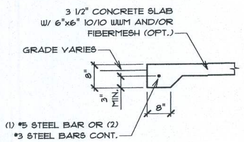
TYPICAL POOL BONDING PLAN

NOT TO SCALE



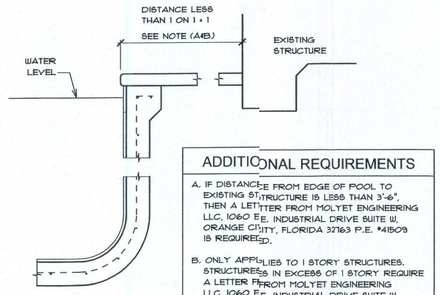
SECTION DETAIL

SCALE: 1/2" = 1'-0"



TURNED EDGE

SCALE: 1/2" = 1'-0"



ADDITIONAL REQUIREMENTS

A. IF DISTANCE FROM EDGE OF POOL TO EXISTING STRUCTURE IS LESS THAN 3'-6", THEN A LETTER FROM MOLYET ENGINEERING LLC, 1060 E.E. INDUSTRIAL DRIVE SUITE W, ORANGE CITY, FLORIDA 32763 P.E. #41509 IS REQUIRED.

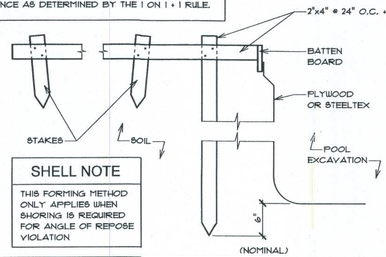
B. ONLY APPLIES TO 1 STORY STRUCTURES. STRUCTURES IN EXCESS OF 1 STORY REQUIRE A LETTER FROM MOLYET ENGINEERING LLC, 1060 E.E. INDUSTRIAL DRIVE SUITE W, ORANGE CITY, FLORIDA 32763 P.E. #41509.

TYPICAL WALL AND FLOOR WITHIN ANGLE OF REPOSE

NOT TO SCALE

DETAIL NOTES

SHORING REQUIRED POST EXCAVATION PRIOR TO APPLICATION OF SHOTCRETE/GUNITE. THE CONTRACTOR MUST PLACE ALL STEEL IN THE POOL WALL AT NO MORE THAN 6 INCHES ON CENTER IN BOTH DIRECTIONS IN THE CRITICAL AREA. THIS STEEL SHALL EXTEND 18" INTO COVE/BOTTOM. THE POOL SHELL WALL SHALL BE CONSTRUCTED AT 6" THICKNESS. STEEL MAT AND SHELL WALL SHALL BE EXTENDED ALONG THE CRITICAL AREA AND TO A POINT WHICH IS GREATER THAN THE MINIMUM REQUIRED DISTANCE AS DETERMINED BY THE 1 ON 1 + 1 RULE.



SHELL NOTE

THIS FORMING METHOD ONLY APPLIES WHEN SHORING IS REQUIRED FOR ANGLE OF REPOSE VIOLATION

1. POOL MUST MEET CODE SETBACK REQUIREMENTS.
2. COMPACTION TEST IS NOT REQUIRED EXCEPT WHEN POOL IS PLACED ON FILL. (COMPACTION SHALL BE 95% OF SOIL DENSITY)
3. REINFORCING STEEL BARS - ASTM A15-58T & A305-58T
4. ALL REINFORCING BARS, POOL & METAL DECK EQUIPMENT TO BE GROUNDED.
5. WALLS & FLOOR - PNEUMATICALLY PLACED OR MACHINE MIXED CONCRETE. (GRADE A, 2500 P.S.I. @ 28 DAYS) WALLS & FLOOR: 6" THICK (MIN.)
6. 3 1/2" THICK CONCRETE DECKING AROUND POOL TO BE REINFORCED WITH 6x6 WELDED WIRE MESH AND/OR FIBER MESH AND/OR #3 REBAR (MIN.) AT 24" O.C.
7. SEE PUMP & FILTER DATA SHEET FOR HYDRAULIC REQ.
8. ANY VARIATION OF STANDARD POOL CRITERIA MUST BE ACCOMPANIED BY LETTER FROM A LICENCED ENGINEER.
9. CONSTRUCTION MUST ADHERE TO FLORIDA RESIDENTIAL CODE SECTION R4101.11 REGARDING BARRIER REQ.
10. ALL POOLS EXCEEDING 8' OF DEPTH WILL REQUIRE SUPPLEMENTAL ENGINEERING.
11. NO DIVING BOARDS OR SLIDES
12. APPLIES TO BOTH POOLS AND SPAS
13. SYSTEM IS DESIGNED AND TESTED AT 60 GAL./MIN., 6 FEET PER SECOND.
14. THESE PLANS MAY BE USED FOR MASTER FILE PURPOSES.
15. THIS DESIGN HAS BEEN TESTED TO BE IN COMPLIANCE WITH FLORIDA RESIDENTIAL CODE SECTION R4101.6.6.3 MAXIMUM VACUUM DOES NOT EXCEED 4 1/2" OF MERCURY AND IS RELEASED IN LESS THAN 3 SECONDS.
16. THIS ENGINEERING EXPIRES ON 9.17.09 OR UNTIL SUPERCEEDED BY NEW CODE, WHICHEVER OCCURS FIRST.

GENERAL NOTES

386-532-8000
Molyet Engineering LLC
Bryan A. Molyet P.E.# 041509
Certificate of Authorization #
1060 East Industrial Drive
Suite W
Orange City, FL 32763

The standard of care for all professional services performed or furnished by Consultant under this Agreement will be the care and skill ordinarily used by members of Consultant's profession practicing under similar circumstances at the same time and in the same locality. Consultant makes no warranties, express or implied, under this Agreement or otherwise, in connection with Consultant's services. Client and Consultant each agree to indemnify and hold the other harmless, and to their respective officers, employees, agents and representatives from and against liability for all claims, losses, damages and expenses (including reasonable attorneys' fees and expenses) arising out of or relating to the extent claims, losses, damages or expenses are caused by the joint or concurrent negligence of the Client and Consultant, they shall be borne by each party in proportion to its negligence.

RESIDENTIAL DESIGN

SWIMMING POOL

Pool Contractor : Paradise Pool Company of Gainesville

Licence No :

Address :

Tel. No :

I Certify That I Have Reviewed These Plans And They Conform To:

Chapter 16 of the 2004 Florida Building Code
or
Chapter R301 of the 2004 Florida Residential Code

Design Criteria:	
Basic Wind Speed	120 mph
Wind Importance Factor	1
Building Category	II
Wind Exposure	B
Internal Pressure Coefficient	+/- 0.18
Components & Cladding Design Pressure	+25.9/-34.7
Garage Door Design Pressure	+25.9/-34.7

No Other Certifications Are Stated or Implied

Bryan A Molyet P.E.
Molyet Engineering LLC
1060 E Industrial Dr. Ste. W
Orange City, FL 32763
PE #41509
Certificate of Authority #0000805

Signature Affixed Only to Document Prepared Under Direct Supervision of Bryan Molyet

DATE:
March 25, 2008
DRAWN BY:
T.S.B.

09:54 AM
8.2.4
BorkPlan Lite
Swimming Pool

SHEET NO:
P-1