

DATE 06/04/2009

## Columbia County Building Permit

PERMIT

This Permit Must Be Prominently Posted on Premises During Construction

000027852

APPLICANT TOM BUSH PHONE 352 332-7665  
ADDRESS 3601 NW 97TH BLVD GAINESVILLE FL 32606  
OWNER MARK & PAULA MOSER PHONE 365-6714  
ADDRESS 266 SE TORTOISE CT LAKE CITY FL 32025  
CONTRACTOR M. TILLIS GIBSON JR PHONE 352 332-7665  
LOCATION OF PROPERTY 441S, TL CR 18, TR TORTOISE CT, FOLLOW DRIVE TO END  
TYPE DEVELOPMENT SWIMMING POOL ESTIMATED COST OF CONSTRUCTION 40526.00  
HEATED FLOOR AREA TOTAL AREA HEIGHT STORIES  
FOUNDATION WALLS ROOF PITCH FLOOR  
LAND USE & ZONING A-3 MAX. HEIGHT  
Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00  
NO. EX.D.U. 1 FLOOD ZONE N/A DEVELOPMENT PERMIT NO.

PARCEL ID 19-6S-18-10621-004 SUBDIVISION  
LOT BLOCK PHASE UNIT TOTAL ACRES

CPC044114  
Culvert Permit No. Culvert Waiver Contractor's License Number Applicant/Owner/Contractor  
EXISTING X09-153 BK HD N  
Driveway Connection Septic Tank Number LU & Zoning checked by Approved for Issuance New Resident  
COMMENTS: NOC ON FILE

Check # or Cash 40115

## FOR BUILDING &amp; ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power date/app. by Foundation date/app. by Monolithic date/app. by  
Under slab rough-in plumbing date/app. by Slab date/app. by Sheathing/Nailing date/app. by  
Framing date/app. by Insulation date/app. by  
Rough-in plumbing above slab and below wood floor date/app. by Electrical rough-in date/app. by  
Heat & Air Duct date/app. by Peri. beam (Lintel) date/app. by Pool date/app. by  
Permanent power date/app. by C.O. Final date/app. by Culvert date/app. by  
Pump pole date/app. by Utility Pole date/app. by M/H tie downs, blocking, electricity and plumbing date/app. by  
Reconnection date/app. by RV date/app. by Re-roof date/app. by

BUILDING PERMIT FEE \$ 205.00 CERTIFICATION FEE \$ 0.00 SURCHARGE FEE \$ 0.00  
MISC. FEES \$ 0.00 ZONING CERT. FEE \$ 50.00 FIRE FEE \$ 0.00 WASTE FEE \$  
FLOOD DEVELOPMENT FEE \$ FLOOD ZONE FEE \$ CULVERT FEE \$ TOTAL FEE 255.00  
INSPECTORS OFFICE Mark Eddle CLERKS OFFICE CH

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.



**Columbia County Building Permit Application**

For Office Use Only Application # 0905-49 Date Received 5/27 By JW Permit # 27852  
 Zoning Official BLK Date 02.06.09 Flood Zone N/A Land Use A-3 Zoning A-3  
 FEMA Map # N/A Elevation N/A MFE N/A River N/A Plans Examiner ND Date 6.4.09  
 Comments \_\_\_\_\_  
☒ NOC ☐ LEH ☐ Deed or PA ☐ Site Plan ☐ State Road Info ☐ Parent Parcel # \_\_\_\_\_  
☐ Dev Permit # \_\_\_\_\_ ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter  
 IMPACT FEES: EMS \_\_\_\_\_ Fire \_\_\_\_\_ Corr \_\_\_\_\_ Road/Code \_\_\_\_\_  
 School \_\_\_\_\_ = TOTAL Suspended

Septic Permit No. X-09-153- IN Re/ile Box Fax 352 332 0266  
 Name Authorized Person Signing Permit Tom Bosh Phone 352 332 7665  
 Address 3601 NW 97 BLVD GAINESVILLE FL. 32606  
 Owners Name MARK or PAULA MOSER Phone \_\_\_\_\_  
 911 Address 266 SE TORTOISE CT. LAKE CF. FL. 32025  
 Contractors Name FUNSTATE POOLS INC. M. TULLIS GIBSON JR. Phone 352-332-7665  
 Address 3601 NW 39 ST. GAINESVILLE FL. 32606  
 Fee Simple Owner Name & Address N/A  
 Bonding Co. Name & Address N/A  
 Architect/Engineer Name & Address FUNSTATE POOLS, DRISCOLL ENGINEERING INC.  
 Mortgage Lenders Name & Address N/A

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Progress Energy

Property ID Number 19-65-18-10621-004 Hx Estimated Cost of Construction 40,526.<sup>00</sup>  
 Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Unit \_\_\_\_\_ Phase \_\_\_\_\_  
 Driving Directions Go SOUTH on 441 To CR 18 TURN LEFT (EAST) for Several Miles  
To TORTOISE CT. on RIGHT (DRT RD) TURN ONTO TORTOISE FOLLOW ROAD  
keep Right UNTILL ARIVE AT RESIDENCE Number of Existing Dwellings on Property \_\_\_\_\_  
 Construction of INGROUND CONCRETE SWIMMING POOL Total Acreage \_\_\_\_\_ Lot Size \_\_\_\_\_  
 Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive Total Building Height \_\_\_\_\_  
 Actual Distance of Structure from Property Lines - Front 700 Side 220 Side 400 Rear 430  
 Number of Stories \_\_\_\_\_ Heated Floor Area \_\_\_\_\_ Total Floor Area \_\_\_\_\_ Roof Pitch \_\_\_\_\_

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.





## COLUMBIA COUNTY BUILDING DEPARTMENT

135 NE Hernando Ave., Suite B-21

Lake City, FL 32055

Office: 386-758-1008 Fax: 386-758-2160

Application Number \_\_\_\_\_

### NOTICE TO SWIMMING POOL OWNERS

I J. Mark Mose have been informed and I understand that prior to the final inspection approval and use of my pool, I will need all the inspections approved and the required fencing installed in accordance with applicable regulations. The Florida Building Code Chapter 4 Section 24 requires private residential swimming pools, hot tubs, or non-portable spas containing water over 24 inches deep to meet the following pool barrier safety feature requirements:

- The pool access must be isolated by a barrier at least 4 feet high and installed around the perimeter of the pool. Unless the pool is equipped with a safety cover complying with the specifications of American Society for Testing and Materials standard F-1346-91.
- The barrier shall not have any gaps or openings which would allow a child to crawl under, squeeze through or climb over and must be placed no less than 20 inches from the water's edge.
- Gates located in the pool barrier must open outward away from the pool and be both self-closing and self latching, with a release mechanism not less than 54" above the standing surface at the gate.
- The barrier must be separate from any other fence, wall, or other enclosure surrounding the yard unless the fence, wall or other enclosure or portion thereof is situated on the perimeter of the pool and meets the pool barrier requirements.
- Where a wall of a dwelling serves as part of the barrier **one** of the following shall apply:
  - 1) All doors and first floor windows with a sill height of less than 48 inches providing direct access from the home to the pool must be equipped with an alarm that has a minimum sound pressure rating of 85 decibels at 10 feet. The alarm shall sound immediately upon opening the window or door unless the temporary bypass mechanism is activated.
  - 2) **Or;** all doors providing direct access from the home to the pool must be equipped with a self-closing, self-latching device with a release mechanism located at least 54 inches above the floor.

According to Florida statutes, failure to comply with these requirements is a misdemeanor of the second degree, punishable by imprisonment for up to 60 days or a fine of up to \$500, except that no penalty shall be imposed if within 45 days after arrest or issuance of a summons or notice to appear, the pool is equipped with the aforementioned safety features and the responsible person attends a drowning prevention education program developed by the Florida Department of Health. I also understand that there are several inspections required in addition to a final inspection for my swimming pool.

J. Mark Mose 5/13/09  
Owner Signature / Date

Address: 266 SE TORTOISE Ct. LAKE CITY FL. 32025

[Signature] 5/13/09  
Contractor Signature / Date

CPC044114  
License Number



**Columbia County Building Permit Application**

**TIME LIMITATIONS OF APPLICATION :** An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

**FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment**

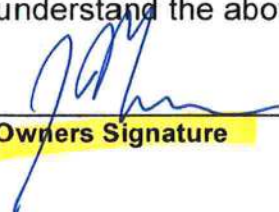
According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

**NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:**


**YOU ARE HEREBY NOTIFIED** as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

**WARNING TO OWNER:** YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

**OWNERS CERTIFICATION:** I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

  
\_\_\_\_\_  
**Owners Signature**

**CONTRACTORS AFFIDAVIT:** By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit.

 5/13/09  
\_\_\_\_\_  
**Contractor's Signature (Permitee)**

Contractor's License Number CPC044114  
Columbia County  
Competency Card Number \_\_\_\_\_

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 13 day of May 2009  
Personally known ☒ or Produced Identification \_\_\_\_\_

  
\_\_\_\_\_  
**State of Florida Notary Signature (For the Contractor)**

SEAL:



# Fun State Pools Inc.

332-POOL

3601 N.W. 97th Blvd.  
Gainesville, Florida 32606

REF. N

POOL SHAPE RANDOM JOB NO. \_\_\_\_\_  
 SIZE 18 x 36 DEPTH 3 TO 6 PERM 575 AREA \_\_\_\_\_  
 DECK 597 DECK SURFACE PAVER DECK C \_\_\_\_\_  
 COPING YES CANTILEVER NO  
 TILE YES COLOR YES OWN  
 STEP COLOR NO COLOR NO  
 TURNOVER 8hr FILTER TYPE PUM SIZE 150 PUMP \_\_\_\_\_  
 SKIMMER YES INLETS 6 MAIN DRAIN \_\_\_\_\_  
 GRAB RAILS NO HAND RAIL NO LADDER \_\_\_\_\_  
 POOL LIGHT YES VOLTS 120 WATT \_\_\_\_\_  
 DIVING BOARD NO SIZE NO  
 AUTOMATIC CHLORINATOR SALT TIMER YES FIL \_\_\_\_\_  
 CLEANING EQUIPMENT MANUAL SWIMOUT PLAN SIZE \_\_\_\_\_  
 ROPE & FLOATS NO ROPE ANCHORS NO  
 AUTOMATIC CLEANING SYSTEM LEGEND POOL HEATER \_\_\_\_\_  
 GAS LINE BY: OWNER SLIDE NO SIZE NO 3" \_\_\_\_\_

## SPA SPECIFICATIONS

SIZE 6' DEPTH 3' JETS 5  
 BLOWER NO SKIMMER NO LIGHT \_\_\_\_\_  
 SPILLWAY YES HEATER YES MAIN DRAIN \_\_\_\_\_  
 SCREEN ENCLOSURE OWNER ROOF OWNER DOOR \_\_\_\_\_  
 ALUM. ROOF OWNER GUTTER OWNER  
 REMOVE FENCE OWNER REPLACE FENCE OWNER TEMP. F \_\_\_\_\_  
 TREE REMOVAL OWNER STUMP REMOVAL OWNER  
 SHRUBS OWNER SAVE OWNER HAUL AWAY OWNER  
 SEPTIC TANK OWNER SEWER LINE OWNER  
 POWER LINE OWNER RELOCATE OWNER  
 GAS LINE OWNER WATER LINE OWNER  
 SPRINKLERS OWNER REROUTE OWNER CAP \_\_\_\_\_  
 PHONE LINE OWNER ACCESS PERMISSION OWNER  
 RETAINING WALL OWNER

Custom Design...FUN-STATE POOLS

NAME MOSEY

ADDRESS 216 SE TORTOISE CT.

CITY LAKE CITY PHONE: PAULA

Part 2 of contract dated \_\_\_\_\_

LOT \_\_\_\_\_ BLOCK \_\_\_\_\_ SUB \_\_\_\_\_

BOOK \_\_\_\_\_ PAGE \_\_\_\_\_

ALSO DESCRIBED AS # \_\_\_\_\_

CUSTOMER'S SIGNATURE 19-65-18-10621-00

OWN. BY Tom Pash

DATE \_\_\_\_\_

CHK BY \_\_\_\_\_

State Pools Inc.

Voice (352) 332-7665

Fax (352) 332-0266

tom@funstatepoolsinc.com

Tom Pash

NORTH

ROAD

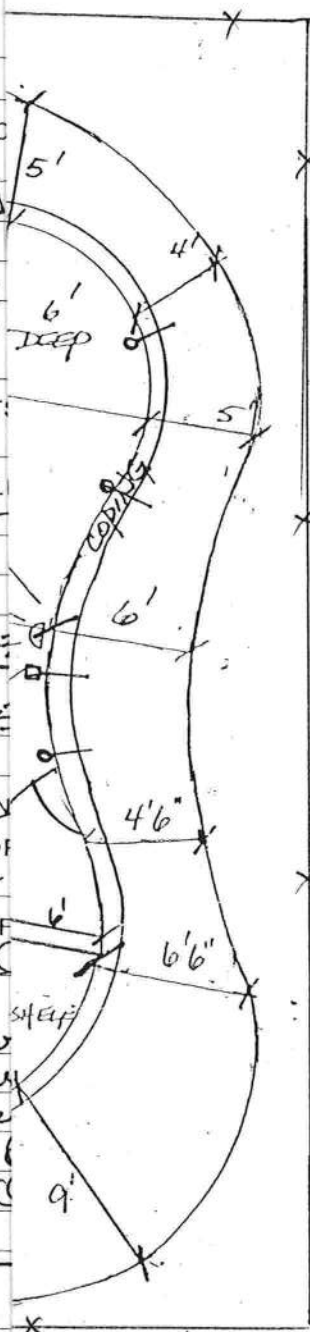
TO HOME

100'

PERIMETER FENCE

GATE

NO SCREEN



## NOTICE OF COMMENCEMENT

This Instrument Prepared By:

Name: Fun State Pools, Inc. Tom Bush

Address: 3601 NW 97 Blvd G'ville FL 32606

Permit No: \_\_\_\_\_

Tax Folio No: 19-65-18-10621-004 4x

STATE OF: Florida

COUNTY OF: Alachua

Inst: 200912008737 Date: 5/27/2009 Time: 12:04 PM

✓ DC, P. DeWitt Cason, Columbia County Page 1 of 1 B: 1173 P: 2637

THE UNDERSIGNED HEREBY gives notice that improvement(s) will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. DESCRIPTION OF PROPERTY: Street Address: 2660 SE TORTOISE CT. LAKE CITY FL. 32025

Legal Description: \_\_\_\_\_

2. GENERAL DESCRIPTION OF IMPROVEMENT(S): INGROUND CONCRETE SWIMMING POOL

3. OWNER INFORMATION: a.) Name: MARK PAULA MOSER Address: 2660 SE TORTOISE CT.

b.) Interest in Property: Fee Simple

c.) Fee Simple Titleholder (if other than owner) Name: \_\_\_\_\_

Address: \_\_\_\_\_

4. CONTRACTOR: a.) Name: Fun State Pools, Inc

Address: 3601 NW 97 Blvd G'ville 32606

b.) Phone: 352-332-7665

5. SURETY: a.) Name: N/A

Address: N/A

b.) Amount of bond \$: N/A

c.) Phone: N/A

6. LENDER: a.) Name: N/A

Address: N/A

b.) Phone: N/A

7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a) 7., Florida Statutes:

a.) Name: N/A

Address: N/A

b.) Phone: N/A

8. In addition to himself, Owner designates the following person(s) to receive a copy of Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes.

a.) Name: N/A

Address: N/A

b.) Phone: N/A

9. Expiration date of notice of commencement (the expiration date is one (1) year from the date of recording unless a different date is specified.) N/A

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

Signature of Owner or Owner's Authorized Officer/Director  
Partner/Manager

Signatory's Title/ Office \_\_\_\_\_

The foregoing instrument was acknowledged before me this 13 day of May, 2009 (year)

by Mark Moser (name of person) as \_\_\_\_\_ (type of authority, e.g. officer,  
trustee, attorney in fact) for \_\_\_\_\_ (name of party on behalf of whom instrument was executed).



Signature of Notary Public - State of Florida  
Print, Type, or Stamp Commissioned Name of Notary Public  
Commission Number: DD 768706  
Personally Known \_\_\_\_\_ or Produced Identification \_\_\_\_\_

Verification Pursuant to Section 92.525, Florida Statutes

Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

Signature of Natural Person Signing Above







PROFESSIONAL SERVICES  
DRISCOLL ENGINEERING, INC.  
PO BOX 357577  
Gainesville, Florida 32606  
(352) 331-1513 E.B. 8690

PLANS AND SPECIFICATIONS

The plans and specifications presented herein are only for the anticipated construction at the locations shown. If construction plans change, the Design Professional should be notified so the plans and specifications can be re-evaluated. The Design Professional should be given the opportunity to review final plans and specifications to see if the intent of the plans and specifications has been followed and/or if Supplement details and recommendations are needed. The Design Professional warrants that the plans and specifications contained herein, have been prepared in accordance with generally accepted professional engineering practice. No other warranties are implied or expressed.

CORPORATE PROTECTION

It is understood and agreed that the Design Professional's Basic Services under this agreement do not include project observation or review of the Contractor's performance or any other construction phase services will be provided by the client. The client assumes all responsibility for interpretation of the contractor documents and for construction observation and supervision and waives any claims against the Design Professional that may in any way connected thereto.

In addition, The client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless from any loss, claim or cost including reasonable attorney's fees and cost of defense, arising or resulting from the performance of such services by otherperson or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to contract documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct thereof.

OWNERSHIP OF INSTRUMENTS OF SERVICE

All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Design Professional as instruments of service shall remain property of the Design Professional. The Design Professional shall retain all common law, statutory and other reserved rights, including the copyright thereto.

DEFECTS IN SERVICE

The client shall promptly report to the Design Professional any defects or suspected defects in the Design Professional's work or services of which the client becomes aware, so that the Design Professional may take measures to minimize the consequences of such defect. The client warrants that he or she will impose similar notification requirement on all contractors in his or her client/contractor contract and shall require all subcontractors at any level to contain a like requirement. Failure by the client's contractors or subcontractors to notify the Design Professional, shall relieve the Design Professional of the cost of remedying the defects above the sum such remedy would have cost had prompt notification been given.

VERIFICATION OF EXISTING CONDITIONS

Inasmuch as the remodeling and/or rehabilitation of an existing building requires certain assumptions be made regarding existing conditions, and because some of these assumptions may not be verifiable without expending additional sums of money or destroying otherwise adequate serviceable portions of the building, The client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless in any claim, liability or cost (including attorney's fees and cost of defense) for injury or economic loss arising out of professional services provided under this agreement, except only those damages, liability, or cost attributable to the sole negligence or willful misconduct of the Design Professional.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI-318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI-301) LATEST EDITION.

2. CONCRETE MIX "X" SHALL BE USED FOR FOUNDATION AND WALLS, FOOTINGS AND INTERIOR SLABS ON GRADE. CONCRETE MIX "B" SHALL BE USED FOR EXTERIOR SLABS, CURBS AND ALL OTHER EXTERIOR CONCRETE. ALL CONCRETE MIXES SHALL COMPLY WITH ASTM C-1191. MIXES REDUCING ADMIXTURE CONFORMING TO ASTM C-494 AIR-ENTRAINING ADMIXTURE SHALL SHALL CONFORM TO ASTM C-260.

MIX A	MIX B
ULTIMATE COMPRESSIVE STRENGTH @ 28 DAYS	3000 psi.
SLUMP RANGE	4"-1", 3"-1"
MAXIMUM AGGREGATE	1"
ENTRAINED AIR	NONE
DRY WEIGHT PER CUBIC FT.	150#

3. ALL CONCRETE SHALL CURE FOR A MINIMUM OF 28 DAYS. IF FORMS FOR VERTICAL SURFACES ARE REMOVED PRIOR TO THE END OF THE CURING PERIOD, SPRAY SURFACES WITH LIQUID MEMBRANE DURING COMPOUND.

4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40 (F-44ksi). LAP CONTINUOUS BARS FOR TENSION LAP SPICE PER ACI-318 UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCEMENT COVER FOR CONCRETE REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI-318, PARAGRAPH 7.7.

5. WELDED WIRE FABRIC SHALL BE USED IN DRIVEWAY SLABS ON GRADE. LAP SHEETS ON MESH SPACE AND WIRE TIE ADJACENT SHEETS TOGETHER SECURELY. CUT ALTERNATE REINFORCEMENT AT CONTROL JOINTS.

6. ALL SLABS ON GRADE SHALL HAVE CONSTRUCTION CONTROL JOINTS NOT TO EXCEED 15'-0" SPACING, UNLESS OTHERWISE NOTED.

7. ALL SIDEWALKS SHALL HAVE CONSTRUCTION OR CONTROL JOINTS NOT TO EXCEED 5'-0" SPACING U.N.O.

MASONRY CONSTRUCTION NOTES

1. CONCRETE MASONRY WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-02/ASCE5-02) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1-02/ASCE5-03).

2. CONCRETE MASONRY UNITS SHALL BE TYPE 1 AND COMPLY WITH "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS (ASTM C90-90)

3. THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY (fm) AS DETERMINED BY THE UNIT STRENGTH METHOD SHALL BE 1500 PSI.

4. MORTAR SHALL CONFORM TO ASTM C270, TYPE M MORTAR SHALL BE USED UNLESS OTHERWISE NOTED. TYPE S MORTAR SHALL BE USED WITH MASONRY IN CONTACT WITH EARTH.

5. MASONRY COLUMN REINFORCEMENT SHALL HAVE #2 TIES IN THE BED JOINTS AT 6" O.C. UNLESS OTHERWISE NOTED.

6. GROUT FOR FILLING BLOCK CORES AND BOND BEAMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. AT THE AGE OF 28 DAYS.

7. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. AND IN THE FIRST COARSE ABOVE AND BELOW OPENINGS, UNLESS OTHERWISE NOTED.



DRISCOLL ENGINEERING, INC.  
CONSULTING ENGINEERS

PO BOX 357577  
GAINESVILLE, FL. 32606  
PH (352) 331-1513  
EB 8690

PREPARED FOR  
COLUMBIA CO. FL  
BUILDING DEPT.  
FILE COPY

CONTRACTOR:  
FUNSTATE POOLS  
3601 N.W. 97th BLVD  
GAINESVILLE, FL  
352-332-7665

ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

INDEX

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GENERAL INFORMATION  
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SHEET:4 DETAIL DRAWINGS  
SHEET:5 DETAIL DRAWINGS

THESE DETAILS HAVE BEEN PREPARED IN COMPLIANCE  
WITH REQUIREMENTS OF THE 2007 FLORIDA BUILDING CODE RESIDENTIAL  
AND THE 2009 AMENDMENTS TO CHAPTER 41 TO THE BEST OF MY KNOWLEDGE

5-15-09  
MICHAEL DRISCOLL P.E.  
FL REG. #43922

CS SHEET



WILLIAM JOHNSON  
CUSTOM DRAFTING  
16908 N.E. 21st STREET  
GAINESVILLE, FL 32609  
PH (352) 485-1942 (352) 494-2041

RESIDENTIAL SWIMMING POOL & SPA DESIGN  
FOR FUN STATE POOLS USE ONLY



DRISCOLL ENGINEERING, INC.  
CONSULTING ENGINEERS  
PO BOX 357577  
GAINESVILLE, FL 32606  
PH (352) 331-1513  
FX (352) 595-3366  
EB 8690



DRISCOLL ENGINEERING, INC.  
Post Office Box 357577  
Gainesville, Florida 32635-7577  
Phone (352) 331-1513 Fax (352) 505-3366  
EB#8690

GENERAL NOTES FOR RESIDENTIAL SWIMMING POOLS

- Design, construction and workmanship shall be in conformity with the requirements of the 2007 Florida Building Code with 2009 supplement, Chapter 41, ANS/NSPI 3; ANS/NSPI 4; ANS/NSPI 5; and ANS/NSPI 6; ANS/APSP-7.
- Every swimming pool shall be equipped complete with approved mechanical equipment consisting of filter, pump, piping valves and component parts.
- Pool piping shall be designed so the water velocity will not exceed 10 feet per second (3048 mm/s) for pressure piping and 8 feet per second (2438 mm/s) for suction piping, except that the water velocity shall not exceed 8 feet per second (2438 mm/s) in copper tubing.
- All pool and spa suction inlets shall be provided with a cover that has been tested and accepted by a recognized testing facility and comply with ANS/ASME A112.19.8M, Suction Filings for Use in Swimming Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances.  

Exceptions:  
1. Surface Skimmers.  
2. Grate or grates having a minimum area of 144 square inches (.09 mm<sup>2</sup>) or greater.
- A minimum of two suction inlets shall be provided for each pump in the suction inlet system, separated by a minimum of 3 feet (914 mm) or located on two different planes, i.e., one on the bottom and one on the vertical wall, or one each on two separate vertical walls. These suction inlets shall be plumbed such that water is drawn through them simultaneously through a common line to the pump. When a skimmer is used in conjunction with a single main outlet to meet the requirements of this section, the common suction line must be in compliance with Section R4101.5.6.3 such that a vacuum cannot be drawn on any single main outlet or skimmer.
- Pumps shall be installed in accordance with manufacturer's recommendations.
- Pump impellers, shafts, wear rings and other working parts shall be of corrosion-resistant materials.
- All pool piping shall be tested and proved tight to the satisfaction of the administrative authority, under a static water or air pressure test of not less than 35 pounds per square inch (ps) (241 kPa) for 15 minutes.  

Exception: Circulating pumps need not be tested as required in this section.
- All pools whether public or private shall be provided with a ladder or steps in the shallow end where water depth exceeds 24 inches (610 mm). In private pools where water depth exceeds 5 feet (1524 mm), there shall be ladders, stairs or underwater benches/swim-outs in the deep end.  

Where manufactured diving equipment is to be used, benches or swim-outs shall be recessed or located in a corner.

Exception: In private pools having more than one shallow end, only one set of steps is required. A bench, swim-out or ladder may be used at all additional shallow ends in lieu of an additional set of steps.
- The entire design of matched components shall have sufficient capacity to provide a complete turnover of pool water in 12 hours or less.
- Approved surface skimmers are required and shall be installed in strict accordance with the manufacturer's installation instructions. Skimmers shall be installed on the basis of one per 800 square feet (74 m<sup>2</sup>) of surface area or fraction thereof, and shall be designed for a flow rate of at least 25 gallons per minute (gpm) (1.6 L/s) per skimmer.
- Approved manufactured inlet fittings for the return of re-circulated pool water shall be provided on the basis of at least one per 300 square feet (28 m<sup>2</sup>) of surface area. Such inlet fittings shall be designed and constructed to insure an adequate seal to the pool structure and shall incorporate a convenient means of sealing for pressure testing of the pool circulation piping. Where more than one inlet is required, the shortest distance between any two required inlets shall be at least 10 feet (3048 mm).
- Filters shall be equipped with a pressure gauge and an air release system.
- Piping shall be schedule 40 PVC, NSFpw minimum.
- Contractor shall install piping so as to not exceed the limits imposed by the tables shown.
- All electrical design is by others.
- Minimum soil bearing capacity shall be a min. 2000 psf.
- Contractor shall submit completed total or simplified total dynamic head calculation worksheet with each permit application to the building dept.

- Notes:
- If a variable speed pump is used, use the max. pump flow in calculations.
  - For side wall drains, use appropriate side wall drain flows published by manufacturer.
  - Insert manufacturer's name and approved maximum flow.
  - See installation instructions for number of pipes to be used.
  - In-floor suction outlet coverings must conform to most recent edition of ASME/ANSI A17.19.8 and be embossed with that edition approval.
  - Pump & filter make, model and location can not change without submitting a revised plans and TDH worksheet.

TDH Calculation Options  
For each pump

☐ Check one:  
Simplified Total Dynamic Head (STDH)  
Complete STDH Worksheet-Fill in all blanks.

☐ Total Dynamic Head (TDH)  
Complete Program or other calc. Fill in required blanks on worksheet & attach calculations.

Flow and Friction Loss Per Foot Schedule 40 PVC Pipe					
Pipe Size	Velocity-Feet Per Second		8 fpm		
	6 fpm	0.26'	21 gpm	0.66'	28 gpm
1.5"	16 gpm	0.16'	50 gpm	0.28'	62 gpm
2"	37 gpm	0.15'	62 gpm	0.25'	103 gpm
2.5"	62 gpm	0.09'	117 gpm	0.15'	146 gpm
3"	68 gpm	0.09'	181 gpm	0.14'	227 gpm
4"	138 gpm	0.05'	313 gpm	0.10'	392 gpm
6"	234 gpm	0.04'	712 gpm	0.04'	890 gpm

Total Head In Feet Conversion Chart  
Inches Mercury (Vacuum Gauge)

	0	2	4	6	8	10	12	14	16	18
0	0.0	2.3	4.5	6.8	9.0	11.3	13.6	15.8	18.1	20.3
1	2.3	4.6	6.8	9.1	11.4	13.6	15.9	18.1	20.4	22.7
2	4.6	6.9	9.1	11.4	13.7	15.9	18.2	20.4	22.7	25.0
3	6.9	9.2	11.5	13.7	16.0	18.2	20.5	22.8	25.0	27.3
4	9.2	11.5	13.8	16.0	18.3	20.5	22.8	25.1	27.3	29.6
5	11.5	13.8	16.1	18.3	20.6	22.8	25.1	27.4	29.6	31.9
6	13.9	16.1	18.4	20.6	22.9	25.2	27.4	29.7	31.9	34.2
7	16.2	18.4	20.7	23.0	25.2	27.5	29.7	32.0	34.3	36.5
8	18.5	20.7	23.0	25.3	27.6	29.8	32.0	34.3	36.6	38.8
9	20.8	23.1	25.3	27.6	29.8	32.1	34.3	36.6	38.9	41.1
10	23.1	25.4	27.6	29.9	32.1	34.4	36.7	38.9	41.2	43.4
11	25.4	27.7	29.9	32.2	34.5	36.7	39.0	41.2	43.5	45.8
12	27.7	30.0	32.2	34.5	36.8	39.0	41.3	43.5	45.8	48.1
13	30.0	32.3	34.6	36.9	39.1	41.3	43.6	45.9	48.1	50.4
14	32.3	34.6	36.9	39.1	41.4	43.6	45.9	48.2	50.4	52.7
15	34.6	36.9	39.2	41.4	43.7	45.9	48.2	50.5	52.7	55.0
16	37.0	39.2	41.5	43.7	46.0	48.3	50.5	52.8	55.0	57.3
17	39.3	41.5	43.8	46.1	48.3	50.6	52.8	55.1	57.4	59.6
18	41.6	43.8	46.1	48.4	50.6	52.9	55.1	57.4	59.7	61.9
19	43.9	46.2	48.4	50.7	52.9	55.2	57.4	59.7	62.0	64.2
20	46.2	48.5	50.7	53.0	55.2	57.5	59.8	62.0	64.3	66.5
21	48.5	50.8	53.0	55.3	57.6	59.8	62.1	64.3	66.6	68.9
22	50.8	53.1	55.3	57.6	59.9	62.1	64.4	66.6	68.9	71.2
23	53.1	55.4	57.7	59.9	62.2	64.4	66.7	69.0	71.2	73.5
24	55.4	57.7	60.0	62.2	64.5	66.7	69.0	71.3	73.5	75.8
25	57.8	60.0	62.3	64.5	66.8	69.1	71.3	73.6	75.8	78.1
26	60.1	62.3	64.6	66.8	69.1	71.4	73.6	75.9	78.1	80.4
27	62.4	64.6	66.9	69.2	71.4	73.7	75.9	78.2	80.5	82.7
28	64.7	66.9	69.2	71.5	73.7	76.0	78.2	80.5	82.8	85.0
29	67.0	69.3	71.5	73.8	76.0	78.3	80.5	82.8	85.1	87.3
30	69.3	71.6	73.8	76.1	78.3	80.6	82.9	85.1	87.4	89.6
31	71.6	73.9	76.1	78.4	80.7	82.9	85.2	87.4	89.7	92.0
32	73.9	76.2	78.4	80.7	83.0	85.2	87.5	89.7	92.0	94.3
33	76.2	78.5	80.7	83.0	85.3	87.5	89.8	92.0	94.3	96.6
34	78.5	80.8	83.1	85.3	87.5	89.8	92.1	94.4	96.6	98.9
35	80.9	83.1	85.4	87.6	89.9	92.2	94.4	96.7	98.9	101.2

CERTIFICATION  
I certify that to the best of my knowledge, these master plan, residential pool design requirements are in compliance with the 2007 Florida Building Code Residential with 2009 supplement, Chapter 41.

5-15-09

MICHAEL E. DRISCOLL P.E.  
FL REG. #43922



WILLIAM JOHNSON  
CUSTOM DRAFTING  
16909 N.E. 21st STREET  
GAINESVILLE, FL 32609  
PH (352) 485-1942 (352) 494-2041

RESIDENTIAL SWIMMING POOL & SPA DESIGN  
FOR FUN STATE POOLS USE ONLY

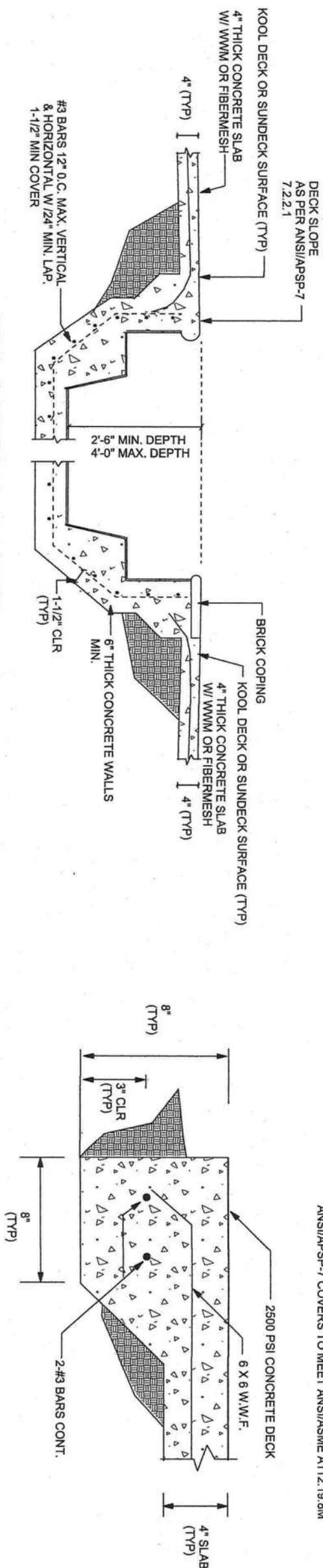


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EB 8690



ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

POOL / SPA MAIN DRAINS  
2- MAIN DRAINS REQUIRED, NO CLOSER THAN  
3' PLUMBED ON COMMON LINE. AS PER F.B.C. #424.2.6.4  
ANSI/APSP-7 COVERS TO MEET ANSI/ASME A112.19.8M

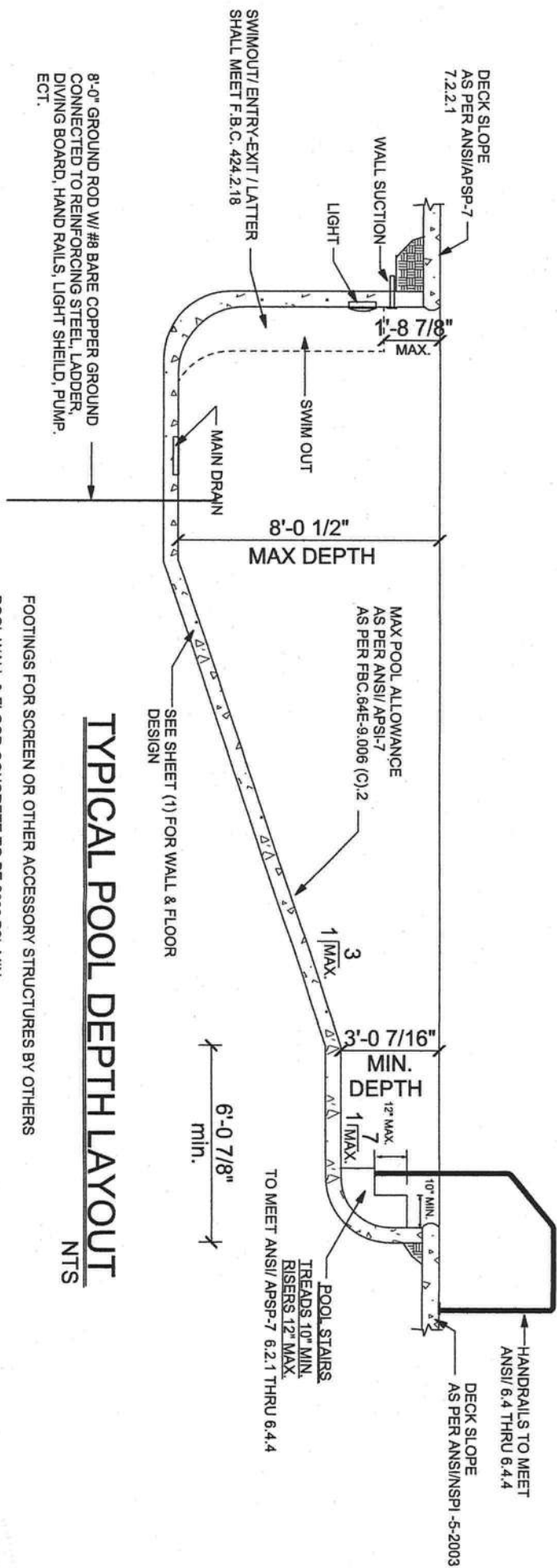


## SPA DEPTH LAYOUT

NTS

## THICKENED EDGE

8" X 8" W/ 2 #3 BAR CONT.  
NTS



## TYPICAL POOL DEPTH LAYOUT

NTS

FOOTINGS FOR SCREEN OR OTHER ACCESSORY STRUCTURES BY OTHERS

POOL WALL & FLOOR CONCRETE TO BE 3000 PSI. MIN.

POOL DECK CONCRETE TO BE 2500 PSI. MIN

ALL PIPING SHALL BE SCH 40 PVC PIPE

ALL SUCTION DEVICES WALL FITTINGS, MAIN DRAINS, ETC. SHALL BE 2" DIA. SCH 40 PVC PIPE.

MAX SUCTION PIPE VELOCITY SIX FEET PER SECOND.

5-15-09

MICHAEL E. DRISCOLL P.E.  
FL REG. #43922

3 SHEET



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FOR FUN STATE POOLS USE ONLY

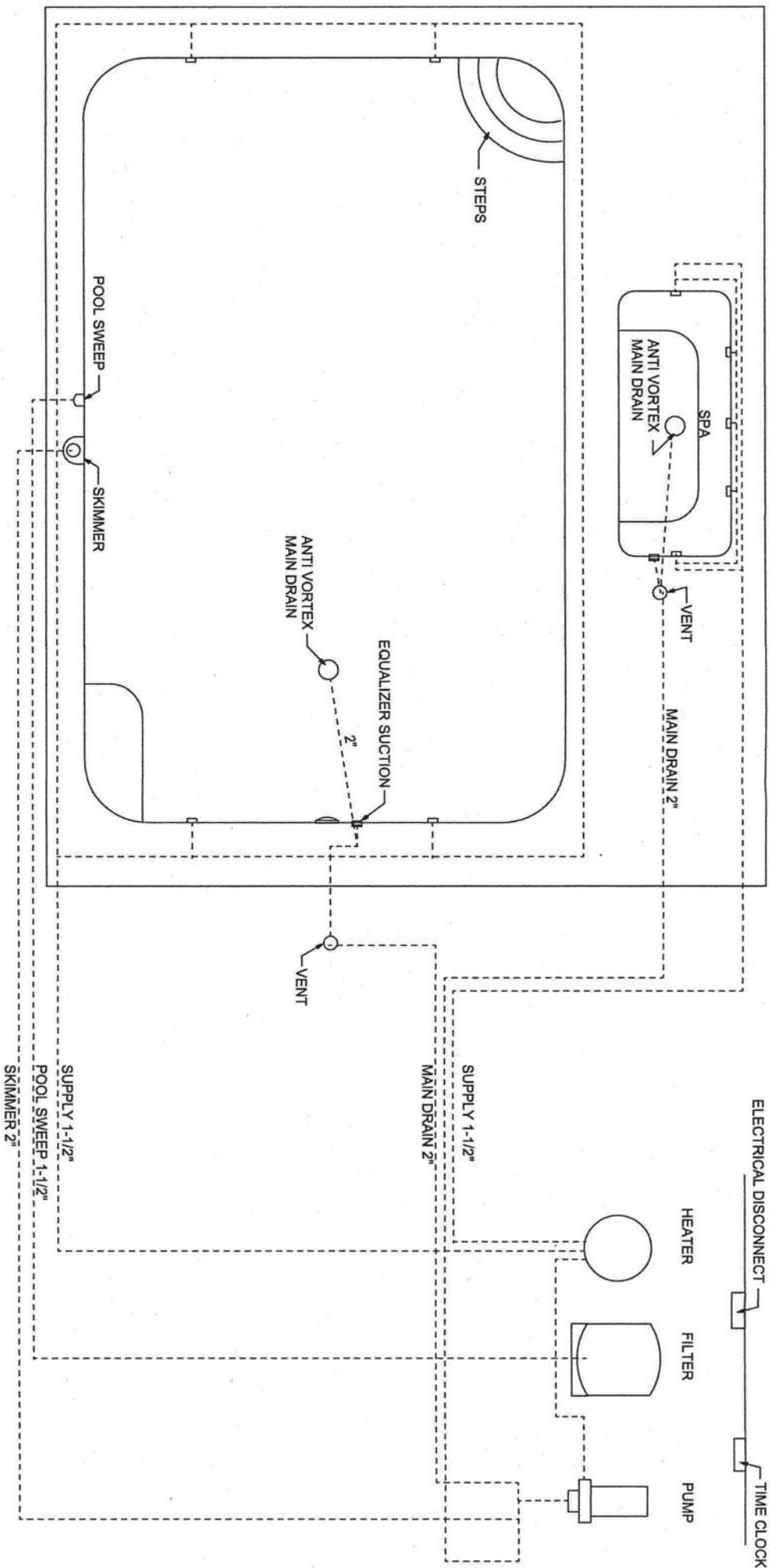


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ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

MAIN DRAINS SHALL MEET  
FBC 2007 # 424.2.6.6.4 & ANSI/APSP-7  
MAIN DRAIN COVERS SHALL MEET  
ASME A112.19.8.M 2007



## TYPICAL LAYOUT

NTS

FOOTINGS FOR SCREEN OR OTHER ACCESSORY STRUCTURES BY OTHERS  
POOL WALL & FLOOR CONCRETE TO BE 3000 PSI, MIN.  
POOL DECK CONCRETE TO BE 2500 PSI, MIN.  
ALL PIPING SHALL BE SCH 40 PVC PIPE  
ALL SUCTION DEVICES WALL FITTINGS, MAIN DRAINS, ETC. SHALL BE 2" DIA. SCH 40 PVC PIPE.  
MAX SUCTION PIPE VELOCITY SIX FEET PER SECOND.

ALL ELECTRICAL DESIGN BY OTHERS  
ANY ELECTRICAL COMPONENTS SHOWN  
ON DRAWINGS ARE FOR DIAGRAMMATICAL  
PURPOSE ONLY.

5-15-09  
MICHAEL E. DRISCOLL P.E.  
FL REG. #48922

RESIDENTIAL SWIMMING POOL & SPA DESIGN  
FOR FUN STATE POOLS USE ONLY

4

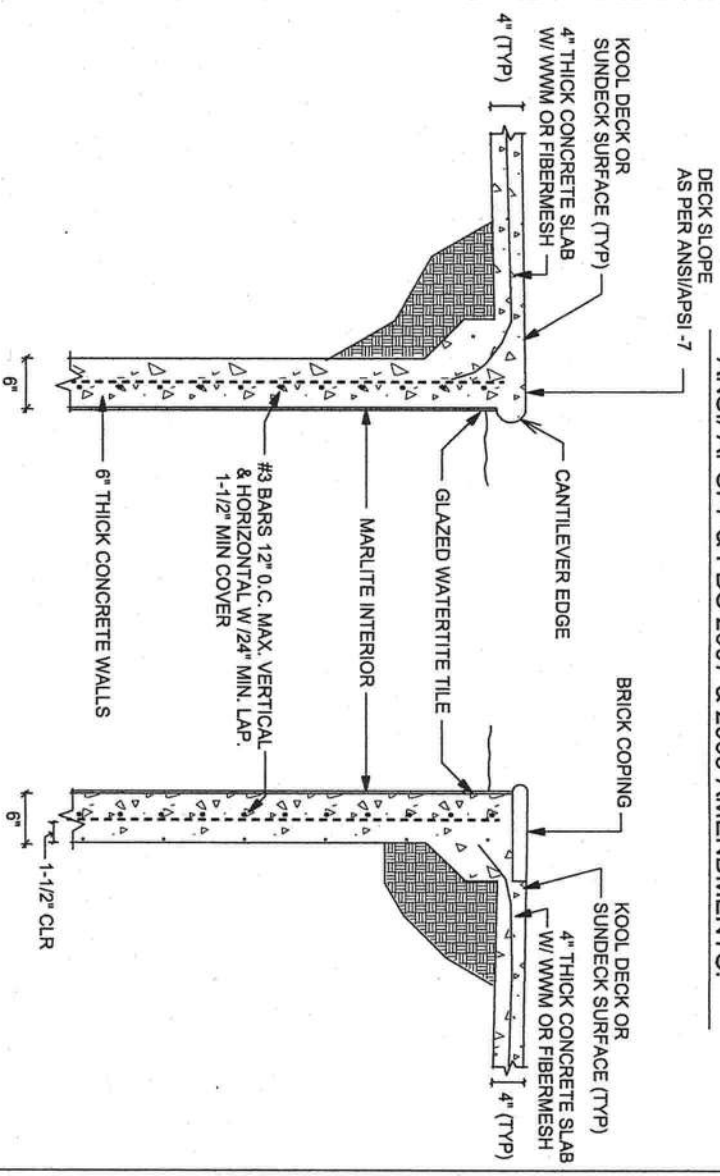


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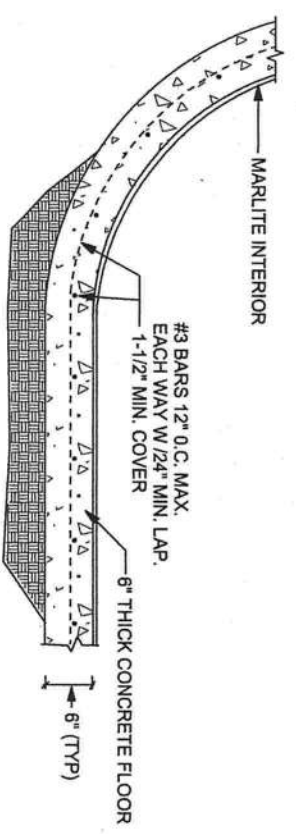
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FX (352) 555-3366  
EIR 8880

ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

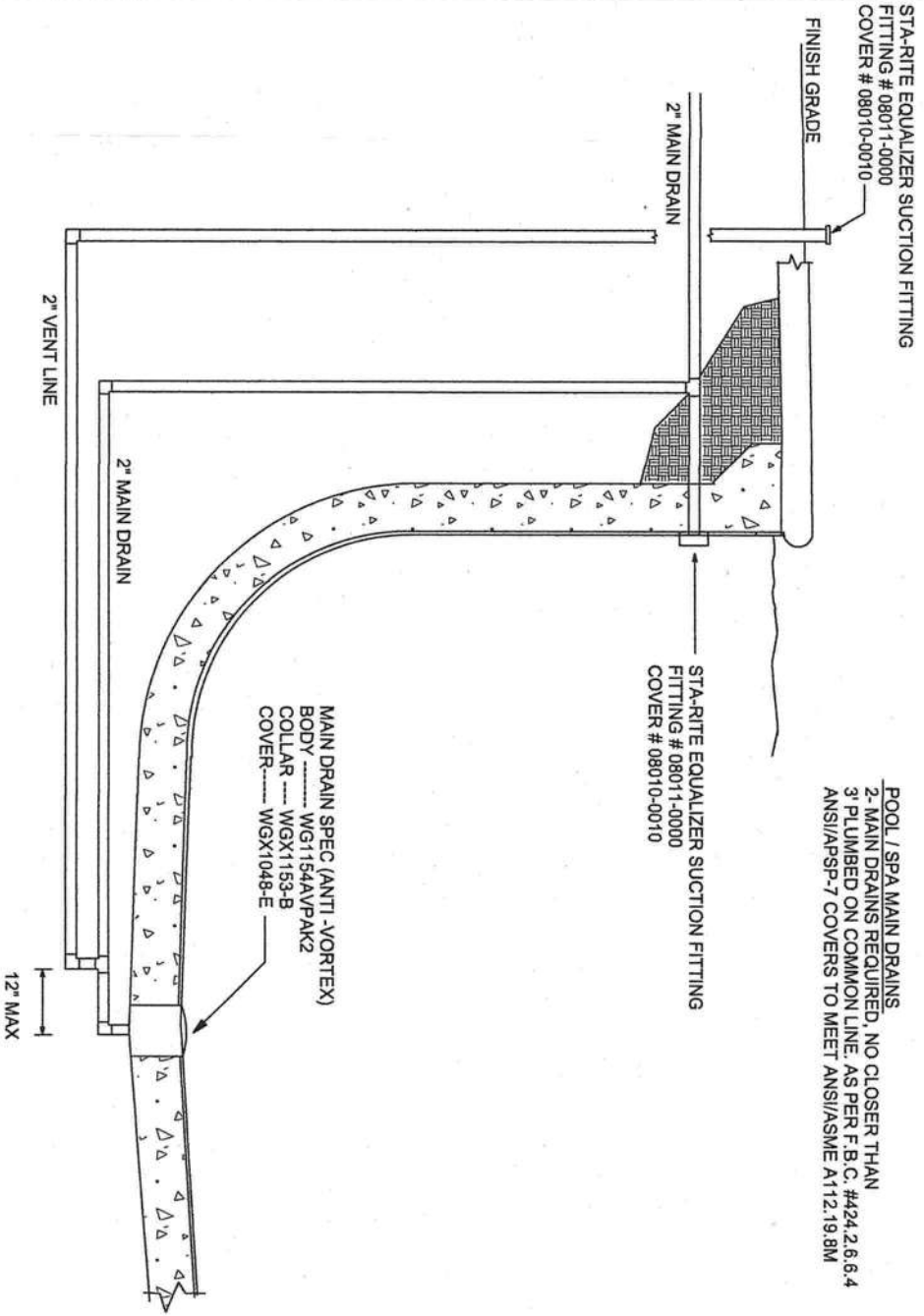


TYP WALL SECTIONS  
NTS

FLOOR SECTION (TYP)  
NTS



ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.



DUAL MAIN DRAIN @ ATMOSPHERIC VENT  
NTS

FOOTINGS FOR SCREEN OR OTHER ACCESSORY STRUCTURES BY OTHERS  
POOL WALL & FLOOR CONCRETE TO BE 3000 PSI, MIN.  
POOL DECK CONCRETE TO BE 2500 PSI, MIN.  
ALL PIPING SHALL BE SCH 40 PVC PIPE  
ALL SUCTION DEVICES WALL FITTINGS, MAIN DRAINS, ETC. SHALL BE 2\"/>

5-15-09  
MICHAEL E. DRISCOLL, P.E.  
FL REG. #45922

5-18-09



ANSI/APSP-7 2006 Specifies three methods for determining the maximum system flow rate. The following simplified TDH calculation is one of the methods specified.

### Simplified Total Dynamic Head (TDH) Calculation Worksheet

#### Determine Maximum System Flow Rate:

Minimum Flow Rate Required: 35 gpm Per Skimmer (Required: 1 skimmer per 800 sf of surf. area)

- Calculate Pool Volume:  $575 \times 4.5 \times 7.48 \text{ (gal./cubic foot)} = 19355$
  - Determine preferred Turnover Time in hours:  $8 \times 60 \text{ (min. / hr.)} = 480$
  - Determine Max Flow Rate:  $19355 / 480 = 40.32$
  - Spa Jets:  $5 \times 20 \text{ gpm per jet} = 100$  flow rate.
- (For single pump pool/spa combo, use the higher of No. 3 or No. 4 in the following calculations for the pool & spa)

#### Determine Pipe Sizes:

Branch Piping to be 2" inch to keep velocity @ 6 fps max. at 82 gpm Maximum System Flow Rate.

Trunk Piping to be 2" inch to keep velocity @ 8 fps max. at 82 gpm Maximum System Flow Rate.

Return Piping to be 2" inch to keep velocity @ 10 fps max. at 103 gpm Maximum System Flow Rate.

#### Determine Simplified TDH:

- Distance from pool to pump in feet: 10'
- Friction loss (in suction pipe) in 2" inch pipe per 1 ft. @ 82 gpm = .10 (from pipe flow/friction loss chart)
- Friction loss (in return pipe) in 2" inch pipe per 1 ft. @ 103 gpm = .16 (from pipe flow/friction loss chart)
- $10' \times .10 = 1.0$
- $10' \times .16 = 1.60$

TDH in Piping: 2.60

Filter loss in TDH (from filter data sheet): 7

Header loss in TDH (from header data sheet): 7.80

Total all other loss: 44.52

Total Dynamic Head (TDH): 54.12

#### Selected Pump and Main Drain Cover:

Pump selection: 514-110 V5-3050 using pump curve for TDH & System Flow Rate

Main Drain Cover: 3204114 XXX (System Flow Rate must not exceed approved cover flow rates)

Notes: Minimum system flow based on min. flow per skimmer of 35 gpm.

Determine the Number and Type of Required In-Floor Suction Outlets:

Check all that apply.

- ☐ 3'-0" ☐ suction outlets @ ☐ gpm max. flow (see note 2).
- ☐ 3 ☐ suction outlets @ ☐ gpm max. flow (see note 3).
- ☐ 32" ☐ channel drain @ ☐ 316 gpm w/ ☐ 2 ports (see note 4).

#### TDH Calculation Options

For each pump

- ☒ Check one.
- ☒ Simplified Total Dynamic Head (STDH) Complete STDH Worksheet - Fill in all blanks.
- ☐ Total Dynamic Head (TDH) Complete Program or other calcs. Fill in required blanks on worksheet & attach calculations.
- ☐ Maximum Flow Capacity of the new or replacement pump.

#### Notes

- If a variable speed pump is used, use the max. pump flow in calculations.
- For side wall drains, use appropriate side wall drain flow as published by manufacturer.
- Insert manufacturer's name and approved maximum flow
- See installation instructions for number of ports to be used.
- In-Floor suction outlet cover/grate must conform to most recent edition of ASME/ANSI A112.19.8 and be embossed with that edition approval.
- Pump, Filter & Heater make and model cannot be changed, and equipment location cannot be moved closer to pool without submitting a revised plan and TDH calculation worksheet for approval.

#### Flow and Friction Loss Per Foot

Schedule 40 PVC Pipe

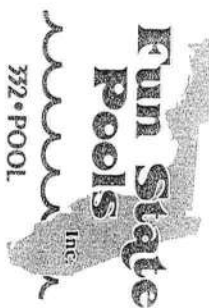
Pipe Size	6 fpe	8 fpe	10 fpe
1"	16 gpm 0.14'	21 gpm 0.23'	26 gpm 0.35'
1.5"	37 gpm 0.08'	50 gpm 0.14'	62 gpm 0.21'
2"	62 gpm 0.06'	82 gpm 0.10'	103 gpm 0.16'
2.5"	88 gpm 0.05'	117 gpm 0.08'	146 gpm 0.13'
3"	136 gpm 0.04'	181 gpm 0.07'	227 gpm 0.10'
4"	234 gpm 0.03'	313 gpm 0.05'	392 gpm 0.07'
6"	534 gpm 0.02'	712 gpm 0.03'	

### Total Head In Feet Conversion Chart

Inches Mercury (Vacuum Gauge)

0	2	4	6	8	10	12	14	16	18
0.0	2.3	4.5	6.8	9.0	11.3	13.6	15.8	18.1	20.3
1	2.3	4.6	6.8	9.1	11.4	13.6	15.9	18.1	20.4
2	4.6	6.9	9.1	11.4	13.7	15.9	18.2	20.4	22.7
3	6.9	9.2	11.5	13.7	16.0	18.2	20.5	22.8	25.0
4	9.2	11.5	13.8	16.0	18.3	20.5	22.8	25.1	27.3
5	11.5	13.8	16.1	18.3	20.6	22.8	25.1	27.4	29.6
6	13.8	16.1	18.4	20.6	22.9	25.2	27.4	29.7	31.9
7	16.2	18.4	20.7	23.0	25.2	27.5	29.7	32.0	34.3
8	18.5	20.7	23.0	25.3	27.5	29.8	32.0	34.3	36.6
9	20.8	23.1	25.3	27.6	29.8	32.1	34.3	36.6	38.9
10	23.1	25.4	27.6	29.9	32.1	34.4	36.7	38.9	41.1
11	25.4	27.7	29.9	32.2	34.5	36.7	39.0	41.2	43.4
12	27.7	30.0	32.2	34.5	36.8	39.0	41.3	43.5	45.8
13	30.0	32.3	34.6	36.8	39.1	41.3	43.6	45.9	48.1
14	32.3	34.6	36.9	39.1	41.4	43.6	45.9	48.2	50.4
15	34.6	36.9	39.2	41.4	43.7	45.9	48.2	50.5	52.7
16	37.0	39.2	41.5	43.7	46.0	48.3	50.6	52.8	55.1
17	39.3	41.5	43.8	46.1	48.3	50.6	52.9	55.1	57.4
18	41.6	43.8	46.1	48.4	50.6	52.9	55.1	57.4	59.7
19	43.9	46.2	48.4	50.7	52.9	55.2	57.4	59.7	61.9
20	46.2	48.5	50.7	53.0	55.2	57.5	59.8	62.0	64.3
21	48.5	50.8	53.0	55.3	57.6	59.8	62.1	64.3	66.6
22	50.8	53.1	55.3	57.6	59.9	62.1	64.4	66.6	68.9
23	53.1	55.4	57.7	59.9	62.2	64.4	66.7	69.0	71.2
24	55.4	57.7	60.0	62.2	64.5	66.7	69.0	71.3	73.5
25	57.8	60.0	62.3	64.5	66.8	69.1	71.3	73.6	75.8
26	60.1	62.3	64.6	66.8	69.1	71.4	73.6	75.9	78.1
27	62.4	64.6	66.9	69.2	71.4	73.7	75.9	78.2	80.5
28	64.7	66.9	69.2	71.5	73.7	76.0	78.2	80.5	82.8
29	67.0	69.3	71.5	73.8	76.0	78.3	80.6	82.9	85.1
30	69.3	71.6	73.8	76.1	78.3	80.6	82.9	85.1	87.4
31	71.6	73.9	76.1	78.4	80.7	82.9	85.2	87.4	89.7
32	73.9	76.2	78.4	80.7	83.0	85.2	87.5	89.7	92.0
33	76.2	78.5	80.7	83.0	85.3	87.5	89.8	92.0	94.3
34	78.5	80.8	83.1	85.3	87.6	89.8	92.1	94.4	96.6
35	80.9	83.1	85.4	87.6	89.9	92.2	94.4	96.7	98.9

NOTE: FIELD TDH MUST BE EQUAL TO OR HIGHER THAN THE CALCULATED TDH.



Tillis Gibson

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www.funstatepoolsinc.com

Swimming Pool Specification For:  
Mark & Paula Moser  
266 S.E. Tolouse Ct.  
Lake City, FL 32025

Scale: None

5/19/09

Date

Date

This form is the property of funstatepoolsinc. and may only be used in conjunction with my Residential Swimming Pool Specification Drawings or by others with my written permission.

5/19/09

CP004114

Tillis M. Gibson

352-332-7665



PROFESSIONAL SERVICES  
DRISCOLL ENGINEERING, INC.  
PO BOX 357577  
Gainesville, Florida 32606  
(352) 331-1513 CA. 8690

PLANS AND SPECIFICATIONS

The plans and specifications presented herein are only for the anticipated construction at the locations shown. If construction plans change, the Design Professional should be notified so the plans and specifications can be re-evaluated. The Design Professional should be given the opportunity to review final plans and specifications to see if the intent of the plans and specifications has been followed and/or if supplement details and recommendations are needed. The Design Professional warrants that the plans and specifications contained herein, have been prepared in accordance with generally accepted professional engineering practice. No other warranties are implied or expressed.

CORPORATE PROTECTION

It is understood and agreed that the Design Professional's Basic Services under this agreement do not include project observation or review of the Contractors performance or any other construction phase services will be provided by the client. The client assumes all responsibility for interpretation of the contractors documents and for construction observation and supervision and waives any claims against the Design Professional that may in any way connected thereto.

In addition, The client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless from any loss, claim or cost including reasonable attorney's fees and cost of defense, arising or resulting from the performance of such services by otherperson or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to contract documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct thereto.

OWNERSHIP OF INSTRUMENTS OF SERVICE

All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Design Professional as instruments of service shall remain property of the Design Professional. The Design Professional shall retain all common law, statutory and other reserved rights, including the copyright thereto.

DEFECTS IN SERVICE

The client shall promptly report to the Design Professional any defects or suspected defects in the Design Professionals work or services of which the client becomes aware, so that the Design Professional may take measures to minimize the consequences of such defect. The client warrants that he or she will impose similar notification requirement on all contractors in his or her client/contractor contract and shall require all subcontractors at any level to contain a like requirement. Failure by the clients contractors or subcontractors to notify the Design Professional, shall relieve the Design Professional of the cost of remedying the defects above the sum such remedy would have cost had prompt notification been given.

VERIFICATION OF EXISTING CONDITIONS

Inasmuch as the remodeling and/or rehabilitation of an existing building requires certain assumptions be made regarding existing conditions, and because some of these assumptions may not be verifiable without expending additional sums of money or destroying otherwise adequate serviceable portions of the building. The client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless in any claim, liability or cost (including attorneys fees and cost of defense) for injury or economic loss arising out of professional services provided under this agreement, except only those damages, liability, or cost attributable to the sole negligence or willful misconduct of the Design Professional.

CONCRETE CONSTRUCTION NOTES:

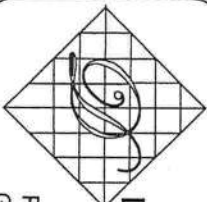
1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI-318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI-301) LATEST EDITION.
2. CONCRETE MIX "X" SHALL BE USED FOR FOUNDATION AND WALLS, FOOTINGS AND INTERIOR SLABS ON GRADE. CONCRETE MIX "B" SHALL BE USED FOR EXTERIOR SLABS, CURBS AND ALL OTHER EXTERIOR CONCRETE. ALL CONCRETE MIXES SHALL CONTAIN A WATER- REDUCING ADMIXTURE CONFORMING TO ASTM C-494 AIR-ENTRAINING ADMIXTURE SHALL SHALL CONFORM TO ASTM C-260

	MIX A	MIX B
ULTIMATE COMPRESSIVE STRENGTH @ 28 DAYS	4" x 1" 3000 psi.	3000 psi.
SLUMP RANGE	4" x 1" 3" x 1" 1"	1"
MAXIMUM AGGREGATE	1"	1"
ENTRAINED AIR	NONE	5-7%
DRY WEIGHT PER CUBIC FT.	150#	150#

3. ALL CONCRETE SHALL CURE FOR A MINIMUM OF 28 DAYS. IF FORMS FOR VERTICAL SURFACES ARE REMOVED PRIOR TO THE END OF THE CURING PERIOD, SPRAY SURFACES WITH LIQUID MEMBRANE CURING COMPOUND.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40 (F=40ksi.) LAP CONTINUOUS BARS FOR TENSION LAP SPICE PER ACI-318 UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCEMENT COVER FOR CONCRETE REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI-318, PARAGRAPH 7.7
5. WELDED WIRE FABRIC SHALL BE USED IN DRIVEWAY SLABS ON GRADE LAP SHEETS ON MESH SPACE AND WIRE TIE ADJACENT SHEETS TOGETHER SECURELY. CUT ALTERNATE REINFORCEMENT AT CONTROL JOINTS.
6. ALL SLABS ON GRADE SHALL HAVE CONSTRUCTION CONTROL JOINTS NOT TO EXCEED 16'-0" SPACING. UNLESS OTHERWISE NOTED.
7. ALL SIDEWALKS SHALL HAVE CONSTRUCTION OR CONTROL JOINTS NOT TO EXCEED 5'-0" SPACING U.N.O.

MASONRY CONSTRUCTION NOTES

1. CONCRETE MASONRY WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-02/ASCE5-02) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1-02/ASCE6-03).
2. CONCRETE MASONRY UNITS SHALL BE TYPE 1 AND COMPLY WITH "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS (ASTM C90-90)
3. THE MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY (fm) AS DETERMINED BY THE UNIT STRENGTH METHOD SHALL BE 1500 PSI.
4. MORTAR SHALL CONFORM TO ASTM C270, TYPE M MORTAR SHALL BE USED UNLESS OTHERWISE NOTED. TYPE S MORTAR SHALL BE USED WITH MASONRY IN CONTACT WITH EARTH.
5. MASONRY COLUMN REINFORCEMENT SHALL HAVE #2 TIES IN THE BED JOINTS AT 8" O.C. UNLESS OTHERWISE NOTED.
6. GROUT FOR FILLING BLOCK CORES AND BOND BEAMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. AT THE AGE OF 28 DAYS.
7. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. AND IN THE FIRST COARSE ABOVE AND BELOW OPENINGS, UNLESS OTHERWISE NOTED.



DRISCOLL ENGINEERING, INC.  
CONSULTING ENGINEERS

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PH (352) 331-1513  
EB 8690

PREPARED FOR

CLIENT & LOCATION:

MOSER

266 S.E. TOROK  
LAKE CITY, FL

CONTRACTOR:

FUNSTATE POOLS  
3601 N.W. 97th BLVD  
GAINESVILLE, FL  
352-332-7665



ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

INDEX

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SHEET:6 PLANS

THESE DETAILS HAVE BEEN PREPARED IN COMPLIANCE  
WITH REQUIREMENTS OF THE 2007 FLORIDA BUILDING CODE RESIDENTIAL  
AND THE 2009 AMENDMENTS TO CHAPTER 41 TO THE BEST OF MY KNOWLEDGE

5-15-09  
MICHAEL DRISCOLL P.E.  
FL REG. #43922



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CS SHEET



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GENERAL NOTES FOR RESIDENTIAL SWIMMING POOLS

- Design, construction and workmanship shall be in conformity with the requirements of the 2007 Florida Building Code with 2009 supplement, Chapter 41, ANS/NSPI 3; ANS/NSPI 4; ANS/NSPI 5; and ANS/NSPI 6; ANSI/ASPE-7.
- Every swimming pool shall be equipped complete with approved mechanical equipment consisting of filter, pump, piping valves and component parts.
- Pool piping shall be designed so the water velocity will not exceed 10 feet per second (3048 mm/s) for pressure piping and 8 feet per second (2438 mm/s) for suction piping, except that the water velocity shall not exceed 8 feet per second (2438 mm/s) in copper tubing.
- All pool and spa suction inlets shall be provided with a cover that has been tested and accepted by a recognized testing facility and comply with ANSI/ASME A112.19.8M, Suction Fittings for Use in Swimming Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances.  

Exceptions:  
☐ 1. Surface Skimmers.  
☐ 2. Grate or grates having a minimum area of 144 square inches (.09 m<sup>2</sup>) or greater.
- A minimum of two suction inlets shall be provided for each pump in the suction inlet system, separated by a minimum of 3 feet (914 mm) or located on two different planes, i.e., one on the bottom and one on the vertical wall, or one each on two separate vertical walls. These suction inlets shall be plumbed such that water is drawn through them simultaneously through a common line to the pump. When a skimmer is used in conjunction with a single main outlet to meet the requirements of this section, the common suction line must be in compliance with Section R4101.6.5.3 such that a vacuum cannot be drawn on any single main outlet or skimmer.
- Pumps shall be installed in accordance with manufacturer's recommendations.
- Pump impellers, shafts, wear rings and other working parts shall be of corrosion-resistant materials.
- All pool piping shall be tested and proved tight to the satisfaction of the administrative authority, under a static water or air pressure test of not less than 35 pounds per square inch (psi) (241 kPa) for 15 minutes.  

Exception: Circulating pumps need not be tested as required in this section.
- All pools whether public or private shall be provided with a ladder or steps in the shallow end where water depth exceeds 24 inches (610 mm). In private pools where water depth exceeds 5 feet (1524 mm), there shall be ladders, stairs or underwater benches/swim-outs in the deep end.  

Where manufactured diving equipment is to be used, benches or swim-outs shall be recessed or located in a corner.

Exception: In private pools having more than one shallow end, only one set of steps is required. A bench, swim-out or ladder may be used at all additional shallow ends in lieu of an additional set of steps.
- The entire design of matched components shall have sufficient capacity to provide a complete turnover of pool water in 12 hours or less.
- Approved surface skimmers are required and shall be installed in strict accordance with the manufacturer's installation instructions. Skimmers shall be installed on the basis of one per 800 square feet (74 m<sup>2</sup>) of surface area or fraction thereof, and shall be designed for a flow rate of at least 25 gallons per minute (gpm) (1.6 L/s) per skimmer.
- Approved manufactured inlet fittings for the return of re-circulated pool water shall be provided on the basis of at least one per 300 square feet (28 m<sup>2</sup>) of surface area. Such inlet fittings shall be designed and constructed to insure an adequate seal to the pool structure and shall incorporate a convenient means of sealing for pressure testing of the pool circulation piping. Where more than one inlet is required, the shortest distance between any two required inlets shall be a least 10 feet (3048 mm).
- Filters shall be equipped with a pressure gauge and an air release system.
- Piping shall be schedule 40 PVC, NSF-PW minimum.
- Contractor shall install piping so as to not exceed the limits imposed by the tables shown.
- All electrical design is by others.
- Minimum soil bearing capacity shall be a min. 2000 psf.
- Contractor shall submit completed total or simplified total dynamic head calculation worksheet with each permit application to the building dept.

Notes:

- If a variable speed pump is used, use the max. pump flow in calculations.
- For side wall drains, use appropriate side wall drain flow as published by manufacturer.
- Insert manufacturer's name and approved maximum flow.
- See installation instructions for number of ports to be used.
- In-floor suction outlet cover/grate must conform to most recent edition of AS/NZS/ANSI A112.109 and be embossed with that edition approval.
- Pump & filter make, model and location can not change without submitting a revised plans and TDH worksheet.

TDH Calculation Options

For each pump

- ☐ Check one:  
☐ Simplified Total Dynamic Head (STDH)  
Complete STDH Worksheet-Fill in all blanks.
- ☐ Total Dynamic Head (TDH)  
Complete Program or other calc. Fill in required blanks on worksheet & attach calculations.

Flow and Friction Loss Per Foot									
Schedule 40 PVC Pipe									
Pipe Size	6 fms			Velocity-Feet Per Second					
				8 fms			10 fms		
1"	16 gpm	0.25'	21 gpm	0.66'	26 gpm	0.94'			
1.5"	37 gpm	0.16'	50 gpm	0.28'	62 gpm	0.48'			
2"	62 gpm	0.15'	82 gpm	0.25'	103 gpm	0.40'			
2.5"	88 gpm	0.09'	117 gpm	0.15'	146 gpm	0.23'			
3"	138 gpm	0.09'	181 gpm	0.14'	227 gpm	0.23'			
4"	234 gpm	0.06'	313 gpm	0.10'	392 gpm	0.15'			
6"	534 gpm	0.04'	712 gpm	0.04'	890 gpm	0.10'			

Total Head in Feet Conversion Chart

Inches Mercury (Vacuum Gauge)																		
0	2	4	6	8	10	12	14	16	18									
0	0.0	2.3	4.5	6.8	9.0	11.3	13.6	15.8	18.1	20.3								
1	2.3	4.6	6.8	9.1	11.4	13.6	15.9	18.1	20.4	22.7								
2	4.6	6.9	9.1	11.4	13.7	15.9	18.2	20.4	22.7	25.0								
3	6.9	9.2	11.5	13.7	16.0	18.2	20.5	22.8	25.0	27.3								
4	9.2	11.5	13.8	16.0	18.3	20.5	22.8	25.1	27.3	29.6								
5	11.5	13.8	16.1	18.3	20.6	22.8	25.1	27.4	29.5	31.9								
6	13.9	16.1	18.4	20.6	22.9	25.2	27.4	29.7	31.9	34.2								
7	16.2	18.4	20.7	23.0	25.2	27.5	29.7	32.0	34.3	36.5								
8	18.5	20.7	23.0	25.3	27.6	29.8	32.0	34.3	36.6	38.8								
9	20.8	23.1	25.3	27.6	29.8	32.1	34.3	36.6	38.9	41.1								
10	23.1	25.4	27.6	29.9	32.1	34.4	36.7	38.9	41.2	43.4								
11	25.4	27.7	29.9	32.2	34.5	36.7	39.0	41.2	43.5	45.8								
12	27.7	30.0	32.2	34.5	36.8	39.0	41.3	43.5	45.8	48.1								
13	30.0	32.3	34.6	36.8	39.1	41.3	43.6	45.9	48.1	50.4								
14	32.3	34.6	36.9	39.1	41.4	43.6	45.9	48.2	50.4	52.7								
15	34.6	36.9	39.2	41.4	43.7	45.9	48.2	50.5	52.7	55.0								
16	37.0	39.2	41.5	43.7	46.0	48.3	50.5	52.8	55.0	57.3								
17	39.3	41.5	43.8	46.1	48.3	50.6	52.8	55.1	57.4	59.6								
18	41.6	43.8	46.1	48.4	50.6	52.9	55.1	57.4	59.7	61.9								
19	43.9	46.2	48.4	50.7	52.9	55.2	57.4	59.7	62.0	64.2								
20	46.2	48.5	50.7	53.0	55.2	57.5	59.8	62.0	64.3	66.5								
21	48.5	50.8	53.0	55.3	57.6	59.8	62.1	64.3	66.6	68.9								
22	50.8	53.1	55.3	57.6	59.9	62.1	64.4	66.6	68.9	71.2								
23	53.1	55.4	57.7	59.9	62.2	64.4	66.7	69.0	71.2	73.5								
24	55.4	57.7	60.0	62.2	64.5	66.7	69.0	71.3	73.5	75.8								
25	57.8	60.0	62.3	64.5	66.8	69.1	71.3	73.6	75.9	78.1								
26	60.1	62.3	64.6	66.8	69.1	71.4	73.6	75.9	78.1	80.4								
27	62.4	64.6	66.9	69.2	71.4	73.7	75.9	78.2	80.5	82.7								
28	64.7	66.9	69.2	71.5	73.7	76.0	78.2	80.5	82.8	85.0								
29	67.0	69.3	71.5	73.8	76.0	78.3	80.5	82.8	85.1	87.3								
30	69.3	71.6	73.8	76.1	78.3	80.6	82.9	85.1	87.4	89.6								
31	71.6	73.9	76.1	78.4	80.7	82.9	85.2	87.4	89.7	92.0								
32	73.9	76.2	78.4	80.7	83.0	85.2	87.5	89.7	92.0	94.3								
33	76.2	78.5	80.7	83.0	85.3	87.5	89.8	92.0	94.3	96.6								
34	78.5	80.8	83.1	85.3	87.5	89.8	92.1	94.4	96.6	98.9								
35	80.9	83.1	85.4	87.6	89.9	92.2	94.4	96.7	98.9	101.2								

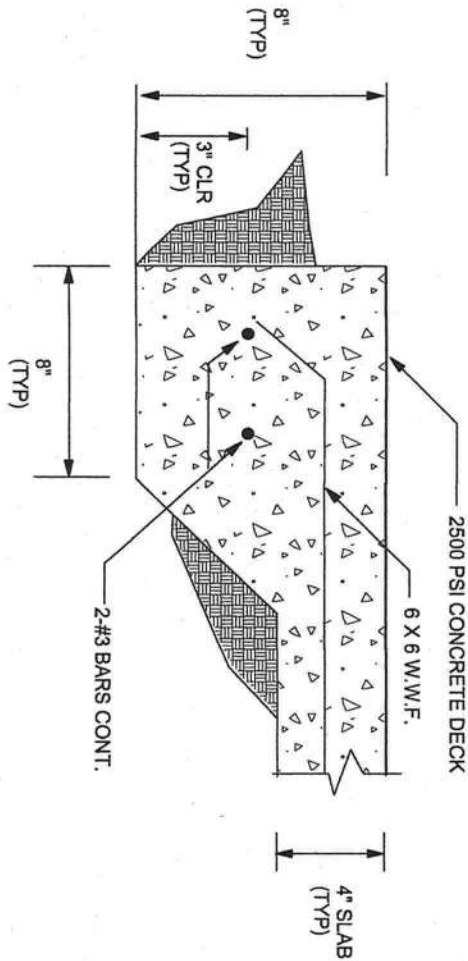
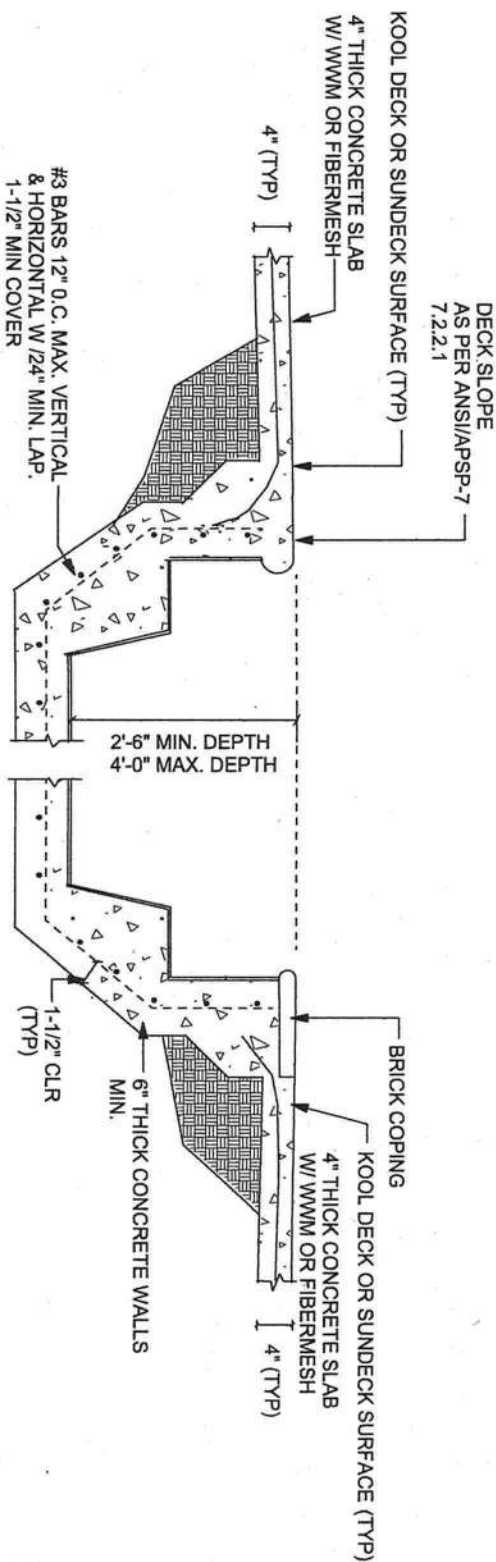
CERTIFICATION

I certify that to the best of my knowledge, these master plan, residential pool design requirements are in compliance with the 2007 Florida Building Code Residential with 2009 supplement, Chapter 41.

5-15-09  
MICHAEL E. DRISCOLL P.E.  
FL REG. #43922

ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

POOL / SPA MAIN DRAINS  
2- MAIN DRAINS REQUIRED, NO CLOSER THAN  
3' PLUMBED ON COMMON LINE, AS PER F.B.C. #424.2.6.6.4  
ANSI/APSP-7 COVERS TO MEET ANSI/ASME A112.19.8M

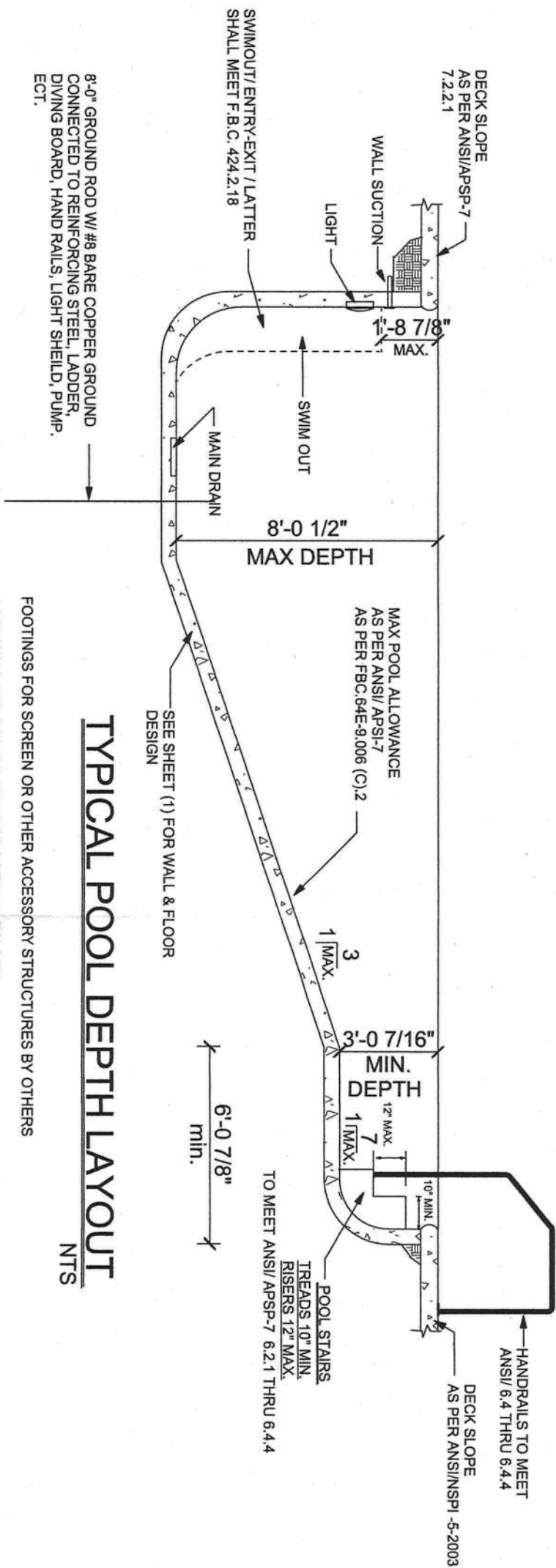


## SPA DEPTH LAYOUT

NTS

## THICKENED EDGE

8" X 8" W/ 2 #3 BAR CONT.  
NTS



## TYPICAL POOL DEPTH LAYOUT

NTS

FOOTINGS FOR SCREEN OR OTHER ACCESSORY STRUCTURES BY OTHERS

POOL WALL & FLOOR CONCRETE TO BE 3000 PSI. MIN.

POOL DECK CONCRETE TO BE 2500 PSI. MIN

ALL PIPING SHALL BE SCH 40 PVC PIPE

ALL SUCTION DEVICES WALL FITTINGS, MAIN DRAINS, ETC. SHALL BE 2" DIA. SCH 40 PVC PIPE.

MAX SUCTION PIPE VELOCITY SIX FEET PER SECOND.

5-15-09

MICHAEL E. DRISCOLL P.E.  
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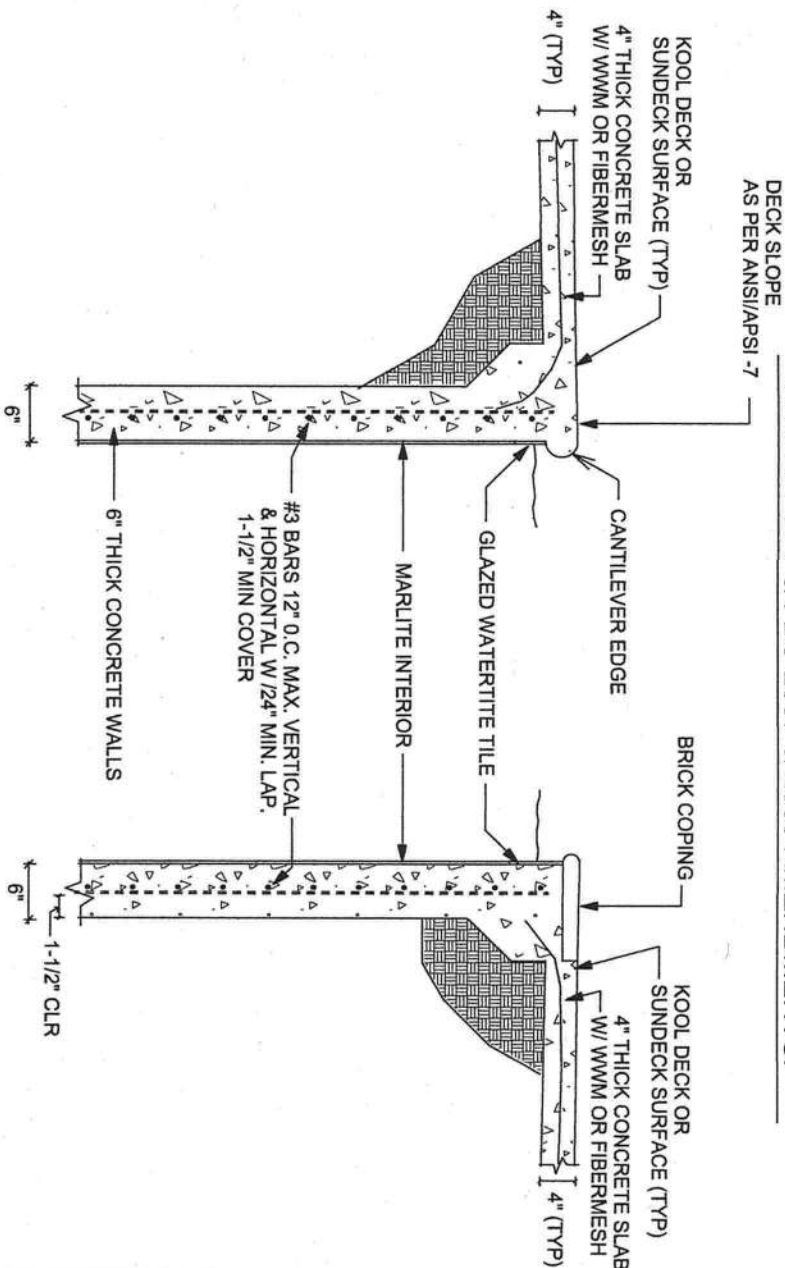
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SHEET:



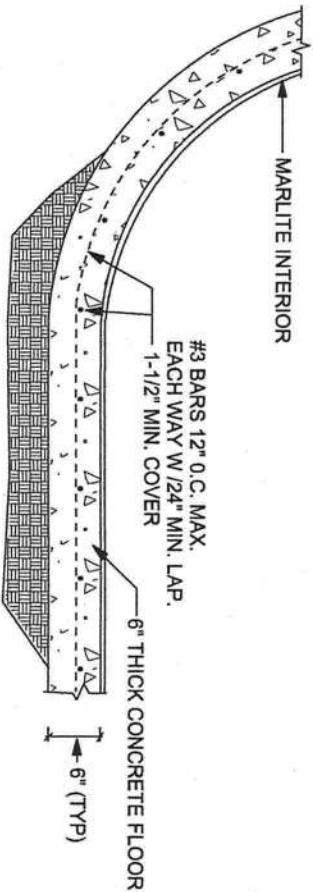


ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.



## TYP WALL SECTIONS

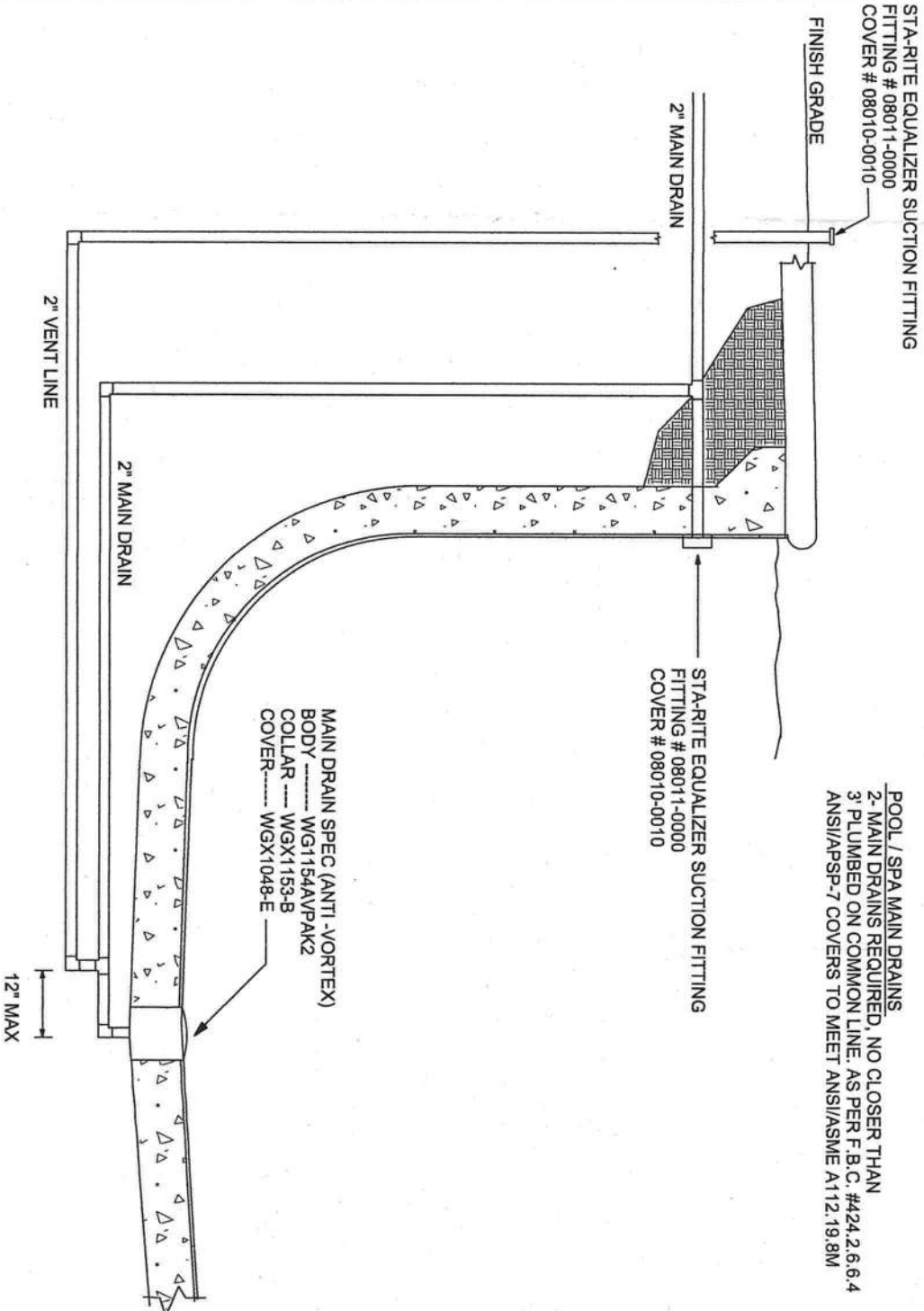
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## FLOOR SECTION (TYP)

NTS

ALL POOL CONSTRUCTION TO COMPLY WITH  
ANSI/ APSP-7 & FBC 2007 & 2009 AMENDMENTS.

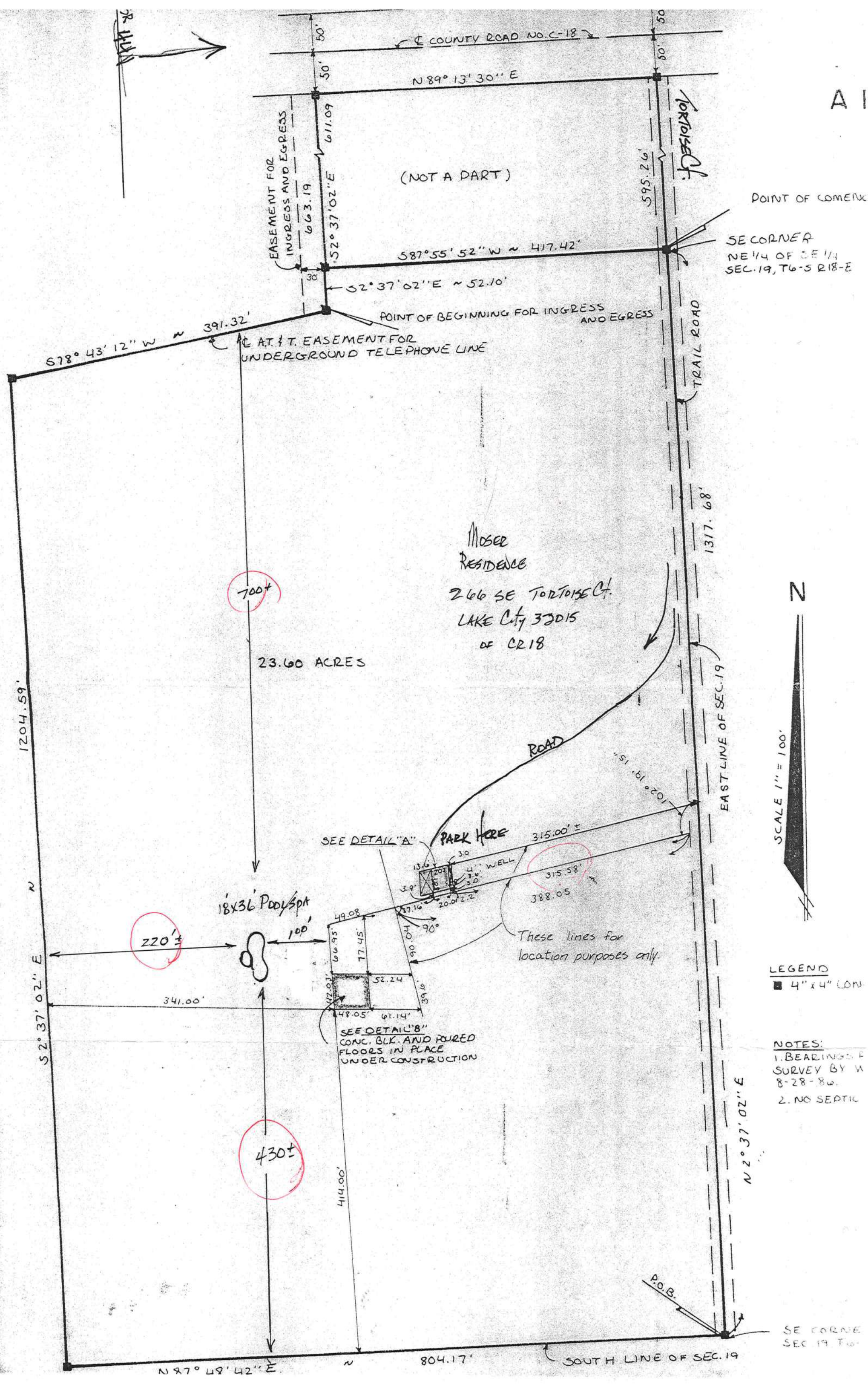


## DUAL MAIN DRAIN @ ATMOSPHERIC VENT

NTS

FOOTINGS FOR SCREEN OR OTHER ACCESSORY STRUCTURES BY OTHERS  
POOL WALL & FLOOR CONCRETE TO BE 3000 PSI. MIN.  
POOL DECK CONCRETE TO BE 2500 PSI. MIN.  
ALL PIPING SHALL BE SCH 40 PVC PIPE  
ALL SUCTION DEVICES WALL FITTINGS, MAIN DRAINS, ETC. SHALL BE 2" DIA. SCH 40 PVC PIPE.  
MAX SUCTION PIPE VELOCITY SIX FEET PER SECOND.





LEGEND  
■ 4" x 4" CON

NOTES:  
1. BEARING OF SURVEY BY W 8-28-86.  
2. NO SEPTIC

N  
SCALE 1" = 100'