

DATE 10/12/2010

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT

000028934

APPLICANT TERRY MIKE HART PHONE 407-383-2052
ADDRESS 1090 KENSINGTON PARK DR ALTIMONTE SPRINGS FL 32714
OWNER ROBERT & JAMIE SHRUM PHONE 407-414-7428
ADDRESS 874 SW ROBERTS ROAD FT. WHITE FL 32038
CONTRACTOR E. MICHAEL HOLLAND PHONE 407-830-5327
LOCATION OF PROPERTY 47-S TO US 27,TR TO UTAH,TL TO ROBERTS ROAD,TL APPROX.1/2
MILE ON THE R, 2ND BACK FROM 90 DEGREE CURVE ON R-ELEC FENCE
TYPE DEVELOPMENT SWIMMING POOL ESTIMATED COST OF CONSTRUCTION 25000.00
HEATED FLOOR AREA TOTAL AREA HEIGHT STORIES
FOUNDATION WALLS ROOF PITCH FLOOR
LAND USE & ZONING AG-3 MAX. HEIGHT 35
Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00
NO. EX.D.U. 1 FLOOD ZONE NA DEVELOPMENT PERMIT NO.

PARCEL ID 30-6S-16-03989-000 SUBDIVISION
LOT BLOCK PHASE UNIT 0 TOTAL ACRES 15.62

CPC056809
Culvert Permit No. Culvert Waiver Contractor's License Number Applicant/Owner/Contractor
EXISTING X10-0367 BK TC N
Driveway Connection Septic Tank Number LU & Zoning checked by Approved for Issuance New Resident

COMMENTS: NOC ON FILE

Check # or Cash 5893

FOR BUILDING & 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 \$ 125.00 CERTIFICATION FEE \$ 0.00 SURCHARGE FEE \$ 0.00
MISC. FEES \$ 0.00 ZONING CERT. FEE \$ FIRE FEE \$ 0.00 WASTE FEE \$
FLOOD DEVELOPMENT FEE \$ FLOOD ZONE FEE \$ CULVERT FEE \$ TOTAL FEE 125.00 ✓
INSPECTORS OFFICE CLERKS OFFICE

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

ck 5893

For Office Use Only Application # 1009-54 Date Received 9/28/10 By SP Permit # 28934
Zoning Official BLK Date 05.10.10 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 1.C Date 10-1-10

Comments

☒ NOC ☐ EH ☐ 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 N/A Accessory Use ☒ UF

Septic Permit No. X10-367 in box "mike" Fax 407 8306404

Name Authorized Person Signing Permit Terry Hart Phone 407 383-2052

Address 1090 Kensington Park Dr. Altamonte Springs, FL 32714

Owners Name Jamie Shrum Phone _____

911 Address 874 Sw. Roberts Ave Fort White, FL 32038

Contractors Name E. Michael Holland Phone 407 8305327

Address 1090 Kensington Park Dr. Altamonte Sp. FL 32714

Fee Simple Owner Name & Address _____

Bonding Co. Name & Address _____

Architect/Engineer Name & Address Gordon Shepardsen 177 Golfside Dr.

Mortgage Lenders Name & Address _____

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

Property ID Number 30-65-16-03989-000 Estimated Cost of Construction \$ 25,000

Subdivision Name NO NAME Lot _____ Block _____ Unit _____ Phase _____

Driving Directions 475, TR SR 27, TL Riverside, TL UTAH, TR on

Roberts, next to last on right.

Number of Existing Dwellings on Property 1

Construction of inground pool, spa & deck Total Acreage 15.65 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 _____ Side 260' Side 220' Rear 920'

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.

SPoke to "mike"
10/5/10

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.

TIME LIMITATIONS OF PERMITS: 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 work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

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 CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.


NOTICE TO OWNER: There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. It may be to your advantage to check and see if your property is encumbered by any restrictions.

(Owners Must Sign All Applications Before Permit Issuance.)


Owners Signature

****OWNER BUILDERS MUST PERSONALLY APPEAR AND SIGN THE BUILDING PERMIT.**

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 including all application and permit time limitations.

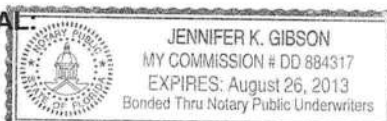

Contractor's Signature (Permitee)

Contractor's License Number CPC056809
Columbia County
Competency Card Number _____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 20 day of Sept 2010
Personally known or Produced Identification


State of Florida Notary Signature (For the Contractor)

SEAL



County Clerk's Office Stamp or Seal

THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with Section 713.13 of the Florida Statutes, the following information is provided in this NOTICE OF COMMENCEMENT.

- Signature of Natural Person Signing (in line #10 above.)

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER _____ CONTRACTOR E. Michael Holland PHONE 407 830 5327
 THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is **REQUIRED** that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL OK	Print Name <u>Brian Miller</u> License #: <u>EC13001686</u>	Signature <u>[Signature]</u> Phone #: <u>386 606 8422</u>
MECHANICAL/A/C	Print Name _____ License #: _____	Signature _____ Phone #: _____
PLUMBING/GAS OK	Print Name <u>E. Michael Holland</u> License #: <u>CPC056809</u>	Signature <u>[Signature]</u> Phone #: <u>407 830 5327</u>
ROOFING	Print Name _____ License #: _____	Signature _____ Phone #: _____
SHEET METAL	Print Name _____ License #: _____	Signature _____ Phone #: _____
FIRE SYSTEM/SPRINKLER	Print Name _____ License #: _____	Signature _____ Phone #: _____
SOLAR	Print Name _____ License #: _____	Signature _____ Phone #: _____

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON	<u>CPC056809</u>	<u>Holland Pools</u>	<u>[Signature]</u>
CONCRETE FINISHER	<u>"</u>	<u>"</u>	<u>[Signature]</u>
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Contractor Form: Subcontractor Form: 6/09



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 Jamie M Shrum 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.

JMSH 9/11/2010
Owner Signature Date

Address: 874 SW. Roberts Ave

S. We
Contractor Signature / Date

CPC056809
License Number

Columbia County Property Appraiser

DB Last Updated: 8/5/2010

2009 Tax Roll Year

Tax Collector

Tax Estimator

Property Card

Parcel List Generator

Interactive GIS Map

Print

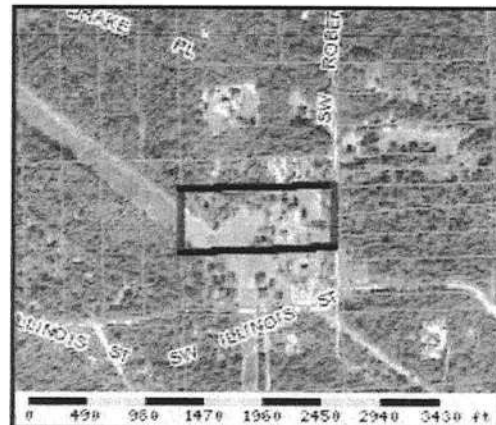
Parcel: 30-6S-16-03989-000

<< Next Lower Parcel Next Higher Parcel >>

<< Prev Search Result: 2 of 2

Owner & Property Info

Owner's Name	SHRUM ROBERT G & JAMIE M		
Mailing Address	874 SW ROBERTS AVE FORT WHITE, FL 32038		
Site Address	874 SW ROBERTS AVE		
Use Desc. (code)	IMPROVED A (005000)		
Tax District	3 (County)	Neighborhood	30616
Land Area	15.650 ACRES	Market Area	02
Description	NOTE: This description is not to be used as the Legal Description for this parcel in any legal transaction.		
COMM NW COR OF SEC, RUN S 1594.09 FT FOR POB, RUN E 1284.58 FT TO W R/W OF A CO RD, S ALONG R/W 528.11 FT, W 367.34 FT, S 479 FT, W 541.09 FT, N 480.42 FT, W 362.26 FT, N 531.36 FT TO POB. (BEING PRCL 4 & PART OF PRCL 5) EX R/W & EX 6.03 AC DESC ORB 1177-2486 ORB 435-041, 553-66, 1057-888 WD 1085-54			



Property & Assessment Values

2009 Certified Values		
Mkt Land Value	cnt: (1)	\$14,550.00
Ag Land Value	cnt: (2)	\$4,392.00
Building Value	cnt: (1)	\$86,100.00
XFOB Value	cnt: (6)	\$5,800.00
Total Appraised Value		\$110,842.00
Just Value		\$202,206.00
Class Value		\$110,842.00
Assessed Value		\$110,842.00
Exempt Value	(code: HX)	\$50,000.00
Total Taxable Value		Cnty: \$60,842 Other: \$60,842 Schl: \$85,842

2010 Working Values

NOTE:
2010 Working Values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

Show Working Values

Sales History

Show Similar Sales within 1/2 mile

Sale Date	OR Book/Page	OR Code	Vacant / Improved	Qualified Sale	Sale RCode	Sale Price
8/31/2005	1057/888	WD	I	Q		\$321,000.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	SINGLE FAM (000100)	1984	AVERAGE (05)	2273	2877	\$84,305.00

Note: All G.F. calculations are based on exterior building dimensions.

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0190	FPLC PF	0	\$1,200.00	0000001.000	0 x 0 x 0	(000.00)
0040	BARN, POLE	0	\$1,000.00	0000001.000	0 x 0 x 0	(000.00)

0040	BARN,POLE	1993	\$1,400.00	0000001.000	0 x 0 x 0	(000.00)
0070	CARPORT UF	2008	\$600.00	0000001.000	0 x 0 x 0	(000.00)
0070	CARPORT UF	2008	\$600.00	0000001.000	0 x 0 x 0	(000.00)

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000100	SFR (MKT)	1 AC	1.00/1.00/1.00/1.00	\$9,495.32	\$9,495.00
006200	PASTURE 3 (AG)	14.65 AC	1.00/1.00/1.00/1.00	\$200.00	\$2,930.00
009910	MKT.VAL.AG (MKT)	14.65 AC	1.00/1.00/1.00/1.00	\$0.00	\$60,875.00
009945	WELL/SEPT (MKT)	2 UT - (0000000.000AC)	1.00/1.00/1.00/1.00	\$2,000.00	\$4,000.00

Columbia County Property Appraiser

DB Last Updated: 8/5/2010

<< Prev

2 of 2

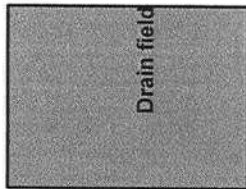
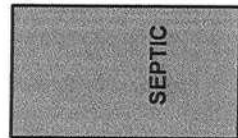
DISCLAIMER

This information was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

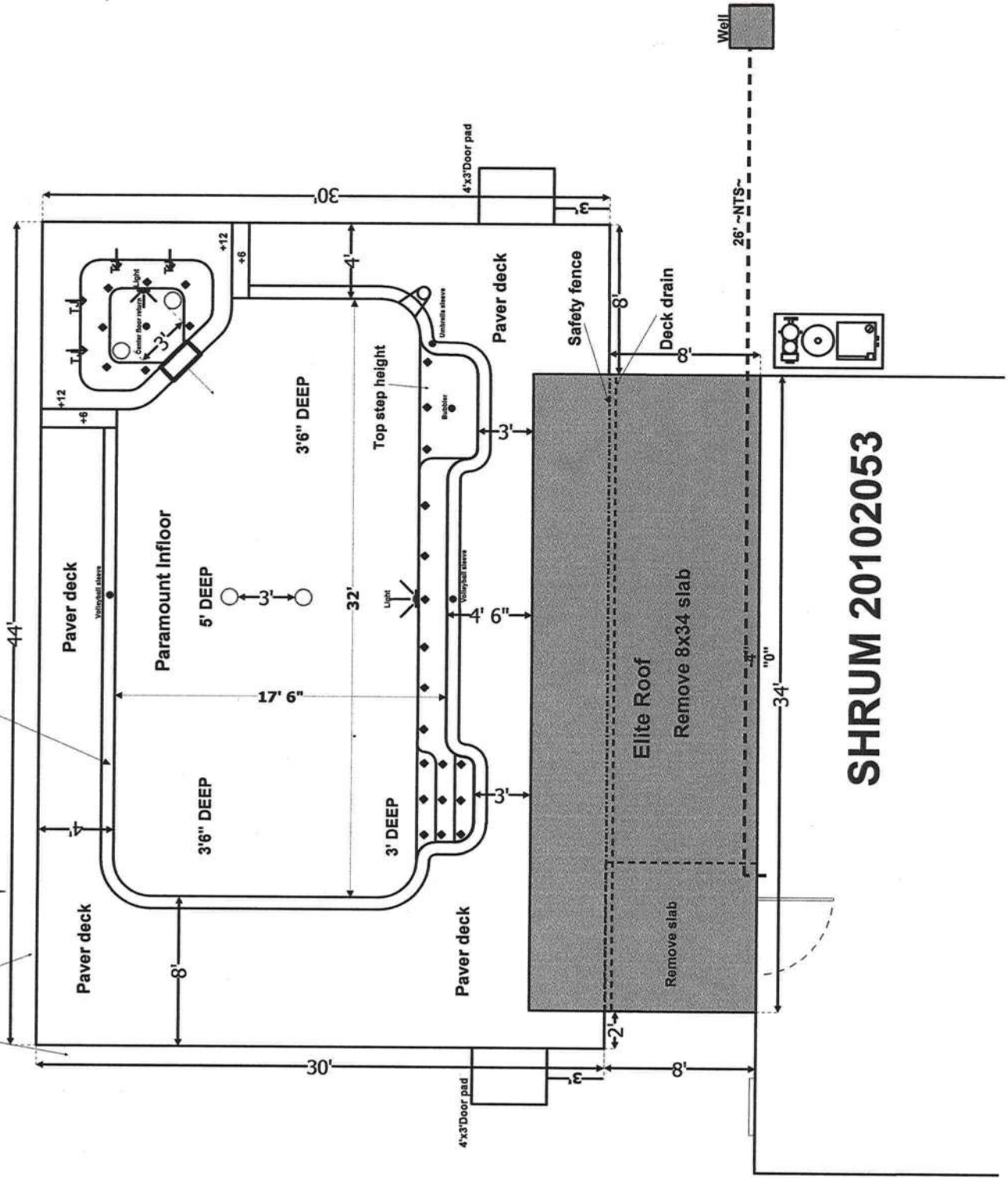
ACCESS

Drop dirt to eliminate turnaround

Brick coping




REVISED



SHRUM 20102053

Job Number: 20102053

Elevation			Pool Specifications		
Set Pool Beam At: -7.5 IN	Set Tile At: -7 IN		Pool Area: 530 SF	Pool Length: 32 LF	Pool Width: 17.6 LF
Layout / Dig / Steel			Pool Perimeter: 96 LF	Pool Depths: 3.5 - 5 - 3.5	Volume: 17054 Gallons
Dig & Haul	Bobcat Shuttle	Benchmark: Finish Floor	Main Drain: 1 PR	Skimmer: 1 EA	Extra Step: 0 LF
Beam: 8 inch Bond			Extra Swimout: 1	Filter: CS 150	Filter Pump: Jandy Flo Pro 1.5hp
Engineering			Inline Chlorinator: Jandy Aqua Pure 700	Pool Light: LED ColorLight #1	Vac Line: Pressure
Turn Down: 6 by 2 LF			Ozonator: UltraPure 700	Pool Control System: Aqualink RS-4	Paramount PV3: 17 Heads
Turn Down: 12 by 20 LF			Paramount PV3 Head Color: TAN		
Decking and Tile			Spa Specifications		
Paver Color: Amaretto	Paver Pattern: T-pattern 6x6 6x9	Footer Only: 106.00 LF	Accessories: N/A	Spa Area: 40 SF	Spa Perimeter: 24 LF
Coping Type: Bullnose Brick	Step Tile Color: AZ608 25	Tile Color #1: AZ608	Spa Jets: 4 EA	Spa Light: LED ColorLight 1 EA	Dam Wall Thickness: 12 IN
Deco Drains: 34 LF	20 6" Raised Beam	16 6" Step Riser	Blower	Spa Heater: See Notes	Spa Spillway: See Notes IN 1 EA
Coping Color: Chestnut			Water Features and Options		
Screen and Interior Finish			Fla Falls: N/A	Bubbler Lines: 1	Two Tier Falls
Screen Style: See Notes	Screen Color: See Notes	Insulated Roof: 408 SF	Water Features Pump: N/A		
Gutter: 52 LF	Gutter Size: As Required	Safety Fence: 34 LF			
Screen Walls: 114 LF	Screen Roof: 1186 SF	Screen Height: 10 FT			
Max Beam: 30 LF	Doors: 2	Lanai Insert: 0 LF			
Notes					
9/14/2010 9:45:38 AM - Access up driveway left of barn and loop around back of barn					
9/14/2010 9:45:06 AM - volleyball and umbrella sleeves see drawing.					
9/14/2010 9:40:57 AM - Bronze screen single story with dome and elite roof					
9/14/2010 9:40:30 AM - well water fill. Treat during fill					
8/31/2010 12:17:13 PM - Pump#FHPM1.5.....Branch 2.5"..Trunk 2"..Return 2"					
8/31/2010 12:16:50 PM - Screen color and shape TBD					
8/31/2010 11:48:21 AM - Blower and heater already on site					
8/31/2010 11:47:59 AM - All underwater fittings to be Tan..Drain covers..Infloor heads..Skimmers..ect.					
			*CALL MIKE HART WITH ANY AND ALL QUESTIONS. 407. 383. 2052		
1090 Kensington Park Drive Altamonte Springs, FL 32714					
Phone (407) 830-5327 Fax (407) 830-6404					
Name: Robert Shrum		PBPG:		Lot #:	
Address: 874 SW Roberts ave		Address: 874 SW Roberts ave			
City: Fort White	Zip: 32038	Municipality:		Subdivision:	
Phones:	Office:	Termite Bond Company:			
Cell:	Fax:				
Customer's Signature:				Date:	
APPROVED					

REVISED

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)

1. Calculate Pool Volume: $\frac{\text{Surf. Area}}{2.5} \times \frac{\text{Avg. Depth}}{2.5} \times 7.48 \text{ (gal./cubic foot)} = \frac{570}{2.5} \times \frac{4}{2.5} \times 7.48 = 17054$
2. Determine preferred Turnover Time in hours: $\frac{\text{Vol. in gal.}}{\text{Hours}} \times 60 \text{ (min. / hr.)} = \frac{17054}{360} = 48$
3. Determine Max Flow Rate: $\frac{17054}{360} = 48 + 20 = 68$
4. Spa Jets: $\frac{\text{No. of Jets}}{20} \times \frac{\text{Let Flow}}{20} \text{ gpm per jet} = \frac{4}{20} \times \frac{60}{20} = 60$ 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	2.5	inch to keep velocity @ 6 fps max. at	80	gpm Maximum System Flow Rate.
Trunk, Skimmer & Suction Piping to be	2	inch to keep velocity @ 8 fps max. at	80	gpm Maximum System Flow Rate.
Return Piping to be	2	inch to keep velocity @ 10 fps max. at	80	gpm Maximum System Flow Rate.

Determine Simplified TDH:

1. Distance from pool to pump in feet: 18
2. Friction loss (in suction pipe) in 2 inch pipe per 1 ft. @ 80 gpm = .10 (from pipe flow/friction loss chart)
3. Friction loss (in return pipe) in 2 inch pipe per 1 ft. @ 80 gpm = .16 (from pipe flow/friction loss chart)
4. $\frac{40}{38} \times .10 = .11$
5. $\frac{\text{(Length of Suct. Pipe)}}{38} \times .11 = \frac{18}{38} \times .11 = .05$
6. $\frac{\text{(Length of Return Pipe)}}{38} \times .16 = \frac{18}{38} \times .16 = .08$

TDH in Piping: 10.08

Filter loss in TDH (from filter data sheet): 3

Heater loss in TDH (from heater data sheet): 0

Total all other loss: 35.92

Total Dynamic Head (TDH): 49

Selected Pump and Main Drain Cover: FPM1.5

Pump selection

Sanoy AS-150 1.5

using pump curve for TDH & System Flow Rate

Main Drain Cover

Hayward

(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" ☒ 2 Hayward suction outlets @ 80 gpm max. flow (see note 2).
- ☐ ☒ 3 suction outlets @ 80 gpm max. flow (see note 3).
- ☐ ☐ channel drain @ 80 gpm w/ ☐ 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

1. If a variable speed pump is used, use the max. pump flow in calculations.
2. For side wall drains, use appropriate side wall drain flow as published by manufacturer.
3. Insert manufacturer's name and approved maximum flow
4. See installation instructions for number of ports to be used.
5. 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.
6. 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 fps	8 fps	10 fps
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 0.09'	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	13.9	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	29.8	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	29.9	32.1	34.3	36.6	38.8
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	43.6	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	50.4	52.7
16	37.0	39.2	41.5	43.7	46.0	48.3	50.5	52.8	55.0
17	39.3	41.5	43.8	46.1	48.3	50.6	52.8	55.1	57.4
18	41.6	43.8	46.1	48.4	50.6	52.9	55.1	57.4	59.6
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	64.2
21	48.5	50.8	53.0	55.3	57.6	59.8	62.1	64.3	66.5
22	50.8	53.1	55.3	57.6	59.9	62.2	64.4	66.6	68.8
23	53.1	55.4	57.7	59.9	62.2	64.4	66.7	68.9	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	80.4
28	64.7	66.9	69.2	71.5	73.7	76.0	78.2	80.5	82.7
29	67.0	69.3	71.5	73.8	76.0	78.3	80.6	82.8	85.0
30	69.3	71.6	73.8	76.1	78.3	80.6	82.9	85.1	87.3
31	71.6	73.9	76.1	78.4	80.7	82.9	85.2	87.4	89.6
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.

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

Date

MAY 01 2009

Michael H. Sheppardson
Contractors Signature

Michael H. Sheppardson
Contractors Printed Name

CPC 051849
Contractors Cert. No.

672 N. Semoran Blvd., Ste 203
Orlando, FL 32807
Office: (407) 275-1099
Fax: (407) 275-1015

RESIDENTIAL
SWIMMING POOL
MASTER SPECIFICATION
DRAWING
FOR

1090 Kensington Park Dr
Altamonte Springs FL 32714
(407) 830-5327
CPC0056809

Holland Pools

Masterly and Excellence in Service

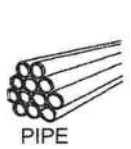
Drawn By: A R PATTON & Associates, Inc.
(407) 977-1892
Specializing in Residential and Commercial Pools, Fountains and Features

GALLONS 17054 TURNOVER RATE HRS. = 6 = GPM NEEDED 48.00
 WATER FEATURE /SPA REQR'D = GPM NEEDED 32
 TOTAL GPM NEEDED 80

BEFORE PROCEEDING - SEE PIPE SIZING TABLE (PAGE2) TO USE THE CORRECT
 PIPE AND FITTING SIZE IN RELATIONSHIP TO THE VELOCITY AND GPM NEEDED

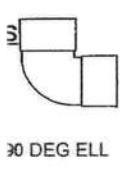
SUCTION SIDE VELOCITY → 8 RETURN SIDE VELOCITY → 10
 QTY QTY

STATIC LIFT

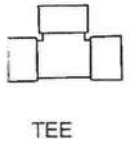


PIPE	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
QTY	0	0	40	3	0	0	0	0
1.5	0	0	4	0.27	0	0	0	0
8	0	0	38	0	0	0	0	0

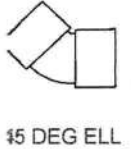
NOTE:
 FLEX PIPE IS 40%
 MORE RESTRICTIVE
 THAN RIGID PIPE
 (SEE PAGE 2)



90 DEG ELL	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
QTY	0	0	4	0	0	0	0	0
X 2.5	0	0	10	0	0	0	0	0
X 4.0	0	0	16	0	0	0	0	0
X 5.7	0	0	22.8	0	0	0	0	0
X 6.9	0	0	27.6	0	0	0	0	0
X 7.9	0	0	31.6	0	0	0	0	0
X 11.4	0	0	45.6	0	0	0	0	0
X 16.7	0	0	66.8	0	0	0	0	0
X 21.0	0	0	84.0	0	0	0	0	0



TEE	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
QTY	0	0	0	1	0	0	0	0
X 6.0	0	0	0	6.0	0	0	0	0
X 8.4	0	0	0	8.4	0	0	0	0
X 12.0	0	0	0	12.0	0	0	0	0
X 14.7	0	0	0	14.7	0	0	0	0
X 16.4	0	0	0	16.4	0	0	0	0
X 22.0	0	0	0	22.0	0	0	0	0
X 32.7	0	0	0	32.7	0	0	0	0
X 49.0	0	0	0	49.0	0	0	0	0



45 DEG ELL	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
QTY	0	0	0	0	0	0	0	0
X 1.4	0	0	0	0	0	0	0	0
X 2.1	0	0	0	0	0	0	0	0
X 2.6	0	0	0	0	0	0	0	0
X 3.1	0	0	0	0	0	0	0	0
X 4.0	0	0	0	0	0	0	0	0
X 5.1	0	0	0	0	0	0	0	0
X 8.0	0	0	0	0	0	0	0	0
X 10.6	0	0	0	0	0	0	0	0

TDH FOR PIPE AND FITTING → 10.273 → 24.896

TDH FOR PIPE, FITTING PLUS LIFT → 11.773 PIPE AND FITTING TDH → 24.896

SKIMMER 2" 0 X 3.0 = 0 FILTER 3
 MAIN DRAIN* 2 X 1.5 = 3 HEATER LOST FROM DATA SHEET 0

3-WAY VALVE 1 1/2"	EACH	0	0	3-WAY VALVE 1 1/2"	0	0
3-WAY VALVE 2"	EACH	2	2.4	3-WAY VALVE 2"	3	5.76
3-WAY VALVE 2.5"	EACH	0	0	3-WAY VALVE 2.5"	0	0
3-WAY VALVE 3"	EACH	0	0	3-WAY VALVE 3"	0	0
3-WAY VALVE 4"	EACH	0	0	3-WAY VALVE 4"	0	0
3-WAY VALVE 6"	EACH	0	0	3-WAY VALVE 6"	0	0
3-WAY VALVE 8"	EACH	0	0	3-WAY VALVE 8"	0	0

SUCTION CLEANER* NO X 9.0 = 0 SALT GENERATOR 2.0000
 *SEE NOTE PAGE 3) YES OR NO
 (YES OR NO)
 EXIT LOSS 3.12
 (SEE TABLE PAGE 2)

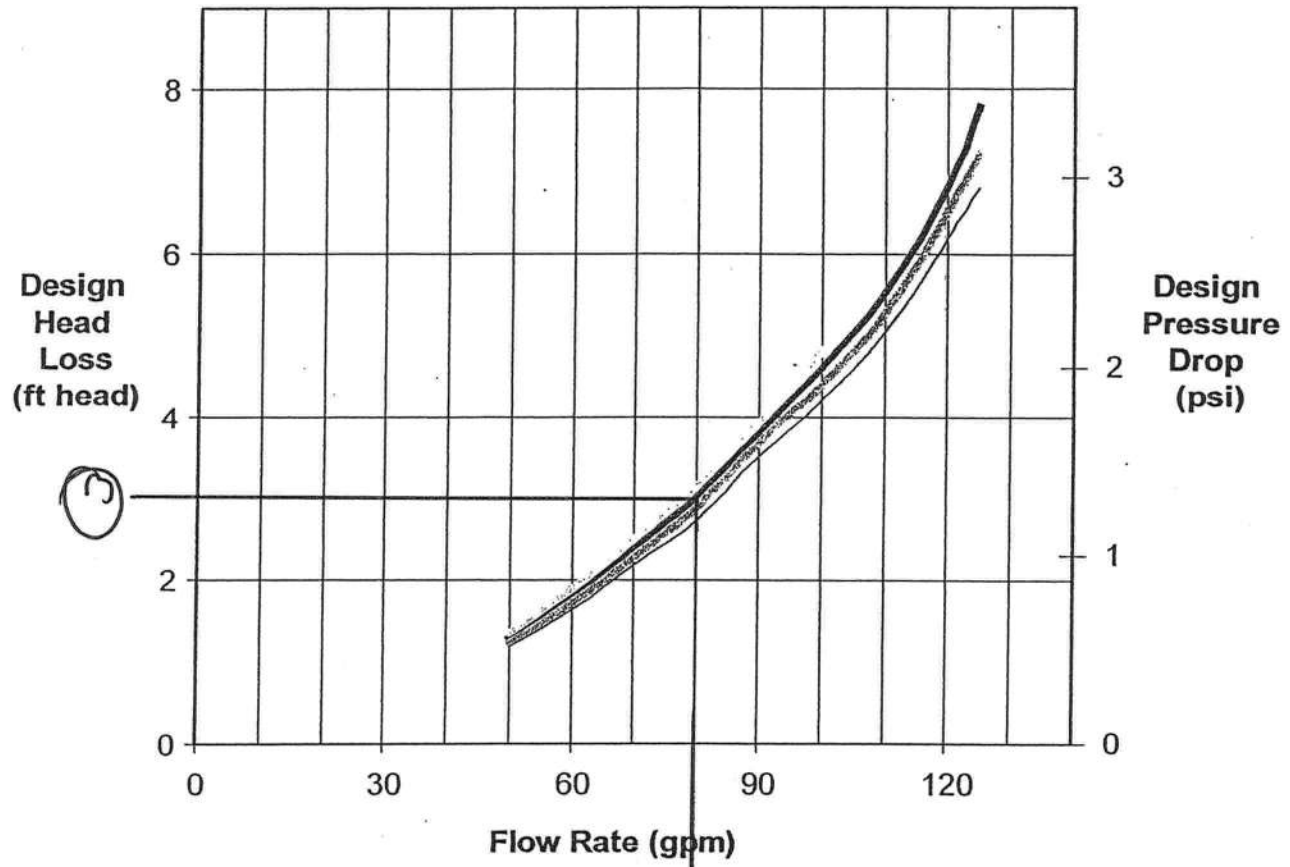
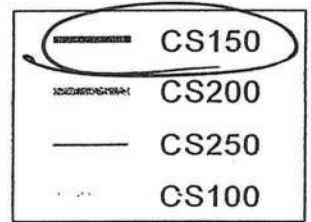
TDH SUCTION SIDE 15 TDH DISCHARGE SIDE 34

TDH FOR COMPLETE POOL 49 TOTAL GPM NEEDED 80



Section 10. Head Loss Curves

0.1Jandy® Cartridge Filter, CS Series



15

80



Qualification Test Plan

Title:
Chlorine Generator Cell
Qualification Test Plan

QTP #: 0113

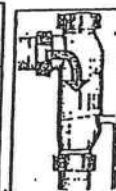
Revision #: B
Date: 2/27/07

Page 23 of 28

20102053

3-Port AquaPure1400 (.040) – 90°Plumb

Flow Rate (GPM)	Pressure (PSI) @ Inlet	Pressure (PSI) @ outlet	Pressure Drop (Delta P)
30	43.7	43.6	0.1
50	40.0	39.7	0.3
70	34.4	33.7	0.7
80	30.8	29.9	0.9
100	21.1	19.5	1.6
120	12.8	10.7	2.1
132	4.2	1.4	2.8



Square Cell AquaPure700

Flow Rate (GPM)	Pressure (PSI) @ Inlet	Pressure (PSI) @ outlet	Pressure Drop (Delta P)
30	43.8	43.3	0.5
50	40.7	39.5	1.2
70	35.1	33.6	1.5
80	32.5	30.5	2.0
100	22.8	19.5	3.3
120	14.7	10.9	3.8
132	5.5	0.1	5.4

2.0



Square Cell AquaPure1400

Flow Rate (GPM)	Pressure (PSI) @ Inlet	Pressure (PSI) @ outlet	Pressure Drop (Delta P)
30	44.0	43.4	0.6
50	40.6	38.7	1.9
70	35.6	33.8	1.8
80	31.7	29.6	2.1
100	23.5	20.3	3.2
120	15	10.7	4.3
132	5.6	0.2	5.4



Originator

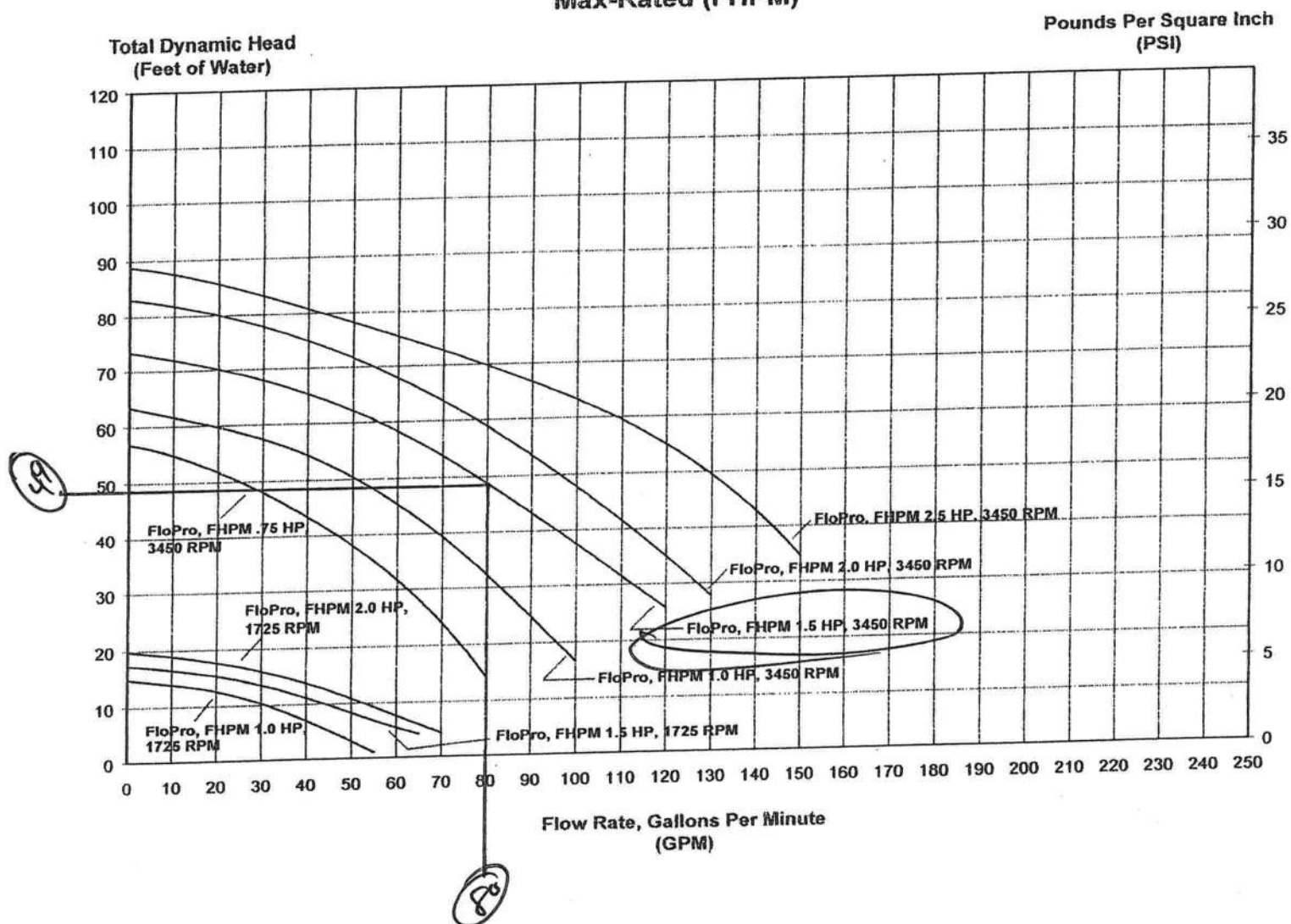
Richard Wu

Approval

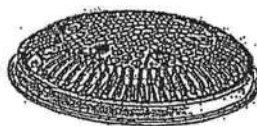
20102053

7.3 Performance Curves


Jandy FloPro Series Pumps Max-Rated (FHPM)





OWNER'S MANUAL
INSTALLATION, OPERATION, & PARTS
DUAL SUBMERGED SUCTION OUTLET SET
[Commonly called main drains]




Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

 This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

 **WARNING** warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.

 **CAUTION** warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

The NOTICE label indicates special instructions that are important but not related to hazards.

 - **WARNING** - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

IMPORTANT SAFETY INSTRUCTIONS

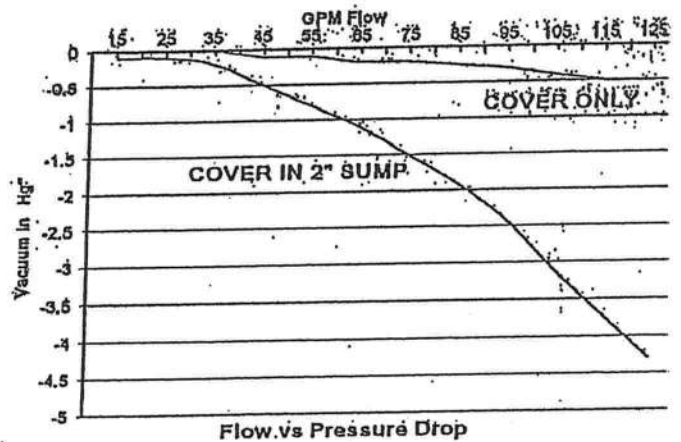
USE ONLY HAYWARD GENUINE REPLACEMENT PARTS

RECOMMENDED SYSTEM SPECIFICATIONS:

ACCEPTABLE PIPE SIZE FOR MAXIMUM RECOMMENDED SYSTEM FLOW RATE PER APSP-7 (6 FT/SEC IN THE BRANCH LINE)

Pipe Size [mm]	Flow rate GPM [Liter/Min]	Pipe Size [mm]	Flow rate GPM [Liter/Min]
1 1/2"	40	2 1/2"	90
[50]	[150]	[75]	[340]
2"	63	3"	138
[63]	[240]	[90]	[522]

Chart 1



'GX1048E Suction Outlet Covers are rated for Floor Only at 125 GPM

FIG 1

Note: 1" Hg = 1.13 Ft of Head

'G1048EW Suction Outlet Covers are rated for Wall or Floor at 72 GPM

the event of one suction outlet being blocked, the remaining suction outlets serving that system shall have a flow rating capable of the full flow of the pump(s) for the specific suction system.

Example: In the System shown in Diagram 1, two (2) "Floor Only" suction outlet covers are selected and mounted. These covers are individually rated for 125 GPM. For a desired flow rate through the pump of 100 GPM, a minimum pipe size from the Chart 1 is selected at 3". At the desired flow of 100 GPM one cover could be partially blocked and the other suction outlet flow would be below the rated 125 GPM of the "Floor" mounted suction outlet cover. Since there are two outlets flowing in normal operation, and the allowable velocity in the interconnecting piping is only 3ft/sec, the same pipe size is required in the interconnecting piping.

Example: In the System shown in Diagram 2, one (1) "Floor Only" suction outlet cover, rated at 125 GPM, and one (1) "Wall or Floor" suction outlet cover, rated at 72 GPM are selected and mounted. For a desired flow rate through the pump of 50 GPM, a minimum pipe size from the Chart 1 is selected at 2". At the desired flow of 50 GPM either cover could be totally blocked and the other suction outlet flow would be below the rated 72 GPM of the wall mounted suction outlet cover. Note: Flow may be limited by entrapping force in dual suction systems.

Minimum distance 3 feet
(Pipe Centerlines)

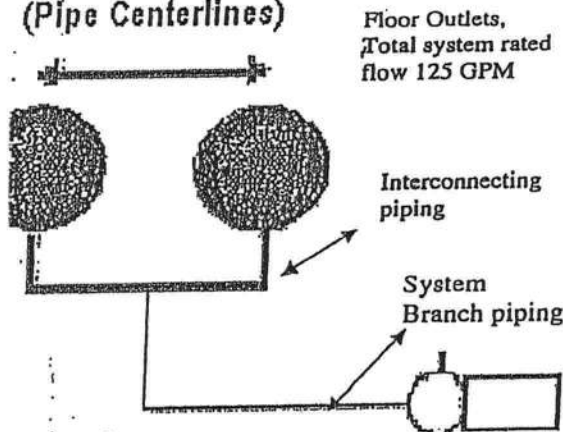
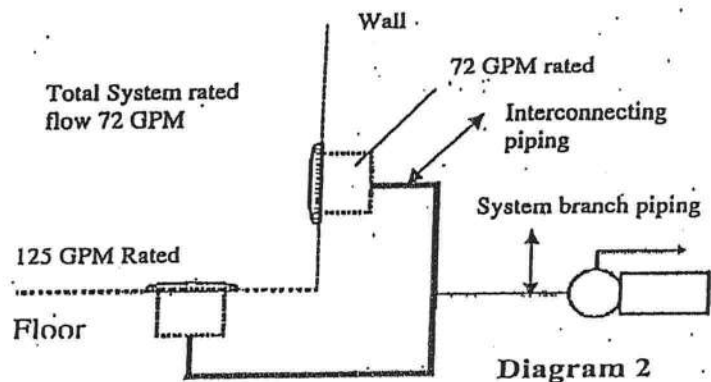
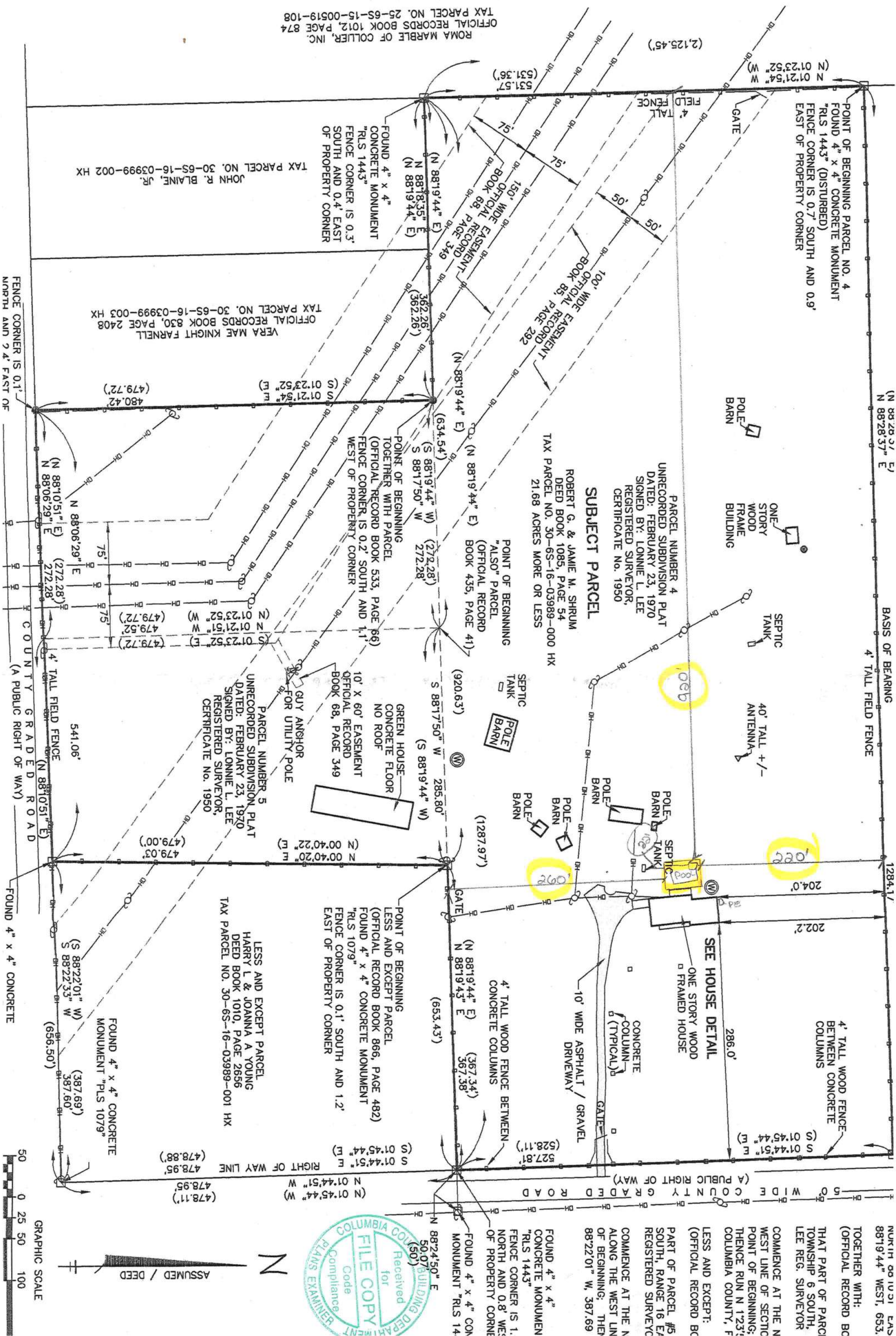


Diagram 1

Dual Outlets on Different Planes (Elevation or Plan View)





POINT OF COMMENCEMENT
NORTHWEST CORNER OF SECTION 30-T6S-R16E

(S 01°23'52" E)
(1594.09')
WEST LINE OF SECTION 30-T6S-R16E
(N 01°23'52" W)
(531.57')

POINT OF BEGINNING PARCEL NO. 4
FOUND 4" x 4" CONCRETE MONUMENT
"RLS 1443" (DISTURBED)
FENCE CORNER IS 0.7' SOUTH AND 0.9'
EAST OF PROPERTY CORNER

(N 88°28'37" E)
(N 88°28'37" E)

MARSHA L. JARRELL
DEED BOOK 805, PAGE 1344
TAX PARCEL NO. 30-6S-16-03987-001 HX

FOUND 4" x 4" CONCRETE
MONUMENT "RLS 1443"
FENCE CORNER IS 1.1' SOUTH AND
0.7' WEST OF PROPERTY CORNER

4' TALL WOOD FENCE
BETWEEN CONCRETE
COLUMNS

4' TALL WOOD FENCE
BETWEEN CONCRETE
COLUMNS

SEE HOUSE DETAIL

ONE STORY WOOD
FRAMED HOUSE

CONCRETE
COLUMN
(TYPICAL)

10' WIDE ASPHALT / GRAVEL
DRIVEWAY

4' TALL WOOD FENCE BETWEEN
CONCRETE COLUMNS

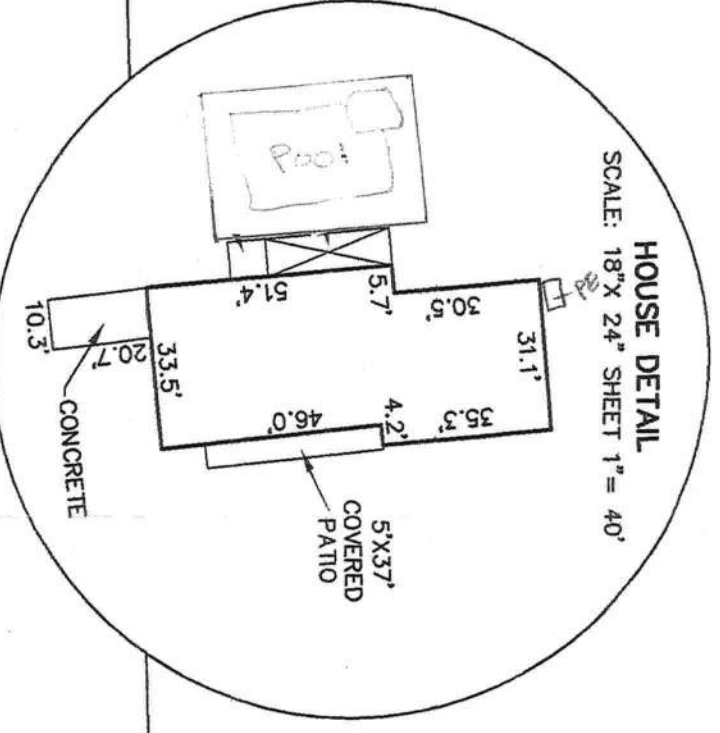
ROBERT G. & JAMIE M. SHRUM
DEED BOOK 1085, PAGE 54
TAX PARCEL NO. 30-6S-16-03989-000 HX
21.68 ACRES MORE OR LESS

SUBJECT PARCEL

PARCEL NUMBER 4
UNRECORDED SUBDIVISION PLAT
DATED: FEBRUARY 23, 1970
SIGNED BY: LONNIE L. LEE
REGISTERED SURVEYOR,
CERTIFICATE No. 1950

POINT OF BEGINNING
"ALSO" PARCEL
(OFFICIAL RECORD
BOOK 435, PAGE 41)

OFFICIAL RE
TAX PARCE
ROMA



LEGEND

- INDICATES PLACED 1/2" REBAR WITH GEOLINE/LB 7082 CAP
- INDICATES FOUND CONCRETE MONUMENT AS NOTED
- INDICATES 6' TALL WOOD PRIVACY FENCE
- INDICATES OVERHEAD UTILITY LINE
- INDICATES UTILITY POLE
- INDICATES EXISTING WATER WELL
- INDICATES RECORD PLAT DATA

PROPERTY

SUBJECT PAR
(OFFICIAL REC

PARCEL No. 4
SOUTH, RANG
REGISTERED 5

COMMENCE A
1°23'52" EAST
BEGINNING;
COUNTY GRAI
SOUTH 88°19'
ALONG THE V
ROAD RIGHT-

ALSO:

THAT PART C
TOWNSHIP 6
LEE, REGISTE

COMMENCE A
EAST, ALONG
EAST, 634.54
NORTH 88°10'
88°19'44" WE

TOGETHER W
(OFFICIAL RE

THAT PART C
TOWNSHIP 6
LEE REG. SUI

COMMENCE A
WEST LINE OI
POINT OF BE
THENCE RUN
COLUMBIA CC

LESS AND EX
(OFFICIAL RE

PART OF PAI
SOUTH, RANG
REGISTERED

COMMENCE A
ALONG THE 1
OF BEGINNING
88°22'01" W,

FOUND 4" x
CONCRETE M
"RLS 1443"
FENCE CORN
NORTH AND
OF PROPERT
MONUMENT

IN SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST,
COLUMBIA COUNTY, FLORIDA

FOR: ROBERT G. & JAMIE M. SHRUM

ATA

ALSO:

THAT PART OF PARCEL No. 1, TOWNSHIP 6 SOUTH, RANGE 16 EAST, SECTION 30, COLUMBIA COUNTY, FLORIDA, REGISTERED SURVEYOR, CERTIFICATE NO. 866, COMMENCE AT THE NW CORNER OF SAID PARCEL, THENCE RUN N 88°10'51" EAST, 656.54 FEET TO THE POINT OF BEGINNING; THENCE RUN N 88°19'44" WEST, 653.43 FEET TO THE POINT OF BEGINNING;

TOGETHER WITH:

(OFFICIAL RECORD BOOK 553)

THAT PART OF PARCEL No. 5, TOWNSHIP 6 SOUTH, RANGE 16 EAST, SECTION 30, COLUMBIA COUNTY, FLORIDA, REGISTERED SURVEYOR, CERTIFICATE NO. 866, COMMENCE AT THE NW CORNER OF SAID PARCEL, THENCE RUN N 1°23'52" WEST, 50.07 FEET TO THE POINT OF BEGINNING; THENCE RUN N 88°22'01" WEST, 387.69 FEET TO THE POINT OF BEGINNING;

LESS AND EXCEPT:

(OFFICIAL RECORD BOOK 866)

PART OF PARCEL #5 OF AN UNDIVIDED SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, SECTION 30, COLUMBIA COUNTY, FLORIDA, REGISTERED SURVEYOR, CERTIFICATE NO. 866, COMMENCE AT THE NW CORNER OF SAID PARCEL, THENCE RUN N 88°24'50" EAST, 50.07 FEET TO THE POINT OF BEGINNING; THENCE RUN N 88°22'01" WEST, 387.69 FEET TO THE POINT OF BEGINNING;

FOUND 4" x 4" CONCRETE MONUMENT "RLS 1443" FENCE CORNER IS 1.5' NORTH AND 0.8' WEST OF PROPERTY CORNER

FOUND 4" x 4" CONCRETE MONUMENT "RLS 1443" FENCE CORNER IS 1.5' NORTH AND 0.8' WEST OF PROPERTY CORNER

FOUND 4" x 4" CONCRETE MONUMENT "PLS 1079" FENCE CORNER IS 1.5' NORTH AND 0.8' WEST OF PROPERTY CORNER

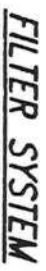
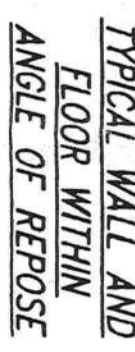
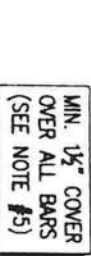
GRAPHIC SCALE

50 0 25 50 100 200


(IN FEET)

SCALE: 18"X 24" SHEET 1"= 100'

1. For pool plan, size, deck, and special details, see Contractor's Pool Plan.
2. Pool Walls shall be 5" thick and Floors shall be 6" thick and shall be pneumatically applied Concrete with a Compressive Strength of 3,000 psi in 28 days. Concrete Decks shall be 2,500 psi. Concrete construction will conform to ACI Standard 318.
3. All Pool construction shall comply with Florida Building Code Building 2007 and Florida Building Code Residential 2007, together with 2009 Revisions, ANSI/NSP National Standard-5 for Residential Inground Swimming Pools, ANSI/NSP National Standard-3 for Permanently Installed Residential Spas, ANSI/APSP-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins and the Latest Adopted National Electric Code (NEC).
4. All Piping to be Schedule 40 PVC, bearing the mark of NSF Approval unless otherwise noted.
5. All Reinforcing Steel to conform to ASTM 615, Grade 40. Reinforcing shall be #3 bars at 12" on center in each direction, w/ 15" lap joints in walls and floors up to 6'. Over 6' use #3 bars at 6" on center in each direction in the areas over 6'.
6. If Concrete is cast against Bare Earth without a Separation Barrier, the minimum cover shall be 3". With a Barrier (Sleeptex) between Concrete and Earth, the minimum cover shall be 1 1/2".
7. All Metallic Pool Fittings within 5' of the inside wall and deck reinforcing steel to be bonded to the Pool Reinforcing Steel with #8 AWG Copper Wire. The #8 Copper Wire to be run internally and externally with the NEC approved PVC Light Conduit form the Light Niche to the Junction Box. Completion of the pool grounding to the Electrical Panel Ground to be by Electrician.
8. Bond all Sheathed Cables, Raceways, Metal Piping and all Fixed Metal Parts separated by a permanent barrier, if within 5'-0" horizontally from Water and 12'-0" Vertically of Maximum Water Level.
9. Equipment/ Bonding to be accomplished in accordance with Article 680 of the Latest Adopted National Electrical Code (NEC).
10. Pool or Patio shall bear only on Rock or Clean Sand, which shall be compacted to provide a Structurally Safe Bearing Capacity. Any Unsuitable Material encountered in excavation shall be removed in its entirety and the area shall be backfilled with acceptable material and properly compacted. Where unsuitable Material cannot be removed, the pool must be redesigned.
11. The Contractor must protect Existing Structures from failure by acceptable methods if required. The Engineer accepts no responsibility for the safety of Existing Structures.
12. The Design Engineer assumes no responsibility for pool construction in Easements or Required Setback areas. Pool Contractor and/or Owner shall verify the layout and all dimensions shown prior to construction.
13. Contractor shall determine the location of all Utilities in relation to the Pool and its Equipment and ensure minimum clearances in accordance with Local Regulations and Ordinances.
14. Contractor shall provide adequate Temporary Fencing around the construction area to prevent unauthorized entry into the Pool Area.
15. If a water supply is provided, a minimum 3" Atmospheric Break will be provided.
16. All Structural, Filtration and Electrical details outlined in these drawings also relate to Spa Construction.
17. All Pool and Spa Heaters shall be equipped with an On/Off Switch mounted for easy access to allow the Heater to be Shut Off without adjusting the Thermostat settings and to allow restarting without relighting the Pilot Light.
18. WARNING: To empty the Pool for any reason, the Hydrostatic Uplift Pressure must be eliminated. The Owner must consult a Contractor experienced in eliminating Uplift Pressure.



PLAN EXPIRES 1 YEAR FROM THE SIGNATURE DATE OR THE EFFECTIVE DATE OF A MAJOR FLORIDA BUILDING CODE CHANGE WHICHEVER IS SOONER


GORDON H. SHEPARDSON, P.
FL PE # 19383
672 N. Semoran Blvd., Ste 204

**RESIDENTIAL
SWIMMING POOL
MASTER SPECIFICATION
DRAWING
FOR
COLUMBIA COUNTY**

rown By: A R PATTON &
Associates, Inc.
(407) 977-1892

Specializing in
Residential and Commercial
Pools, Fountains and Features

Holland Pools

Monetizing and Excellence in Service

1090 Kensington Park Dr
Altamonte Springs FL 32714

(407) 830-5327
CPC0056809

Scale: None Rev 7 - 11/18/09

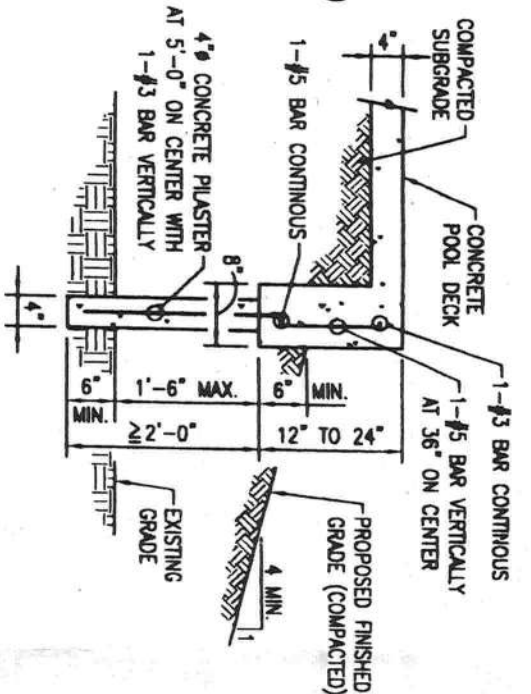
FILE COPY

TURNDOWN NOTES

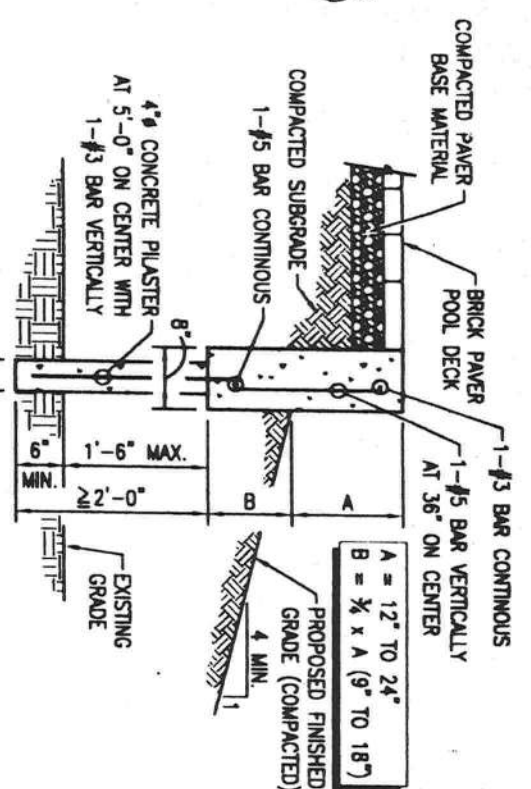
1. Detail is based on NO surcharge behind the Turndown and the Ground away from the Turndown is Level (>4 to 1). Turndown may abut Ribbon Footer and be tied into Footer if Appropriate, with #3 Rebar.
2. Turndown shall bear on Rock, Clean Sand or Structurally Sound Soils (>1,500 PSF) that shall be compacted to provide Optimum Bearing Capacity and prevent Settling or Shifting.
3. All Reinforcing Steel is to Conform to ASTM 615, Grade 40.
4. Concrete shall contain Fiber Mesh and have a 28 Day Compressive Strength of 2,500 PSI.
5. All Construction to Conform to Florida Building Code Building 2007, Florida Building Code Residential 2007, together with 2009 Revisions.
6. Refer to Contractor's Plan on file with the Building Department for Details on Turndown Location.
7. If the Base of the Turndown does not extend into the Old (Existing) Ground, a 4" Plaster will be required every 5'-0" that will be either 2'-0" into the Ground or to 6" into the Indigenous Material, whichever is Deeper. The Plaster will have a #3 Rebar tied into the #5 Rebar in the base of the Vertical Pour.
8. A Deck Turndown is NOT intended to be a substitute for a Retaining Wall. If the Vertical Dimension from the Top of the Concrete Deck to the Old (Existing) Ground reaches 42" for a 12" Turndown, 48" for a 18" Turndown or 54" for a 24" Turndown, for more than 20% of the Turndown Length or the Finished Grade Slope exceeds (steeper than) 4' Horizontally and 1' Vertically, a Turndown should not be used.
9. For a Paver Deck, if the Vertical Dimension from the Top of the Deck to the Old (Existing) Ground reaches 30.0" for a 12" Turndown, 36.0" for a 18" Turndown or 42.0" for a 24" Turndown, for more than 20% of the Turndown Length or the Finished Grade Slope exceeds (steeper than) 4' Horizontally and 1' Vertically, a Turndown should not be used.
10. If a Screen Enclosure is to be installed on top of the Turndown, the Swimming Pool Contractor must Coordinate attachment of the Screen Enclosure to the Turndown with the Screen Contractor.

FOOTER NOTES

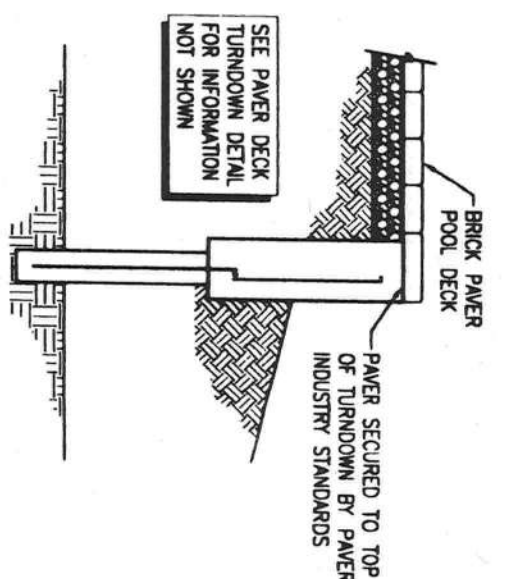
1. If a Screen Enclosure is to be installed, the Swimming Pool Contractor must Coordinate Construction of any required Footer with the Screen Contractor.
2. Footer shall bear on Rock, Sand or Structurally Sound Soils (>1,500 PSF) that shall be compacted to provide Optimum Bearing Capacity and prevent Settling or Shifting.
3. Concrete shall have a 28 Day Compressive Strength of 2,500 PSI with Fiber Mesh or 6x6-10x10 W.W. Mesh.
4. (3) #3 Rebars is Equivalent to (1) #5 Rebar.
5. A Footer may be installed with a Brick Paver Pool Deck if required by the Jurisdiction or at the Option of the Contractor and may be placed over the Top of the Footer or Abutting the Side of the Footer.



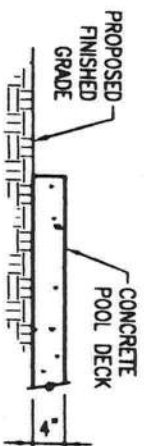
CONCRETE DECK TURNDOWN



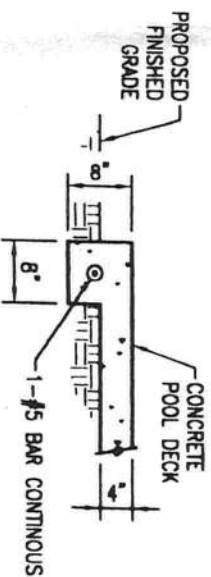
PAVER DECK TURNDOWN



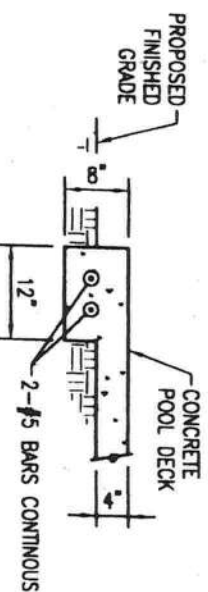
ALTERNATE PAVER ON TURNDOWN



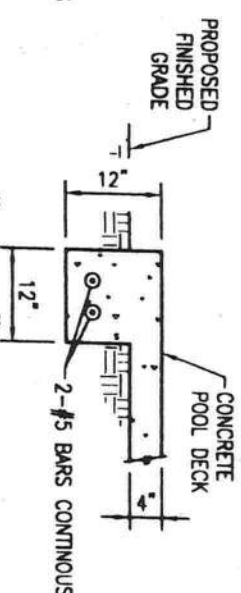
NO FOOTER



8" X 8" FOOTER

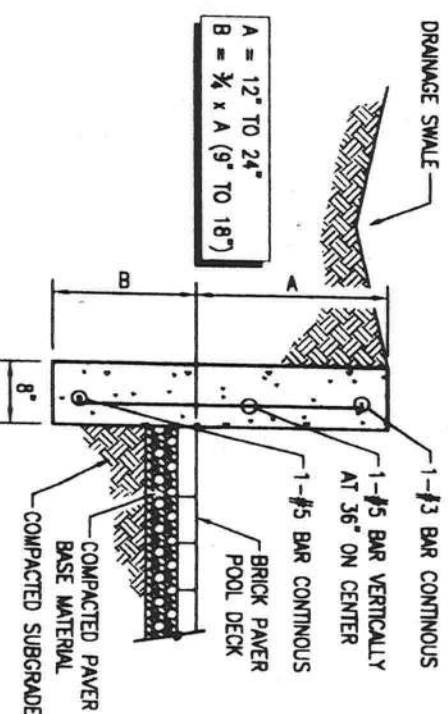


8" X 12" FOOTER



12" X 12" FOOTER

ALTERNATE PAVER LOCATION



Drawn By: A R PATTON & Associates, Inc. (407) 977-1892
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History and Excellence in Service
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(407) 830-5327
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RESIDENTIAL
SWIMMING POOL
MASTER SPECIFICATION
DRAWING
FOR
COLUMBIA COUNTY

SEP 17 2010

Date

[Signature]
GORDON H. SHEPARDSON, P.E., P.A.
FL P.E. 19333
672 W. Semoran Blvd., Ste. 204
Orlando FL 32807
Office (407) 275-1099
Fax (407) 275-1015

Scale: None Rev 4 - 4/15/09

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: $\frac{\text{Surf Area}}{\text{Avg Depth}} \times 7.48 \text{ (gal./cubic foot)} = \frac{\text{Vol. in gal.}}{\text{Turnover in Min.}}$
- Determine preferred Turnover Time in hours: $\frac{\text{Vol. in gal.}}{\text{Turnover in Min.}} \times 60 \text{ (min. / hr.)} = \frac{\text{Vol. in gal.}}{\text{Turnover in Min.}}$
- Determine Max Flow Rate: $\frac{\text{Vol. in gal.}}{\text{Turnover in Min.}} = \frac{\text{Vol. in gal.}}{\text{Turnover in Min.}}$
- Spa Jets: $\frac{\text{No. of Jets}}{\text{Jet Flow}} \times \text{gpm per jet} = \frac{\text{Total Jet Flow Rate}}{\text{System Flow Rate}}$

(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 inch to keep velocity ☐ 6 fps max. at gpm Maximum System Flow Rate.
Trunk, Skimmer & Suction Piping to be inch to keep velocity ☐ 8 fps max. at gpm Maximum System Flow Rate.
Return Piping to be inch to keep velocity ☐ 10 fps max. at gpm Maximum System Flow Rate.

Determine Simplified TDH:

- Distance from pool to pump in feet:
- Friction loss (in suction pipe) in inch pipe per 1 ft. ☐ gpm = (from pipe flow/friction loss chart)
- Friction loss (in return pipe) in inch pipe per 1 ft. ☐ gpm = (from pipe flow/friction loss chart)
- $\frac{\text{Length of Suct. Pipe}}{\text{Length of Return Pipe}} \times \frac{\text{Friction Loss in Suct. Pipe}}{\text{Friction Loss in Return Pipe}} = \frac{\text{TDH Suct. Pipe}}{\text{TDH Return Pipe}}$

TDH in Piping:

Filter loss in TDH (from filter data sheet):

Header loss in TDH (from header data sheet):

Total all other loss:

Total Dynamic Head (TDH):

Selected Pump and Main Drain Cover:

Pump selection

(Make and Model)

using pump curve for TDH & System Flow Rate

Main Drain Cover

(Make and Model)

(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).
☐ suction outlets ☐ gpm max. flow (see note 3).
☐ channel drain ☐ gpm w/ 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 fps	8 fps	10 fps
1"	16 gpm	21 gpm	26 gpm
1.5"	37 gpm	50 gpm	62 gpm
2"	62 gpm	82 gpm	103 gpm
2.5"	88 gpm	117 gpm	146 gpm
3"	136 gpm	181 gpm	227 gpm
4"	234 gpm	313 gpm	392 gpm
6"	534 gpm	712 gpm	883 gpm

Total Head In Feet Conversion Chart

Inches Mercury (Vacuum Gauge)

0	0.0	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	13.8	16.1	18.4	20.6	22.9	25.2	27.4	29.7	31.9	34.2
7	16.1	18.4	20.7	23.0	25.3	27.5	29.8	32.0	34.3	36.5
8	18.4	20.7	23.0	25.3	27.6	29.9	32.1	34.4	36.6	38.8
9	20.7	23.1	25.3	27.6	29.9	32.1	34.4	36.7	38.9	41.1
10	23.1	25.4	27.7	29.9	32.2	34.5	36.7	39.0	41.2	43.4
11	25.4	27.7	29.9	32.2	34.5	36.8	39.0	41.3	43.5	45.8
12	27.7	30.0	32.2	34.5	36.8	39.1	41.3	43.6	45.9	48.1
13	30.0	32.3	34.6	36.9	39.1	41.4	43.6	45.9	48.1	50.4
14	32.3	34.6	36.9	39.1	41.4	43.7	45.9	48.2	50.4	52.7
15	34.6	36.9	39.2	41.5	43.7	46.0	48.3	50.5	52.7	55.0
16	36.9	39.2	41.5	43.7	46.0	48.3	50.5	52.8	55.0	57.3
17	39.2	41.5	43.8	46.1	48.3	50.6	52.8	55.1	57.4	59.6
18	41.5	43.8	46.1	48.4	50.6	52.9	55.1	57.4	59.7	61.9
19	43.8	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	66.7	68.9	71.2
23	53.1	55.4	57.7	59.9	62.2	64.5	66.7	69.0	71.3	73.5
24	55.4	57.7	60.0	62.2	64.5	66.8	69.1	71.3	73.6	75.8
25	57.7	60.0	62.3	64.5	66.8	69.1	71.4	73.6	75.9	78.1
26	60.1	62.3	64.6	66.9	69.2	71.4	73.7	75.9	78.2	80.4
27	62.4	64.6	66.9	69.2	71.5	73.7	76.0	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	80.6	82.9	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	92.1	94.4	96.6
34	78.5	80.8	83.1	85.3	87.6	89.8	92.1	94.4	96.7	98.9
35	80.9	83.1	85.4	87.6	89.9	92.2	94.4	96.7	98.9	101.2

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

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Holland Pools
Planning and Excellence in Service

1090 Kensington Park Dr (407) 830-5327
Altamonte Springs FL 32714 CPC0056809

RESIDENTIAL
SWIMMING POOL
DRAWING
FOR
COLUMBIA COUNTY

Scale: None Rev 7 - 11/18/09

Contractors Telephone No

Contractors Cert. No.

Contractors Printed Name

Contractors Signature

Date

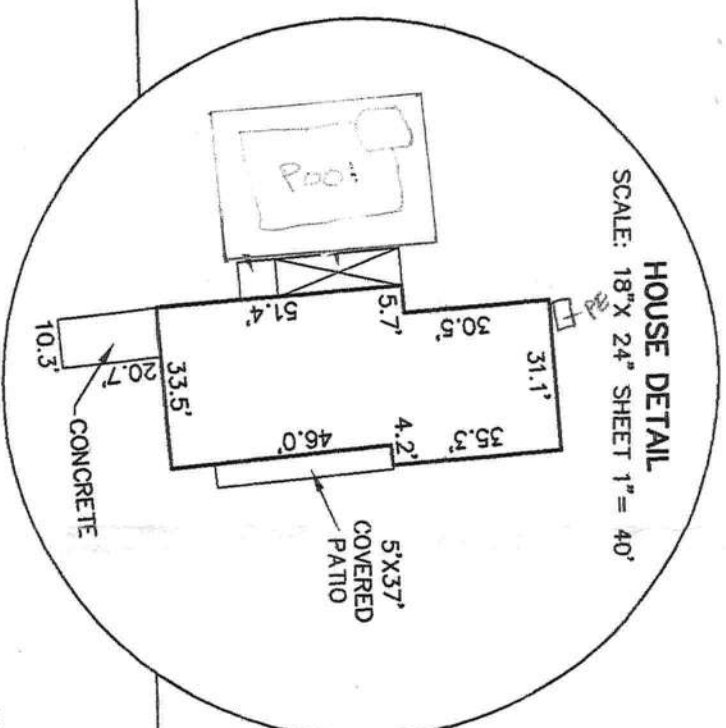
SEP 17 2010

Date

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

This worksheet was
Created and provided
By

Gordon H Shepardson PE PA
672 N Semoran Blvd Ste 204
Orlando FL 32807
Off (407) 275-1099
Fax (407) 275-1015



INDICATES PLACED 1/2" REBAR WITH GEOLINE/LB 7082 CAP
INDICATES FOUND CONCRETE MONUMENT AS NOTED
INDICATES 6' TALL WOOD PRIVACY FENCE
INDICATES OVERHEAD UTILITY LINE
INDICATES UTILITY POLE
INDICATES EXISTING WATER WELL
INDICATES RECORD PLAT DATA

SUBJECT PARCEL
(OFFICIAL RECORD #

PARCEL No. 4, OF
SOUTH, RANGE 16 E
REGISTERED SURVEY

THAT PART OF PAR
TOWNSHIP 6 SOUTH
LEE, REGISTERED SL

COMMENCE AT THE
EAST, ALONG SAID
EAST, 634.54 FEET
NORTH 88°10'51" E
88°19'44" WEST, 65.

TOGETHER WITH:
(OFFICIAL RECORD €

THAT PART OF PAR
TOWNSHIP 6 SOUTH
LEE REG. SURVEY OF
COMMENCE AT THE
WEST LINE OF SECT
POINT OF BEGINNING
THENCE RUN N 12° E
COLUMBIA COUNTY,

LESS AND EXCEPT:
(OFFICIAL RECORD)

PART OF PARCEL #
SOUTH, RANGE 16
REGISTERED SURVEY

COMMENCE AT THE
ALONG THE WEST L
OF BEGINNING; THI
88°22'01" W, 387.6

FOUND 4" x 4"
CONCRETE MONUMENT
"RLS 1443"
FENCE CORNER IS
NORTH AND 0.8' W
OF PROPERTY CORN
FOUND 4" x 4" C
MONUMENT "RLS 1

BOUNDARY SURVEY

IN SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST,
COLUMBIA COUNTY, FLORIDA

PROPERTY DESCRIPTION

SUBJECT PARCEL
(OFFICIAL RECORD BOOK 435, PAGE 41)

FOR: ROBERT G. & JAMIE M. SHRUM

PARCEL No. 4. OF AN UNRECORDED SUBDIVISION SURVEY PLAT OF THE NW 1/4 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST; SAID SURVEY PLAT BEING DATED FEBRUARY 23, 1970, AND SIGNED BY LONNIE L. LEE, REGISTERED SURVEYOR, ON CERTIFICATE No. 1950; SAID LANDS BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NW CORNER OF SAID SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, AND RUN SOUTH 1°23'52" EAST, ALONG THE WEST LINE OF SAID SECTION 30 A DISTANCE OF 1,594.09 FEET, TO THE POINT OF BEGINNING; THENCE NORTH 88°28'37" EAST, 1,284.58 FEET TO THE WEST RIGHT-OF-WAY LINE OF A 50-FOOT COUNTY GRADED ROAD; THENCE SOUTH 1°45'44" EAST ALONG SAID RIGHT-OF-WAY LINE 528.11 FEET; THENCE SOUTH 88°19'44" WEST, 1,287.97 FEET TO THE WEST LINE OF SAID SECTION 30; THENCE NORTH 1°23'52" WEST, ALONG THE WEST LINE OF SAID SECTION 30, 531.36 FEET TO THE POINT OF BEGINNING, LESS AND EXCEPT COUNTY ROAD RIGHT-OF-WAY.

ALSO:

THAT PART OF PARCEL No. 5 OF AN UNRECORDED SUBDIVISION SURVEY PLAT OF THE NW 1/4 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST; SAID SURVEY PLAT DATED FEBRUARY 23, 1970, AND SIGNED BY LONNIE L. LEE, REGISTERED SURVEYOR, CERTIFICATE No. 1950, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NW CORNER OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, AND RUN SOUTH 1°23'52" EAST, ALONG SAID WEST LINE OF SAID SECTION 30 A DISTANCE OF 2,125.45 FEET; THENCE RUN NORTH 88°19'44" EAST, 634.54 FEET TO THE POINT OF BEGINNING; THENCE RUN SOUTH 1°23'52" EAST, 479.72 FEET; THENCE RUN NORTH 88°10'51" EAST, 656.50 FEET; THENCE RUN NORTH 1°45'44" WEST, 478.11 FEET; THENCE RUN SOUTH 88°19'44" WEST, 653.43 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:
(OFFICIAL RECORD BOOK 553, PAGE 66)

THAT PART OF PARCEL No. 5 OF UNRECORDED SUBDIVISION SURVEY PLAT OF THE NW 1/4 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, SAID SURVEY PLAT DATED FEBRUARY 23, 1970, AND SIGNED BY LONNIE L. LEE REG. SURVEYOR CERTIFICATE No. 1950, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NW CORNER OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, AND S 1°23'52" EAST, ALONG WEST LINE OF SECTION 30, A DISTANCE OF 2125.45 FEET; THENCE RUN N 88°19'44" EAST 362.26 FEET TO THE POINT OF BEGINNING; THENCE RUN S 10°23'52" EAST, 480.42 FEET; THENCE RUN N 88°10'51" EAST, 272.28 FEET; THENCE RUN N 1°23'52" WEST 479.72 FEET; THENCE RUN S 88°19'44" WEST, 272.28 FEET TO THE BEGINNING, IN COLUMBIA COUNTY, FLORIDA.

LESS AND EXCEPT:
(OFFICIAL RECORD BOOK 866, PAGE 482)

PART OF PARCEL #5 OF AN UNRECORDED SUBDIVISION SURVEY PLAT OF THE NW 1/4 OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, SAID SURVEY PLAT DATED FEBRUARY 23, 1970, AND SIGNED BY LONNIE L. LEE, REGISTERED SURVEYOR, CERTIFICATE # 1950 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NW CORNER OF SECTION 30, TOWNSHIP 6 SOUTH, RANGE 16 EAST, AND RUN S 1°23'52" E, ALONG THE WEST LINE OF SAID SECTION 30, 2,125.45 FEET; THENCE N 88°19'44" E, 920.63 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE N 88°19'44" E, 367.34 FEET; THENCE S 1°45'44" E, 478.88 FEET; THENCE S 88°22'01" W, 387.69 FEET; THENCE N 00°40'22" E, 479.00 FEET TO THE POINT OF BEGINNING.

SURVEYOR'S NOTES

- BEARINGS HEREON ARE REFERENCED TO THE ASSUMED BEARING OF N 88°28'37" E ALONG THE NORTH LINE OF THE PARENT TRACT.
- NO ABOVE-GROUND OR BELOW-GROUND UTILITIES OR IMPROVEMENTS WERE LOCATED EXCEPT AS SHOWN HEREON.
- THE BOUNDARY SURVEY SHOWN HEREON IS BASED UPON ACTUAL FIELD MEASUREMENTS AND OBSERVATIONS MADE ON AUGUST 15, 2005.
- REPRODUCTIONS OF THIS SKETCH ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA SURVEYOR AND MAPPER.

FLOOD NOTE

ACCORDING TO MY INTERPRETATION OF COMMUNITY PANEL NUMBER 120070 0255 B OF THE FLOOD INSURANCE RATE MAPS FOR COLUMBIA COUNTY, FLORIDA, DATED: JANUARY 6, 1988 THE SUBJECT PROPERTY IS IN FLOOD ZONE "X", IE "AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN."

CERTIFIED TO:

ROBERT G. & JAMIE M. SHRUM
PROFESSIONALS' TITLE COMPANY, LLC
FIRST AMERICAN TITLE INSURANCE COMPANY OF TEXAS

GEOLINE SURVEYING, INC. LB 7082

DAVID G. SHORT
FLORIDA PROFESSIONAL SURVEYOR AND MAPPER
CERTIFICATE OF REGISTRATION NO. 5022

GEOLINE
SURVEYING, INC.

Professional Land Surveyors
13430 NW 104th Terrace, Suite A
Alachua, Florida 32615
(386)418-0500 Fax: (386)462-9986
geoline@geolineinc.com

DRAWN BY: DAVID SHORT
DESIGNED: DAVID SHORT
CHECKED: DAVID SHORT

SCALE 1" = 100'
DATE August 17, 2005
PROJECT # 200-175

SHRUM PROPERTY
COLUMBIA COUNTY, FLORIDA

JOB # 200-175

SHEET # 1 OF 1

BAR WITH GEOLINE/LB 7082 CAP
E MONUMENT AS NOTED
RIVACY FENCE
Y LINE

WELL
ATA

x 4" CONCRETE
"RLS 1443"
RNER IS 1.1' SOUTH AND
OF PROPERTY CORNER

4' TALL WOOD FENCE
BETWEEN CONCRETE
COLUMNS

E DETAIL
ORY WOOD
ED HOUSE

CONCRETE
COLUMN
(TYPICAL)

WIDE ASPHALT / GRAVEL
DRIVEWAY

ALL WOOD FENCE BETWEEN
CRETE COLUMNS

NG
PARCEL
BOOK 866, PAGE 482)
NCRETE MONUMENT

0.1' SOUTH AND 1.2'
Y CORNER

EXCEPT PARCEL
JOANNA A YOUNG
1010, PAGE 2656
I-6S-16-03989-001 HX

FOUND 4" x 4" CONCRETE
MONUMENT "PLS 1079"

CRETE
3"
4' SOUTH AND
ITY CORNER

