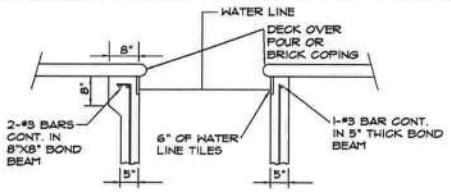
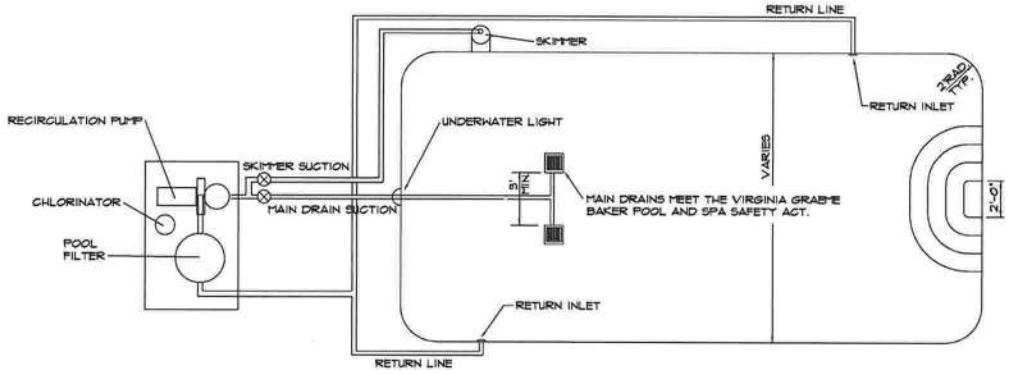
JOB SPECIFIC PIPE SIZING, TOTAL DYNAMIC HEAD CALCULATIONS AND EQUIPMENT SPECIFICATIONS AND DOCUMENTATION ARE TO BE PROVIDED BY THE POOL CONTRACTOR FOR EACH PROJECT. THE POOL CONTRACTOR MUST USE THE MAXIMUM FLOW CAPACITY OF THE SELECTED PUMP AND PROVIDE HYDRAULIC CALCULATIONS FOR TDH TO DETERMINE PROPER PUMP AND PIPING SIZING. THE MANUFACTURER'S EQUIPMENT SPECIFICATIONS AND OTHER DOCUMENTATION FOR PUMPS, FILTERS, HEATER EQUIPMENT AND MAIN DRAINS AND COVERS ARE TO BE SUBMITTED FOR REVIEW AND DOCUMENTATION FOR SIZING THE CIRCULATION SYSTEM.

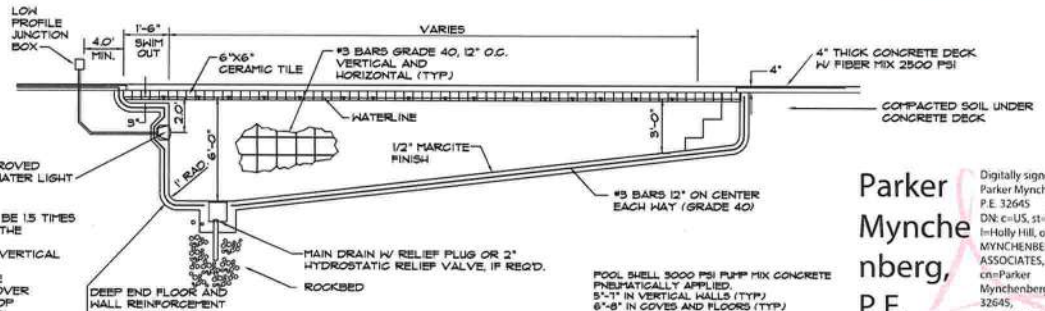


ALTERNATE BEAM FINISH DETAIL

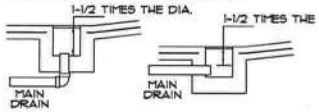
POOL SHELL 3000 PSI PUMP MIX CONCRETE PNEUMATICALLY APPLIED.
5"-7" IN VERTICAL WALLS (TYP.)
6"-8" IN COVES AND FLOORS (TYP.)
2500 MIN. GUNITE MAY BE SUBSITIUTED FOR 3000 PSI CONCRETE



TYPICAL SWIMMING POOL



THE MAIN DRAIN PIPE INVERT NEEDS TO BE 1.5 TIMES THE DIAMETER DOWN FROM THE TOP OF THE MAIN DRAIN GRATE TO THE TOP OF THE MAIN DRAIN PIPE. IF THE PIPE COMES IN VERTICAL TO THE MAIN DRAIN BOX.
IF THE MAIN DRAIN PIPE COMES INTO THE MAIN DRAIN BOX HORIZONTALLY, THE COVER FROM THE TOP OF THE GRATE TO THE TOP OF THE MAIN DRAIN PIPE NEEDS TO BE 1.5 TIMES THE DIA. OF THE MAIN DRAIN PIPE.



DEEP END FLOOR AND WALL REINFORCEMENT TO SLOPE BREAK-
#3 BAR @ 12" ON CENTER, EACH WAY < 7.0' DEEP
#3 BAR @ 6" ON CENTER, EACH WAY > 7.0' DEEP AND OVER.

SECTION

POOL SHELL 3000 PSI PUMP MIX CONCRETE PNEUMATICALLY APPLIED.
5"-7" IN VERTICAL WALLS (TYP.)
6"-8" IN COVES AND FLOORS (TYP.)
2500 MIN. GUNITE MAY BE SUBSITIUTED FOR 3000 PSI CONCRETE

GENERAL NOTES:

1. POOL IS TO BE BUILT TO COMPLY WITH FLORIDA, COUNTY AND CITY BUILDING CODES.
2. ALL METAL PARTS WITHIN 5 FT. WILL BE GROUNDED AS PER NATIONAL ELECTRIC CODE AND AS REQUIRED BY LOCAL INSPECTOR.
3. FILTRATION SYSTEM WILL HAVE SUFFICIENT CAPACITY TO PROVIDE A COMPLETE TURNOVER OF POOL WATER IN (12) TWELVE HOURS OR LESS.
4. POOL CONSTRUCTION TO BE THE SAME REGARDLESS OF SIZE AND SHAPE. IF FILL IS REQUIRED FOR 2 FT. TO 4 FT. OF WALL HEIGHT THEN WALLS HAVE TO BE REINFORCED WITH ADDITIONAL STEEL (8" O.C. BOTH WAYS) AND/ OR EXTRA WALL THICKNESS (8" TO 10").
5. ALL PVC PIPE WILL BE SCHEDULE 40.
6. ALL METAL FIXTURES AND POOL LIGHTS TO BE BONDED TO POOL STEEL AND GROUND WIRE.
7. POOL ALARMS DO NOT NEED TO BE HARDWIRED
8. SOIL CONDITIONS AT POOL LOCATION ARE ASSUMED TO BE ADEQUATE FOR A SINGLE FAMILY DWELLING.
9. TERMITE CONTROL WILL BE APPLIED UNDER ALL POOL DECKS.
10. ALL PUMPS AND FILTERS WILL BE ANCHORED TO A CONCRETE PAD WITH TAP CON ANCHORS.
11. ALL POOL AND SPA SUCTION INLETS SHALL BR PROVIDED WITH A COVER THAT HAS BEEN TESTED AND ACCEPTED BY A RECOGNIZED TESTING FACILITY AND COMPLY WITH A.N.S.I./A.S.M.E. A112.19, 8M, "SUCTION FITTINGS FOR USE IN SWIMMING POOLS, SPAS, HOT TUBS, AND WHIRLPOOLS BATHTUB APPLIANCES"
12. THE POOL DESIGN WILL MEET CHAPTER 45 OF THE 2020 FLORIDA BUILDING CODE-RESIDENTIAL 7TH EDITION.
13. RESIDENTIAL POOLS MUST COMPLY WITH CHAPTER 45 OF THE 2020 FLORIDA BUILDING CODE-RESIDENTIAL 7TH EDITION.
14. POOL CONSTRUCTION WILL MEET 2017 NATIONAL ELECTRIC CODE. SEE 680.26 (B)(2)(b) FOR PERIMETER BONDING USING AT LEAST ONE(1) #8 AWG BARE SOLID COPPER CONDUCTOR.
15. FOR RESIDENTIAL POOLS UP TO A WATER DEPTH OF 8'-0" #5 REBAR 12" O.C.B.W. OVER 8'-0"; SPECIAL ENGINEERING IS REQUIRED AND IS NOT A PART OF THIS DRAWING SPECIFICATIONS. WALL THICKNESS SHALL PROVIDE CODE COVER OVER REINFORCING. FOR OVER 8'-0" A SPECIAL DESIGN WILL BE REQUIRED.
16. RESIDENTIAL POOLS SHALL COMPLY WITH THE ANSI/APSP/ICC-5 2011 FOR RESIDENTIAL INGROUND POOLS, ANSI/APSP/ICC-3 2014 FOR PERMANENTLY INSTALLED RESIDENTIAL SPAS, AND ANSI/APSP/ICC-7 2015 FOR SUCTION ENTRAPMENT AVOIDANCE STANDARDS, AND ANSI/APSP/ICC-15-11 AMERICAN NATIONAL STANDARD FOR FOR RESIDENTIAL SWIMMING POOL AND SPA ENERGY EFFICIENCY WITH ADDENDA A APPROVED JANUARY 9, 2013.
17. RESIDENTIAL POOLS SHALL COMPLY WITH THE ANSI/APSP/ICC-14-14 AMERICAN NATIONAL STANDARD FOR PORTABLE ELECTRIC SPA ENERGY EFFICIENCY.
18. DO NOT USE OR OPERATE POOL OR SPA IF THE SUCTION FITTING IS MISSING, BROKEN, OR LOOSE.
19. IF THE SUCTION INLET SYSTEM, SUCH AS AN AUTOMATIC CLEANING SYSTEM, IS A VACUUM CLEANER SYSTEM WHICH HAS A SINGLE SUCTION INLET, OR MULTIPLE SUCTIONS INLETS WHICH CAN BE ISOLATED BY VALVES, THEN EACH SUCTION INLET SHALL PROTECT AGAINST USER ENTRAPMENT BY EITHER AN APPROVED ANTI-VORTEX COVER, 12" X 12" GRATE OR LARGER, OR OTHER APPROVED MEANS.

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

Parker Mynchenberg, P.E. 32645

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Date: 2021.02.21 12:45:39 -05'00'

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(386) 677-6891 FAX (386) 677-2114

BLUE OASIS POOLS & SPSA, INC.
7655 CASA GRANDE BLVD.
KEYSTONE HEIGHTS, FL. 32656
CPC1457142
904-591-5625

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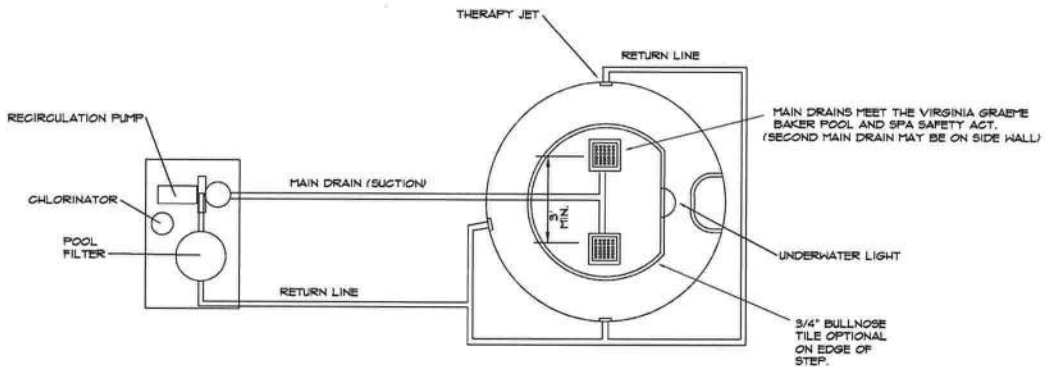
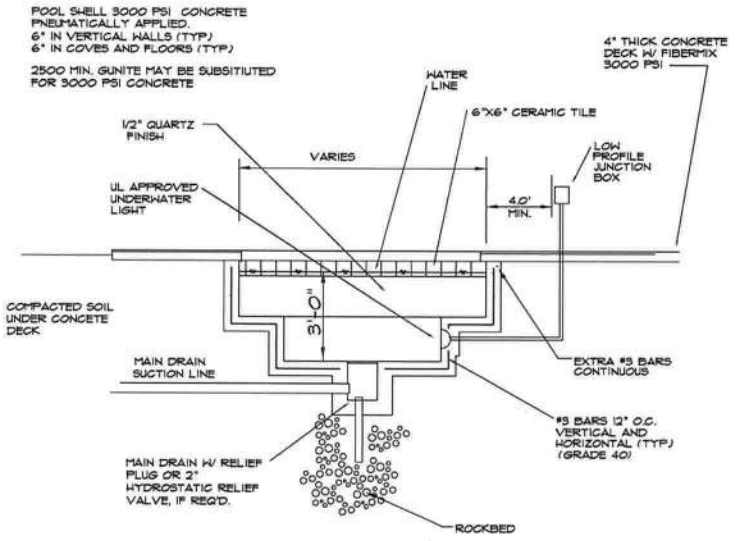
BAKER COUNTY

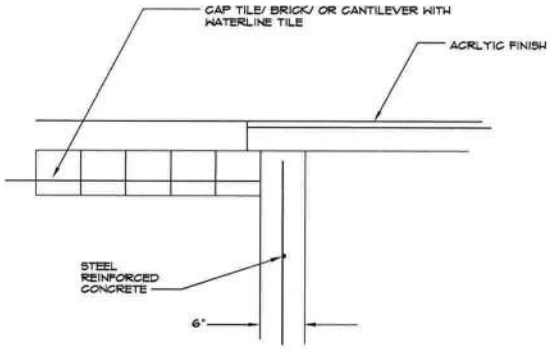
C:\2021 RESIDENTIAL SWIMMING POOLS\BLUE OASIS POOLS\JOHN PRENDERGAST\BLUE OASIS POOLS.dwg, 2/10/2021 5:37:02 PM, DWG To PDF.pc3



TYPICAL SPA POOL - 2 MAIN DRAINS ON FLOOR



SECTION



DECK AND TILE DETAIL

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Date: 2021.02.21 12:46:22 -05'00'

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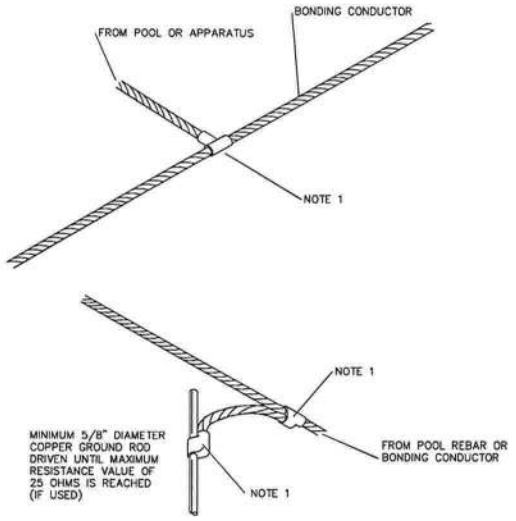
BAKER COUNTY

POOL BONDING NOTES:

1. EQUIPOTENTIAL BONDING OF PERIMETER SURFACES REQUIRES A COPPER CONDUCTOR; MINIMUM #8 AWG BARE SOLID COPPER CONDUCTOR WHICH FOLLOWS THE CONTOUR OF THE PERIMETER SURFACE OF THE POOL FROM 18" TO 24" FROM THE INSIDE WALLS OF THE POOL AND WHICH IS SECURED WITHIN OR UNDER THE PERIMETER SURFACE 4" TO 6" BELOW SUBGRADE. THE PERIMETER BONDING SHALL BE ATTACHED TO THE POOL REINFORCING SHELL AT A MINIMUM OF 4 POINTS UNIFORMLY SPACED AROUND THE PERIMETER OF THE POOL.
2. ALL UNDERGROUND OR UNDER SLAB CONNECTIONS SHALL BE BY LISTED MEANS PER NEC 250.8. BONDING CABLES UNDER SLAB SHALL BE PLACED AT THE BOTTOM OF EXCAVATION.
3. WHEN REBAR IS UTILIZED FOR THE CONSTRUCTION OF PLANTERS AND FOOTERS ADJACENT TO THE POOL (WITHIN 5 FT), THIS REBAR SHALL BE BONDED USING #8 AWG BARE SOLID COPPER CONDUCTOR BY LISTED MEANS PER NEC 250.8 TO THE BONDING CONDUCTOR.
4. LOCATION OF COPPER BONDING CONDUCTOR, BONDING JUMPERS, AND CONNECTIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE TO DETERMINE EXACT LOCATION. BONDING CONDUCTOR SHALL CONFORM TO THE SHAPE OF THE POOL WHILE MAINTAINING SMOOTH RADIAL CURVES – NO 90° RADIUS SHALL BE PERMITTED.
5. RESISTANCE OF THE GROUND SYSTEM SHALL NOT EXCEED 25 OHMS.
6. IF REQUIRED, ALL GROUND RODS SHALL BE 5/8" COPPER CLAD STEEL, 8' LONG AND DRIVEN TO A DEPTH OF 28" BELOW FINISHED GRADE. MINIMUM, AND WHERE USED SHALL BE BONDED USING #8 AWG BARE SOLID COPPER CONDUCTOR BY LISTED MEANS PER NEC 250.8 TO THE BONDING CONDUCTOR.
7. SPECIAL CASES MAY INCLUDE, BUT ARE NOT LIMITED TO, VANISHING EDGE POOLS, POOLS WITH PERIMETERS OF VARYING (VERTICAL) GRADES, DIMINISHED PERIMETER SURFACES LIKE EDGE PLANTERS, STOP/RETAINING WALLS, AND ZERO-LOT LINES. IN THESE CASES, THE BONDING CONDUCTOR SHALL BE INSTALLED IN ACCORDANCE WITH NEC 680.26, NOTE 1 (ABOVE), AND DIRECTION FROM THE AUTHORITY HAVING JURISDICTION (AHJ). THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE BONDING WITH THE AHJ IN THE DETERMINATION OF ITS APPLICATION OF THE NEC.
8. COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE POOL AND SPA REBAR AS SHOWN, 4 LOCATIONS, MINIMUM AT EACH SEPARATE BODY OF WATER, USING A #8 AWG BARE SOLID COPPER CONDUCTOR. FOR NON-CONDUCTIVE POOL SHELLS, BONDING AT 4 POINTS SHALL NOT BE REQUIRED.
9. COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE EQUIPMENT GROUND OF THE POOL PUMP MOTOR AND OTHER ELECTRICAL COMPONENTS AS REQUIRED BY NEC 680.26 (VERIFY LOCATIONS) USING #8 AWG BARE SOLID COPPER WIRE.
10. COPPER BONDING CONDUCTOR SHALL BE BONDED TO ALL METALLIC COMPONENTS OF THE POOL AND SPA AND THE METAL STRUCTURES, INCLUDING, BUT NOT LIMITED TO, ALL HANDRAILS, DIVING BOARDS, AND LADDER GRABRAILS IN THE POOL AND SPA AND AND INCLUDE ALL METAL WIRING AND ALL FIXED METAL PARTS THAT ARE WITHIN 5 FT. HORIZONTALLY OF THE INSIDE WALL OF THE POOL (SPA) AND 12 FT VERTICALLY ABOVE THE MAXIMUM WATER LEVEL OF THE POOL USING #8 AWG BARE COPPER WIRE.
11. ALL POOL AND SPA LIGHTING NICHES SHALL BE BONDED TO POOL AND SPA REBAR PER NEC 680. THE COPPER BONDING CONDUCTOR SHALL BE BONDED TO THE REBAR AT BOTH THE POOL AND THE SPA, PER NOTE 8, ABOVE, WHICH SHALL, IN TURN, PROVIDE BONDING OF THE LUMINAIRE NICHES.
12. ELECTRICAL CONTRACTOR SHALL CALL FOR THE INSPECTION OF THE BONDING OF THE POOL AND ITS PERIMETER SURFACES PRIOR TO COVER-UP OF THESE AREAS.

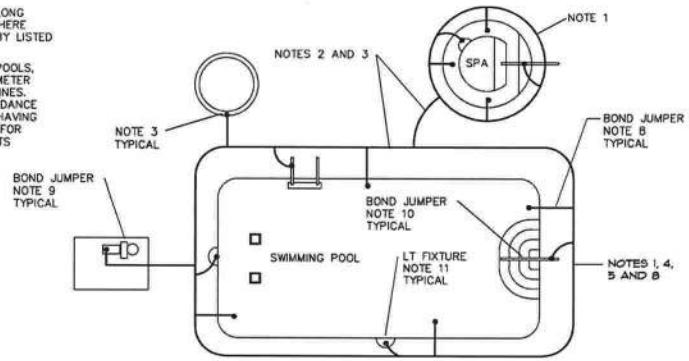


TYPICAL BONDING TYPES

NOT TO SCALE

NOTES:

1. SPLICES (WELDED OR MECHANICAL) SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

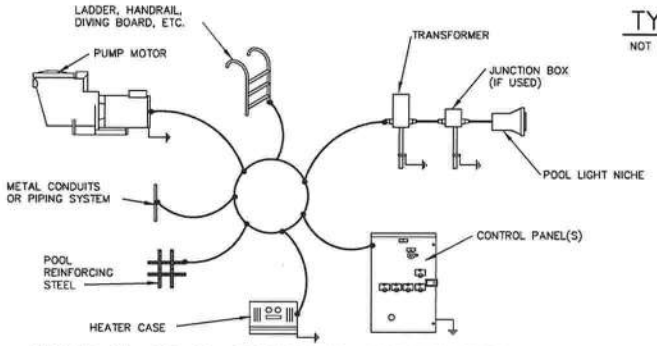


TYPICAL POOL BONDING PLAN

NOT TO SCALE

BONDING LEGEND

- • BOND CONNECTION, PER NEC 250.8
- ▭ PARALLEL TAP CONNECTION, PER NEC 250.8
- ——— UNDERGROUND BONDING CONDUCTOR, #8 AWG (MINIMUM)



TYPICAL POOL BONDING SCHEMATIC

NOT TO SCALE

SCHEMATIC NOTES:

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

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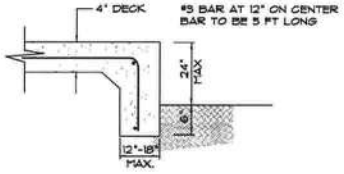
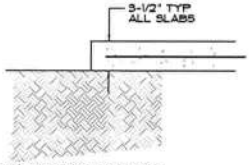
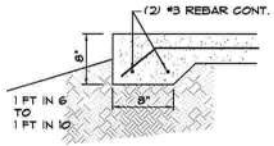


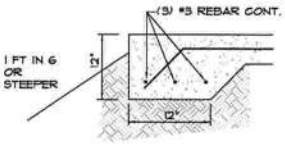
TURN DOWN FOOTER DETAIL



FLAT SLOPE/NO FOOTING
TYPE 1



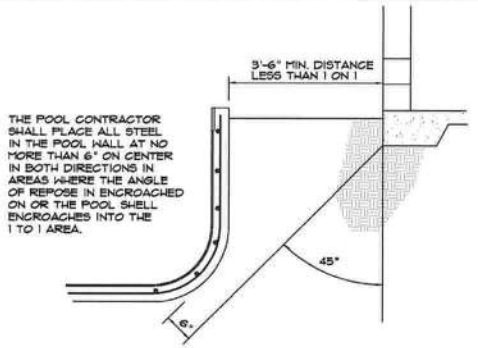
MOTERATE SLOPE FOOTING
TYPE 2



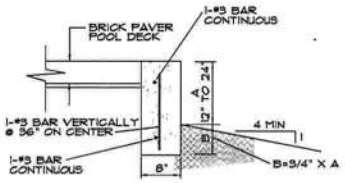
STEEP SLOPE FOOTING
TYPE 2

SLAB-FOOTING DETAILS

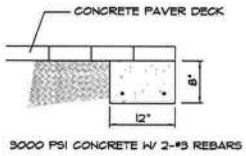
2500 MIN. GUNITE MAY BE SUBSITIUTED
FOR 3000 PSI CONCRETE
USE 6X6 10/10 WWM OR FIBER MESH
CURE FOR ONE WEEK BEFORE INSTALLING
ANCHORS.



THE POOL CONTRACTOR SHALL PLACE ALL STEEL IN THE POOL WALL AT NO MORE THAN 6" ON CENTER IN BOTH DIRECTIONS IN AREAS WHERE THE ANGLE OF REPOSE IN ENCROACHED ON OR THE POOL SHELL ENCROACHES INTO THE 1 TO 1 AREA.

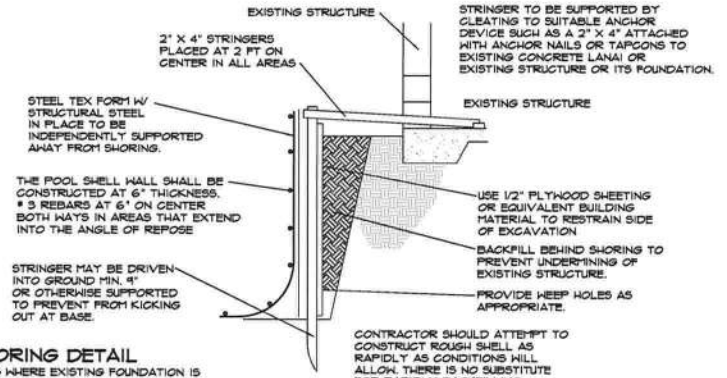


PAVER DECK
TURNDOWN DETAIL



3000 PSI CONCRETE W/ 2-#3 REBARS

RIBBON FOOTING
W/ PAVER DECK



CONTRACTOR SHOULD ATTEMPT TO CONSTRUCT ROUGH SHELL AS RAPIDLY AS CONDITIONS WILL ALLOW. THERE IS NO SUBSTITUTE FOR RAPIDLY BACKFILLING EXCAVATION TO PREVENT UNDERMINING OF ADJACENT STRUCTURE.

SHORING DETAIL

IN LOCATIONS WHERE EXISTING FOUNDATION IS THREATENED BY UNDERMINING DUE TO ADVERSE CONDITIONS AT THE TIME OF EXCAVATION SHORING MAY BE REQUIRED.

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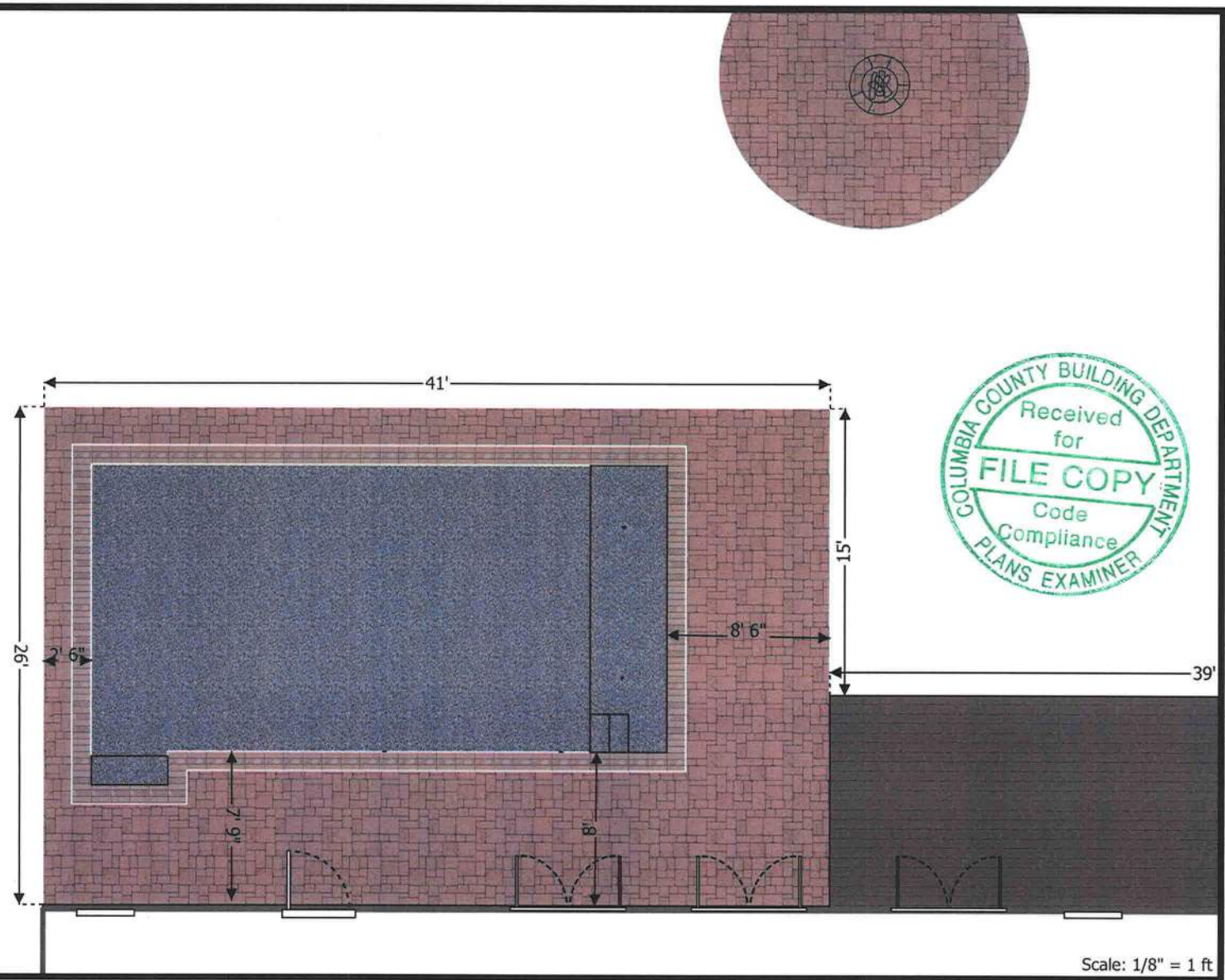


Scale: 1/8" = 1 ft

Pool

Perimeter: 93' 6" Area: 457 ft²
Envelope: 30' x 16' 9"
Depth: 3' 6" to 4' 8" RTNS:
Drains: 0 Lights: 3
Skim: P.C.:
Dig Type Volume: 13,243
Spillover Length(s):
Coping Material: Brick, Nob Hill, Straight
Interior Finish: Pool Interiors, Blue
Notes:

Spa

Perimeter: 0" Area: 0 ft²
Jets: Height:
Lights: 0 RTNS:
Drains: 0 Spillover Length(s):
Coping Material:
Interior Finish:
Notes:

Tile

Raised Beams:

Pool Tile Material: Tile, Stone, Brown Foam
Spa Tile Material:
Notes:

Deck

Perimeter: 284' 7" Area: 1138.36 ft²
Coping Area: 0 ft²
Coping Material:
Surface Material: Pavers, Random
Turn Down: -3" 263' 1" Riser:

NOTES:

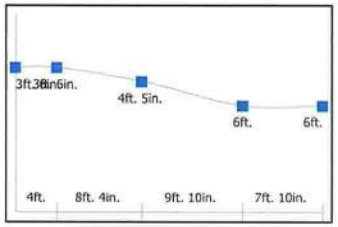
Equipme

Circ Pump: Control Panel:
Pump #2: Remote:
Pump #3: Sanitizer:
Filter: Blower:
Heater: Fill Line:
Cleaner: Other:
Pool Light: Other:
Spa Light: Other:
Other: Other:
NOTES:

Blue Oasis
POOLS & SPAS

Project Name: Nicewonger
Client Name: John Nicewonger
Client Email: jhnicewonger@gmail
Client Phone: 407-244-4977
Address:
City: Fort White
State/Province: Fl
Zip/Postal Code:
Designer Name: John

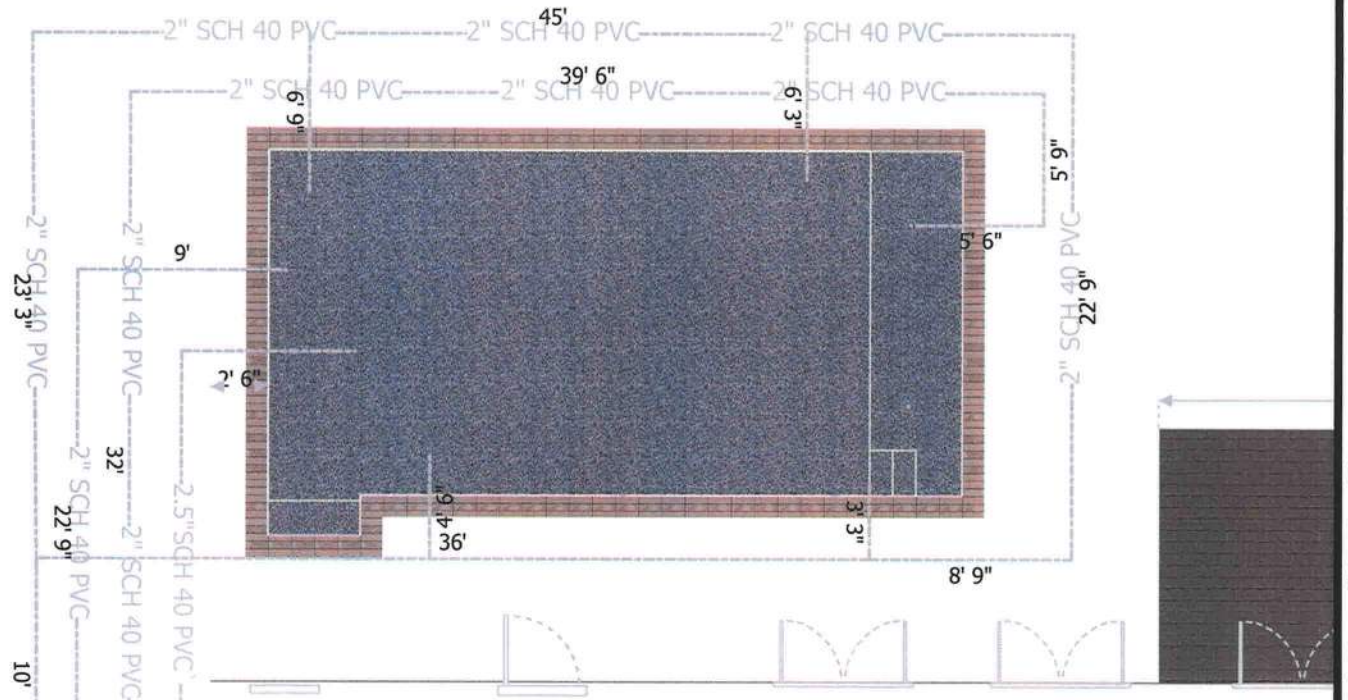
Pool Depth



Approv

I/we (the undersigned) have reviewed this plan and approve it as correct within reasonable tolerance. I/we understand that any changes made to a shape or to a location

X



COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

3
A33

Plumbing Detail

Scale: 0" : 0'

Scale: 1/8" = 1 ft

Pool

Perimeter: 93' 6" Area: 457 ft²
Envelope: 30' x 16' 9"
Depth: 3' 6" to 4' 8" RTNS:
Drains: 0 Lights: 3
Skim: P.C.:
Dig Type Volume: 13,243
Spillover Length(s):
Coping Material: Brick, Nob Hill, Straight
Interior Finish: Pool Interiors, Blue
Notes:

Spa

Perimeter: 0" Area: 0 ft²
Jets: Height:
Lights: 0 RTNS:
Drains: 0 Spillover Length(s):
Coping Material:
Interior Finish:
Notes:

Tile

Raised Beams:

Pool Tile Material: Tile, Stone, Brown Foam
Spa Tile Material:
Notes:

Deck

Perimeter: 0" Area: 0 ft²
Coping Area: 0 ft²
Coping Material:
Surface Material: Pavers, Random
Turn Down: Riser:

NOTES:

Equipme

Circ Pump: Control Panel:
Pump #2: Remote:
Pump #3: Sanitizer:
Filter: Blower:
Heater: Fill Line:
Cleaner: Other:
Pool Light: Other:
Spa Light: Other:
Other: Other:
NOTES:

Blue Oasis
POOLS & SPAS

Project Name: Nicewonger
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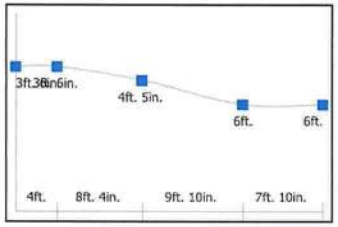


Approv

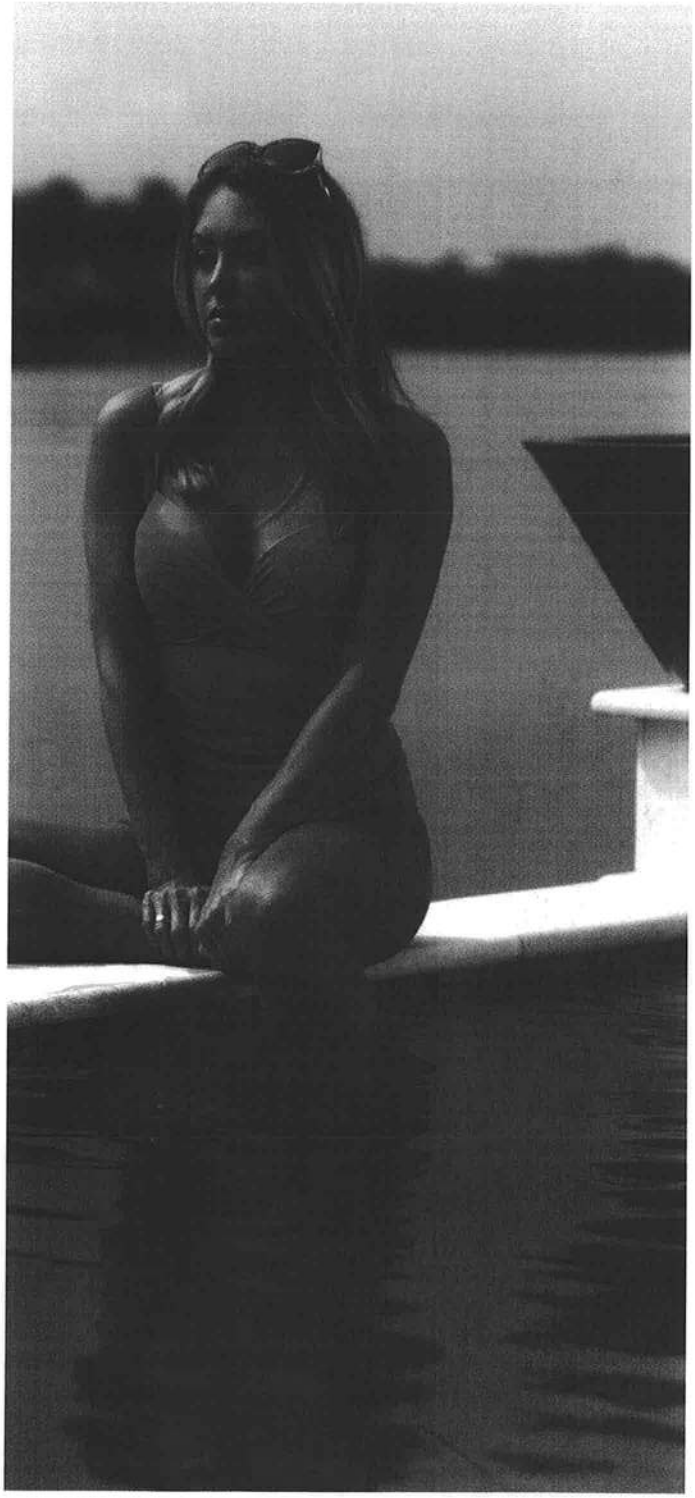
I/we (the undersigned) have reviewed this plan and approve it as correct within reasonable tolerance. I/we understand that any changes made to a shape or to a location

X

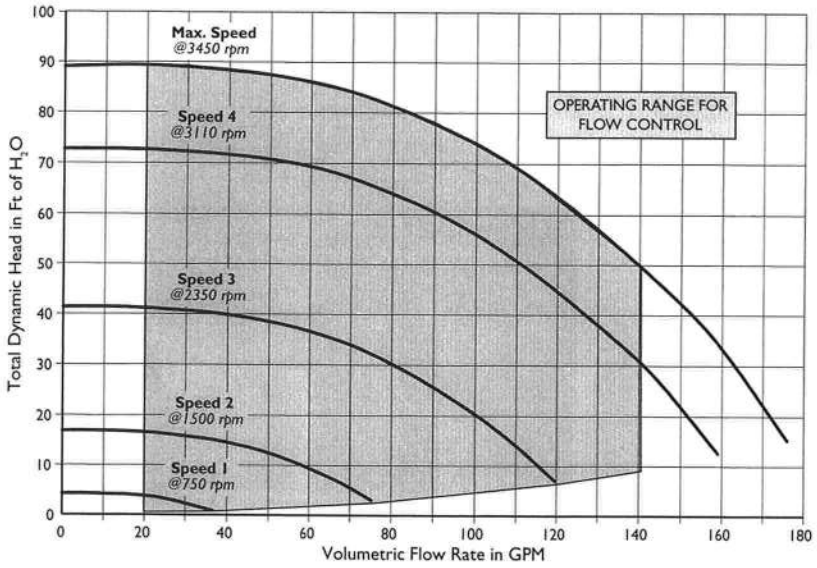
INTELLIPRO® VSF

VARIABLE SPEED *AND* FLOW PUMP

PRECISE FLOW CONTROL FOR THE HIGHEST ENERGY SAVINGS *AND* ULTIMATE SYSTEM PERFORMANCE.



Performance Curves



The ENERGY STAR® Certified IntelliPro VSF pump from Sta-Rite® meets strict energy-efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. This pump saves money, reduces energy use and protects the environment.

AN ECO SELECT® BRAND PRODUCT
The IntelliPro VSF Variable Speed and Flow Pump has earned the Eco Select brand distinction as one of the greenest and most efficient choices from Pentair.

STA-RITE®
Simply Smarter.

AVAILABLE FROM:

Call 800-831-7133 or
visit www.staritepool.com.

PUMPS | FILTERS | HEATERS | HEAT PUMPS | AUTOMATION | LIGHTING | CLEANERS | SANITIZERS | WATER FEATURES | MAINTENANCE PRODUCTS

04/18 Part # P1-632

SYSTEM:2™ MOD D.E. FILTERS FOR INGROUND POOLS

Superior in every way

The System:2 Mod D.E. filter removes dirt particles up to ten times smaller than the particles removed by sand and cartridge filters. Compared to other D.E. filters, the System:2 Mod D.E. filter is far less complicated to service. If you're the do-it-yourself type, you save time. If you leave the maintenance to a pool service, saving time means saving money!

KEY FEATURES

Less maintenance

The balanced-flow tank design directs water through both side of the filter module, which increases dirt-loading without clogging. Holding more dirt means a longer time between cleanings.

Single module

A single module replaces complicated multi-grid assemblies that are difficult to clean and reassemble.

Smooth running

2" plumbing ports improve hydraulic flow for greater efficiency.

Easy access

Posi-Ring® closure provides easy access to the filter module. 50/50 split-tank design permits rinse-in-place cleaning. Fast in, fast out!

Balanced-flow tank

A balanced-flow tank design maximizes the use of the module's surface area to trap more dirt and reduce the frequency of cleaning.

Stands tough

Dura-Glas™, a high-density composite resin from Sta-Rite, will never corrode and weathers the elements.

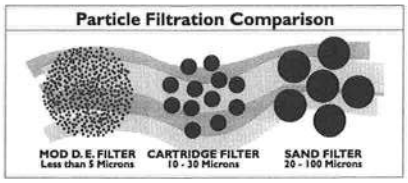
Easy, two-way cleaning

For quick cleaning, simply move the valve lever to the backwash position—that's it! For more thorough cleaning, remove the tool-free tank lid and spray-rinse the module* while it's still in place. In minutes, it's ready for another season.

*Modules used in conjunction with certain pool/spa sanitizers may require soaking in special cleaning solutions.

FILTER PERFORMANCE

Model Number	For Pools up to 8 Hour Turnover (gal.)	Filter Area (sq. ft.)	Optimal[1] Performance at this GPM	D.E. Required[2] (lbs.)
PLD50	29,000	30	45	6[3]
PLD70	35,000	36	55	4
PLDE36	35,000	36	54	5.4
PLDE48	46,000	48	72	7.2



[1] Operating at this GPM will provide the longest filter cycles combined with the best and greatest dirt-loading capacity.
[2] Do not use more D.E. than shown here. Mixed results with D.E. alternatives.
[3] PLD50 requires more D.E. than the PLD70 because of precoat design and flow characteristics.
Operating Limits—Maximum continual operating pressure is 50 PSI. For pool/spa (bather) applications, the maximum operating water temperature within the filter is 104°F (40°C).

STA-RITE

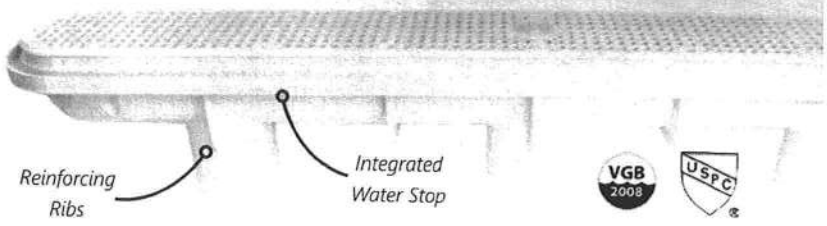
Simply Smarter.

1620 Hawkins Ave | Sanford, NC 27330 | United States | 800.831.7133 | staritepool.com

Heavy Duty Unblockable VGB Safety Drain Design

PRODUCT FEATURES

- **IMPROVED** Strength &Durability
- Integrated Water Stop Design Prevents Plaster Separation & Retains Drain Shape
- Body Reinforcing Ribs
- Finishing Plugs for Unused Screws
- Black Drains Include Matching Black Sump
- Covers Completely Hide the White Sump
- Color Covers Will Retrofit Competing Channel Drains
- Installation Debris Guard Included
- IAPMO Listed VGB Suction: Compliant to ANSI/APSP-16 2011 & CPSC Requirements



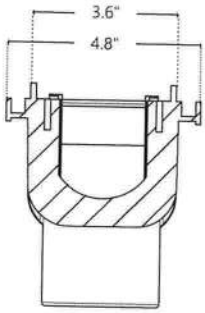
TECHNICAL GUIDE

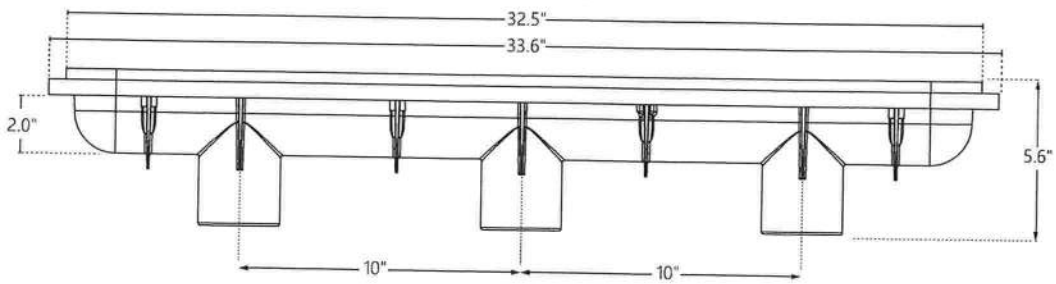
- Single or Multiple Drain Use
- Seven Year Life on Cover
- Floor or Wall Installation
- IAPMO Listed
- 38.79in² Open Area
- Three 2" Socket × 2.5" Spigot Ports
- PVC Sump Body

IAPMO LISTED FLOW RATES

PLUMBING	PORTS	FLOOR FLOW RATE	WALL FLOW RATE
2.5"	OUTER	308 GPM	212 GPM
2.5"	CENTER	200 GPM	168 GPM
2"	OUTER	268 GPM	192 GPM
2"	CENTER	184 GPM	176 GPM

FLOW RATE VERIFIED MAY 2011 TO CPSC TEST PROTOCOL





ORDERING GUIDE

32" VGB UNBLOCKABLE CHANNEL MAIN DRAIN & ACCESSORIES

WHITE	GRAY	BLACK	DARK GRAY	TAN	DARK BLUE*	DESCRIPTION	BOX QTY
25506-320-000	25506-321-000	25506-324-000	25506-327-000	25506-329-000	25506-369-000	COMPLETE DRAIN & SUMP	40
25506-320-800	25506-321-800	25506-324-800	25506-327-800	25506-329-800	25506-369-800	32" COVER ONLY	20
25506-320-900	—	25506-324-900	—	—	—	32" BODY ASSEMBLY	1
25506-320-100	25506-321-100	25506-324-100	25506-327-100	25506-329-100	25506-369-100	COVER & FRAME (NO SUMP)	1
25506-320-150	—	—	—	—	—	ADJUSTABLE COLLAR ADAPTER	—
25620-320-000	—	—	—	—	—	2" HYDROSTATIC RELIEF VALVE	250
25520-050-020	—	—	—	—	—	2" NPT PLUG	450
25506-320-030	—	—	—	—	—	INSTALLATION DEBRIS GUARD	—

*for light blue order 25506-359-xxx

CMP everything matters.

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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: 35gpm per skimmer (required: 1 skimmer per 800 sq ft of surf. area)

1. Calculate Pool Volume ___ (Surface Area) X ___ (Avg Depth) X 7.48 (gal./cubic foot) = 13,250 (Volume in Gallons)
2. Determine preferred Turnover Time in Hours: 6 (Hours) X 60 (min / hour) = 360 (Turnover in min)
3. Determine Max Flow Rate 13,250 (Volume in Gallons) / 360 (Turnover in Min) + ___ (Pool Flow Rate) = 36.80 (System Flow Rate)
4. Spa Jets: ___ (No of Jets) X ___ (Jet Flow) GPM per jet = ___ (Total Jet Flow Rate) 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 88 gpm Maximum System Flow Rate

Suction Piping to be 2.5 inch to keep velocity @ 8 fps max. at 117 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:

1. Distance from pool, to pump in Ft: 30
2. Friction loss (in suction pipe) in 2.5 inch pipe per 1 t. @ gpm = .08 (from pipe flow/friction loss chart)
3. Friction loss (in return pipe) in 2 inch pipe per 1 t. @ gpm = .16 (from pipe flow/friction loss chart)
4. 65 (Length of Suction Pipe) X .08 (Ft of head/1 ft of Pipe) = 5.2 (TDH Suction Pipe)
5. 110 (Length of Suction Pipe) X .16 (Ft of head/1 ft of Pipe) = 17.6 (TDH Suction Pipe)

Flow and Friction Loss Per Foot
(Schedule 40 pvc Pipe)

Velocity - Feet Per Second						
Pipe Size	6 FPS		8 FPS		10 FPS	
1.5"	37 gpm	0.08'	50 gpm	.14'	62 gpm	.21'
2"	62gpm	0.06'	82 gpm	.10"	103 gpm	.16'
2.5"	88 gpm	0.05'	117 gpm	.08'	148 gpm	.13'
3"	136 gpm	0.04'	181 gpm	.07'	227 gpm	.10'

TDH in Piping 22.8
Filter loss in TDH (from filter data sheet) 4.2
Heater loss in TDH (from heater data sheet) ___
Total all other loss ___
Total Dynamic Head (TDH) 27.0

Selected Pump and Main Drain Cover:

Pump selection Intelli pro VSF (Pump model and size in HP) using pump curve for TDH & System Flow Rate

Main Drain Cover CMP 32" Channel (Pump model and size in HP) (System Flow Rate must not exceed approved cover flow rates)

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

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

(Check all that apply)

☐ ⊙ ← 3' → ⊙ ___ suction outlets @ ___ gpm max. flow (see note 2)

☐ ⊙ ⊙ ⊙ ___ suction outlets @ ___ gpm max. flow (see note 3)

☑ ▭ CMP 32" channel drain @ 800 gpm w/ 1 ports (see note 4)

Total Head In Feet Conversion Chart

Inches Mercury (Vacuum Gauge)

PSI	0	2	4	6	8	10	12	14	16	18
0	0	2.3	4.5	6.8	9	11.3	13.6	15.8	18.1	20.3
1	2.3	4.6	5.8	9.1	11.4	13.6	15.9	18.1	20.4	22.7
2	4.6	6.9	6.1	11.4	13.7	15.9	18.2	20.4	22.7	25
3	6.9	9.2	11.5	13.7	16	18.2	20.5	22.8	25	27.3
4	9.2	11.5	13.8	16	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	25.2	27.5	29.7	32	34.3	36.5
8	18.5	20.7	23	25.3	27.5	29.8	32	34.4	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	41.2	43.5	45.8
12	27.7	30	32.2	34.5	36.8	39	41.3	43.5	45.8	48.1
13	30	32.3	34.5	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
16	37	39.2	41.5	43.7	46	48.3	50.5	52.8	55	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	64.2
20	46.2	48.5	50.7	53	55.2	57.5	59.8	62	64.3	66.5
21	48.5	50.8	53	55.3	57.6	59.8	62.1	64.3	66.6	58.9
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	71.2	73.5
24	55.4	57.7	60	62.5	64.5	66.7	69	71.3	73.5	75.8
25	57.8	60	62.3	64.5	66.8	69.1	71.3	73.6	75.8	78
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	90.5	82.7
28	64.7	66.9	69.2	71.5	73.7	76	78.2	80.5	82.8	85
29	67	69.3	71.5	73.8	76	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
32	73.9	76.2	78.4	80.7	83.1	85.2	87.5	89.7	92	94.3
33	76.2	78.5	80.7	83	85.3	87.5	89.8	92	94.3	96.6
34	78.5	80.8	83.1	85.3	87.6	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

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

** GAGES TO BE INSTALLED AT THE TIME OF FINAL INSPECTION FOR VERIFICATION.

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 low 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 and Heater make and model cannot change, and equipment location cannot be move closer the pool without submitting a revised plan and TDH calculation worksheet for approval

Velocity - Feet Per Second						
Pipe Size	6 FPS		8 FPS		10 FPS	
1.5"	37 gpm	0.08'	50 gpm	.14'	62 gpm	.21'
2"	62 gpm	0.06'	82 gpm	.10"	103 gpm	.16'
2.5"	88 gpm	0.05'	117 gpm	.08'	148 gpm	.13'
3"	136 gpm	0.04'	181 gpm	.07'	227 gpm	.10'
4"	234 gpm	0.03'	313 gpm	.05'	392 gpm	.07'
6"	534 gpm	0.02'	712 gpm	.03'		

ANSI/APSP/ICC Worksheet

Swimming Pool Energy Efficiency Compliance Information

Note: These Requirements Apply ONLY to the **Filtration Pump**

Maximum Filtration Flow Rate Calcutlations

Pool Water Voume_____÷ 360 =_____ gpm = filtration flow rate

Is there an Auxiliary load on the filtration pump? Yes___ NO____

If so, what is the auxiliary flow rate _____gpm

Maximum Flow Rate _____gpm (maximum auxiliary pool loads or the filtration flow rate, whichever is greater.

The pool filtration flow rate shall not be greater than the rate needed to turn over the pool water volume in 6 hours or 36 gpm whichever is greater. This means that for pools of less than 13000 gallons, the pump shall be sized to have a flow rate of 36 gpm or less.

Suction Pipe size @ 6 fps _____inch

Return Pipe size @ 8 FPS _____inch

Filter Factors: (Cartridge .375) or (D.E 2) or (Sand 15)

_____÷ _____=_____
(flow rate) (filter factor) (minimum filter size)

Filter Make/Size _____

Backwash valve? Yes_____ No_____ (if yes, must be 2 inch min)

Pump Selection from APSP database on Curve **A (less than 17000 gallons)** or **C (greater than 17000 gallons)** (circle one)

Model_____

Flow Rate (low speed)_____gpm @ _____rpm

Flow Rate (high speed) _____gpm @ ____ rpm (not required if no auxiliary load on filtration pump

Pump Controls

Standard time clock / 2 speed time clock _____or other _____

Heater Model _____

Notes: suction piping in front of pump inlet must be 4 pipe diameters in length. Must have 18" of straight pipe after the filter for solar.

Date

Contractors Signature

John Prendergast

Print Name

CPC 145 7142

Certification Number

904 591-5625

Telephone Number

Swimming Pool Specifications for:

Owner: John + Melanie Nicewonger

Address 1829 SW Wilson Springs Rd.

City, State, Zip Ft. White, FL.