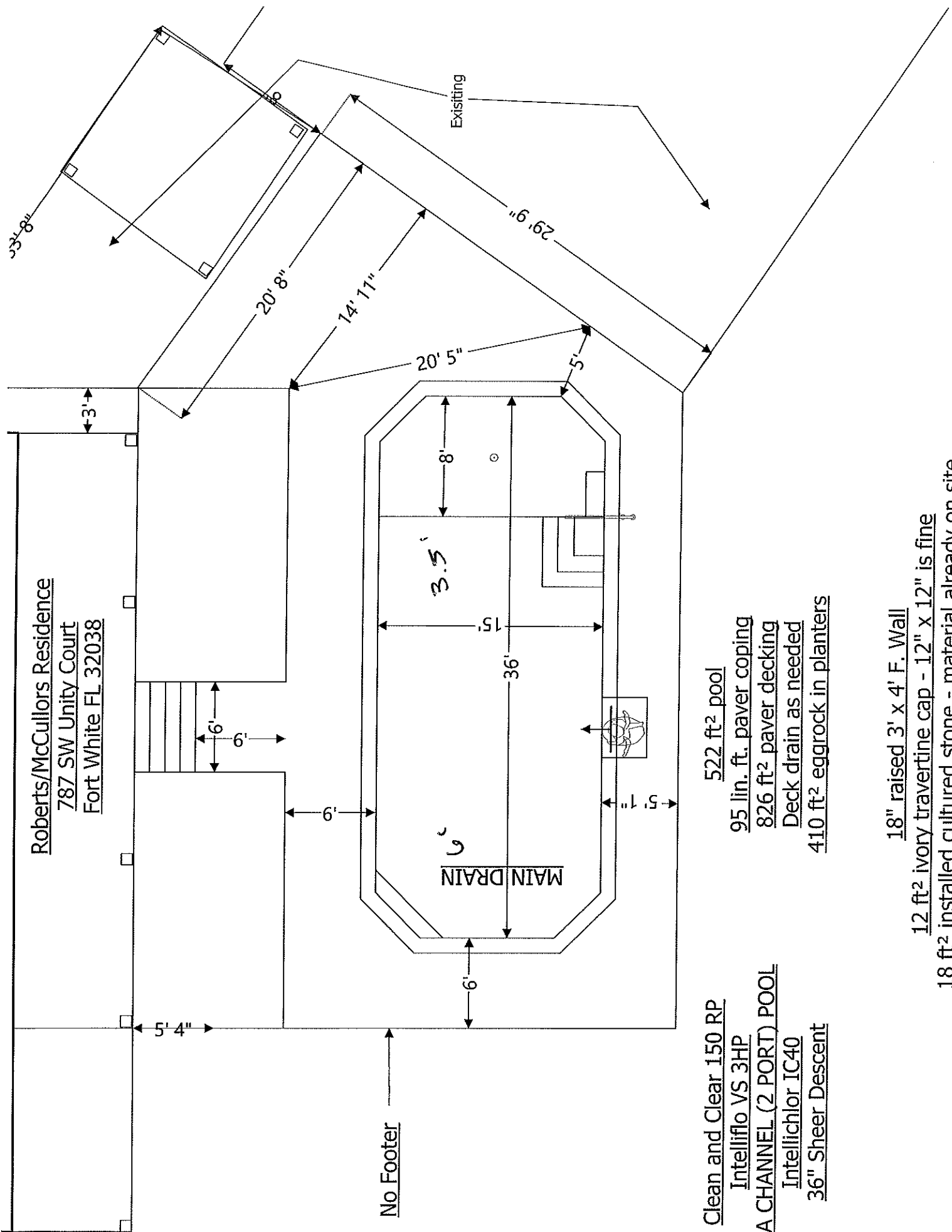




Roberts/McCullors Residence
787 SW Unity Court
Fort White FL 32038

No Footer

Clean and Clear 150 RP

Intelliflo VS 3HP

A&A CHANNEL (2 PORT) POOL

Intellichlor IC40

36" Sheer Descent

522 ft² pool

95 lin. ft. paver coping

826 ft² paver decking

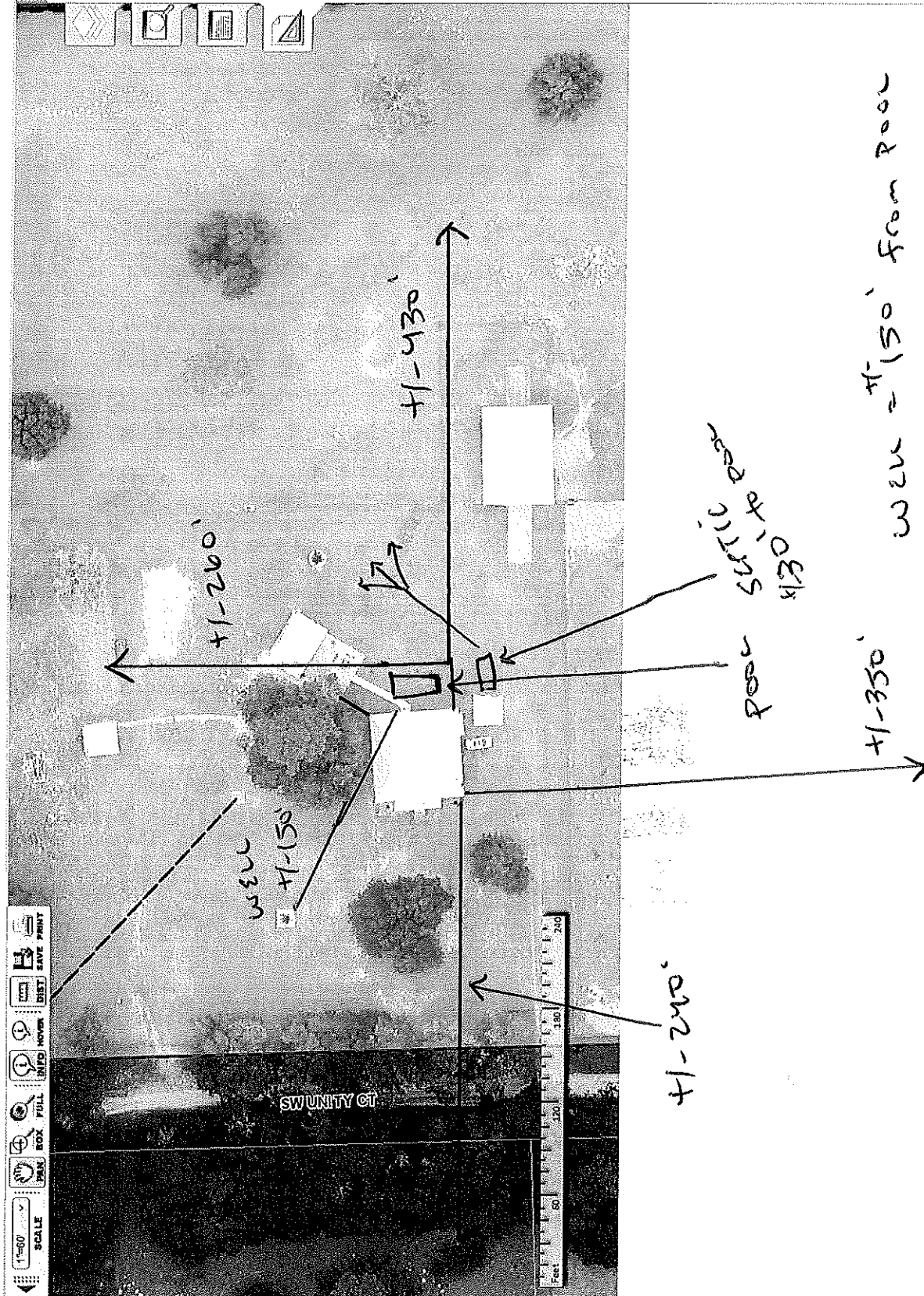
Deck drain as needed

410 ft² eggrock in planters

18" raised 3' x 4' F. Wall

12 ft² ivory travertine cap - 12" x 12" is fine

18 ft² installed cultured stone - material already on site





ENGINEERING REPORT INDEX SHEET

pursuant to Rule 61G15-23.001(4)(b), F.A.C.

SUPPLEMENTAL INFORMATION TO THE SUBJECT
RESIDENTIAL POOL/SPA PERMIT APPLICATION meeting
2020 FBC 7th Ed, Section 454.2 Private Swimming Pools

SPECIFICALLY:

- WORKSHEET SHOWING COMPLIANCE WITH ANSI 15
- SITE SPECIFIC INFORMATION SHOWING COMPLIANCE WITH ANSI 7
- TDH CALCULATION SUPPORTING ANSI 7 SUCTION OUTLET INFORMATION
- ATTACHED PRODUCT SHEETS WITH INFORMATION SUPPORTING
ANSI 7 AND 15 WORK SHEETS

PROJECT INFORMATION

PROJECT CLIENT: **SOUTHERN ESCAPES**
PROJECT NAME: **DAVID MCCULLORS & CATHY ROBERTS**
PROJECT ADDRESS: **787 SW UNITY CT**
LOT: **M&B**
AREA:
City:

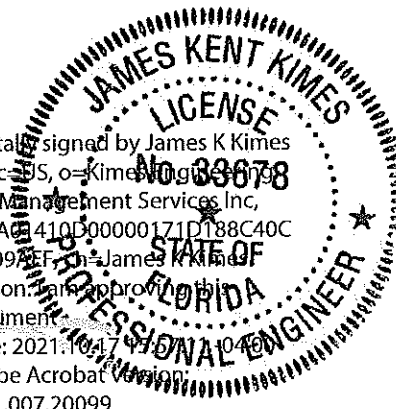
J. Kent Kimes, PE, #33678

Principal Engineer

QW

This item has been electronically
Signed and sealed by J. Kent Kimes,
PE on date & time stamp shown
using a Digital Signature. Printed
copies of this document are not
considered signed and sealed and
the signature must be verified on
any electronic copies.

Digital signed by James K Kimes
DN: c=US, o=Kimes Engineering
and Management Services Inc,
ou=AC41000000171D188C40C
00009AEF, cn=James K Kimes
Reason: I am approving this
document.
Date: 2021.10.17 11:04:00
Adobe Acrobat Version:
2021.007.20099



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CLIENT SOUTHERN ESCAPES
 NAME DAVID MCCULLORS & CATHY ROBERTS
 ADDRESS 787 SW UNITY CT
 LOT: M&B
 AREA:

WORKSHEET SHOWING DATA FOR COMPLIANCE WITH ANSI/APSP- 15

ANSI 15 Filtration

Volume of Pool Area SF x Avg Depth FT = Vol CF
 Vol in CF x 7.48 gal/CF = GALLONS

Calculate Maximum Filtration Flow Rate: Pool Volume/ 360 = GPM [if <13,000 MAY use 36 gpm]

ANSI 15 Auxiliary Flow

Calculate Maximum Auxiliary Load Design Flow Rate:

MAY USE LESS THAN THIS MAXIMUM

IF AT LEAST ANSI 5 12 HR TURNOVER

Number of Spa Jets @ 10 gpm ea. = GPM

Or Water Feature Flow:

GPM

ANSI 15 Flow:

[maximum ANSI 15 Filtration Flow, minimum 12 hour turnover] GPM

Actual Turnover at ANSI 15 Flow HR

PUMP FROM APSP LISTING

Select a pump with Curve A (pools <17,000 gal) or Curve C (pools >17,000 gal) flow equal to or less than **ANSI 15 Filtration Flow**. May select a multi speed pump with flows acceptable for the **ANSI 15 Auxiliary Flow**, with acceptable Curve A or C listed flows. Curve A or C flows listed have no relationship or requirement related to **ANSI 15 Auxiliary Flow**.

Pump Make & Model:

Pump Flow Rate(s) from Listing: @ Low/Single speed GPM, & @ High Speed GPM

Pump Control: Filtration Pump has no auxiliary load: ☒ , time clock to be installed.

Filtration Pump with auxiliary load: Control for low speed default w/in 24 hrs:

Make/model

Size filter on "FILTRATION Flow"

Filter Rates: Cartridge= 0.375 gpm/sf; Sand= 15 gpm/sf; DE= 2 gpm/sf

Filter size: **ANSI 15 Flow** GPM / gpm/sf = SF Min Filter Size

See pool plan for filter model or show here:

ANSI 7 Flow: see Site Specific Information Sheet

ANSI 5 Flow: Depending on the pipe, use any of the ANSI 15 Filtration, or ANSI 15 flows or the flow at 60 ft TDH on the See flow vs velocity vs pipe size on Standard Engineering.

See summary of pipe sizes on ANSI 7 Site Specific Information Sheet

HEATER MODEL:

GAS HEATER EFFICIENCY RATING:

HEAT PUMP EFFICIENCY C.O.P.:

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CLIENT SOUTHERN ESCAPES
 NAME DAVID MCCULLORS & CATHY RO
 ADDRESS 787 SW UNITY CT
 Lot: M&B
 Area:

SITE SPECIFIC INFORMATION FOR COMPLIANCE WITH ANSI/APSP-7

METHOD OF DETERMINING ANSI 7 PUMP FLOW

Detailed TDH
 Curve & Calc

X

SUCTION OUTLET FOR:	FILTRATION PUMP
Manufacturer & Model:	PENTAIR INTELLIFLO VS 3HP
Pump Flow from Pump Curve with method indicated:	117 GPM

ANSI/APSP/ICC-7 2013 ADOPTED IN 2020 FBC 7TH ED NO LONGER SIZES BRANCH OR TRUNK SUCTION BASED ON ANSI 7 FLOW

LISTED SUCTION OUTLET COVER/GRATE- POOL OUTLET

Number of Suction Outlets:	ONE UNBLOCKABLE	Manufacturer & Model:	A&A CHANNEL (2 PORT)
APPROVED Maximum Outlet Flow (GPM)	Floor:	227 GPM	Wall: 184 GPM
BRANCH DRAIN 6 FPS @ ANSI 15 FLOW	NA (in) -- USE	NA (in)	
TRUNK SUCTION 6 FPS @ ANSI 15 FLOW	2 (in) -- USE	2.5 (in)	

SUCTION OUTLET FOR:	NOT USED
Manufacturer & Model	
Pump Flow from Pump Curve with method indicated:	GPM

ANSI/APSP/ICC-7 2013 ADOPTED IN 2020 FBC 7TH ED NO LONGER SIZES BRANCH OR TRUNK SUCTION BASED ON ANSI 7 FLOW

LISTED SUCTION OUTLET COVER/GRATE- SPA OUTLETS

Number of Suction Outlets:		Manufacturer & Model:	
APPROVED Maximum Outlet Flow (GPM)	Floor:	GPM	Wall: GPM
BRANCH DRAIN 6 FPS @ ANSI 15 FLOW	(in) -- USE	(in)	
TRUNK SUCTION 6 FPS @ ANSI 15 FLOW	(in) -- USE	(in)	

ANSI 15 FLOW= 52 GPM

MINIMUM CIRCULATION LINES SIZED ON ANSI 15 FLOW PIPE SIZE SUMMARY

MIN. DRAIN/BRANCH/TRUNK/SKIMMER SUCTION:	2 (in) ANSI 15 Flow @ 6 FPS
FILTRATION RETURNS:	2 (in) ANSI 15 Flow @ 8 FPS
SPA AUX. FLOW	0 GPM
2 ND AUX. FLOW	30 GPM
SPA AUXILIARY RETURN:	(in) ANSI 5 Flow @ 8 FPS
2 ND AUXILIARY RETURNS:	1.5 (in) ANSI 5 Flow @ 8 FPS
OPTIONAL VACUUM OR SWEEP LINE:	1.5 (in) ANSI 5 Flow @ 8 FPS

NOTES: LINE SIZES DEFINED FOR EFFICIENT OPERATION

SUCTION OULET COVER/GRATE MEETS ANSI 7 FLOW

FOR POOL USE ONE UNBLOCKABLE A&A CHANNEL (2 PORT) DRAIN. NO BRANCH PIPE REQD.

USE 2.5" DRAIN SUCTION LINES TO PUMP

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CLIENT SOUTHERN ESCAPES
 NAME DAVID MCCULLORS & CATHY ROBE
 ADDRESS 787 SW UNITY CT
 LOT: M&B
 AREA:

	POOL ONLY		
	Suction	Pressure	Equipment
Pipe Size (in.)	2.5"	2"	2"
Pipe Length (100% flow)	20	14	15
#EL fittings	5	5	5
#T Run fittings	2	2	1
#T Branch fittings	1	1	1
Gate Valves	0	0	0
# 3 Way valves	1	1	1

This calculation assumes worst case with 100% suction from drain and none from skimmer.

This calculation is conservative in that it omits the velocity head on the pressure side beyond the first split of return lines.

Pump Curve PENTAIR INTELLIFLO VS 3HP

Filter: PENTAIR CCRP150, 150SF

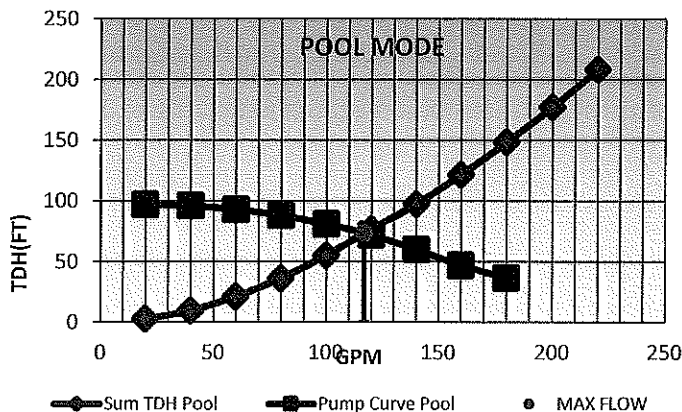
Heater: NA

Return Fittings **3**

Head loss based on Hazen-Williams equation, where $c=150$

Head Loss per 100 ft $= 0.2083 (100/c)^{1.852} * q^{1.852} / d_h^{4.8655}$

	DETAILED TDH POOL MODE											
Sum of Pipe Friction	1.9	7.0	14.7	25.1	37.9	53.2	70.8	90.6	112.7	137.0	163.4	
Filter(s)	0.0	0.4	1.7	3.7	6.5	9.3	10.3	12.2	14.1	16.0	17.9	
Return Fitting(s)	0.8	1.5	3.3	5.0	7.4	10.0	11.2	13.1	14.9	16.8	18.7	
Salt System	0.0	0.7	1.4	2.3	3.3	4.3	5.0	5.9	6.7	7.6	8.5	
Heater(s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sum TDH (FT H ₂ O)	2.7	9.6	21.1	36.1	55.1	76.8	97.3	121.8	148.5	177.4	208.5	
Flow (GPM)	20	40	60	80	100	120	140	160	180	200	220	



POOL MODE

MAXIMUM: **117 GPM @ 73' TDH**

NO BRANCH PIPE REQD. FOR UNBLOCKABLE DRAINS.

RECOMMENDED MIN. TRUNK SUCTION TO EQUIP:

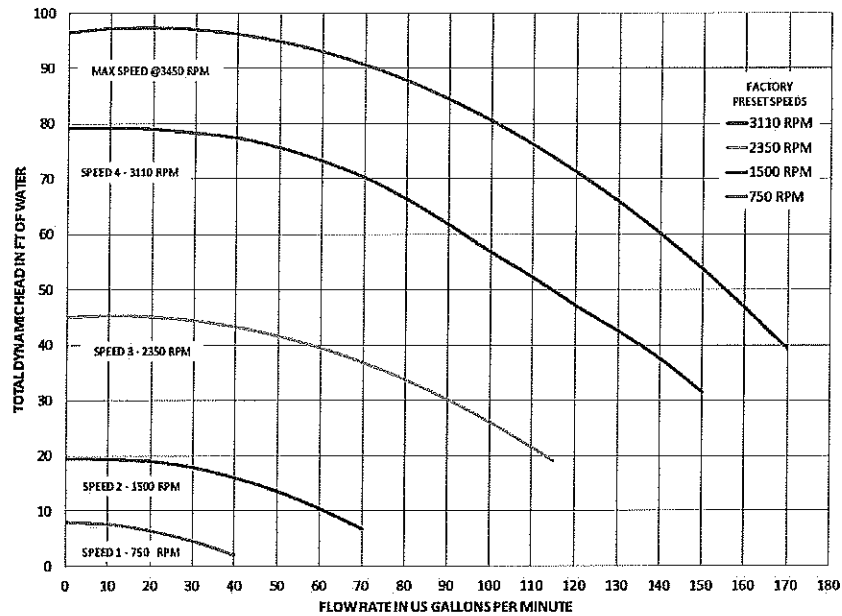
NA (in)

2.5 (in)

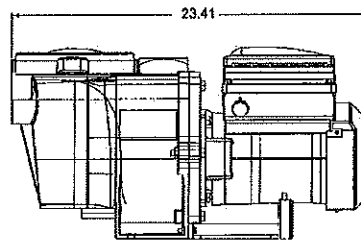
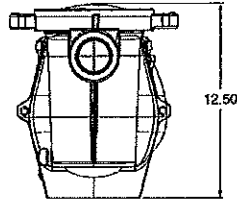
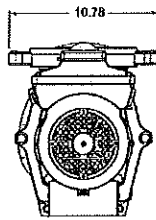
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INTELLIFLO® VARIABLE SPEED HIGH PERFORMANCE PUMP (CONT'D)

Dimensions and Performance

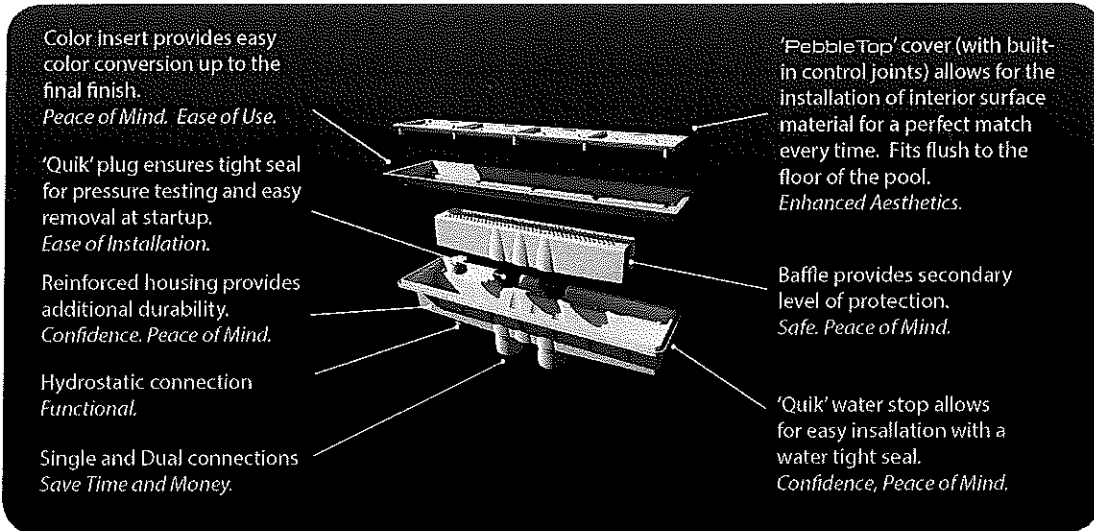


Note: IntelliFlo VS+SVRS minimum speed is 1100 RPM



See page 510 for replacement parts.

anatomy of the avsc drain



item numbers

	AVSC Drain (Standard Cover)		AVSC Drain (PebbleTop Cover)		Cover		Inserts
Color	Single	Dual	Single	Dual	PebbleTop	Standard	
White	571840	571903	571444	571508	571831	552892	553799
Gray	571858	571911	571452	571516	571815	552905	553801
Light Gray	571891	571954	571495	571559	571823	562741	562741
Black	571866	571920	571461	571524	571786	556121	561836
Gold	571882	571946	571487	571541	571807	556113	561844
Dark Blue	571874	571938	571479	571532	571794	558803	561852

Available Colors

Sumps

White Gray Lt. Gray

Color Inserts

White Gray Lt. Gray Black Gold Dk. Blue

PebbleTop & Standard Covers

White Gray Lt. Gray Black Gold Dk. Blue

Rated Flow (Floor Only): 237 (Single) / 237 (Double)
Rated Flow (Floor Only): 237 (Single) / 237 (Double)



PROUDLY MADE
IN THE USA

Developed and Manufactured by A&A Manufacturing
3750 West Indian School Road
Phoenix, AZ 85019
800-851-8492 | 602-258-6935 | aamfg.com



technology
Enhancing People's Lives...

PebbleTop cover is molded exclusively for A&A Manufacturing by ColorMatch Pool Filings U.S. Patent Numbers: 6,209,586 / 6,346,035 / 6,557,588 and other patents pending



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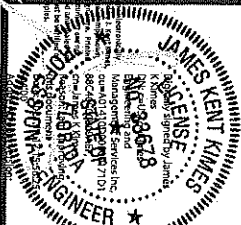
787 SW UNITY CR
SOUTHERN ESCAPES

TYPICAL PLAN & SECTIONS
FOR RESIDENTIAL POOL/SPA



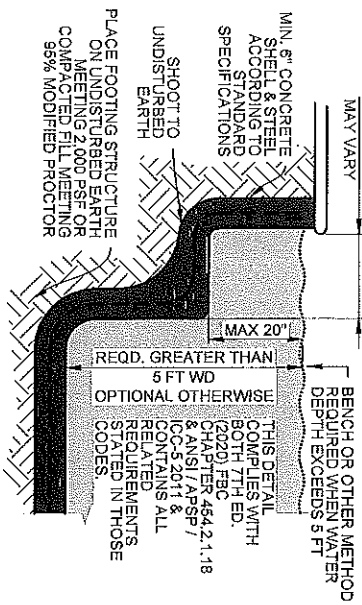
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REV.	DATE	DESCRIPTION			
PROJ. NO.:	DWG BY:	CKD BY:	DRAWING:	VERSION:	
KE RSTD	MCM	JKK	01-Jan-21	21-Dec-20	



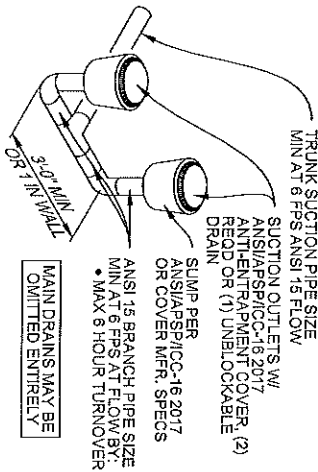
3 BENCH SECTION

SCALE: N.T.S.



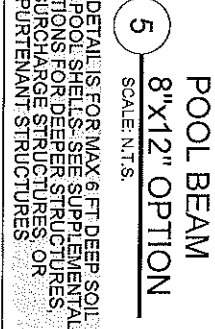
4 BRANCH PIPING

SCALE: N.T.S.



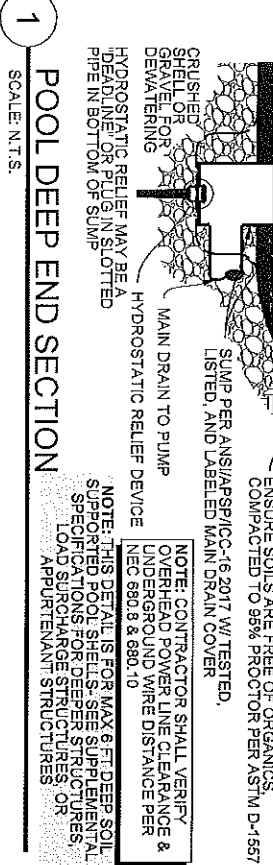
5 POOL BEAM 8"x12" OPTION

SCALE: N.T.S.



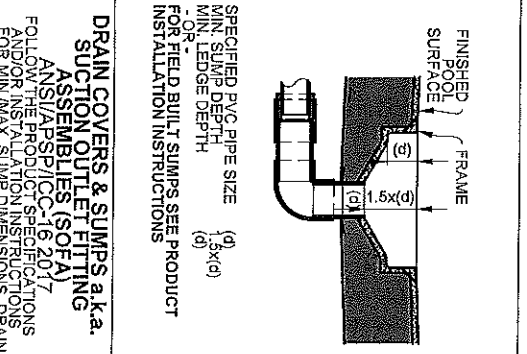
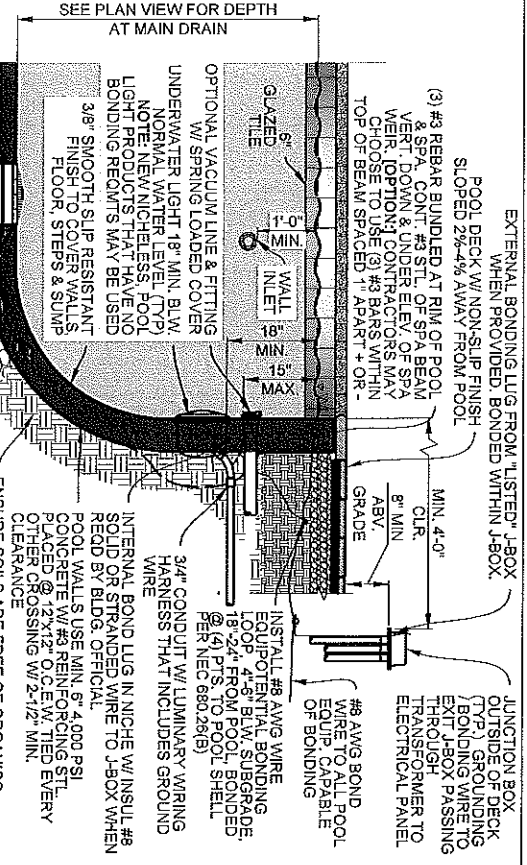
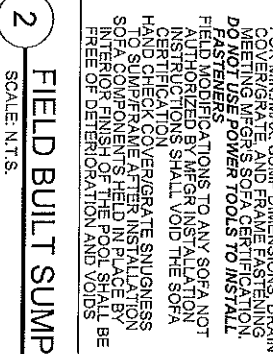
1 POOL DEEP END SECTION

SCALE: N.T.S.



2 FIELD BUILT SUMP

SCALE: N.T.S.



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787 SW UNITY CR
SOUTHERN ESCAPES

TYPICAL SECTIONS
FOR RESIDENTIAL POOL/SPA

KIMES
ENGINEERING

3990 SR 64 E.
Bradenton, FL 34208
Office: 941-749-0311
C.A. 27189

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INDEX SHT S1

SHEET
S2
SHEET 2 OF 2

COMPLIES WITH
7TH ED. (2020) FBC,
ALL VOLUMES

NOTES:
• APPROVED PRODUCT SPECIFICATION MAY DIFFER FROM FIELD BUILT SUMPS SHOWN ON THIS PAGE

ADDITIONAL STRUCTURAL NOTES:
• USE MINIMUM ASTM A815 GRADE 40 STEEL
• LAP #3 BARS MINIMUM 25"
• 6" SHELL THICKNESS AND 2'-1/2" CONCRETE COVERAGE ARE MINIMUMS
• USE 4,000 PSI CONCRETE
• CONTRACTOR / OWNER REQUIRED TO: CONTACT ENGINEER IF POOL NOT PLACED ON UNDISTURBED AND NOT DEWATERED EARTH THAT CAN MEET 2,000 PSF BEARING CAPACITY.
• WHEN BURIED DEBRIS IS ENCOUNTERED OR QUESTIONABLE CONDITIONS ARE INDICATED AT THE WORK SITE PRIOR / DURING CONSTRUCTION, A SUBSURFACE BONDING PLANT SHALL CONDUCT BONDING TESTS IN THE AREA OF THE POOL TO CONFIRM SOIL BEARING CAPACITY, VERIFYING GROUND WATER LEVEL ALL MODIFIED SOILS & EARTH FILL SHALL MEET A SOIL DENSITY AND COMPACTION MINIMUM OF 95% MODIFIED PROCTOR WITHOUT SETTLEMENT.