

**POOL PLAN**

**PEARL ZALON  
3424 MARINA DRIVE  
SANTA BARBARA, CA 93110**

**DAKARI POOLS, INC.**  
776 W HWY 246, BUELLTON, CA 93427  
CELL: 805.886.9454  
PLANS TO BE ON JOB SITE AT ALL TIMES



NO	REVISIONS	DATE
1	SEE REVISION CORRECTIONS	6/8/22

**A0.0**

**POOL & SPA HEATING SYSTEM EQUIPPED AS FOLLOWS:**

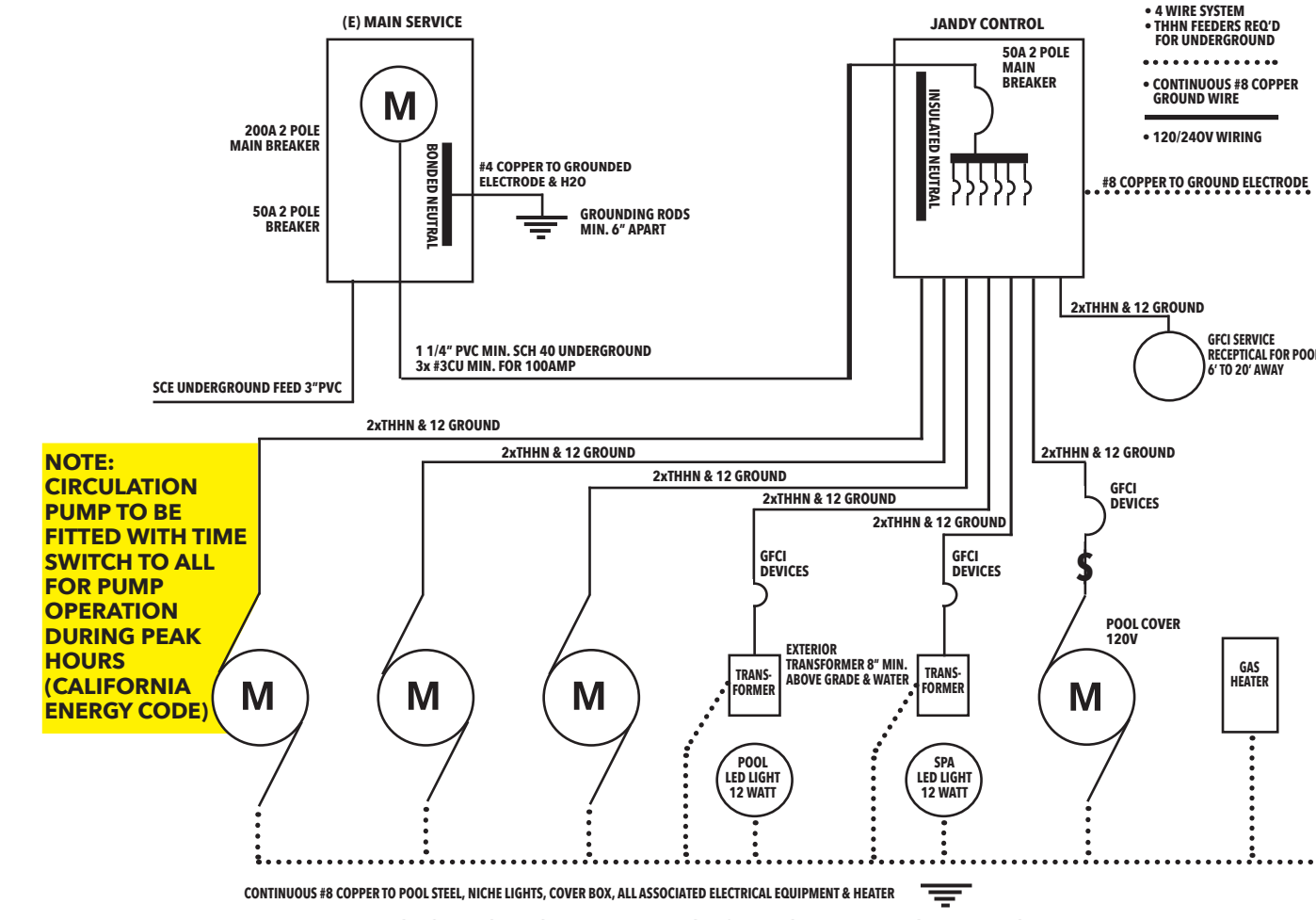
- Gas-fired, fan-type pool/spa heaters that have no continuously burning pilot light. L0-nox A.S.M.E.
- Gas-fired heating systems are to be certified for a minimum of 78% thermal efficiency per ASME regulator
- Weatherproof, operating energy efficiency note shall be displayed on heater door.
- An on/off switch mounted outside of the heater. (must allow shut-off without adjusting thermostat)
- No electric resistance heating.
- System is installed with:
  - Heater to be grounded with a #8 solid copper wire.
  - Heater pad that is 3" above finish grade.
  - At least 36" of pipe between filter and heater for future solar heating.
  - Insulated cover for outdoor heated pools and spas.

**INSPECTION NOTES:**

- The Special Inspector shall be a qualified person who shall demonstrate competence to the satisfaction of the building official. Names and qualifications of special inspector(s) shall be submitted to the Building Department for approval.
- Special inspection required for caisson pour and concrete placement of grade beams by deputy inspector and soils inspector.
- Soils engineer shall inspect all foundation elevations as required.
- SUMMARY OF DEPUTY AND CONSULTANT INSPECTIONS:**
- Soils engineering inspector (where soil engineering has been a project requirement).
- Shotcrete installation by deputy inspector.
- Structural Engineering inspector.

**NOTE:** Field Inspector will be provided at job site with all pool equipments' manufactures' install specifications to verify required clearances and installation requirements.

DISTANCE FROM PUMP: 12 FT (3.66M)					
JANDY MODEL	SOUND LEVEL dB (1000 RPM)	SOUND LEVEL dB (1725 RPM)	SOUND LEVEL dB (3450 RPM)	SOUND LEVEL dB (60 GPM)	SOUND LEVEL dB (10 GPM)
JEP 2.0 (FEN II)	30.3	41.8	56.2	--	--
VSSH2 70DV2A	34.1	41.7	60.7	--	--
FHPM 1.5				44.8	--
JEP 1.5 HP				--	50.6



HEATER SIZE INPUT BTU	PIPE SIZE				
	3/4"	1"	1 1/4"	1 1/2"	2"
200,000	0'-30"	30'-100"	100'-380"	380'-600"	-
260,000	0'-15"	15'-60"	60'-230"	230'-490"	490'-600"
400,000	0'-5"	5'-30"	30'-110"	110'-230"	230'-600"

SCOPE OF WORK	
CONSTRUCTION TYPE:	New in-ground shotcrete pool
POOL SIZE:	15FT X 34FT SPA SIZE: NONE
PROJECT OWNERS:	PEARL ZALON
PROJECT ADDRESS:	3424 MARINA DR SANTA BARBARA, CA 93110
ZONE:	A-1.5-D-3 A.P.N.: 047-021-011
LOT SIZE:	1.10 AC SLOPE: 11%
SET BACKS:	SEE SITE PLAN - A1.0
OPEN YARD AREA REQUIRED:	1250SF
OPEN YARD AREA PROVIDED:	1920SF
GRADING CUT:	45 Cubic Yards
GROSS SF RESIDENCE:	N/A
SF of POOL:	510SF
SF of SPA:	N/A
CONTRACTOR / PLAN PREPARER:	DAKARI POOLS, INC. P.O. BOX 1882, SANTA YNEZ, CA 93460- PH 805.886.9454
ENGINEER:	POOL ENGINEERING, INC. 1201 TUSTIN AVE, ANAHEIM, CA 92807- PH 714.630.6100
SOILS ENGINEER:	PACIFIC MATERIALS LABORATORY OF SANTA BARBARA, INC. P.O. BOX 96, 35-A SOUTH LA PATERA LANE GOLETA, CA 93116

POOL GENERAL SPECIFICATIONS	
SHAPE:	RECTANGLE
PER:	98LF
AREA:	510SF
SIZE:	15FT X 34FT
DEPTH:	3.5FT X 7FT
CAPACITY:	15,300 GALLONS
PUMP:	JANDY PB4-60
FILTER:	JANDY CL340
HEATER:	LAARS
CLEANER:	NAVIGATOR
CHLORINATOR:	JANDY 1400
PIPE SIZE:	2.5" TYPE: PVC
RETURN LINE:	2.5"
MAIN DRAIN:	2"
AUTOFILL/WANTI SIPHON VALVE:	YES
SKIMMER/W/VACUUM LINE:	YES
GAS LINE:	PE SIZE: 1 1/2"
ELECTRICAL:	BY DAKARI POOLS, INC.
BONDING:	BY DAKARI POOLS, INC.
LIGHTS:	4(EA) LED 12WATT
LIGHT TRANSFORMER:	AS SHOWN
AUTO CONTROL:	JANDY RS6
TILE:	CHOICE / DAKARI POOLS, INC.
PLASTER:	BY DAKARI POOLS, INC.
SITE PREPARATION:	N/A
GRADING:	BY DAKARI POOLS, INC.
SOIL CLASS:	EXPANSIVE
DISPOSITION OF DIRT:	HAUL
DECKING BY:	OTHERS
COPING BY:	OTHERS
POOL BASIN EQPMT BY:	N/A
PUMP FILTER:	N/A
SAFETY COVER:	(YES) NO
UL#ASTMF1346-91	
DRAWN BY:	DAKARI POOLS, INC. DATE
CHK'D BY:	DATE

SPA GENERAL ADD'L SPECIFICATIONS	
SPA TYPE:	
DEPTH:	
TOTAL GALLONS:	N/A
SPA JETS:	
BENCH:	
TILED WALL:	
JET PUMP:	
LIGHT:	
SOLAR GENERAL SPECS	
SO. FT. POOL:	SO. FT. PANEL:
PANEL SIZE:	
NUMBER OF PANELS:	N/A
AUTOMATIC ATMOSPHERIC SENSOR:	
OWNER(S)	
TO DETERMINE:	
APPROXIMATE ELEVATION OF POOL ON DAY OF EXCAVATION	
EXIT ALARMS ON THE PRIVATE SINGLE-FAMILY HOME'S DOORS OR WINDOWS THAT PROVIDE DIRECT ACCESS TO THE SWIMMING POOL OR SPA	
THE EXIT ALARM MAY CAUSE EITHER AN ALARM NOISE OR A VERBAL WARNING, SUCH AS A REPEATING NOTIFICATION THAT "THE DOOR TO THE POOL IS OPEN".	
DO NOT TURN ON POOL LIGHT WHEN POOL IS EMPTY	
OWNER(S)	
NAME:	Pearl Zalon
ADDRESS:	3424 Marina Drive
CITY:	Santa Barbara
RES. PHONE:	805-687-7150

**GENERAL NOTES:**

- Plans comply with 2019 CBC, CRC, CMC, CPC, 2019 CEC state codes, and county of Santa Barbara ords #4822, \$4766 and planning/zoning ords.
- This project shall comply with the 2019 California Residential Energy Standard.
- Waterproof operation energy efficiency note shall be displayed on heater door.
- Special inspection of shotcrete is required; barriers complying with 2019 CBC Section 31.09.4.4 thru 3109.4.4.8 verified by the city/county inspector prior to filling pool with water. (CBC Sec. 106.3) Barriers to comply with city/county of Santa Barbara barrier codes CBC 3109 & SBC ord#5536.
- The special inspector shall be a qualified person who shall demonstrate competence to the satisfaction of the Building official.
- Provide manufactures installation specs for pool equipment clearances at job site for inspector.

**ELECTRICAL:**

- Heater to be grounded with a #8 solid copper wire.
- Pool lights shall be installed 18" below waterline or per manufactures specs.
- Provide waterproof/GFCI outdoor receptacles at approx. 6ft min. to 20ft from edge of pool. (2019 CEC 680.22)(B)
- Receptacles in wet locations to have an enclosure that is waterproof whether or not attachment plug is inserted in the receptacle.
- No exterior lights within 10ft of pool.
- All lighting to be hooded- not to shine on adjacent properties and right of ways.
- Auto control with disconnected- GFI with receptacles outlet.
- All relays and timers in sub panel.
- Bonding to comply with CEC 2019 680.26 Equipotential Bonding, Parts 1 & 2.
  - To be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at a min. 4 points of crossing.
  - Conform to contour of pool and deck. (Under paved & unpaved surfaces at a min. of 3 horiz. ft from pool & spa walls)
- Fixed metal parts within 5 ft or less from the inside of pool wall shall be bonded per CEC 680.26(B)(7).

**PLUMBING:**

- Gas line to be of PE. (See sizing chart this sheet)
- Backflow device to be tested by certified technician prior to final inspection.
- Compliance with 2019 CBC sec. 3109.4.4 thru 3109.4.4.8 VIRGINIA, GRAEME BAKER POOL & SAFETY ACT. ASME/ANSI A112.19.8-2009 for listed covers/ grates where required.
- Pool system has directional inlets and a circulation pump time control.
- All anti-entrapment drain cover device is required. Cover shall meet ASTM or ASME requirements.
- All exposed plumbing to be painted.
- Provide as a minimum a backflow RP device on the pool fill line.
- In system piping for pools and spas, all elbows shall be sweep elbows or of an elbow type that has pressure drop of less than the pressure drop of a straight pipe with a length of 30 pipe diameters. For use of the latter method, a list must be provided at field inspection that shows that the elbows comply.

**CALIFORNIA ENERGY COMMISSION**

**GAS / OIL POOL HEATERS**

\* MODEL NUMBER: JX1 400N\*

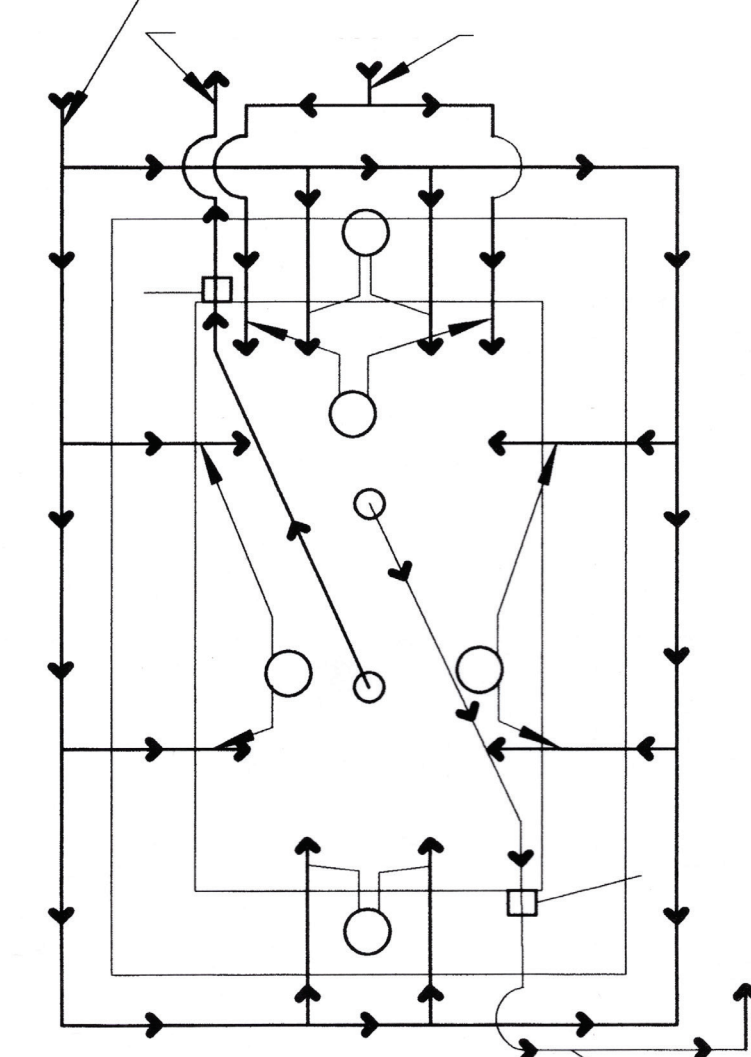
\* MANUFACTURER: ZODIAC POOL SYSTEMS, INC. \* ADD DATE: 04/03/2015

\* BRAND: JANDY PRO SERIES \* REGULATORY STATUS: C-FEDERALLY REGULATED CONSUMER PRO

\* ENERGY SOURCE: G-NATURAL GAS \* IMPUT BTUH: 399000

\* INPUT KWH: \* THERMAL EFFICIENCY: 83

\* THERMAL EFFICIENCY STANDARD: 82 \* PILOT LIGHT? (Y/N): NONE



**CALIFORNIA ENERGY COMMISSION**

Dedicated-Purpose Pool Pumps (Manufactured On Or After July 19, 2021)

\* Model Number: VSSH220DV2A

Manufacturer: Zodiac Pool Systems, Inc. Add Date: 07/19/2021

Brand: Jandy \* Regulatory Status: 1 - Federally-Regulated Comr

Reference Number: \* Dedicated-Purpose Pool Pump Product Group: 1 - Self-priming pool filter pu

Freeze Protection Controls When Shipped: Default Dry-Bulb Air Temperature Setting (F): NA - Not applicable

Default Run-Time Setting (Minutes): Default Motor Speed (Rpm):

Default Motor Speed Is More Than Half Of The Maximum Available Speed: Weighted Energy Factor (Kgal/Kwh) Standard: 1.546

Weighted Energy Factor (Kgal/Kwh) Standard: 5.59 Rated Hydraulic Horsepower (Hp):

Speed Configuration For Which The Pump Is Being Rated: True Power Factor At High Load Point: VS - Variable-speed 0.97

Dedicated-Purpose Pool Pump Nominal Motor Horsepower (Hp): 2.2 Dedicated-Purpose Pool Pump Total Horsepower (Hp):

Dedicated-Purpose Pool Pump Service Factor: 1 Input Power At The High Flow Load Point (Watts): 973.18

Flow Rate At The High Flow Load Point (Gpm): 72.03 Speed At The High Flow Load Point (Rpm): 2730

Input Power At Maximum Rotating Speed (Watts): 1936.4 Flow Rate At Maximum Rotating Speed (Gpm): 92.48

Speed At Maximum Rotating Speed (Rpm): 3450 True Power Factor At Low Load Point: 0.56

Pump Certified With NSF/ANSI 50-2015: Vertical Lift (Feet):

True Priming Time (Minutes): 111.79 Input Power At The Low Flow Load Point (Watts):

Flow Rate At The Low Flow Load Point (Gpm): 31.24 Speed At The Low Flow Load Point (Rpm): 1170

Maximum Head (Feet): 69.2 Pool Pump Control Is Integral Or Separate Component: None

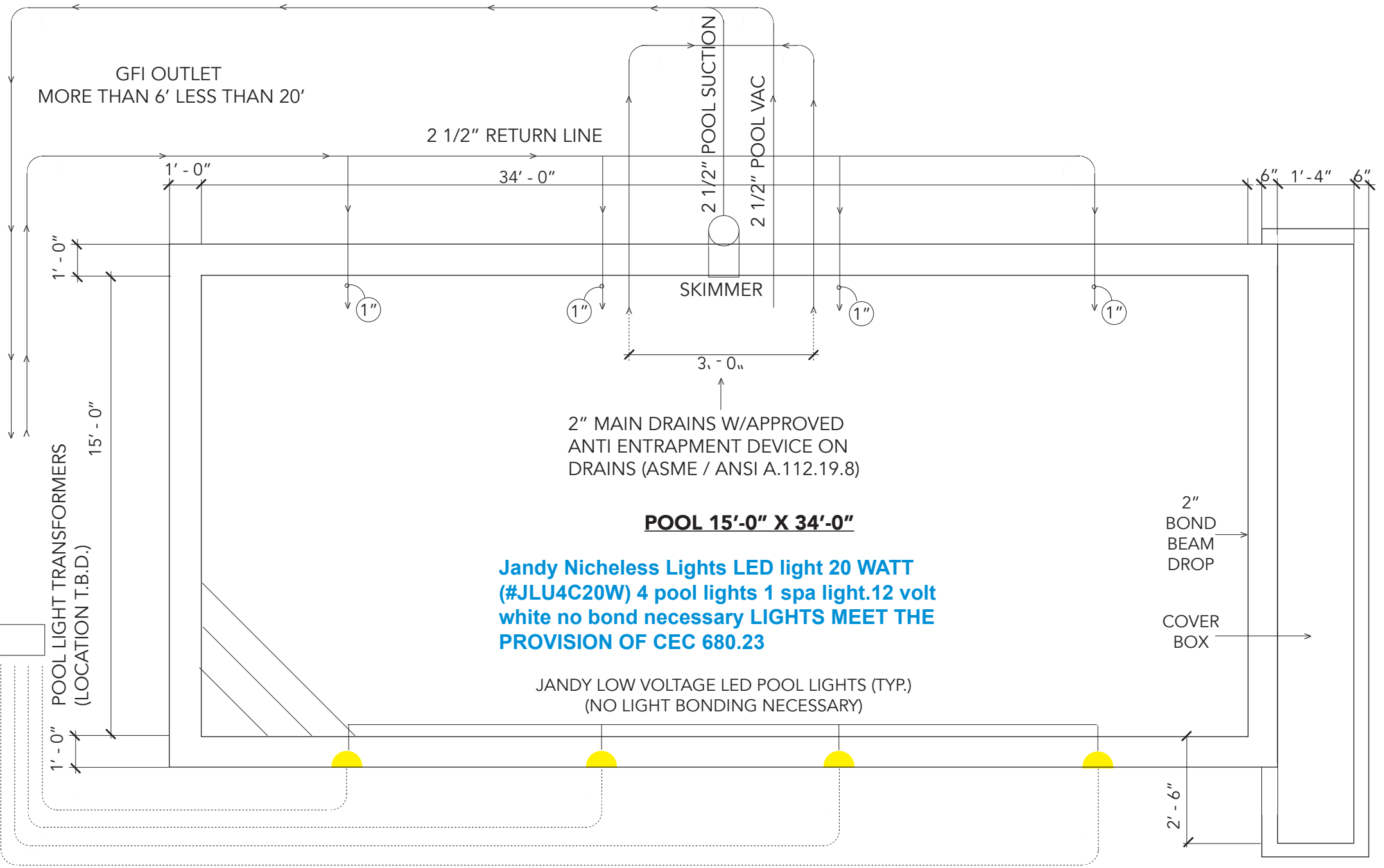
Pool Pump Control Maximum Run-Time (hours): Pump Meets All 3 Criteria Of DOE Enforcement Policy: None



**WILL BE INCLUDING POOL PUMP MOTOR COVER SERENE+ MODEL L170762**

**NO SAFETY FENCE WILL BE USED**

"Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than (9 sq. in.) of surface area to the pool water at all time. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities, and it shall be bonded in accordance with CEC 680.26(C), if applicable. Water bond shall be installed in an accessible location and always below pool/spa water level at all times per manufacturer's instructions.

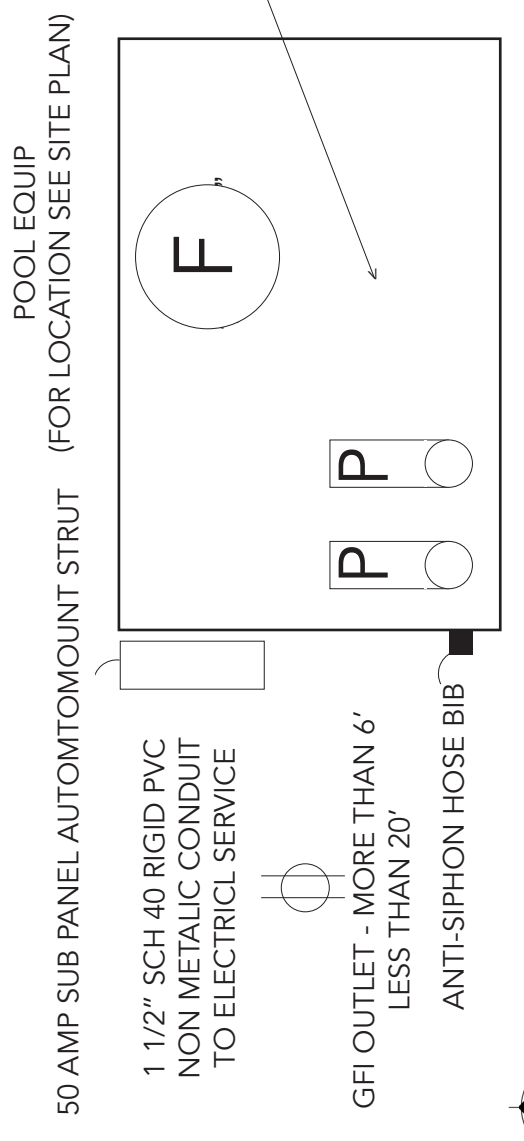


An equipotential common bonding grid is to be provided and shall extend under poured concrete, paved & unpaved walking surfaces for (3ft) horizontally beyond the inside walls of the pool and shall be attached to the pool reinforcing steel or copper conductor grid at min of (4) points uniformly spaced around the perimeter of the pool. [CEC 680.26].

Will not be building any structure around equipment pad

General purpose GFCI protected receptacle is minimum 6 ft and maximum 20 ft from the inside walls of the swimming pool. Receptacles in wet locations shall have a weatherproof enclosure. An outlet box hood installed for this purpose shall be listed and shall be identified as "Extra Duty". [CEC 406.9].

36" OF PIPING PROVIDED BETWEEN HEATER AND FILTER FOR FUTURE SOLAR HEATING EQUIPMENT (CALIFORNIA ENERGY CODE)

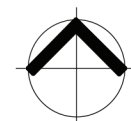


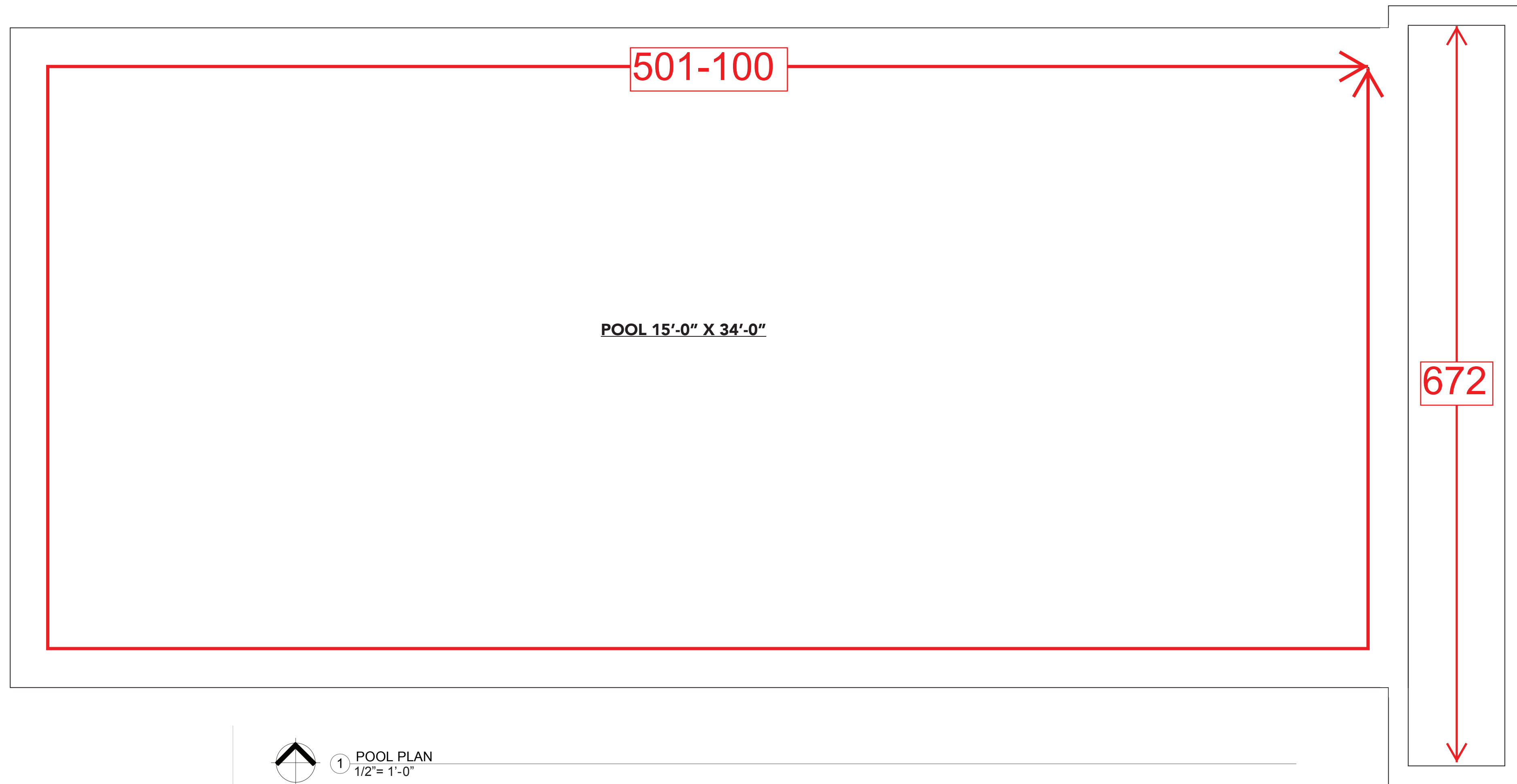
1 POOL PLAN 1/4" = 1'-0"

**DROWNING PREVENTION FEATURE FOR POOL AND/OR SPA CONSISTING OF AT LEAST TWO OF THE FOLLOWING:**


1. An enclosure that meets the requirements of HSC Section 115923 and isolates the swimming pool or spa from the private single-family home OR
2. Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standard in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device OR
3. An approved safety pool cover that meets all of the performance standards of ASTM F1346-91 OR
4. Exit alarms on the private single-family home's doors or windows that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that "the door to the pool is open." OR
5. A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor of the private single-family home's doors providing direct access to the swimming pool or spa OR
6. An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety feature OR
7. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by ASTM or the American Society of Mechanical Engineers (ASME).

*David Heuer*  
DAKARI POOLS, INC.

 ① POOL PLAN  
1/2" = 1'-0"



SITE PLAN REVIEWED  
for conformance to structural details

  
Todd L. Lacher, F.C.E.  
Pool Engineering, Inc.

Structural details shall take precedence over conflicts with site plan.

Date: 4/18/2022

**Note**

Pool excavation shall be inspected by soils engineer prior to steel placement. As a condition of the use of Pool Engineering, Inc. structural plans, Soils Engineer shall certify that the pool bottom conforms to Structural Note 1 on Standard Pool Structural Plan.

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**A1.0**



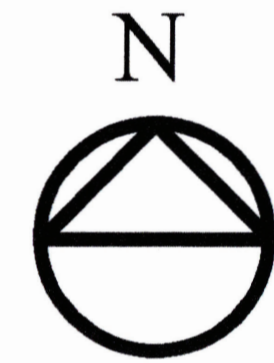
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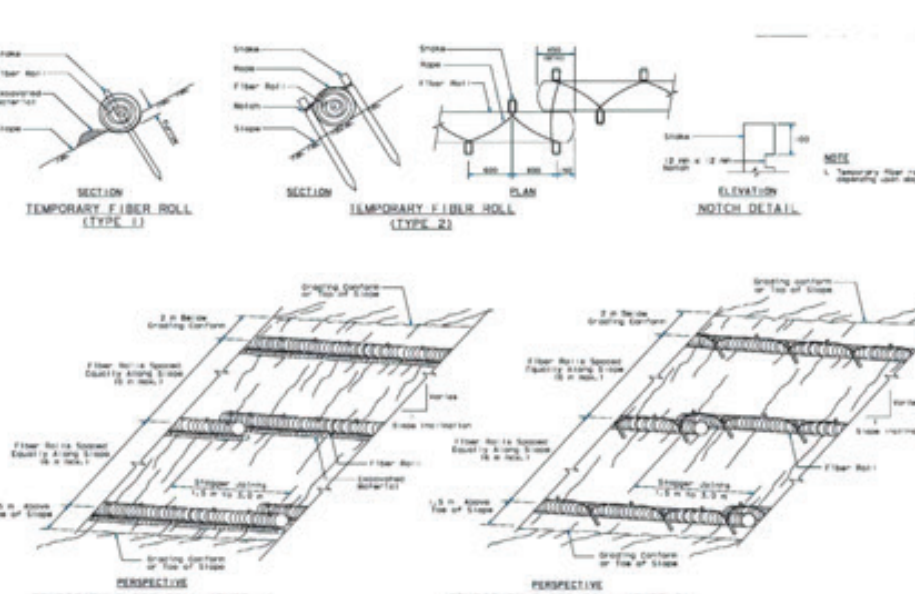
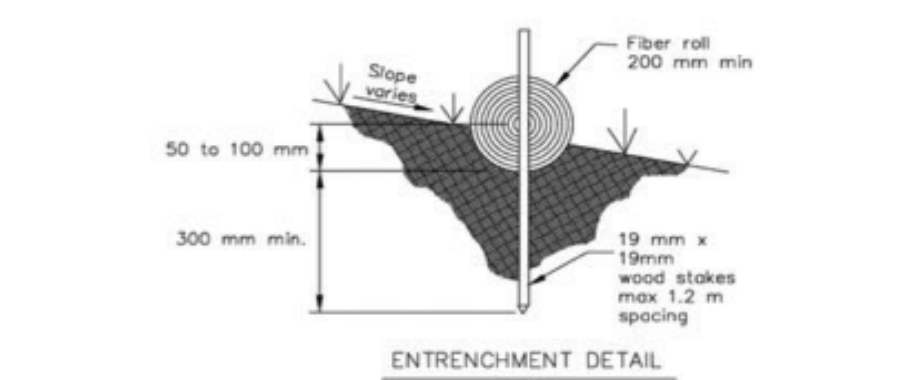
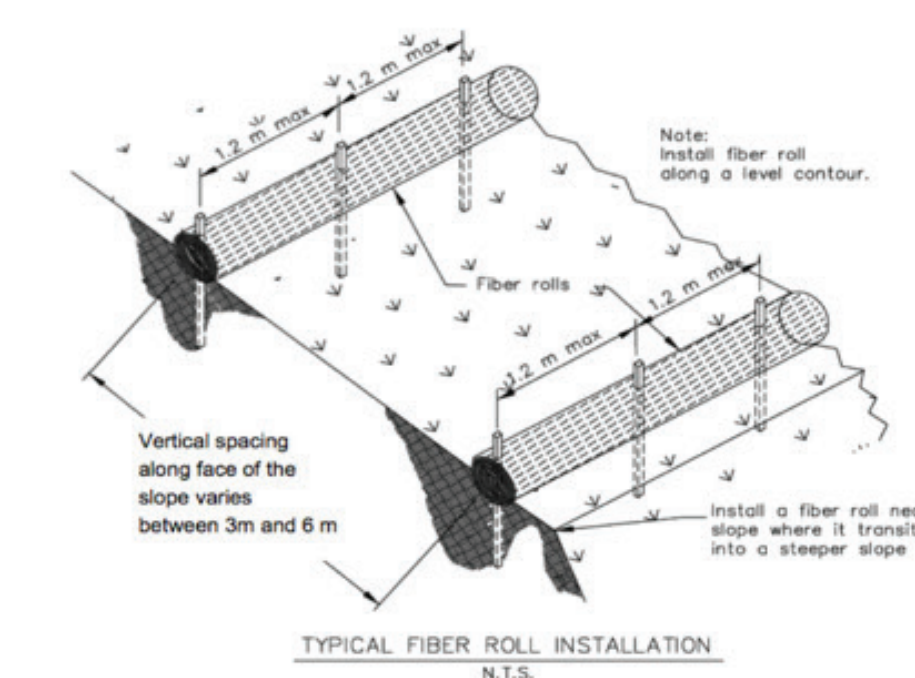
A2.0



1 POOL PLAN  
1/20" = 1'-0"

A FIBER ROLLS

- Limitations**
  - Runoff and erosion may occur if fiber roll is not adequately trenched.
  - Fiber rolls at the toe of slopes greater than 1:5 may require the use of 500 mm (20" diameter) or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).
  - Fiber rolls may be used for drainage inlet protection if they can be properly anchored.
  - Difficult to move once saturated.
  - Fiber rolls could be transported by high flows if not properly staked and trenched in.
  - Fiber rolls have limited sediment capture zone.
  - Do not use fiber rolls on slopes subject to creep, slumping, or landslide.
- Standards and Specifications**
  - Fiber Roll Materials**
    - Fiber rolls shall be either:
      - Prefabricated rolls.
      - Rolled tubes of erosion control blanket.
  - Assembly of Field Rolled Fiber Roll**
    - Roll length of erosion control blanket into a tube of minimum 200 mm (8 in) diameter.
    - Bind roll at each end and every 1.2 m (4 ft) along length of roll with jute-twine.
  - Installation**
    - Slope inclination of 1:4 or flatter: fiber rolls shall be placed on slopes 6.0 m apart.
    - Slope inclination of 1:4 to 1:2: fiber rolls shall be placed on slopes 4.5 m apart.
    - Slope inclination 1:2 or greater: fiber rolls shall be placed on slopes 3.0 m apart.
    - Stake fiber rolls into a 50 to 100 mm (2 to 4 in) trench.
    - Drive stakes at the end of each fiber roll and spaced 600 mm (2 ft) apart if Type 2 installation is used (refer to Page 4). Otherwise, space stakes 1.2 m (4 ft) maximum on center if installed as shown on Pages 5 and 6.
    - Use wood stakes with a nominal classification of 19 by 19 mm (3/4 by 3/4 in), and minimum length of 600 mm (24 in).
    - If more than one fiber roll is placed in a row, the rolls shall be overlapped, not abutted.
  - Removal**
    - Fiber rolls are typically left in place.
    - If fiber rolls are removed, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.
- Maintenance and Inspection**
  - Repair or replace split, torn, unraveling, or slumping fiber rolls.
  - Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
  - Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
  - Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.



David Hauer  
DAKARI POOLS, INC

**POOL PLAN**

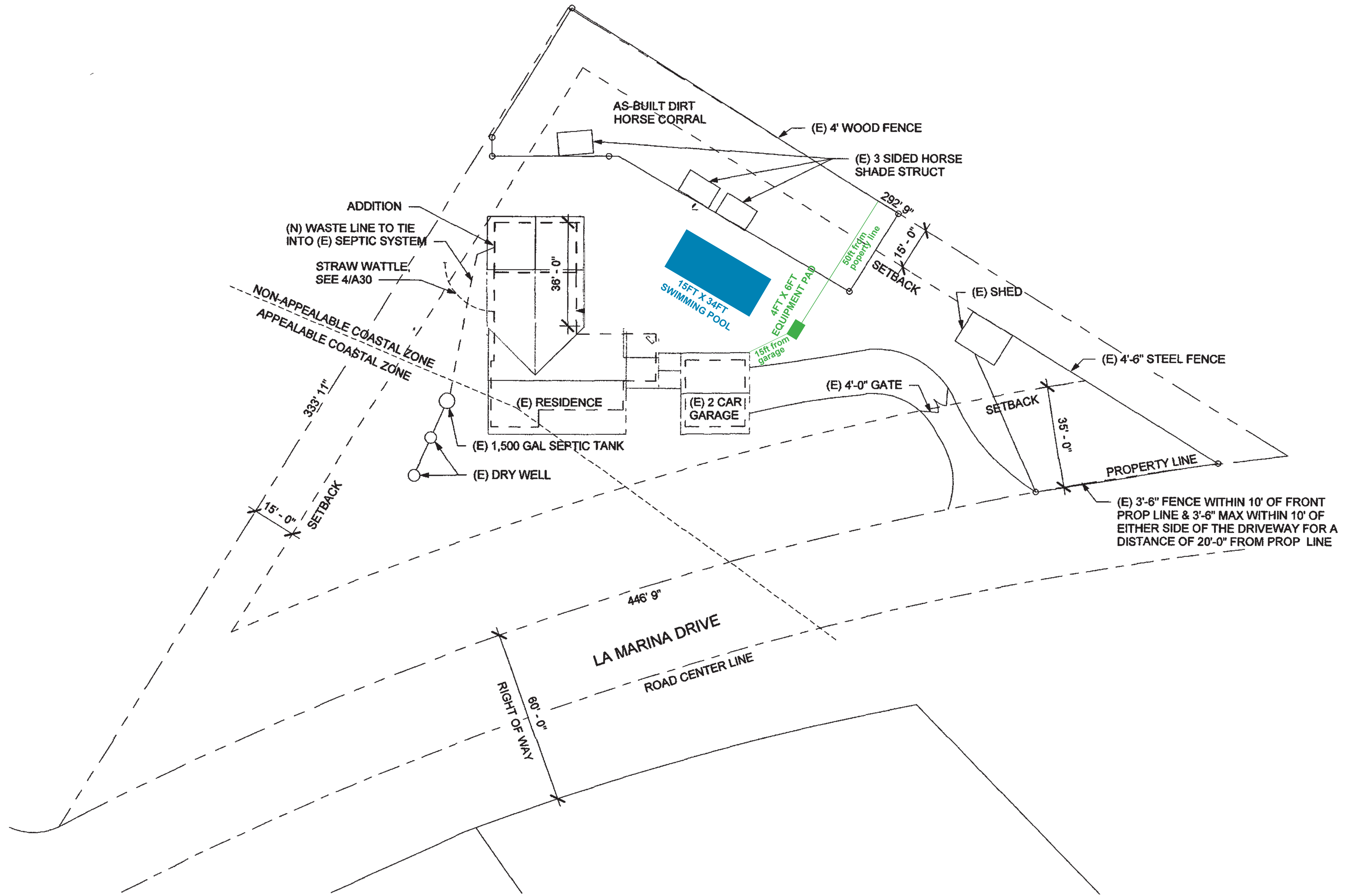
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**A3.0**



① Site  
1" = 20'-0"



*David Heuer*  
DAKARI POOLS, INC



# CALCULATIONS

## METHODOLOGY:

$\gamma$  = EQUIVALENT FLUID PRESSURE

**CASE I**  
 $OTM = 1/6 \gamma H^3$  WHERE  $\gamma = 100$  pcf  
 NET MOM = OTM - RESISTING MOMENT

**CASE II**  
 $OTM = 1/6 \gamma H^3$  WHERE  $\gamma = 62.4$  pcf  
 NET MOM = OTM + RESISTING MOMENT

$$f_s = \frac{M(12 \text{ in/ft})}{A_s j d} = \frac{M_t (12)}{A_s (0.887) d}$$

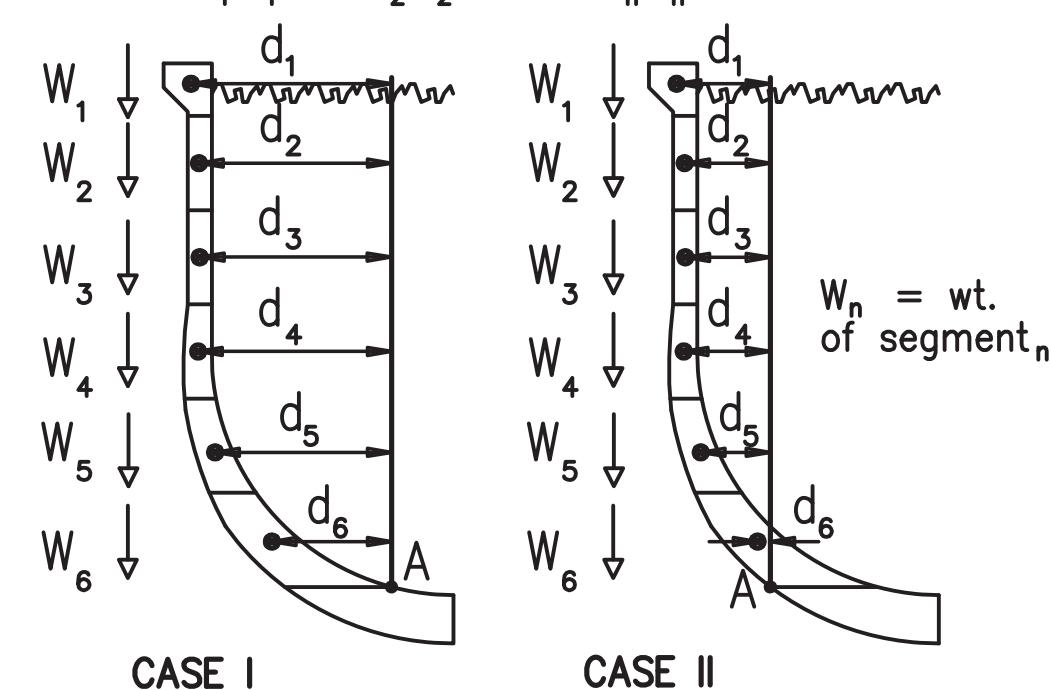
$$f_c = \frac{M(2) 12 \text{ in/ft}}{j k b d^2} = \frac{M_t (2)(12)}{(0.887)(0.339)(12) d^2} < 1125 \text{ psi}$$

$$v_c = \frac{(1/2) \gamma H^2}{(12 \text{ in/ft}) j d} = \frac{\gamma H^2}{(2)(12)(0.887) d} < 55 \text{ psi}$$

$f'_c = 2,500$  psi  
 $F_s = 20,000$  psi  
 $f_c = 0.45 f'_c = 1125$  psi  
 $v_c = 1.1 \sqrt{f'_c} = 55$  psi

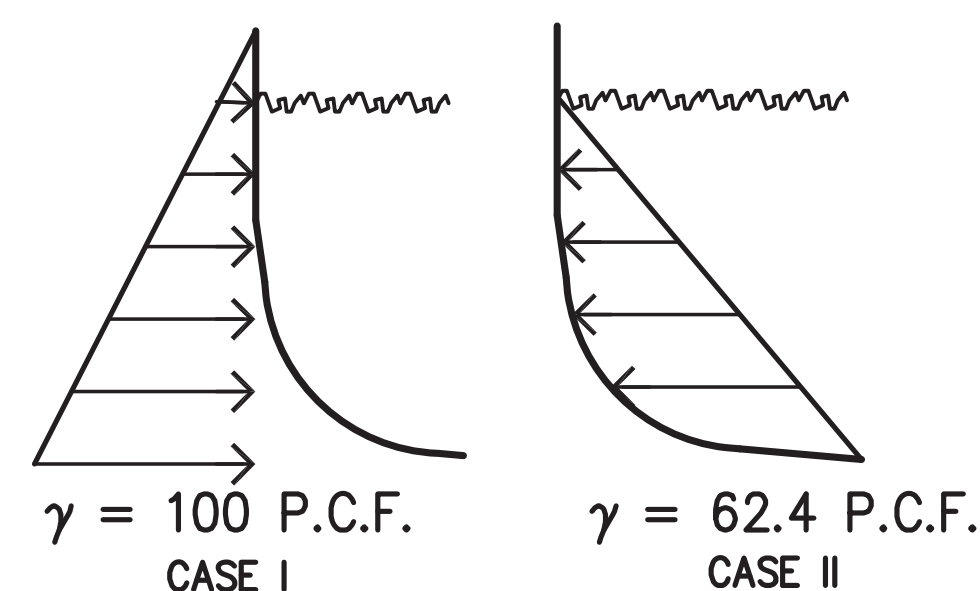
## RESISTING MOMENT:

RESISTING MOMENT ABOUT POINT A  
 $RM = W_1 d_1 + W_2 d_2 + \dots + W_n d_n$

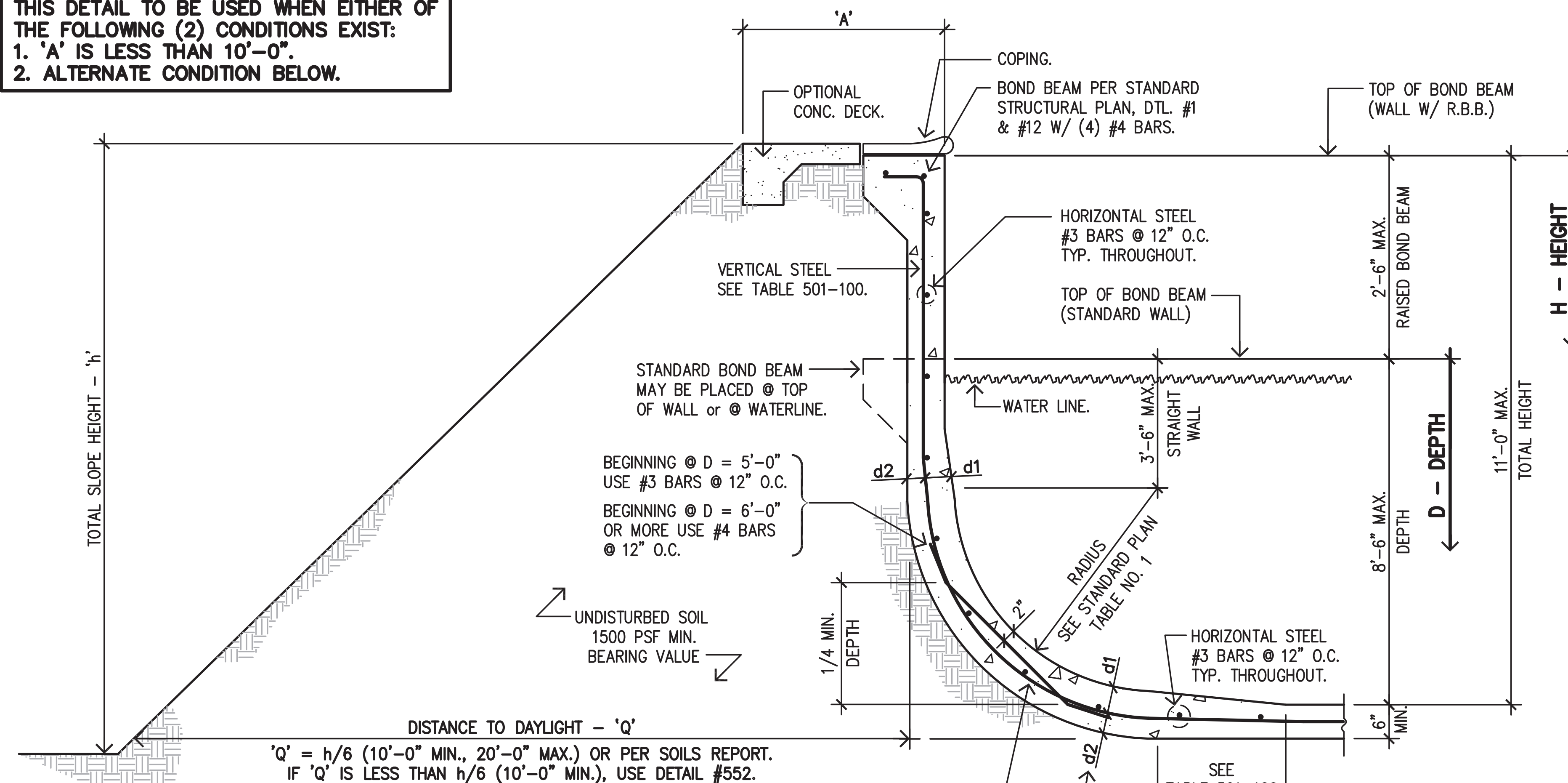


## LOADING DIAGRAM:

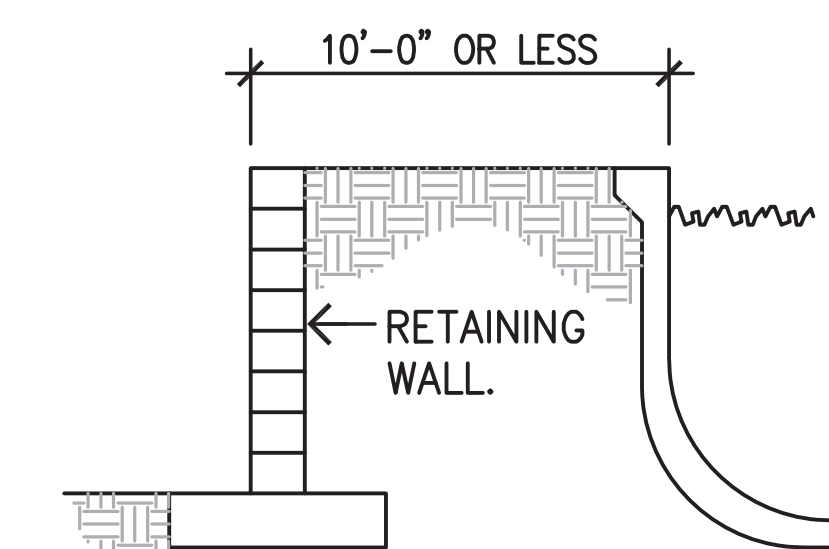
THIS DETAIL IS DESIGNED FOR EACH OF THE LOAD CASES DEFINED BELOW.



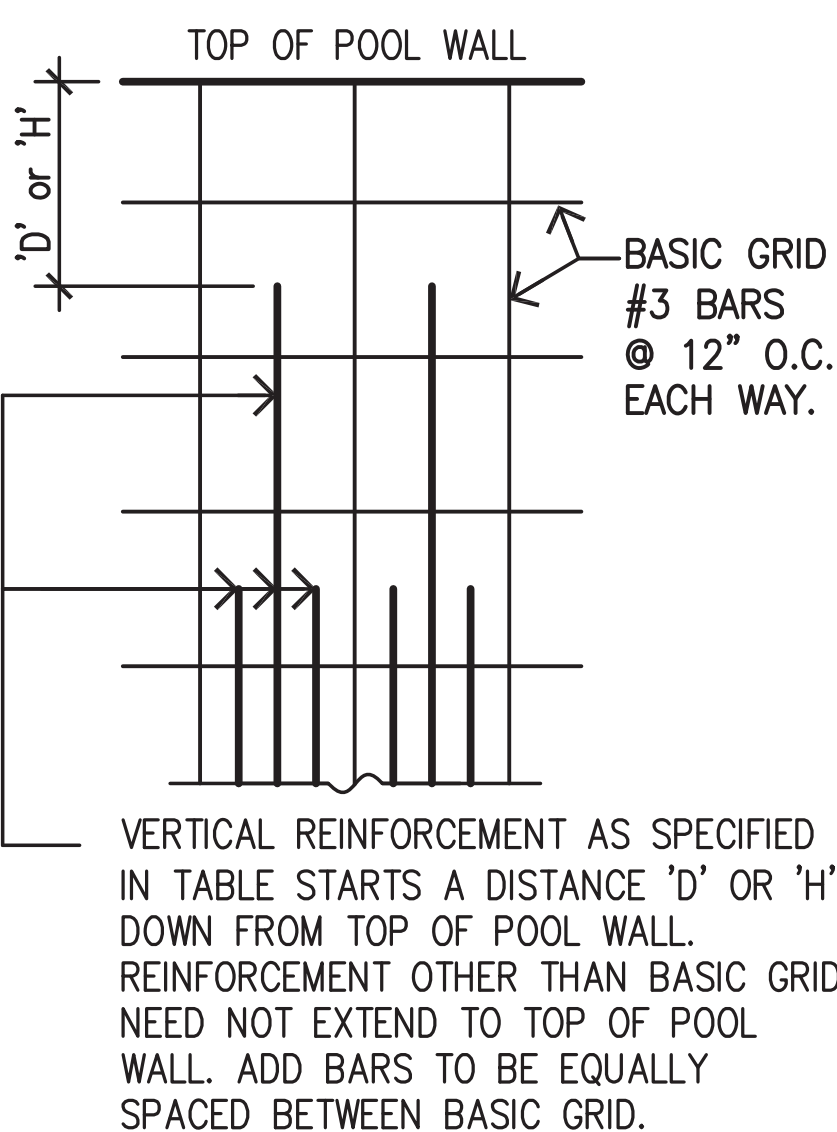
THIS DETAIL TO BE USED WHEN EITHER OF THE FOLLOWING (2) CONDITIONS EXIST:  
 1. 'A' IS LESS THAN 10'-0".  
 2. ALTERNATE CONDITION BELOW.



## ALTERNATE CONDITION



## TYPICAL ADD BAR REINFORCING DIAGRAM



## TABLE 501-100

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD.  
 BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH.  
 (SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

POOL DEPTH	NO RAISED BOND BEAM			REQ'D TRANS.
	D	d1	d2	
0 to 3'-0"	3"	3"	#3 @ 12"	2'-0"
3'-6"	4"	3"	"	2'-0"
4'-0"	4"	3"	#3 @ 4"	2'-0"
4'-6"	4"	3"	"	2'-0"
5'-0"	4"	3"	"	2'-0"
5'-6"	5"	4"	"	2'-0"
6'-0"	5"	4"	add 3 #4	2'-0"
6'-6"	4 1/2"	4"	"	2'-2"
7'-0"	5"	5"	"	2'-5"
7'-6"	6"	5 1/2"	"	2'-8"
8'-0"	6 1/2"	6"	"	2'-10"
8'-6"	6 1/2"	7"	"	3'-0"

TOTAL HEIGHT	2'-6" MAX. RAISED BOND BEAM			REQ'D TRANS.
	H	d1	d2	
0 to 3'-0"	3"	3"	#3 @ 12"	2'-0"
3'-6"	4"	3"	"	2'-0"
4'-0"	4"	3"	#3 @ 4"	2'-0"
4'-6"	4"	3"	"	2'-0"
5'-0"	4 1/2"	3"	"	2'-0"
5'-6"	5 1/2"	3"	"	2'-4"
6'-0"	5 1/2"	3"	add 3 #4	2'-11"
6'-6"	5 1/2"	3"	"	3'-8"
7'-0"	6"	3"	"	4'-4"
7'-6"	7"	3"	"	4'-8"
8'-0"	7 1/2"	3 1/2"	add 3 #5	4'-10"
8'-6"	8 1/2"	3 1/2"	"	5'-0"
9'-0"	9 1/2"	3 1/2"	"	5'-2"
9'-6"	10 1/2"	3 1/2"	"	5'-4"
10'-0"	11 1/2"	4"	"	5'-5"
10'-6"	12 1/2"	4 1/2"	"	5'-6"
11'-0"	13"	5"	"	8'-3"

## CALCULATION RESULTS:

FREESTANDING WALL  
 EQUIVALENT FLUID PRESSURE = 100 P.C.F.  
 RESULTS FOR NO RAISED BOND BEAM

DEPTH 'D'	SOIL OTM ft-#	WATER OTM ft-#	SOIL RM ft-#	WATER RM ft-#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	f <sub>s</sub> p.s.i.	f <sub>c</sub> p.s.i.	v <sub>c</sub> p.s.i.
3'-0"	450	281	97	-44	353	3"	3"	#3 @ 12"	13804	384	12.5
4'-0"	1067	666	129	-85	937	4"	3"	#3 @ 4"	9467	420	16.7
5'-0"	2083	1300	241	-36	1842	4"	3"	"	18611	911	26.0
6'-0"	3600	2246	506	28	3094	5"	4"	add 3 #4	12169	793	30.0
7'-0"	5717	3567	1047	380	4670	5"	5"	"	18364	1119	40.8
8'-0"	8533	5325	2265	810	6135	6 1/2"	6"	"	19908	1085	41.0
8'-6"	10235	6387	5031	389	6775	6 1/2"	7"	"	18696	928	46.3

RESULTS FOR 2'-6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft-#	WATER OTM ft-#	SOIL RM ft-#	WATER RM ft-#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	f <sub>s</sub> p.s.i.	f <sub>c</sub> p.s.i.	v <sub>c</sub> p.s.i.
3'-0"	450	1	97	-44	353	3"	3"	#3 @ 12"	13804	384	12.5
4'-0"	1067	35	121	-93	946	4"	3"	#3 @ 4"	9556	424	16.7
5'-0"	2083	163	147	-137	1936	4 1/2"	3"	"	17291	716	23.1
6'-0"	3600	446	183	-213	3417	5 1/2"	3"	add 3 #4	12154	698	27.3
7'-0"	5717	948	221	-278	5495	6"	3"	"	17832	972	34.0
8'-0"	8533	1730	274	-451	8260	7 1/2"	3 1/2"	add 3 #5	14680	885	35.6
9'-0"	12150	2856	349	-670	11801	9 1/2"	3 1/2"	"	16351	857	35.5
10'-0"	16667	4388	453	-990	16214	11 1/2"	4"	"	18381	1057	36.6
11'-0"	22183	6387	2214	-1471	19969	13"	5"	"	19909	1044	38.8

Ron Lacher, R.C.E.  
 1201 N. Tustin Ave.  
 Anaheim, CA 92807  
 Fax: (714) 630-6114  
 Phone: (714) 630-6100

pool engineering inc.

FOR USE ONLY AT  
 3424 Marina Dr  
 Santa Barbara CA 93110



Date: 4/18/2022

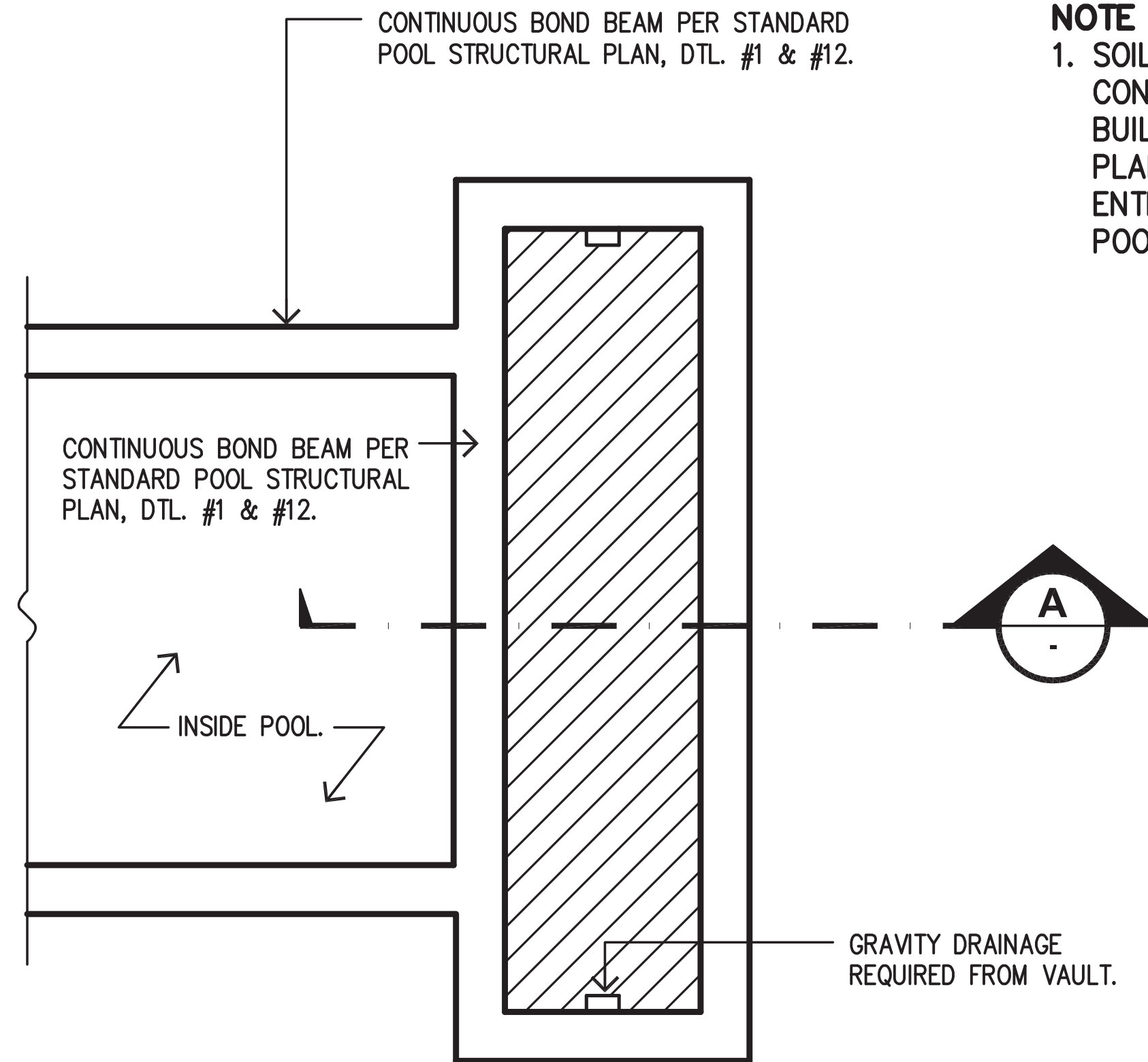
22-04138

FREESTANDING WALL  
 EQUIVALENT FLUID PRESSURE = 100 P.C.F.

## DETAIL #501-100

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.  
 THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

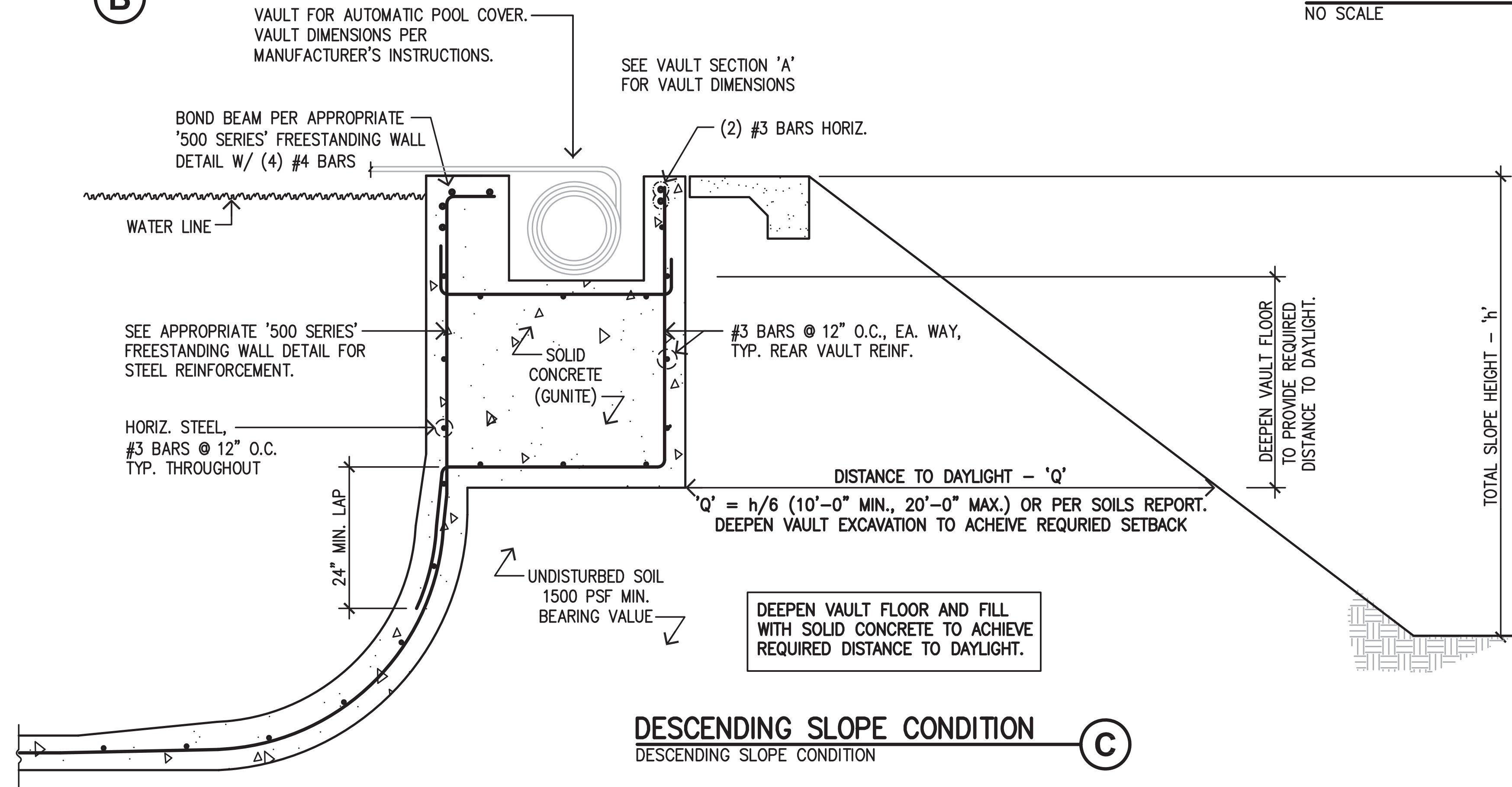




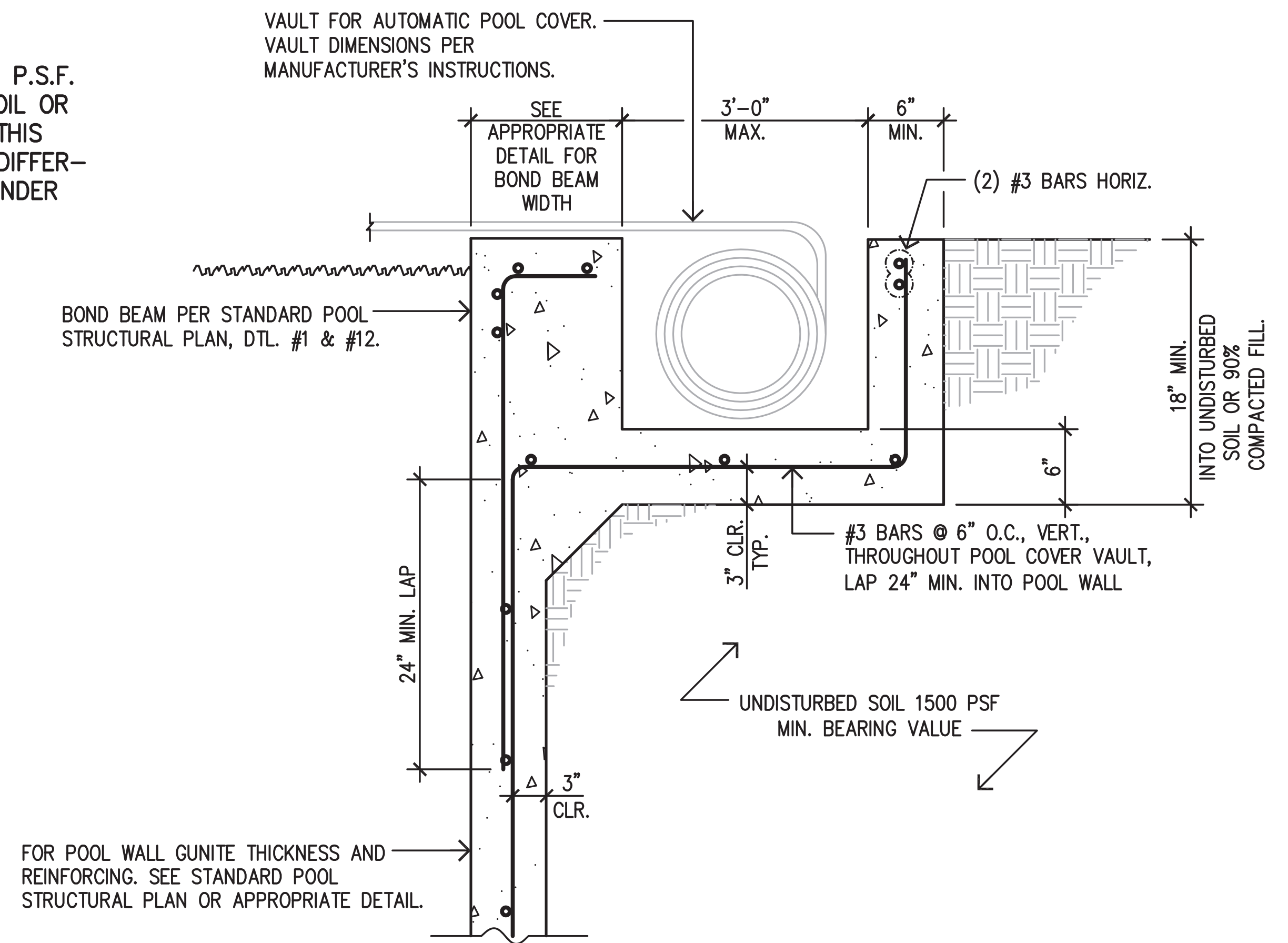
VAULT DIMENSIONS PER MANUFACTURER'S INSTRUCTIONS.

**VAULT PLAN VIEW**  
NO SCALE

**B**



**DESCENDING SLOPE CONDITION**  
DESCENDING SLOPE CONDITION



**TYPICAL VAULT SECTION**  
NO SCALE

**A**

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3424 Marina Dr  
Santa Barbara CA 93110



Date: 4/18/2022

22-04138

AUTOMATIC POOL COVER  
VAULT DETAIL

**DETAIL #672**

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pool  
engineering  
inc.

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.  
THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

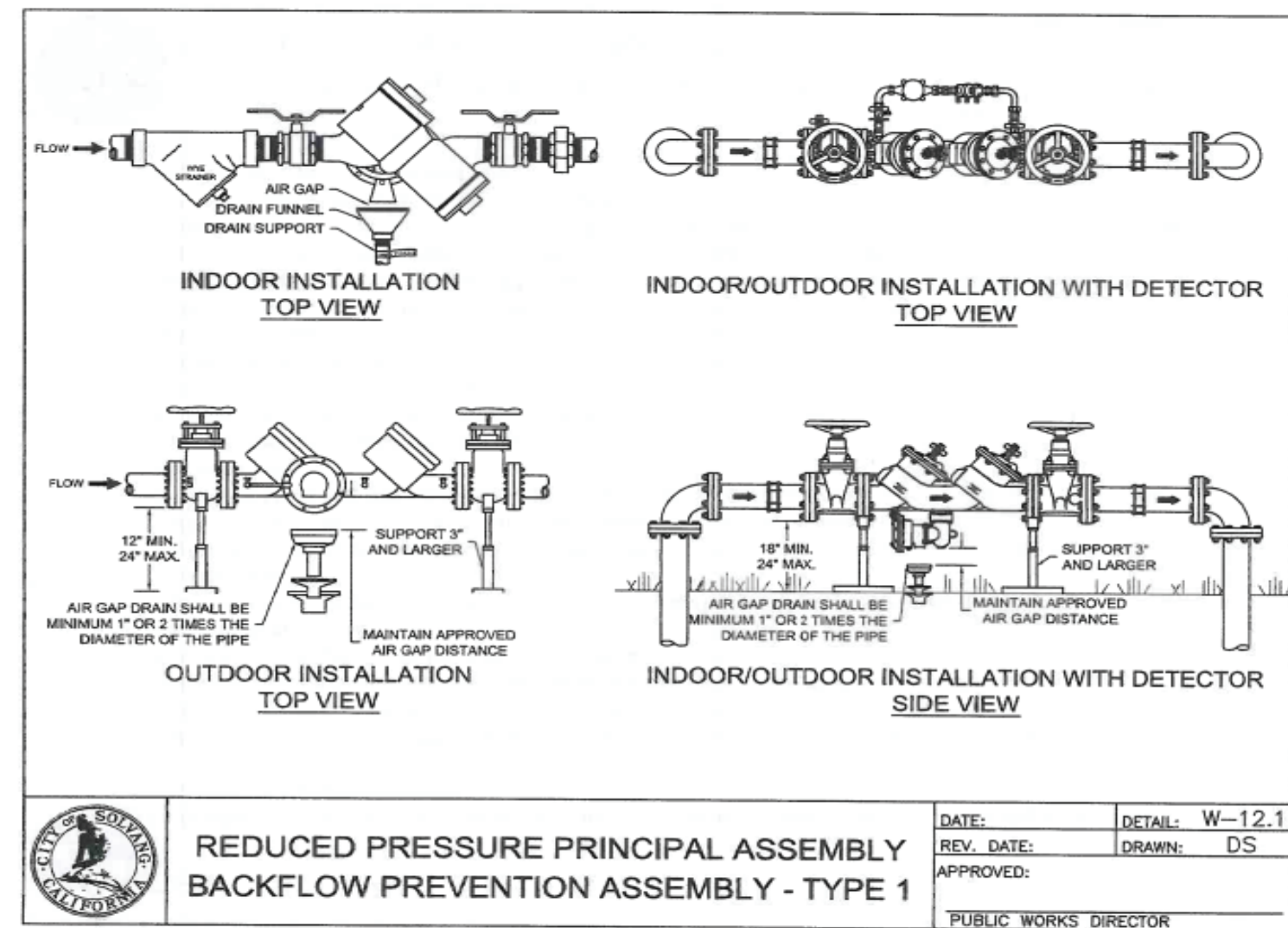
18/2 MAY 3, 2021



## MANDATORY ENERGY CONSERVATION REQUIREMENTS FOR SWIMMING POOL/SPA CF2R-PLB-03-E

### Plumbing Requirements (continued):

- Provide backflow protection per (City of Solvang Municipal Code Title 9, Chapter 4 (9-4-4))
  - Backflow Protection Requirements:
    - Clearly indicate on the plumbing plans the method of backflow prevention compliance. Options to include the following:
      1. **Preferred Option:** Create an air gap at the pool auto-fill. Provide a detail on the plans which demonstrates the proposed air gap.
      2. Install a Reduced Pressure Principal Assembly Type 1 per City's standards. Location to be two feet behind the existing water meter box on the customer side a minimum of 1 ft. above grade. (Alternative locations for the Reduced Pressure Principal Assembly Type 1 must be approved by the City of Solvang Water Supervisor, Mike Matthews (805) 688-5575 ext. 229 prior to installation). The Reduce Pressure Valve must be tested immediately after installation and results provided to the Water Supervisor. **Prior to final pool inspection, please schedule an inspection with the Water Supervisor by calling (805) 465-6657 x229 to provide testing results or verification of an air gap. Obtain Water Supervisor's signature on inspection card.** The installation of the Reduce Pressure Valve must also be registered with the City's Utility Billing Clerk. The Water Supervisor may confirm registration with the Utility Clerk prior to the air gap/reduced pressure valve inspection. Final approval from the Water Supervisor will not be granted unless registration with the Utility Clerk has occurred.



**POOL AND SPA HEATING SYSTEMS**  
CEC-CF2R-PLB-03-E (Revised 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF INSTALLATION  
Pool And Spa Heating Systems - For Non-HERS Registered Projects  
CF2R-PLB-03-E (Page 1 of 3)

Project Name: PEARL ZALON Enforcement Agency: SB COUNTY Permit Number:  
Dwelling Address: 3424 MARINA DRIVE City: SANTA BARBARA Zip Code: 93110

**A. Pool and Spa System Type**

01 Pool and Spa System Type In-Ground Pool

**B. Pool and Spa Systems and Equipment Requirements (Section 110.4(a) and 110.5)**

01 Heater has a thermal efficiency that complies with the Appliance Efficiency Regulations.

02 A readily accessible on-off switch is mounted on the outside of the heater, which allows the heater to be shut off without the user adjusting the thermostat setting.

03 A weatherproof plate or card containing instructions for the energy-efficient operation of the pool or spa heater is permanently mounted.

04 No electric resistance heating except for listed package units that have fully insulated enclosures and tight fitting covers that are insulated to at least R-6. Or if documentation is provided that at least 60% of the annual heating energy is from site solar energy or recovered energy.

05 Heating system has no pilot light.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

**C. Pool and Spa System Installation Requirements (Section 110.4(b))**

01 To allow for the future addition of solar heating equipment, at least 36" of pipe is installed between the filter and heater, or dedicated suction and return lines are installed, or built-in, or built-up, connections for future solar heating are provided.

02 A cover is provided for outdoor pools or spas that have a heat pump or gas heater.

03 Pool system has directional inlets to adequately mix the pool water.

04 Pool system has a time switch that allows the pump to be set or programmed to run during off-peak periods only.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

**POOL AND SPA HEATING SYSTEMS**  
CEC-CF2R-PLB-03-E (Revised 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF INSTALLATION  
Pool And Spa Heating Systems - For Non-HERS Registered Projects  
CF2R-PLB-03-E (Page 3 of 3)

Project Name: PEARL ZALON Enforcement Agency: SB COUNTY Permit Number:  
Dwelling Address: 3424 MARINA DRIVE City: SANTA BARBARA Zip Code: 93110

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Installation documentation is accurate and complete.

Documentation Author Name: David Heuer Documentation Author Signature: David Heuer  
Documentation Author Company Name: Dakari Pools, Inc. Date Signed: 3/16/2022  
Address: 776 W Hwy 246 City/State/Zip: Buellton, CA 93427 Phone: 805.886.9454

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Installation is true and correct.
2. I am either: a) a responsible person eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement, or b) I am an authorized representative of the responsible person and attest to the declarations in this statement on the responsible person's behalf.
3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations and the installation conforms to the requirements given on the Certificate of Compliance, plans, and specifications approved by the enforcement agency.
4. I will ensure that a registered copy of this Certificate of Installation shall be posted or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name: David Heuer Responsible Builder/Installer Signature: David Heuer  
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) Dakari Pools, Inc. Position With Company (Title): President  
Address: 776 W Hwy 246 City/State/Zip: Buellton, CA 93427 CSLB License: 840618 Phone: 805.886.9454 Date Signed: 3/16/2022

**POOL AND SPA HEATING SYSTEMS**  
CEC-CF2R-PLB-03-E (Revised 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF INSTALLATION  
Pool And Spa Heating Systems - For Non-HERS Registered Projects  
CF2R-PLB-03-E (Page 2 of 3)

Project Name: PEARL ZALON Enforcement Agency: SB COUNTY Permit Number:  
Dwelling Address: 3424 MARINA DRIVE City: SANTA BARBARA Zip Code: 93110

**D. Pool Pump Sizing and Flow Rate Specification (Section 150.0(p))**

01 The pool pump specified is listed in the CEC database of certified pool pumps.

02 The pool pump flow rate shall not exceed the maximum pump flow rate calculated based on pool sizing in the table below. The return pipe diameter, suction pipe diameter, and filter area shall be at least as large as the required minimums shown in the table.

03 Alternatively, a flow calculation or flow test result shall be provided to demonstrate that the pump flow rate is less than 6 hour filtration turnover, and the return pipe flow rate does not exceed 8 fps and that the suction pipe flow rate does not exceed 6 fps.

04 An alternative compliance calculation or a flow test result is provided for this pool or spa use (must attach flow calculation or flow test result to this form) Yes  No

05 The pump is capable of operating at 2 or more speeds (not applicable if pump is less than 1 horsepower)

06 Each auxiliary pool load is served by either a separate pump, or the system is served by a multi-speed pump.

07 Volume of Pool (gallons) Gallons 15,300

07 Filter Type (Cartridge, Sand, DE)

08a	08b	08c	08d
Required Min Return Pipe Diameter (inches)	Required Min Suction Pipe Diameter (inches)	Required Min Filter Area (ft <sup>2</sup> )	Required Max Pump Flow (gpm)
1 1/2"	2"		

09 Return Pipe Diameter (inches) 2.5 inches

10 Suction Pipe Diameter (inches) 2.5 inches

11 Filter Surface Area (ft<sup>2</sup>) 130 SF

12 Max Pump Flow Rate (gpm) 125 gpm

13 Measured Flow Rate Return Line (fps) 6-8 gallons

14 Measured Flow Rate Suction Line (fps) 6-8 gallons

15 Compliance Statement: N/A

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

**E. Pool System Piping (Section 150.0(p)2)**

01 The suction side pipe is straight for at least 4 pipe diameters before entering the pump (See table below for the required straight run lengths for various pipe sizes).

02 All elbows are sweep elbows, or an elbow type that has a pressure drop that is less than the pressure drop of a straight pipe with a length of 30 pipe diameters.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

**F. Pool Filters and Valves (Section 150.0(p)3 and 4)**

01 If a filter is used in a pool intended for public use, the size of the filter is at least the size specified in NSF/ANSI 50.

02 If a backwash valve is used: The diameter of the backwash valve is at least 2 inches, or the diameter of the return pipe, whichever is greater.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

CERTIFICATE OF INSTALLATION - USER INSTRUCTIONS  
Pool And Spa Heating Systems - For Non-HERS Projects  
CF2R-PLB-03-E (Page 1 of 1)

**Table C**  
Pool sizing (Values are based on a maximum allowable turnover rate of 6- hours)  
Note: For pumps greater than 1 hp. The maximum Pump Flow is the lowest speed default filtration

Max Pool Volume (gallons)	Min Pipe D or Greater (inches)		Min Filter Area or more (square feet)			Max Pump Flow (gpm)
	Return	Suction	Cartridge	Sand	DE	
13,000	1.5	1.5	100	2.4	20	36
17,000	1.5	2	130	3.1	25	47
21,000	2	2	160	3.9	30	58
28,000	2	2.5	210	5.2	40	78
42,000	2.5	3	320	7.8	60	117
48,000	3	3	360	8.9	70	133

**Table D**  
Pipe Diameter/Pipe Length

Pipe Diameter (inch)	Required Pipe Length leading into pump (inch)
1.5	6
2	8
2.5	10
3	12

*David Heuer*  
DAKARI POOLS, INC

## POOL PLAN

**PEARL ZALON  
3424 MARINA DRIVE  
SANTA BARBARA, CA 93110**

**DAKARI POOLS, INC.**  
776 W HWY 246, BUELLTON, CA 93427  
CELL: 805.886.9454  
PLANS TO BE ON JOB SITE AT ALL TIMES



NO	REVISIONS	DATE
1	SEE REVISION CORRECTIONS	6/8/22

# A4.0