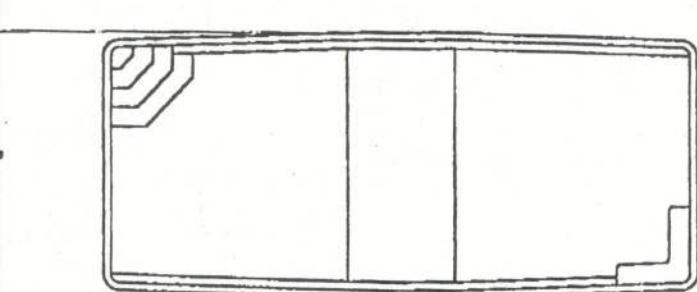
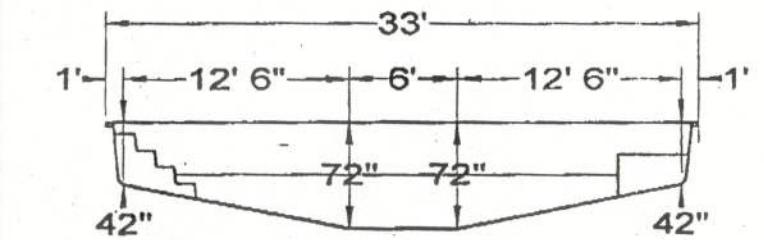


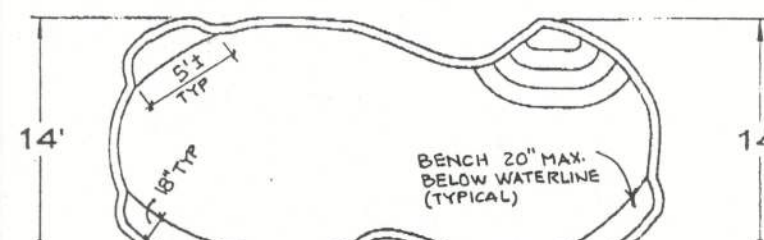
GULF COAST



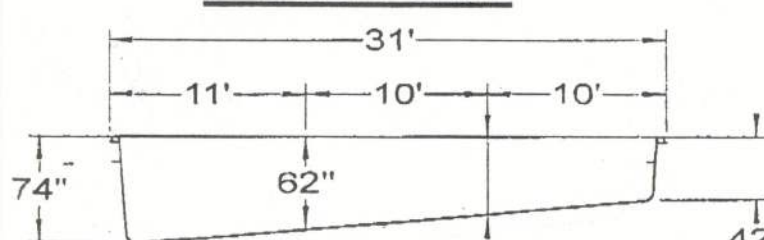
CARIBBEAN



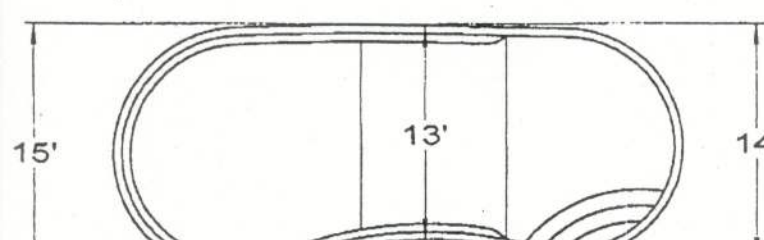
ROCKPORT



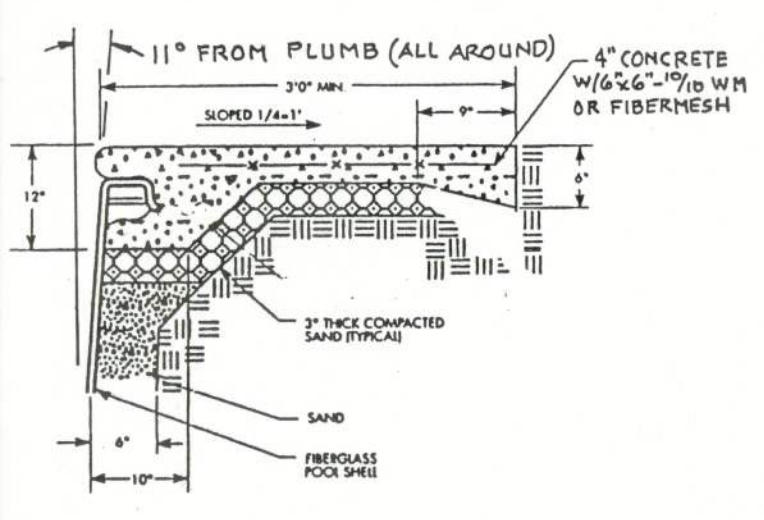
SANTA BARBARA



SEA BREEZE II



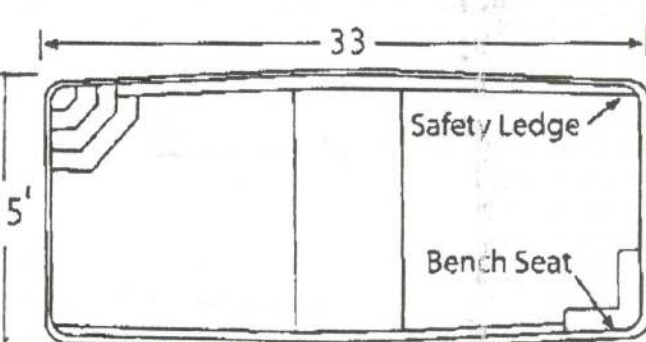
FREEPORT



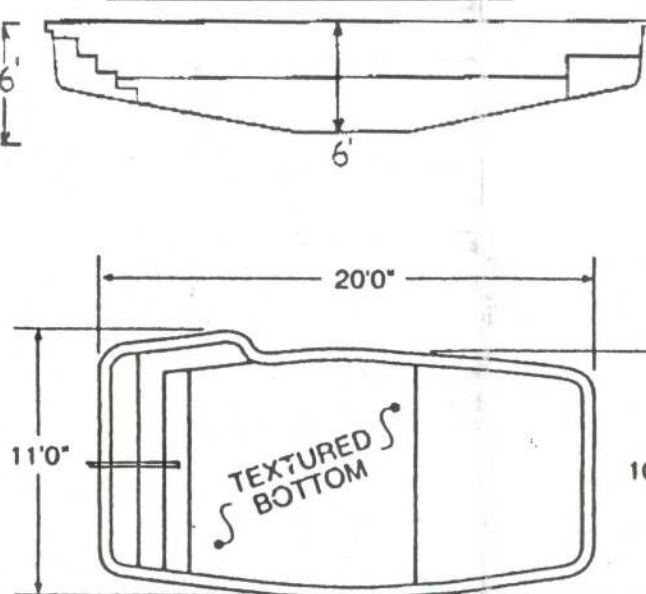
TYP. CANTILEVER CONC. DECK SECTION



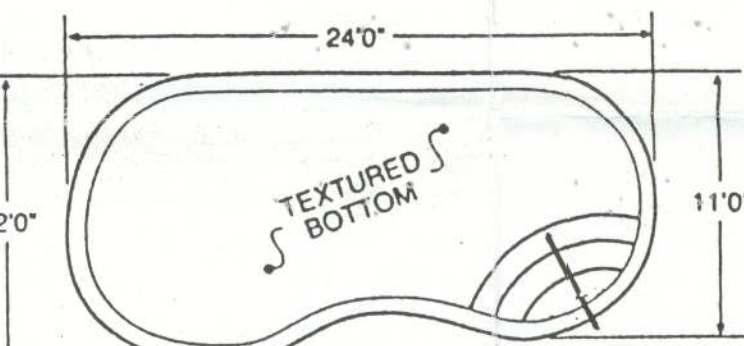
THE ORLANDO



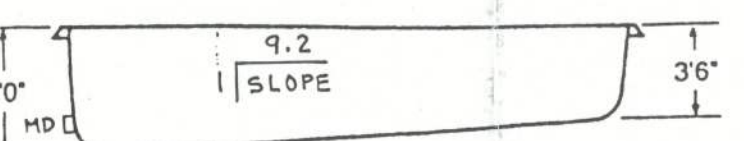
THE ATLANTIC



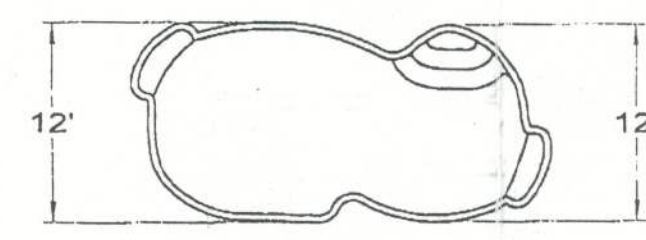
CLEARWATER



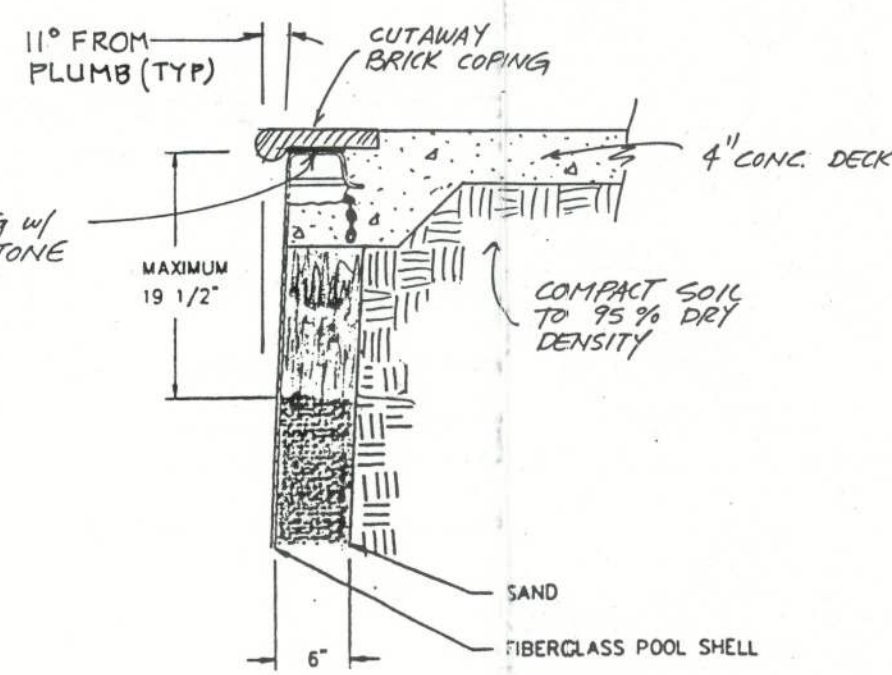
SUN COAST



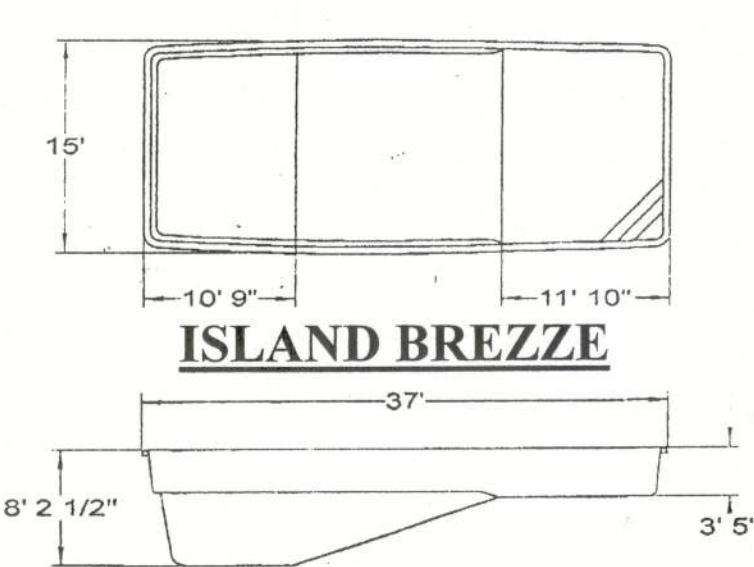
KEY WEST



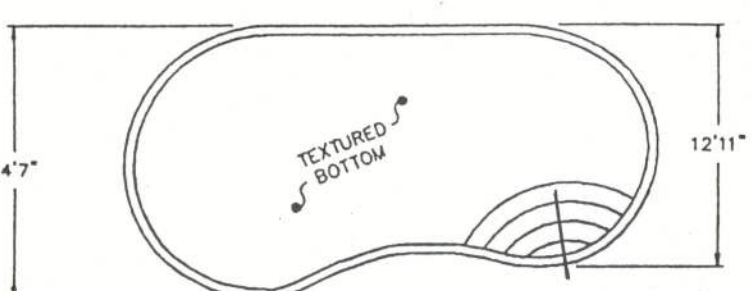
BAHAMAS



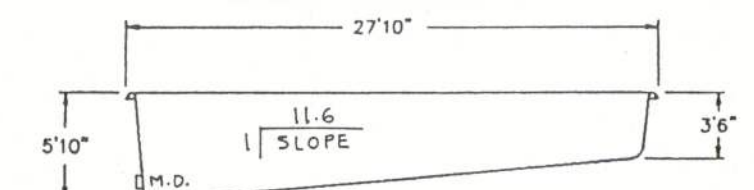
TYP. BRICK COPING DETAIL



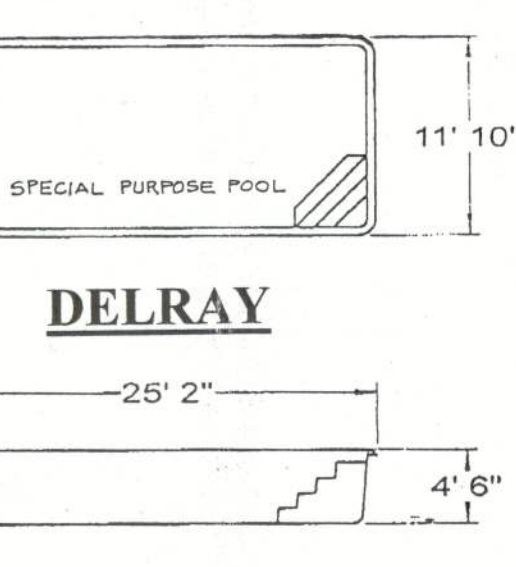
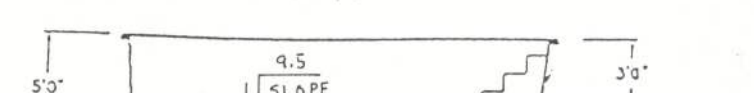
ISLAND BREEZE



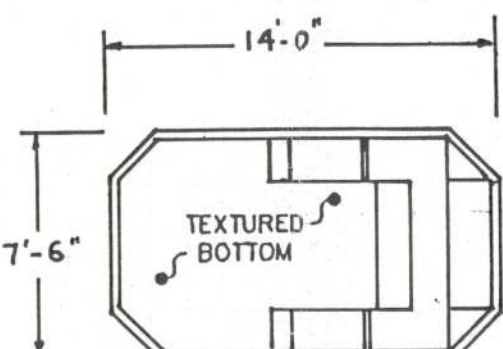
MONTEREY



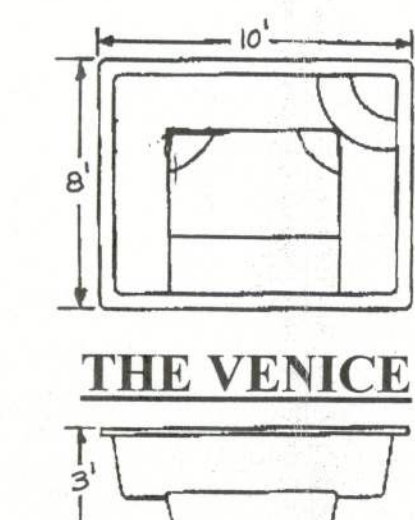
CAPE CORAL



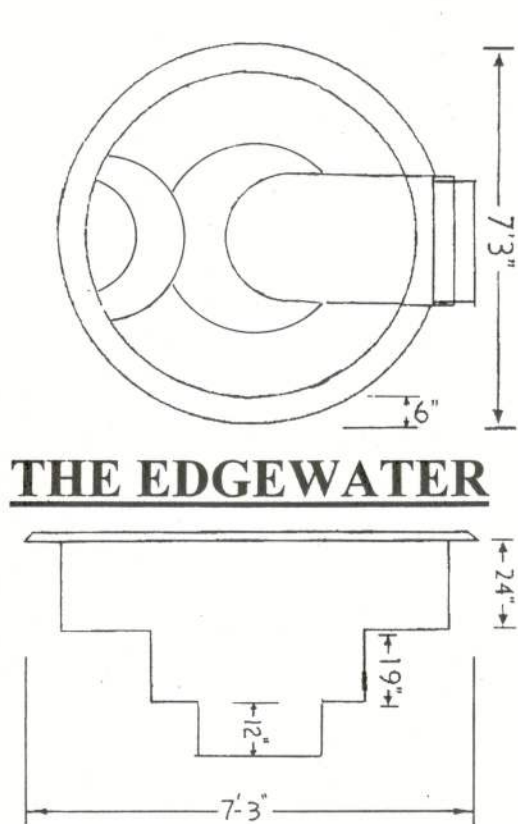
DELRAY



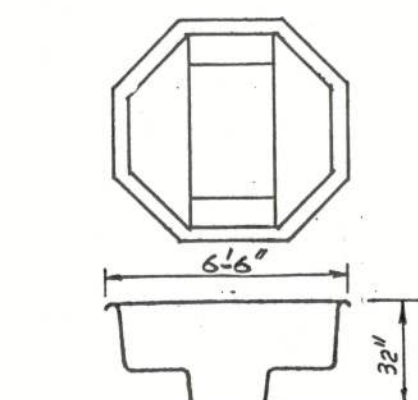
DAYTONA



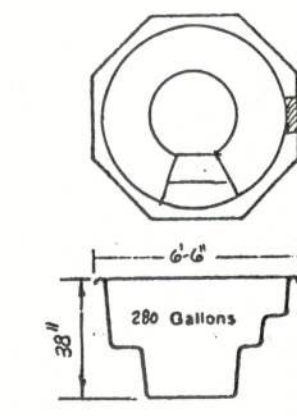
THE VENICE



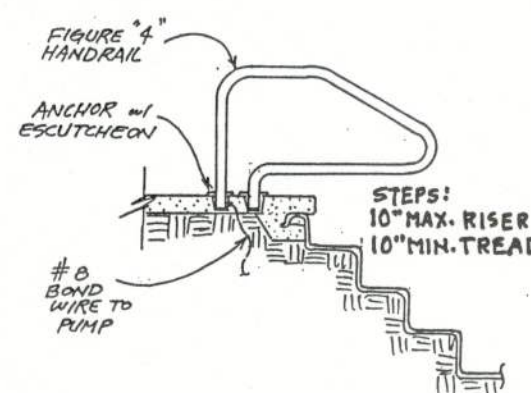
THE EDGEWATER



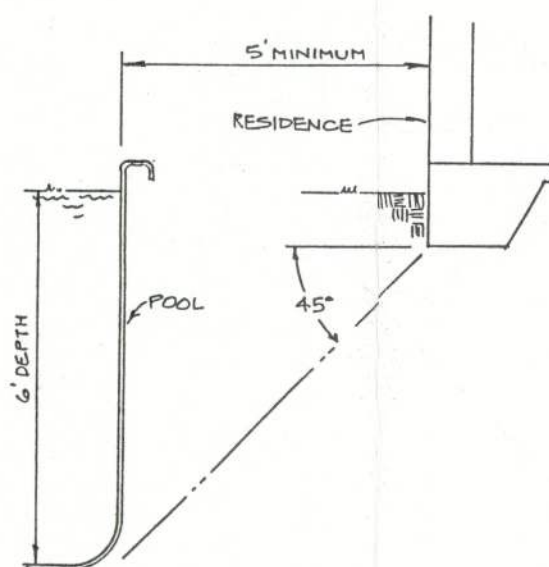
CYPRESS



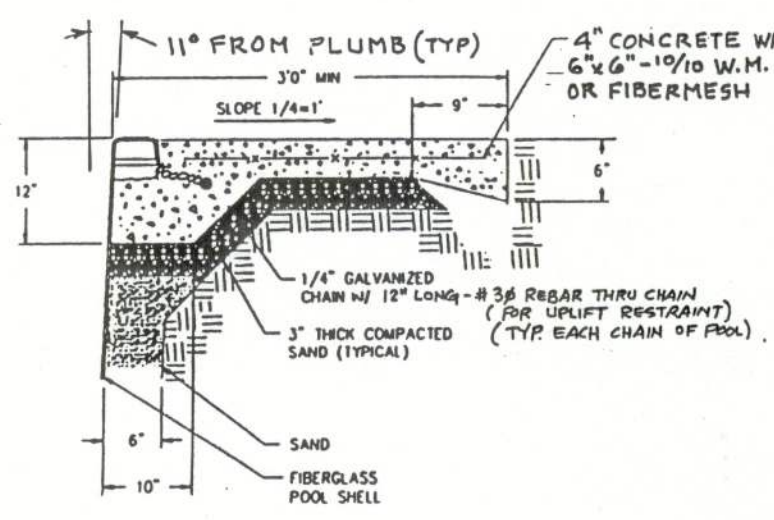
MYSTIC



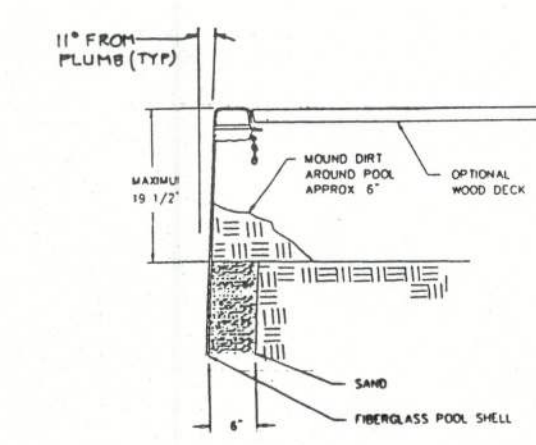
HANDRAIL DETAIL



ANGLE OF REPOSE DETAIL



TYP. CONCRETE DECK SECTION



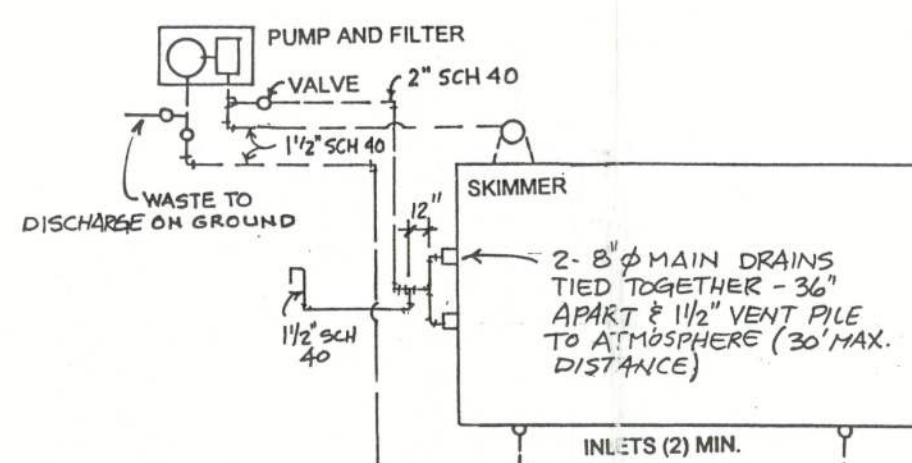
TYP. ABOVE GROUND SECTION

NOTES

1. PROVIDE MAIN DRAIN W/ANTI-VORTEX COVER
2. PROVIDE SKIMMER
3. AS A SAFETY PRECAUTION, VALVE MAIN DRAIN ONLY
4. PROVIDE AIR RELIEF VALVE AND PRESSURE GAUGE AT FILTER
5. ELECTRICAL CONNECTIONS AND BONDING SHALL BE IN ACCORDANCE WITH N.E.C. 680 CURRENT EDITION
6. SLOPE DECK AT 1/4" PER FOOT AWAY FROM POOL
7. FENCES, BARRIERS AND OTHER SAFETY REQUIREMENTS TO BE AS REQUIRED BY FLORIDA BUILDING CODE
8. ALL POOLS ARE NON DIVING
9. THIS DRAWING TO BE USED IN CONJUNCTION WITH VIKING POOLS SPECIFICATIONS AND INSTALLATION REQUIREMENTS
10. REGARDING POOL GEOMETRY AND DIMENSIONS, THE ENGINEER SHALL NOT BE RESPONSIBLE FOR MANUFACTURING VARIANCE NOR THE INSTALLATION ON A SPECIFIC SITE WITHOUT KNOWLEDGE AND INVESTIGATION BY THE ENGINEER.
11. A SITE PLAN SHALL ACCOMPANY THIS DRAWING AND SHALL SPECIFY SETBACKS, BARRIER TYPE AND DECK SPECIFICATIONS INCLUDING DRAINAGE
12. ALL POOLS ARE TYPE "O" FLOOR SLOPES ARE CONSTANT (NO SLOPE BREAK EXCEPT AS SHOWN)
13. STEPS TO HAVE 10" MIN. TREAD, 12" MAX. RISER
14. HANDRAIL REQUIRED FOR ALL POOLS
15. POOLS ARE IN COMPLIANCE WITH FLORIDA BUILDING CODE SEC. 424.2
16. PLAN DIMENSIONS ARE TO OUTSIDE EDGE OF POOL COPING. COPING WIDTH IS 6" TYPICAL. WATERLINE DIMENSIONS ARE, THEREFORE, 12" LESS THAN PLAN DIMENSIONS.

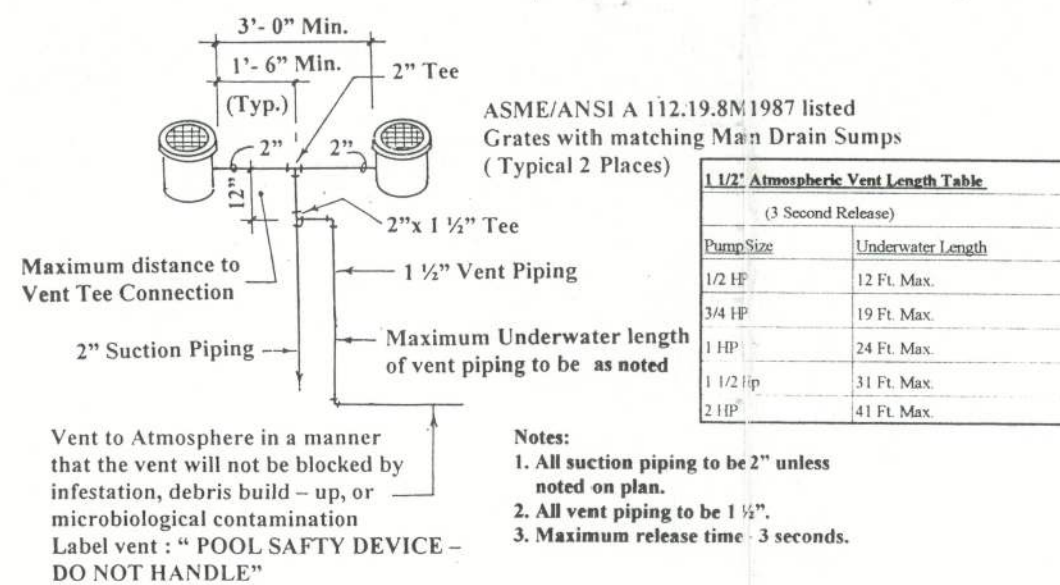
MAIN DRAIN LOCATIONS

ALL MAIN DRAINS ARE TO BE LOCATED AT THE DEEPEST POINT OF THE POOL.



PLUMBING SCHEMATIC

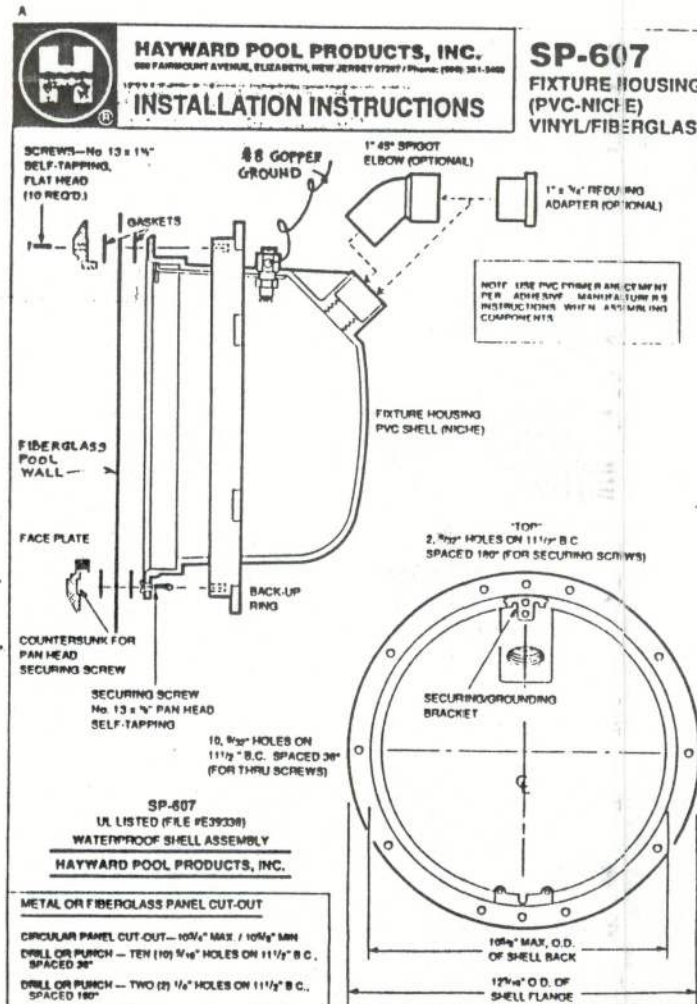
N.T.S.



APPROVED SWIMMING POOL, SPA AND WADING POOL DUEL MAIN DRAIN ATMOSPHERIC VENT ARRANGEMENT FOR COMPLIANCE WITH 424.2.6.6 OF THE FLORIDA BUILDING CODE.

ATMOSPHERIC VENTING DETAIL

N.T.S.



LIGHT DETAIL

N.T.S.

ENGINEERING REPORT ON THE VIKING FIBERGLASS POOL

September 18, 1995

This report deals primarily with the strength and characteristics of the fiberglass polyester material used in the construction of the Viking Pools. These pools are manufactured by the Firm VIKING POOLS S.E., INC., OAK HILL, FLORIDA. The ability of the pool structure to carry the loads imposed on it (which are primarily static loads, due to water pressure, ground settling, and dynamic loads due to earthquakes) depends on the strength and energy absorption qualities of the fiberglass reinforced plastic material composed of isophthalic resin, vinyl ester resin, fiberglass, and ceramic. To ascertain the mechanical behavior of the above material, tensile and flexure specimens were made from materials removed from the walls of existing pools. All of these specimens were tested at Columbia Research and Testing, Heidelberg, California. The tests were conducted in accordance with ASTM D-638-91 for "Tensile Properties of Plastics" and ASTM D-790-92 for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials. From the load tests in tension and flexure, the following mechanical properties were evaluated:

- (1) Tensile Strength.
- (2) Flexural Strength.

The average value of these properties appear as follows:

Tensile Strength (lb/in.²): 41,976

Flexural Strength (lb/in.²): 13,308

The fiber reinforced plastic is strong, tough and resilient material. Compared to gunite, this material is stronger under tensile and flexural loadings. In conclusion, the Viking Pool, when properly installed in compacted ground against a compacted sand cushion (compacted by wetting) can safely carry the loads due to water pressure and ground movement.

INSTALLATION

The swimming pools consists of one-piece fiberglass construction shop-formed over a mold. The material is fiberglass reinforced plastic, 1/4 inch thick, composed of isophthalic resin, vinyl ester resin, fiberglass and ceramic. The surface finish is a gel coat. Viking Pools, Inc. produces various styles of swimming pools and spas, the overall pool dimensions, depths and capacities are shown in Table 1.

The fiberglass has an average tensile strength of 13,308 psi, and an average flexural strength of 41,976 psi. The upper portion of the pools and spas is constrained by a concrete bond beam.

Some pools and all spas can be placed nineteen-and-one-half (19 1/2) inches above ground. Vertical supports consisting of 1 inch by 1 1/2 inches wood member integrated in the fiberglass reinforced plastic application process at four feet six inch (4'6") intervals are required. The spas do not require the vertical supports. These pools and spas do not require concrete or wood decking. Fig. 2.

All plumbing and electrical work must comply with the code currently in effect at the construction site. The pool or spa excavation is to be performed to permit excavation profile to coincide to the contours of the pool. The overexcavation is approximately 6 inches on the sides and 12 inches on the ends. At the deep end, the width of the pool is over excavated from 8 to 24 inches in order that the first portion of the backfill may be manually adjusted for the initial 12 inches of backfill. The overexcavation of the bottom of the pool varies from approximately 3 to 6 inches, depending on soil type. The backfill for the bottom of the pool or spa is accomplished by spreading a layer of bedding sand. Compaction of the sand layer is by means of manual tamper and water.

SETTING OF THE POOL

The pool is delivered to the pool site. A hydraulic crane is present to pick up the pool and lower it carefully into the excavation. Mini pools and spas are usually manhandled into place.

LEVELLING THE POOL

The qualified pool installers then check the level of the pool and its fit with the excavation by walking around on the inside of the pool feeling for any voids that might be present.

The pool is then filled out of the excavation and set back as many times as necessary to achieve a perfect fit. The perfect fit is realized by using the following technique, namely, raising the surface of the sand in order to see where the pool is touching after it is removed and also walking around on the inside of the pool to detect low spots. When the level of the pool is within one-half inch, the setting procedure is complete.

The filling of the pool with water and simultaneous sand backfill operations are then commenced. The sand is compacted with a tamper and water. Care should be exercised to insure that the backfill level and water level are approximately the same throughout this procedure.

This pool is designed to be kept full at all times. The pool shell could be damaged if the water level is allowed to drop below the pool shell. When appreciable draw-down is noticed, or if it becomes necessary to drain the pool, contact VIKING POOLS, INC., or their agents for instructions.

WHEN CONCRETE DECKS ARE POURED

Forms are now put up around the perimeter of the pool. Small smalls measuring 12" wide and 6" deep are dug under each chain along the sides of the pool. This will ensure a bonding or anchoring effect on the sides. Rebar or wire mesh shall be used in the event of adobe soil. Concrete is then poured coming up to approximately 1/4" of the top of the coping with a slight fall away from the pool. See Fig. 1. Cantilever deck may also be used.

POOL NAME	SIZE	GALLONS	FEET	DEPTH
BAHAMAS	8'6" X 14'0"	2,000	41	4'0"
CAPE CORAL	10'0" X 20'	3,750	48	3'0"-5'0"
CARIBBEAN	15'0" X 33'	15,000	82	3'-6"
CLEARWATER	11'0" X 20'	4,000	57	3'0"-5'0"
CYPRESS	6'6" OCTAGON	420	20	32"
DAYTONA	7'6" X 14'	1,200	37	3'-5"
DELRAY	11'10" X 25'2"	8,500	74	4'-5"
FREEPORT	12' X 25'	8,000	65	6'-5"-5'-5"
GULF COAST	16' X 40'	28,000	110	3'-6"-7'-11"
ISLAND BREEZE	12'0" X 37'0"	24,000	104	3'-42"-8'-175"
KEY WEST	12'0" X 25'0"	9,000	65	3'-5"-6'0"
MONTEREY	14'0" X 28'	10,000	69	3'-5"-8'-3"
MYSTIC	6'6" ROUND	280	19	38"
ROCKPORT	14'0" X 31'	12,000	78	3'-5"-6'0"
SANTA BARBARA	14'0" X 30'	12,500	75	3'-5"-6'0"
SEA BREEZE II	15' X 34'	15,500	83	3'-5"-6'0"
SUN COAST	12'0" X 24'	6,000	60	3'-5"-5'0"
THE ATLANTIC	15' X 33'	16,500	95	3'-6"
THE EDGEWATER	7'3" ROUND	650	22	42"
THE ORLANDO	14' X 30'	15,000	88	3'-6"-6"
THE VENICE	8' X 10'	1,350	36	3'-3'3"



Viking Pools Southeast, Inc.
155 Valencia Drive, Oak Hill, Florida 32759
888-407-6657 * 904-345-3500 * fax 904-345-4600

CURTIS - SINCLAIR, INC.
8259 N. MILITARY TRAIL, SUITE 3
PALM BEACH GARDENS, FL 33418
PH. 561-630-8534 FAX 561-630-4570
C.O.A. No. 5725

DATE:

J.N.



STEPHEN M. SINCLAIR, P.E.
FLORIDA LICENSE NO. 35631

JUN 08 2005