



CSL# 626207

At ePoolsCAPES.com we have been building swimming pools for more that 40-years. We have prepared the information below for our prospective Customers, so that they might be able to apply our acquired understanding for how to buy the best product possible...

We have produced this information in an effort to make you the beneficiary of something that you can truly compare, not just a price...but, to compare real measurable value for the things that should be part of the price!

By simply "[clicking](#)" on the light blue colored bold wording that is exhibited throughout this document below, you will become more informed about how to compare the value in a pool price...

ePoolsCAPES.com Swimming Pool Specifications:

1. The Contractor will provide and install separate SCH 40 PVC 1.50" plumbing runs from the [Surface Skimmer](#) (s) Devices to the Pool Equipment Pad for each Skimmer device. (Click [Here](#) to view an example of bad practices)

- (Per Skimmer Detail P-1a / Equipment Pad Layout for Valve / Actuator Configurations)

2. The Skimmer's 2nd outlet ([equalizer Line](#)) located at the bottom of the Skimmer will be run to a 1.50" Tee connection, which will be split and continue as two (2) 1.50" lines that pass through the pool's vertical wall (placement to be a minimum 18" below static water level, and having a separation of a minimum distance of 3'-0". These pipes will then have the appropriate VGBA approved covers per flow characteristics and placement conformity, to be placed over them at time of Pool Plastering, matching the selected plastering color.

- (Click [Here](#) to view proper installation practices)

3. The Contractor will provide and install separate SCH 40 PVC 2.00" plumbing run (s) from the Main Drain (s) Devices to the Pool Equipment Pad for each of the Main Drain devices.

- (See Equipment Pad Layout for Valve / Actuator Configurations)

4. The Main Drain Devices will be [split](#) and continue as two (2) 1.50" lines that pass through the pool's horizontal bottom shell and having a separation of a [minimum distance of 3'-0"](#). These pipes will then have the appropriate [VGBA approved covers](#) per flow characteristics and placement conformity, to be placed over them at time of Pool Plastering, matching the selected plastering color.

- (Per Main Drain Detail P-1b)

5. The Contractor will insure and authenticate that during the County / City Inspection that all Filtration System Plumbing will meet or exceed the standards called for according to 2013 Title 24 Energy Efficiency Guidelines. This will include but, not be limited to;

- **Use of Certified Sweep Elbow (≤ 3.7 HF /HHL)**
- **Maximum Piping Velocity (6-FPS Suction / 8-FPS Return)**
- **6-Hour Turnover Rate**
- **Over Peak Use Programming**

6. The Contractor will provide and install an isolated 2.50" SCH 40 PVC **Hot Water Floor Return Pipe** that will be interconnected to all Main Drains, in a looped manifold configuration. The piping conformity will be installed in a manner that will provide even distribution of heated water to the bottom of the pool / spa by exiting the Heater's pad location at the Pool Equipment Pad, then running through the 2.50" Hot Water Floor Return Pipe that will return to the pool and distribute the heated water to the bottom Main Drains via the interconnecting **Header Manifold Pipe**. This mode of operation will be controlled by **3-Way / 2-Way Valve** operation via the placement of programmed **24v Valve Actuators**, which will be connected to a fully automated / programmable controller. The Contractor will be responsible for programming the Automation System to facilitate this function as "Pool / Heat Mode" attaching the commands to the appropriate valve (s) operational functions. Additionally, both air and water temperature sensors will be provided and installed, interfacing with the Automation System and Operational Control Devices functionality.

- **(Per Pool Equipment Pad Detail P-3 pp)**

7. The Contractor will provide and install all the necessary Pool Equipment in workmen like manner, meeting or exceeding the NSP Swimming Pool Standards inclusive but, not limited to all UBC, CBC, NEC, 2013 Title 24 Energy Efficiency Standards and Local Building Codes. The Equipment will be plumbed per the Rough Plumbing **Suction** and **Return** piping conformities / **Electrical Schematic** and will conform to the Pad's Concrete base, having Pad Layout dimensions that correspond to 6'-0" x 8'-0". The Sub-Panel's location will be adjacent to the Pad and the will be installation in accordance with all NEC Standards for clearance and height requirements i.e., 36" Front, 36" Side & 36" Bottom of cabinet.

- **(Per Pool Equipment Pad Detail P-3 pp)**

8. For estimating purposes the Contractor will provide and install all steel reinforcement according to Neil Anderson & Associates (NAA) **Swimming Pool Structural Engineering Schedule** (Expansive Schedule). Upon award of Contract to perform the Contractor will make inclusive submission of 3-Sets of PERMIT READY PLAN, DRAWINGS & SPECIFICATIONS for the Construction of the pool to Neil Anderson's Sacramento Office for review. The Contractor will gain approval from NAA for the planned swimming pool construction directions, inclusive of utilizing, exclusively 3-Ea. #4 (1/2") 40-Grade continuous rebar on all **Bond Beam** applications. **#3 will not be accepted in any case**, regardless. Upon conclusion of the excavation of the pool / spa, and before progressing with the steel reinforcement erection the Contractor will request a site visit by representatives of NAA to conduct geotechnical observations in order to insure that the planned directions are in accordance with the prescribed assumptions that have been called out on the Structural Engineering Steel Schedule. The Contractor will include (1) one site visit fee in his estimate for the Engineer's services but, any new provisions directed by the Engineer that go beyond the prescribed steel placements and or deviations, modifications to the excavation will be considered Additional Work.

- **(Per Neil Anderson & Associates, Expansive Schedule)**

9. The Contractor will provide and install all [Auto-fill Devices](#) together with a 1.00" SCH 40 PVC water supply line, outfitted with a shut-off valve. The Auto-fill Device's water supply will be connect to an approved [Backflow Prevention Unit](#) (PVB or DCRP) and **Anti-Siphon Valve will not be acceptable**. The ½" Overflow line is to be connected to the yard drainage but, this will be in addition to the 3.00" Overflow Line.

10. The Contractor will provide and install all [Overflow Devices](#) and these will have a 3.00" overflow drain pipe that will be installed in the throat of the Surface Skimmer and then ran to the yard drainage system, in accordance with the plans and specifications provide herein.

11. The Contractor will provide and install all Lighting and these components will have the necessary conduits installed Per NEC requirements, MFG.'s recommendations and plans and specifications provide herein.

- [\(Per Pool Lighting Detail P-4 pp\)](#)
- [\(Per Pool Lighting Detail P-5 pp\)](#)

12.) The Contractor will install an [Equipotential Bonding Grid](#) Per the NEC requirements for Swimming Pool Bonding for all pool decking and all accessories in proximity to the swimming pool / spa.

13.) The Contractor, when responsible for the installation of the pool concrete decking, as part of the Work Scope, will also be responsible for concrete drainage devices, as necessary to direct run-off water. In cases where such devices are deployed they will follow the Poured In-Place Standards stated herein;

- [Poured In-Place Skimmer and Catch Basin Lids](#)

In no case will "Channel Drains" be allowed as an acceptable standard but, in lieu of these devices an [Invisible Style Drain](#) will be utilized when such application becomes necessary.

14.) The Contractor will install in accordance with all UBC, CBC and Local Building Codes, the necessary gas piping for Pool / Spa Heaters and any Fire Pits, BBQ Cook Centers and Space Heater accessories, when depicted as part of the Work Scope Per the equipment Mfg.'s recommendations. This is to include the responsibility for testing that an adequate supply is prevalent and making calculations for providing a minimum continuous gas pressure of (9" W.C.) at the accumulative BTU consumptive gas volume demand, prior to installing any gas piping. If it becomes known during the testing that the gas supply isn't adequate to facilitate the intended usages, the Contractor will notify the Owner of the deficiencies and provide a solution for supplying gas or deducting the values for the elements that involved inclusion.

Additionally, the Pool / Spa heater gas pipe connection will include a [Drip Leg](#) Per the Mfg's Installation Detail. Together will all [Gas Piping Venting](#) being installed as depicted in these specifications and per all local plumbing codes.

15.) The Contractor will install all electrical conduits and wiring (**copper conductor only**) as not to exceed the NEC maximum density for conduit / conductor installation values, per conduit size. Additionally, the Contractor will not exceed more than (3) three 90° sweep elbows per run and provide a 240v GFCI rated Main Breaker that feeds the Pool Equipment's Sub-Panel.

The Contractor will perform Electrical Load Calculations for the Electrical Home Run that will be installed between the Main Electrical Meter and the Pool Equipment's Sub-Panel and the conductor size selected will be a WTHHN rated copper conductor, sized not to exceed an AVL of 3.00% over the run's distance and at the 100% full load capacity for the Sub-Panel's Busbar ampere rating. In all cases where the Work Scope calls for secondary 120v or 240v power distribution running out of the Sub-Panel, each individual circuit will be provided an individual GFCI Circuit Breaker, that is correctly sized for the circuited load.

ePoolscapes.com Specifications

POOL DIMENSIONAL SPECIFICS:

- SIZE: _____ x _____ SF: _____ PERIMETER FEET: _____
- SHALLOW DEPTH: _____ **DEEP DEPTH:** _____
- VOLUME (GALS.):** _____ TURNOVER RATE: _____ GPM @ 6HRS.
- SKIMMER** QTY: _____ -EA SIZE: _____" **MAIN DRAIN** QTY: _____ -EA SIZE: _____" DUAL SPLIT
- RETURN** QTY: _____ -EA SIZE: _____" WATER FEATURE: _____ QTY _____ -EA
- SUCTION:** _____ GPM @ 5 fps RETURN: _____ GPM @ 5 fps
- HOT WATER FLOOR RETURN QTY:** _____ -EA SIZE _____" (OPTION)

SPA DIMENSIONAL SPECIFICS:

- SIZE: _____ x _____ SF: _____ PERIMETER FEET: _____ **JET QTY:** _____ -EA
- SHALLOW DEPTH: _____ **DEEP DEPTH:** _____
- VOLUME (GALS.):** _____ TURNOVER RATE: _____ GPM @ 6HRS.
- SKIMMER** QTY: _____ -EA SIZE: _____" **MAIN DRAIN** QTY: _____ -EA SIZE: _____" DUAL SPLIT
- RETURN** QTY: _____ -EA SIZE: _____" WATER FEATURE: _____ QTY _____ -EA
- SUCTION:** _____ GPM @ 5 fps RETURN: _____ GPM @ 5 fps
- HOT WATER FLOOR RETURN QTY:** _____ -EA SIZE _____" (OPTION)

POOL CONCRETE SPECIFICS:

- CONCRETE FINISH:** BROOM SALT EXPOSED STAIN STAMP **PATTERN**
- CONCRETE FLAT-WORK: SF: _____ COLOR: _____ **IN-LOAD** **DUST-ON** **DUST-ON**
- LOAD DESIGN MIX:** _____ -SACK _____ -PSI ROCK: 50/50 PEA GRAVEL
- CONCRETE **STAIR RISERS** FINISH: BROOM SALT STAMP EXPOSED STAIN
- CONCRETE STAIR RISERS: TREADS _____" RISERS NOSE RADIUS: _____" _____ LF
- POOL COPING: **CANTILEVER FORM:** LF: _____ STYLE: **A** **B** **C** **D** **E** **F** **G** **H** **I** **J** **K** **L**
- SPA COPING: **CANTILEVER FORM:** LF: _____ STYLE: **A** **B** **C** **D** **E** **F** **G** **H** **I** **J** **K** **L**
- OTHER SPECIALITY FORMS: _____ LF: _____

SUB-GRADE PREP:

- 4" AB ROAD BASE IMPORT: _____ SF: _____
- VIBRATORY PLATE COMPACTION: _____ SF: _____
- FIBERMESH ADDITIVE: YES NO
- STEEL REINFORCEMENT:** # _____ SIZE: _____ SPACING: _____
- EQUIPOTENTIAL BONDING:** _____ x _____ SF: _____

POOL SHELL APPLICATIONS:

- RAISED BOND BEAM** #1: _____ HT: _____ LF: _____
- RAISED BOND BEAM** #2: _____ HT: _____ LF: _____
- RAISED BOND BEAM** #3: _____ HT: _____ LF: _____
- WATER LINE TILE: GROUP #1 STANDARD SIZE: _____" X _____" LF: _____
- STEP TILE: GROUP #1 STANDARD** SIZE: _____" x _____" LF: _____
- SEAT TILE: GROUP #1 STANDARD SIZE: _____" x _____" LF: _____
- SPILLWAY TILE: _____ SIZE: _____" X _____" SF: _____
- PLASTERING COLOR:** WHITE TAHOE BLUE -LHT -MED -DRK
- PEBBLE FINISH: GRANITE MARBLE QUARTZ
- SPECIALITY WATER FEATURES:** _____

ePoolscapes.com Specifications

EQUIPMENT LISTING:

- EQUIPMENT PAD: _____ x _____
- FILTER PUMP:** MFG. PENTAIR MODEL# _____ HP. _____ QTY: _____ -EA VARIABLE SPEED
- FILTER TYPE:** CARTRIDGE: **SAND** DE SIZE: _____ SF / MODEL # _____ GPM FR: _____
- AUX. #1 PUMP:** _____ QTY: _____ HP: _____ GPM: _____ HF: _____
- AUX. #2 PUMP: _____ QTY: _____ HP: _____ GPM: _____ HF: _____
- AUX. #3 PUMP: _____ QTY: _____ HP: _____ GPM: _____ HF: _____
- SPA AIR BLOWER** _____ HP: _____ QTY: _____
- HEATER: MFG. PENTAIR** MODEL#: _____ BTU RATING: _____
- CHLORINATOR FEEDER:** MFG. PENTAIR MODEL#: _____ QTY: _____
- CHLORINE GENERATOR: MFG. PENTAIR MODEL#: _____ QTY: _____
- OZONE GENERATOR: _____ QTY: _____
- POOL CLEANER:** Pentair PN# GW7900 QTY: _____
- CLEANING KIT:** RAINBOW #5500 w/ 8' POLE
- SHEER DESCENTS #1:** QTY: _____ SIZE: _____
- SHEER DESCENTS #2: QTY: _____ SIZE: _____
- SHEER DESCENTS #3: QTY: _____ SIZE: _____

LIGHTING SYSTEM:

- TIME CLOCKS:** 230/ 115v QTY: _____ PUMP (S)
- TIME CLOCKS: 230/ 115v QTY: _____ LIGHT (S)
- POOL LIGHTING: **IntelliBrite®**: QTY _____ **GloBrite®**: QTY: _____
- SPA LIGHTING: IntelliBrite®: QTY _____ GloBrite® QTY: _____
- WATER FEATURE LIGHTING: IntelliBrite®: QTY _____ GloBrite®: QTY: _____
- IN-DECK LED LIGHTING: **DEKOR** QTY: _____

AUTOMATION CONTROL SYSTEM:

- SunTouch** **EasyTouch** # _____ Indoor Wireless **Functions** _____
- IntelliTouch** i5+3 i7+3 i9+3 10+3D i9+3S i5 Extension i10 Extension
- Indoor Wireless Functions _____ Power Center **Load Center**

UTILITIES LISTING:

- MAIN ELECTRICAL TO SUB-PANEL:** LF: _____ CONDUIT SIZE: _____" CONDUCTOR SIZE #: # _____
- VOLTAGE:** 230v 120v **AMPERE LOAD:** _____ AVL: _____v (_____%)
- OTHER 240v POWER DISTRIBUTION: LF _____ CONDUIT SIZE: _____ CONDUCTOR SIZE: # _____
- OTHER 120v POWER DISTRIBUTION: LF _____ CONDUIT SIZE: _____ CONDUCTOR SIZE: # _____
- METER GAS SUPPLY TO EQUIPMENT: SERVICE RISERS QTY: _____ PIPE SIZE: _____ PIPE TYPE: _____
- OTHER GAS SUPPLY TO EQUIPMENT: SERVICE RISERS QTY: _____ PIPE SIZE: _____ PIPE TYPE: _____

FENCING:

- W.I. _____'-_____ " BIAS PANEL _____-LF GATE _____"
- WOOD FENCING _____-RAIL _____' _____" _____-LF GATE _____"