

370 Montauk Hwy. Wainscott, NY 11975 P 631.537.3750 F 631.537.3761

## REPORT ON EXISTING POOL SHELL AND PLUMBING

Pool was drained and washed down for evaluation:

#### **Pool Specifications:**

- Pool Size: 20' x 45'
- 900 Square feet
- 16" Bluestone coping
- Shallow end depth: 3'2" water
- Deep end center 8'6" depth
- Year of construction is unknown
- 1 12" x 12" main drain with field manufactured sump (Non VGB compliant)
- Skimmers: 2
- Wall returns: 4
- 1 Large Incandescent light, Center of Deep end wall

#### **Equipment Notes:**

- Pool Filter: Sand TR 100
- Multiport: 2" Triton
- Valves: 2" schedule 40
- Pump Housing : 1.5"
- Pump: unknown

#### Structure Notes:

- Efflorescence and moisture noticeable at and below tile line.
- Tile line is hollow in several areas.

- There are several visible cracks some previously repaired:
  - 1. Previous crack repair at shallow skimmer
  - 2. Previous crack repair on floor down across slope
  - 3. Structural crack through shell front of bench
  - 4. Previous crack repair, center of deep wall through pool light
  - 5. Previous crack repair shallow end house side corner
  - 6. Substantial damage to top of pool bench
- Shallow end skimmer throat concrete has separated from the plastic skimmer throat
- Deep end skimmer throat concrete has separated from the plastic skimmer

#### **Core Samples: Photos Attached**

• Six core samples were removed from the pool shell and we found 5 of the six to be below standards for thickness and rebar coverage. No PSI compression test was done at this time. See cores below.

#### Plumbing Pressure Test: \*\*\* Please note no pressure testing was done. \*\*\*

- There were several visible repairs that were previously done
- There were mixed materials used for repairs
- There were pipe size conversions between pool and equipment pad
- There are signs of cracked pipes due to freezing water inside pipes

We visually determined plumbing is not good and needs to be replaced. It is mostly flexible PVC which is not rated or recommended for in ground swimming pools.

# Core Sample # 1: Shallow end of pool left side (Proposed Spa Location)

Thickness of core is 4" overall with approximately 2.5" of clean gunite and 1.5" contaminated layer with sand mix. Only 1/16" of plaster was found on this core.



#### **Core sample # 2: Shallow End of Pool** Thickness of core is 4" overall with

approximately 3" of clean gunite and 1" contaminated layer with sand mix. Only 1/8" of plaster was found on this core. 5



**Core sample # 3: Shallow End Floor** Thickness of core is 3.5" overall with approximately 3" of clean gunite and .5" contaminated layer with sand mix. 3/8" of plaster was found on this core.





## Core sample # 4: Pool Slope upper section

Thickness of core is 3.5" overall with approximately 3" of clean gunite and .5" contaminated layer with sand mix. 3/8" of plaster was found on this core.





### Core Sample #5: Deep End Floor

Thickness of core is 5" overall with approximately 4" of clean gunite and 1" contaminated layer with sand mix. 1/2" of plaster was found on this core.





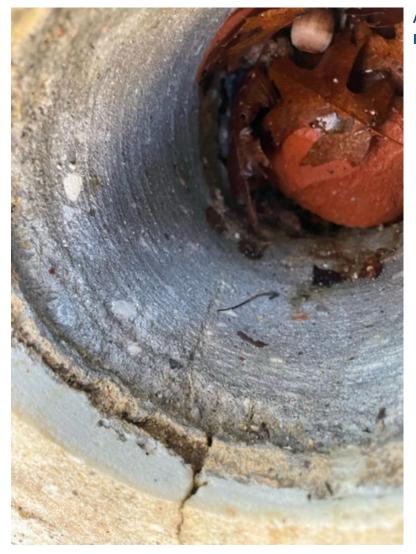
## Core sample # 6: Pool Wall

Thickness of core is 6.75" overall with approximately 5.75" of clean gunite and 1" contaminated layer with sand mix. 1/4" of plaster was found on this core.



#### **Summary of Pool Inspection:**

- Core samples varied in thickness, and all are below minimum thickness. Pool shell should be a minimum of 10" thick reinforced with grade 60 #4 rebar.
- Shallow end of pool: 4" to 5" thick core sample retrieved
- Pool Slope: 4" to 5" thick core sample retrieved
- Deep End: 4" to 5" thick core sample retrieved
- Wall Far Center: 7" thick core sample retrieved
- All core samples taken are contaminated with layers of sand throughout
- 3/4" Bluestone gravel was observed below pool floor at core sample locations
- Additional core taken from floor in front of bench centered on existing crack. Pool shell is cracked through the thickness of the floor.
- There is a 16" pool beam cantilevered on top of the 7" thick wall.



### Additional Core Through Crack in Pool Floor

Dear Ali,

After reviewing the scope of the project and taking into consideration the information we have compiled from the inspection and evaluation. We have concluded that the swimming pool should not be renovated and needs to be replaced. A free standing swimming pool should have at minimum a 10" thick pool shell with  $\frac{1}{2}$ " rebar. The rebar needs to be grade 60 and placed at 10" on center horizontal and vertical with 5" on center for depths more than 48". The existing pool shell by design has outward forces, that outward force and flex is amplified when the pool is full, and the weight of the water is pushing outward on the pool walls in all directions with no soil or support behind it to equalize the pressure.

Although the underground pool plumbing was not pressure tested, upon our initial site visit and visual inspection of the plumbing and previous repairs that are running on top of the ground. The piping is undersized for proper filtration of this size swimming pool.

Taking all factors into consideration, SRK Pools would recommend removal of the existing swimming pool and replacing it with a new pool and spa. This direction ensures that the monetary investment made in the improvements to your property will provide many years of trouble free, energy efficient, safe operation, and enjoyment.

We are here to help in any way we can. Please feel free to reach out to discuss this along with any other questions you may have.

Sincerely,

SRK Team



## Additional pool Photos: Deep Corner Left



## Additional Pool Photos: Deep Corner Right



## Additional Pool Photos: Structural Crack





Additional Pool Photos: Shallow end previous repair