



## Pool Report

### Inground concrete swimming pool Deficiencies and Repair

Completed phase one inspection: main drains were previously sealed with concrete and not operational causing poor water circulation and sanitization, deep-end water was always cloudy and black deep-end clarity dot did not pass Toronto Public Health Inspection. Solution is to raise the deep end to a safer level of 6', reconnecting the main drain and installing a new main drain suction manifold system. This will ensure a clarity and property sanitization of pool water passing Toronto Public Health.

Inspection of pool walls revealed many concrete plaster separations from the main concrete wall structure allowing for water seepage behind walls into the ground. This pool was constructed in different sections with expansion joints where a caulking was used to waterproof seams.

Entire pool walls and floor plaster have lost its waterproof capabilities and require a new concrete base with a plaster finish with an epoxy top grout layer or waterproof tiles. An inquiry has been sent out to Toronto Public Health with a request to remove main drains and are waiting for the area inspector to confirm.

#### **Areas of Concern:**

- Entire pool walls and flooring have lost all waterproofing capabilities
- Sections of concrete structure is seamed with caulking
- Stairs are detaching from main concrete walls
- Skimmers are cracked or in an inoperable state
- Coping stone has lifted off the concrete collar
- Patio stones are off level and trip hazards

#### **Main Drains Leak Test-Inconclusive Findings:**

Without exposing the main connection under the concrete floor and using high powered air compression equipment. Solution is to de-commission the main drains entirely and either raise the deep end to a safer level of 6' or excavate outside the pool walls to locate the main drain and install new suction drains on the bottom of pool walls.

- Excavate to locate main drains pipes
- High pressure system leak detection
- New manifold with connection to equipment room
- Install new main suction anti-vortex drains
- Concrete coring into equipment room
- Waterproof exposed concrete wall

#### **Raise Deep End to 6':**

Raise current deep end from 8' to 6' for better water clarity, re-circulation and safety. Pouring of 32mpa structural concrete slurry, fiberglass structural fibers, coring rebar rods into deep end floor. Re-sloping of current pool hopper.

- Concrete coring structural rebar rods / Concrete Slurry Fill with pump truck
- Re-sloping pool hopper / Non shrinkable expansion joints

#### **Entire Pool Walls and Flooring Repair:**



Walls and floor require to be chipped, grinded and repaired structurally, then a top concrete grout with complete waterproofing membrane epoxy to be applied ready for finish material.

New wall and skimmer face plates with new fittings replacements, some skimmers that are beyond repairable will require replacement by excavating around the skimmer area and isolating water lines.

Pool Stairs to be chipped and reattached to the pool wall with structural rebar.

- Chip, Diamond Grind and Expose base concrete walls and floor of entire pool getting ready for top coat
- Repair any structural hollow or compromised wall/floor area exposed during demo of current concrete walls and base
- Expose Detaching Pool Stairs, reconnect structurally to pool walls, form and pour outer concrete grout membrane
- Waterproofing new surface with underlayment
- New pool returns face fittings
- New Skimmer Replacement/Faceplates as needed--Determined while demo each skimmer would require excavation and concrete removal

### **Pool Wall and Floor Finish Options:**

There are two options to refinish the interior side of pool:

1. Marble Lite Plaster Finish Top Coat
  - ❖ Preparing Surface with epoxy top coat
  - ❖ Speckle White Plaster Finish
2. Water Resistant Pool Tiles with Epoxy Grout
  - ❖ Preparing surface with waterproof epoxy membrane
  - ❖ Supply and install new stepwise pool tiles 50% slip resistant
  - ❖ Epoxy waterproof grout colour to match

### **Restoration of Patio and Surface Deck:**

Coping stones will require to be removed and either re-installed or replaced with similar style precast stone.

- Removal of coping stones and sub mortar
- Pouring of new concrete bond beam collar
- Installation of coping stone
- Refurbishing existing stones
- Supply new Precast stones
- Removing existing patio slabs
- New sub base gravel crush compacted
- Supply and install new patio slab or Precast stone

### **Pool Recirculation Equipment:**

Pool equipment will be performance tested to determine if replacement is required and suggestions will be made at that point.

- Performance Testing of current pool equipment
- Opening and filling of pool with water trucks
- Sanitization system to be stress tested
- Reconnection of system and replacement of required gaskets / Chemicals for start up