



**CLEARWATER**  
BRIGHT AND BEAUTIFUL · BAY TO BEACH

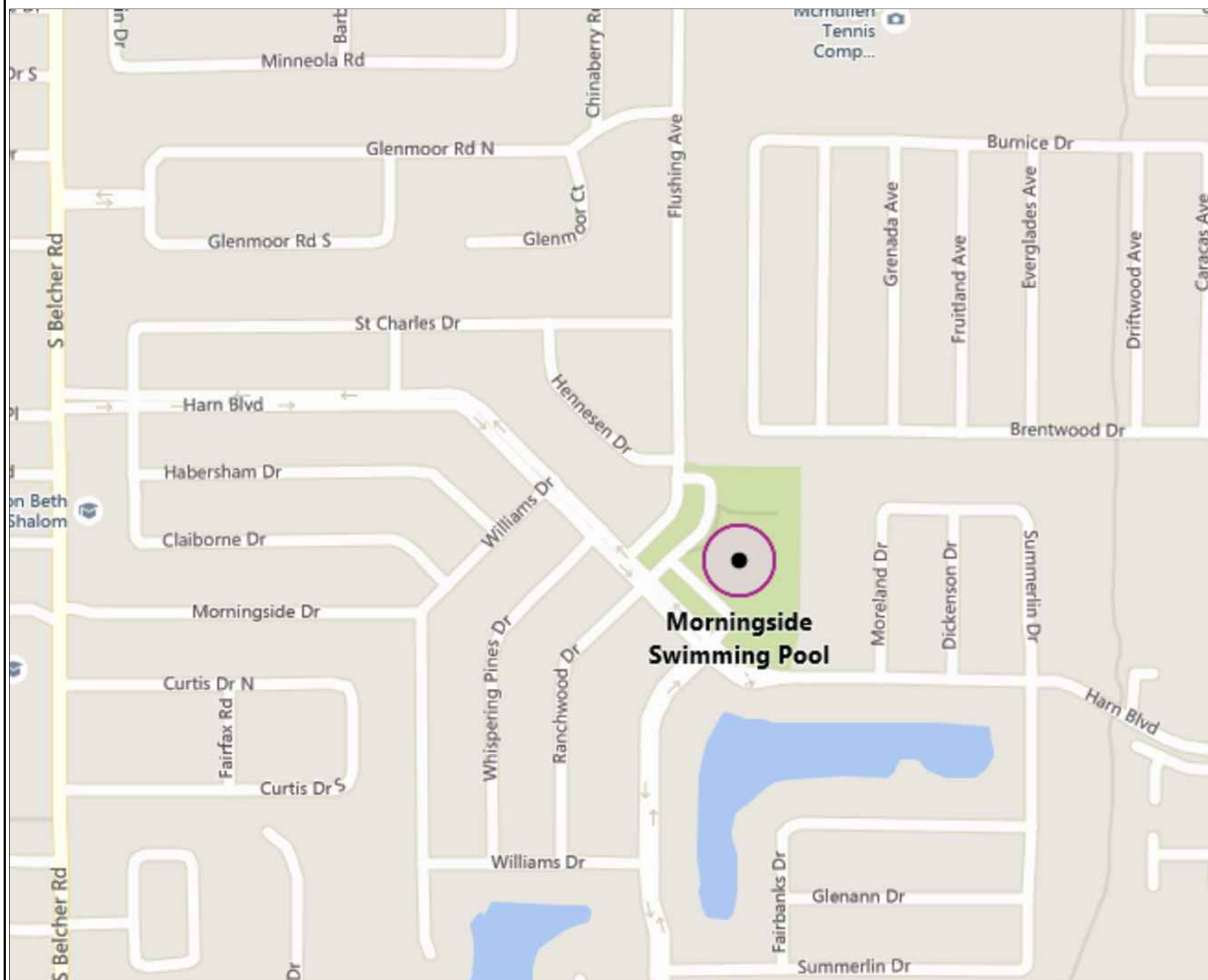


# MORNING SIDE - AQUATIC CENTER RENOVATIONS

## 2400 HARN BOULEVARD, CLEARWATER, FL 33756

PROJECT NUMBER 16-0008-PR

DATE: March 2016



Address: 2400 Harn Boulevard  
Clearwater, Florida 33756  
Pinellas County

TABLE OF CONTENT	
1	COVER SHEET
2	NOTES & SPECIFICATIONS
3	SITE PLAN
4	CONSTRUCTION PLAN
5	MAIN POOL EQUIPMENT DETAILS
6	ACTIVITY POOL EQUIPMENT DETAIL PLAN

### CITY OFFICIALS

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MICHAEL D. QUILLEN, P.E.  
CITY ENGINEER

APPROVED BY  
DATE APPROVED

CITY ENGINEER MICHAEL D. QUILLEN, P.E. #33721



## ACTIVITY "KIDDIE" POOL

**Capacity:** 14,000 Gallons  
**Area:** 800 Square Feet  
**Perimeter:** 120 Feet  
**Flow Rate:** 75 GPM

**Recirculation Pump:** Sta-Rite Max-E-Pro, P6E6EL, 1 H.P, 75 GPM @ 50' TDH

**Filter:** Aquaworx Vacuum DE, (9) Grids, 4.5 SF/EA, 40.5 SF total, 81 GPM

**Vacuum Pump:** Sta-Rite Max-E-Pro, P6E6E, Self-Priming, 70 GPM @ 60' TDH

**Valves:** Proportional flow, ball, globe, or butterfly for return line, main drain, gutter and heater by-pass or approved equal, otherwise gate.

**Pipe:** PVC Schedule 40 NSFpw  
**Vacuum Fitting:** Hayward VAC-LOCK  
**Rail:** Smith (See Details)  
**Anchors:** Hayward SP1392  
**Transformers:** Area Lighting LG-300 / 12Volt.  
**Vacuum Head:** Rainbow 214  
**Vacuum Hose:** Plastiflex  
**Brush:** A&B 3004  
**Concrete:** 3500 psi, 28 day  
**Steel:** ASTM GR40, A615  
**Poles:** (3) Jed, 16' Straight  
**Heater:** NONE.

**Level (Static) Line Grate:** SP1019.  
**Main Drain:** Waterway plastic-640-475XV-SECURE meet ASME/ANSI A112 19-8-2007 NSF50, 64E-9  
**Inlets:** Hayward SP1425 (FLOOR) Hayward SP1419E (WALL)  
**Escutcheons:** Frost 41661  
**Life Ring:** (2) 24" W/30' Throw Line, Jim Buoy  
**Hook:** (2) RAINBOW 153  
**Test Kit:** Taylor K-2006  
**Ladder:** Smith (See Detail)

## MAIN POOL

**Capacity:** 203,400 Gallons  
**Area:** 4,885 Square Feet  
**Perimeter:** 328 Feet  
**Flow Rate:** 600 GPM

**Recirculation Pump:** Pentair EQK1500 W/strainer, 15 HP, 700 GPM @ 50' TDH Model 340035 throttled to 600

**Filter:** Aquaworx Vacuum DE, (67) Grids, 4.5 SF/EA, 301 SF total

**Vacuum Pump:** Pentair Max-E-Pro, P6E6F-207L, 1.5 HP W/integral strainer

**Valves:** Proportional flow, ball, globe, or butterfly for return line, main drain, gutter and heater by-pass or approved equal, otherwise gate.

**Pipe:** PVC Schedule 40 NSFpw  
**Gutters:** Pentair 540063  
**Vacuum Fitting:** Hayward VAC-LOCK  
**Rail:** Smith (See Details)  
**Anchors:** Hayward SP1392  
**Transformers:** Area Lighting LG-300 / 12Volt.  
**Vacuum Head:** Rainbow 214  
**Vacuum Hose:** Plastiflex  
**Brush:** A&B 3004  
**Concrete:** 3500 psi, 28 day  
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**Hook:** (2) RAINBOW 153  
**Test Kit:** Taylor K-2006  
**Ladder:** Smith (See Detail)

## GENERAL NOTES:

- Structure suitable when empty for ground water not higher than 6" above main drain.
- Permanent Tile depth markers, minimum 4" high with contrasting color, slip resistant flush on deck or top of beam not more than 2 feet from water edge and inside back of gutter (glazed) minimum 4" high.
- Permanent Red International *NO DIVE* Tiles, non-slip flush minimum 4" high, on top of the deck not more than 2 feet from water edge every 25 feet of perimeter maximum see detail.
- All equipment shall have NSF, UL, or appropriate approval.
- All electrical, grounding, wiring & bonding to comply with Florida building code FBC 2014, 5th Edition, NEC Section 680.26(C). No overhead power within 10 feet. Electrician must certify compliance to engineer. NEC 680.26(C) requires that all parts specified in 680.26(B) shall be connected to an equipotential bonding grid with solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG or rigid metal conduit of brass or other identified corrosion-resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors suitable for the purpose and are of stainless steel, brass, copper, or copper alloy.
- Pool make-up water is from an approved source with air gap.
- No direct connections between water and sanitary systems, minimum 3" gap.
- Vacuum breakers on all hose bibs in pool area.
- Minimum 7' vertical clearance above deck and pool water.
- No food or drink services to be within 12 feet of inner edge pool deck.
- Walkways between pool and sanitary facilities shall be impervious, slip resistant for the first 15 feet from pool water edge.
- If night swimming is allowed, overhead lighting shall provide at least 3 foot candles of illuminations at the water and wet deck level.
- Overhead illumination of 30 foot candles at floor level in equipment room.
- Owner to provide storage of chemicals under roof, protected from access by unauthorized persons.
- Owner to provide traffic barriers at deck if needed.
- Main drain(s) to meet ASME/ANSI A112 19-8-2007, NSF50, 64E-9 and comply with Virginia Graeme Baker Act.
- Feeders to be interlocked with recirculation pump.
- Pipe: PVC schedule 40 NSFpw
- Gauges: 2" minimum; 0-60 psi.
- Test Kit: Taylor 2006 or Equal
- All electric and ground to meet NEC or local code.
- This pool is classified as a Title II or Title III pool and does require ADA lift or ramp.
- The equipment area or collector tank or chemical containers shall not be accessible to unauthorized individuals.
- Install new equipment and plumbing per manufacturers instructions.
- Plastic pipe subject to a period of prolonged sunlight exposure must be coated to protect it from ultraviolet light degradation
- ALL EQUIPMENT MUST BE LABELED AND EASILY READ, THIS INCLUDES THE FLOWMETER.
- All equipment (pumps, motors, pressure gauges, valves, auto and manual fills, piping, filters, flow indicators and flow meters ) must be operating properly before calling this office and/or the Health Department for inspection.
- Lighting certification is not part of this submittal. Contact a Lighting or Electrical engineer for certification.
- Direct access to equipment is required.
- Pool and Bathroom electrical outlets to be GFCI with trip points 6mA or less with cover.
- Pool chemicals to be stored away from other materials in a cool, dry, ventilated area with restricted access.
- Pool to have Shepherd's Hook, Straight Pole, Ring Buoy for safety equipment.
- The deck must not have pits and crevices more than  $\frac{3}{16}$ " deep.
- A flow meter shall be provided with properly located and proper clearances upstream and down stream.
- A gate to the equipment area must provide within 10' of the equipment area.
- The equipment room area must provide clearances for all equipment as prescribed by the manufacturer to allow normal maintenance and removal.
- All equipment meets NSF/ANSI Standards 50-2007.
- Recirculation pump must have a hair and lint strainer.
- All exposed PVC piping will be painted for UV protection.
- The plans meet FBC 2014, 5th Edition, Section 454.1.
- The plans meet 2011 National Electric Code
- All depth markers are to indicate actual depths within 3".

## SITE PLAN NOTES:

- RINSE SHOWER SHALL BE PROVIDED ON THE POOL DECK WITHIN THE PERIMETER OF THE FENCE.
- HOSE BIBB WITH VACUUM BREAKER REQUIRED ON DECK.
- WASTE TO SANITARY SEWER OR STORM WITH AIR GAP, MEET LOCAL CODES. PAINT EXPOSED PVC. Each WASTE LINE SHALL HAVE A UNIQUE AIR GAP. WASTE LINES FROM DIFFERENT SOURCES SHALL NOT BE TIED TOGETHER, BUT MAY DISCHARGE INTO A COMMON SUMP OR RECEPTACLE AFTER AIR GAP. (CONTRACTOR TO PROVIDE)
- CONFIRM LOCATIONS AND ELEVATIONS WITH THE OWNER AND LANDSCAPE CONTRACTOR.
- DEPTH MARKERS ALONG THE DECK ARE TO BE SET BEHIND THE 8" POOL COPING.
- NO FOOD OR DRINK FACILITIES WITHIN 12 FEET OF POOL OR SPA.
- PROVIDE A HOSE BIBB WITHIN 25 FEET OF THE RESTROOMS.
- PROVIDE DIRECTIONAL SIGNS TO RESTROOMS.
- NO RECLAIMED WATER SHALL BE USED AS AN IRRIGATION SOURCE FOR THE PLANTER AREAS ALONG THE POOL DECK.
- PAINT ALL EXPOSED PVC.
- HEATERS MUST BE FENCED.

## POST POOL RULE SIGN

*NO GLASS OR ANIMALS IN THE FENCED POOL AREA*

*NO FOOD OR BEVERAGES IN POOL OR ON POOL WET DECK*

*SHOWER BEFORE ENTERING POOL*

*DO NOT SWALLOW THE POOL WATER*

*MAX. MAIN POOL LOAD 120 PERSONS, ACTIVITY POOL 18 PERSONS*

*NO DIVING*

*POOL HOURS DAWN a.m. TO DUSK p.m. (Until lighting certified)*

NOTE: Pool Rule Letters to be 1" high minimum except NO DIVING shall be 4" high minimum.

## FENCE:

Florida Building Code requires that all public pools shall be surrounded by a minimum 48" high fence. The fence shall be continuous around the perimeter of the pool area that is not otherwise blocked or obstructed by adjacent buildings or structures and shall adjoin with itself or abut to the adjacent members. Access through the barrier other than from doored exits of adjacent building(s) shall be through self-closing, self-latching, lockable gates of 48" minimum height with the latch located a minimum of 54" from the bottom of the gate or at least 3" below the top of the gate on pool side. Gates shall open outward away from the pool area.

## RESTROOMS

Outside access to facilities shall be provided for bathers at outdoor pools and if they are not visible from any portion of the pool deck, signs shall be posted showing directions to the facilities. These directions shall be legible from any portion of the pool deck and the letters shall be a minimum of one inch high. Walkways shall be provided between the pool and the sanitary facilities, and shall be constructed of concrete or other nonabsorbant material having a smooth slip resistant finish for the first 15 feet of the walkway measured from the nearest pool water's edge.

Floors: smooth, non-slip, impervious, pitched to floor drains, cove wall to floor, no carpet, duckboard or footbaths. Provide permanent towel, tissue, soap dispensers and waste baskets. Label doors. Install hose bib w/ vacuum breaker, either in resorts or outside nearby. Water shall be from an approved potable source with air break. Diaper changing tables shall be provided at facilities that cater to families with small children.

- RESTROOM FACILITIES:
- ARE WITHIN 200 FEET WALKING DISTANCE FROM THE WATERS EDGE.
  - SHALL BE AT LEAST AS INDICATED ON THE FOLLOWING TABLE:

TOTAL AREA IN SQ. FT.	MEN'S RESTROOM			WOMEN'S RESTROOM	
	URINAL	W/C	LAVATORY	W/C	LAVATORY
0 - 2,500	1	1	1	1	1
2,501 - 5,000	2	1	1	5	1
5,001 - 7,500	2	2	2	6	2
7,501 - 10,000	3	3	3	9	3

## FLOW & FRICTION LOSS PER FOOT SCHEDULE 40 PVC PIPE

PIPE SIZE	VELOCITY - FEET PER SECOND					
	6 FPS		8 FPS		10 FPS	
1"	16 GPM	0.14'	21 GPM	0.23'	26 GPM	0.35'
1.5"	37 GPM	0.08'	50 GPM	0.14'	62 GPM	0.21'
2"	62 GPM	0.06'	82 GPM	0.10'	103 GPM	0.16'
2.5"	88 GPM	0.05'	117 GPM	0.09'	146 GPM	0.13'
3"	138 GPM	0.04'	181 GPM	0.07'	227 GPM	0.10'
4"	234 GPM	0.03'	313 GPM	0.05'	392 GPM	0.07'
6"	534 GPM	0.02'	712 GPM	0.03'		
8"	948 GPM	0.01'	1253 GPM	0.03'		
10"	1482 GPM	0.005'	1945 GPM	0.01'		

## MODIFICATION SCOPE

This modification includes the demolition of the existing equipment for the activity pool and main pools filter equipment, and installation of a new equipment pack unit for the pools. The activity and main pools equipment are located adjacent to the rec. building in the mechanical room of the rec. building. All plumbing shall be located, cut and re-plumbed to the new equipment. New plumbing will be installed for the activity and main pool and tied to the new units.

The deck areas will be reconstructed as necessary to establish positive drainage, and constructed per the owners specifications.

THE POOL, DECK AND EQUIPMENT SHOWN ARE DESIGNED TO MEET THE REQUIREMENTS OF THE FOLLOWING APPLICABLE CODES:
DEPARTMENT OF HEALTH (DOH) 64E-9 FLORIDA ADMINISTRATIVE CODE
FLORIDA STATUTES, CHAPTER 514
FLORIDA BUILDING CODE 2014, FIFTH EDITION
FLORIDA PLUMBING CODE 2014
NATIONAL ELECTRIC CODE (NEC) 2011
NATION FIRE PROTECTION ASSOCIATION (NFPA) 70
NATION FIRE PROTECTION ASSOCIATION (NFPA) 101

# GB Collins Engineering PA Certificate of Authorization 27934

300 Alternate 19 North, Suite A  
Palm Harbor, FL 34683  
Phone: (727) 442-8443  
gb\_collins@verizon.net

For: City of Clearwater  
Parks and Recreation Department

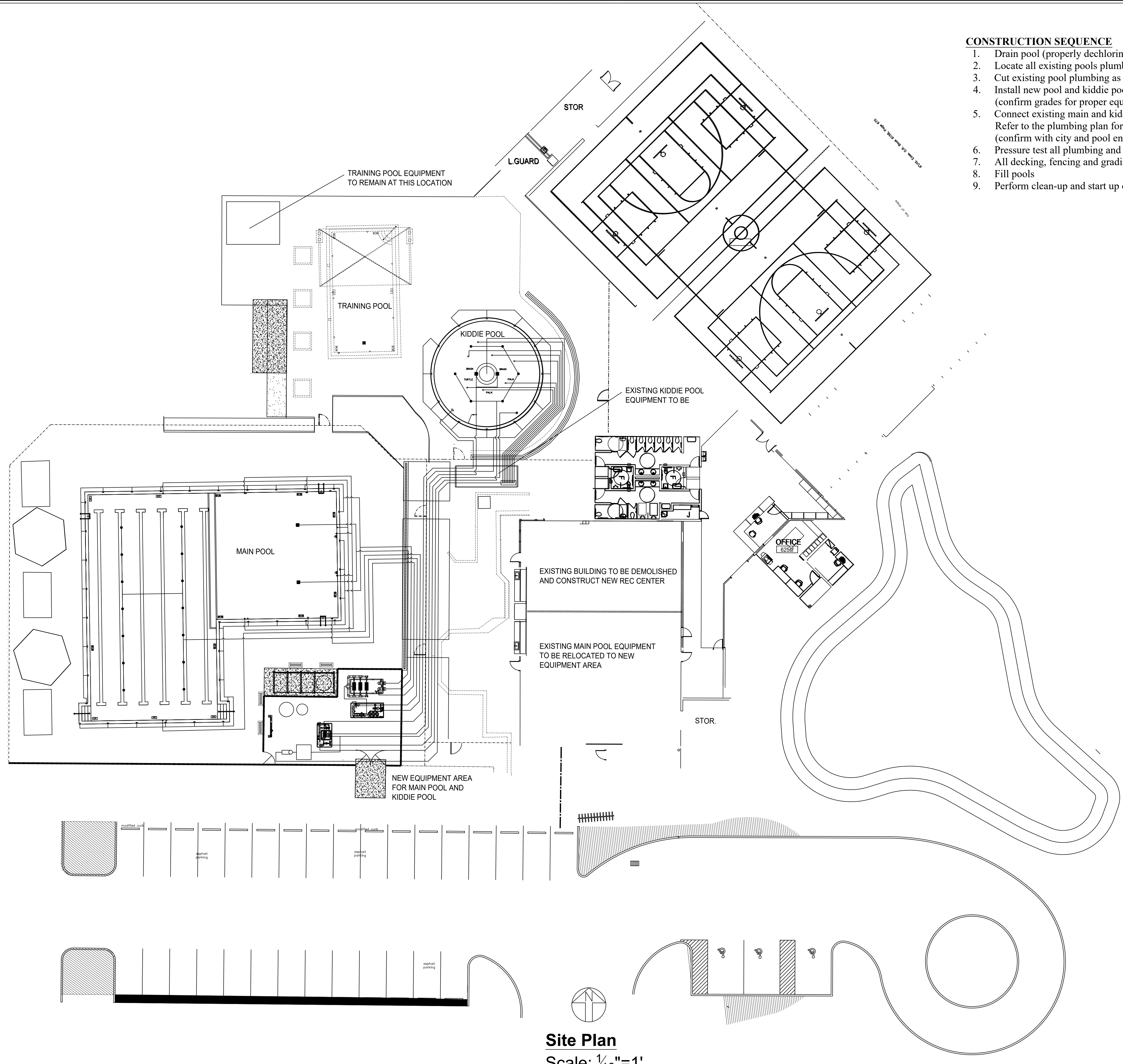
Morningside Main and Activity Pool  
Modification -Specifications & Notes

SAMUEL A. LIBERATORE, P.E. #65740

#	Revision Description	Date

Date: Sept 2, 2016

Drawn by: SAL



**CONSTRUCTION SEQUENCE**

1. Drain pool (properly dechlorinate prior to discharge)
2. Locate all existing pools plumbing (Main Pool and Kiddie Pool)
3. Cut existing pool plumbing as necessary
4. Install new pool and kiddie pool equipment (confirm grades for proper equipment elevation to be set)
5. Connect existing main and kiddie pool plumbing to new equipment packs. Refer to the plumbing plan for appropriate plumbing sizes (confirm with city and pool engineer existing plumbing and new plumbing)
6. Pressure test all plumbing and check for leakage prior to backfill
7. All decking, fencing and grading to be completed
8. Fill pools
9. Perform clean-up and start up of systems

**Site Plan**  
Scale: 1/16"=1'

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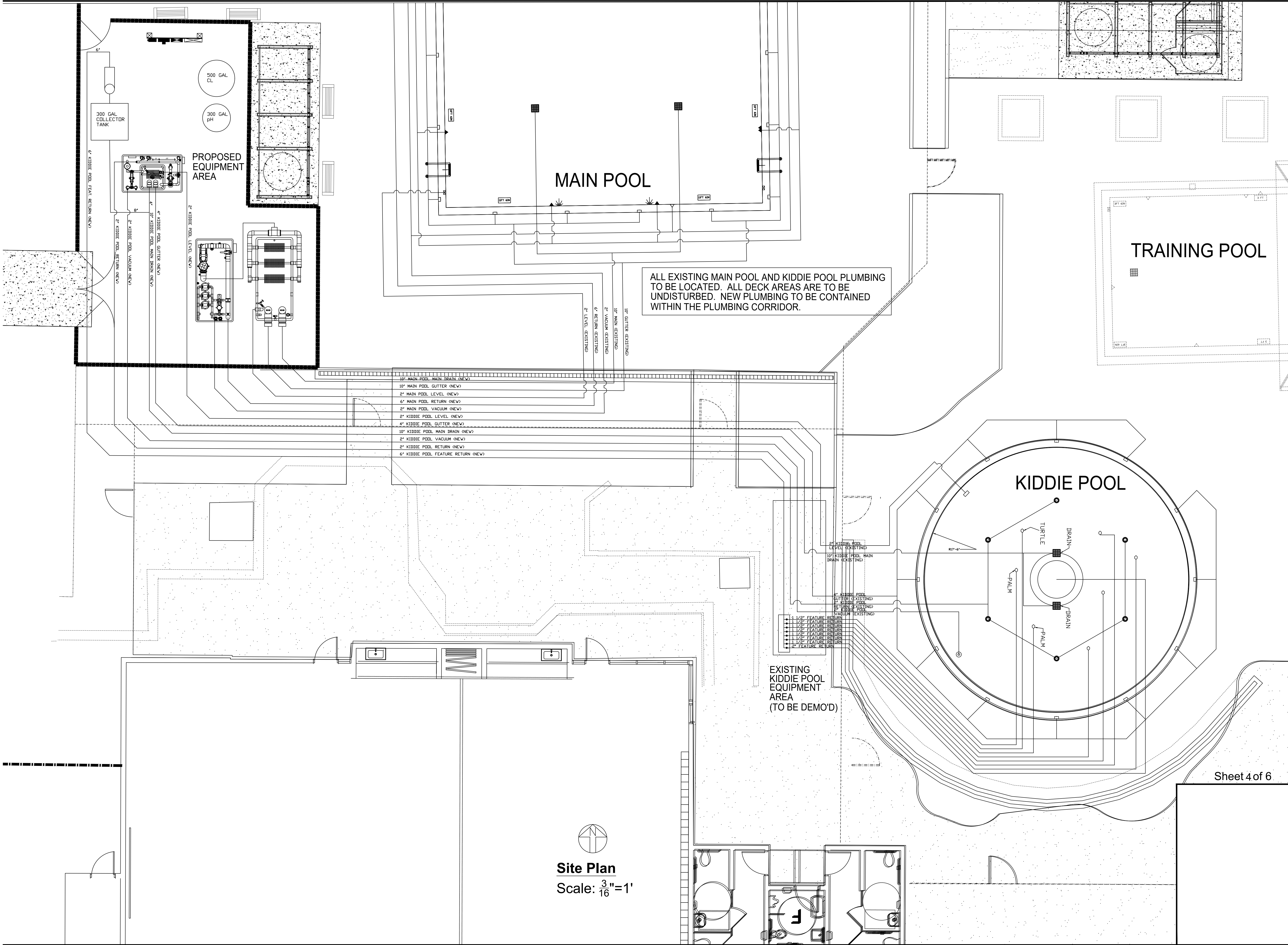
Morningside Main and Activity Pool  
Modification - Site Plan

SAMUEL A. LIBERATORE, P.E. #65740

#	Revision Description	Date

Date: Sept 2, 2016  
Drawn by: SAL





MAIN POOL

TRAINING POOL

KIDDIE POOL

ALL EXISTING MAIN POOL AND KIDDIE POOL PLUMBING TO BE LOCATED. ALL DECK AREAS ARE TO BE UNDISTURBED. NEW PLUMBING TO BE CONTAINED WITHIN THE PLUMBING CORRIDOR.

- 10" MAIN POOL MAIN DRAIN (NEW)
- 10" MAIN POOL GUTTER (NEW)
- 2" MAIN POOL LEVEL (NEW)
- 6" MAIN POOL RETURN (NEW)
- 2" MAIN POOL VACUUM (NEW)
- 2" KIDDIE POOL LEVEL (NEW)
- 4" KIDDIE POOL GUTTER (NEW)
- 10" KIDDIE POOL MAIN DRAIN (NEW)
- 2" KIDDIE POOL VACUUM (NEW)
- 2" KIDDIE POOL RETURN (NEW)
- 6" KIDDIE POOL FEATURE RETURN (NEW)

EXISTING KIDDIE POOL EQUIPMENT AREA (TO BE DEMO'D)

**GB Collins Engineering PA**  
 Certificate of Authorization 27934

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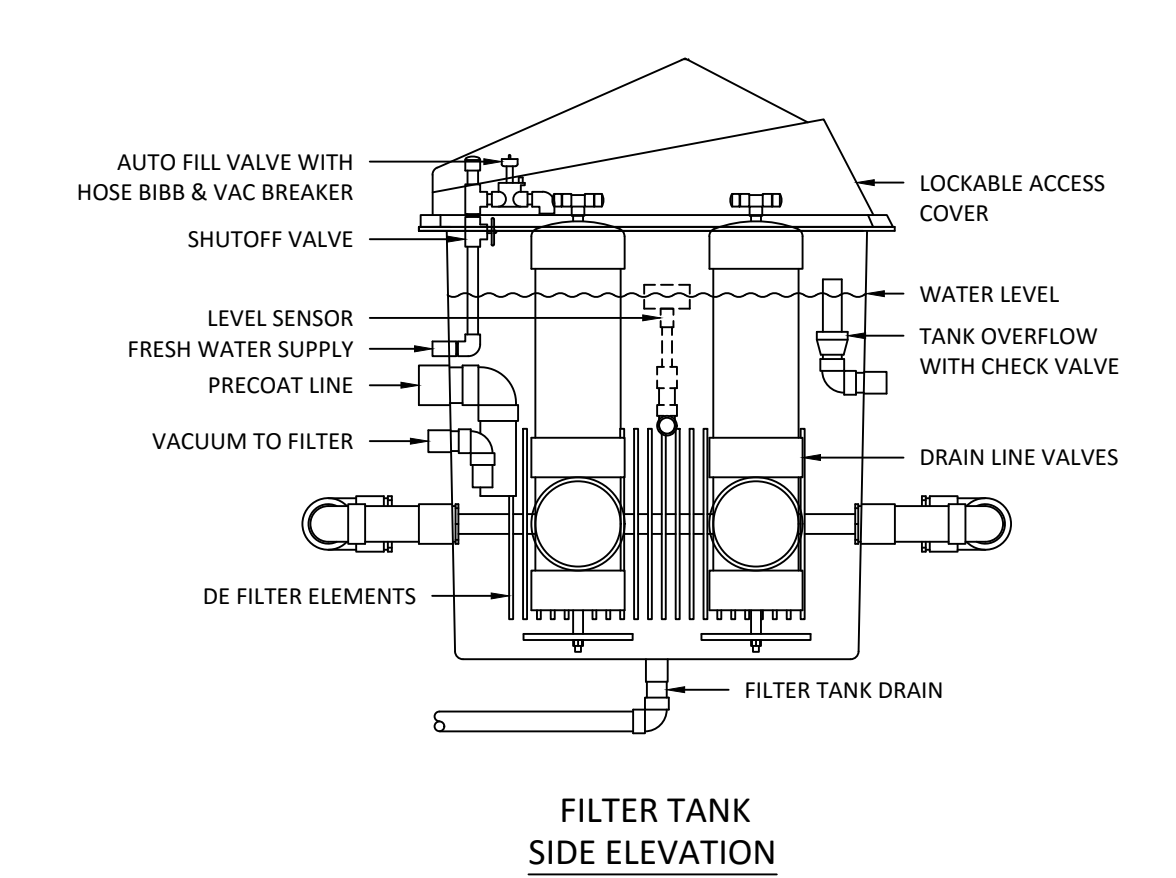
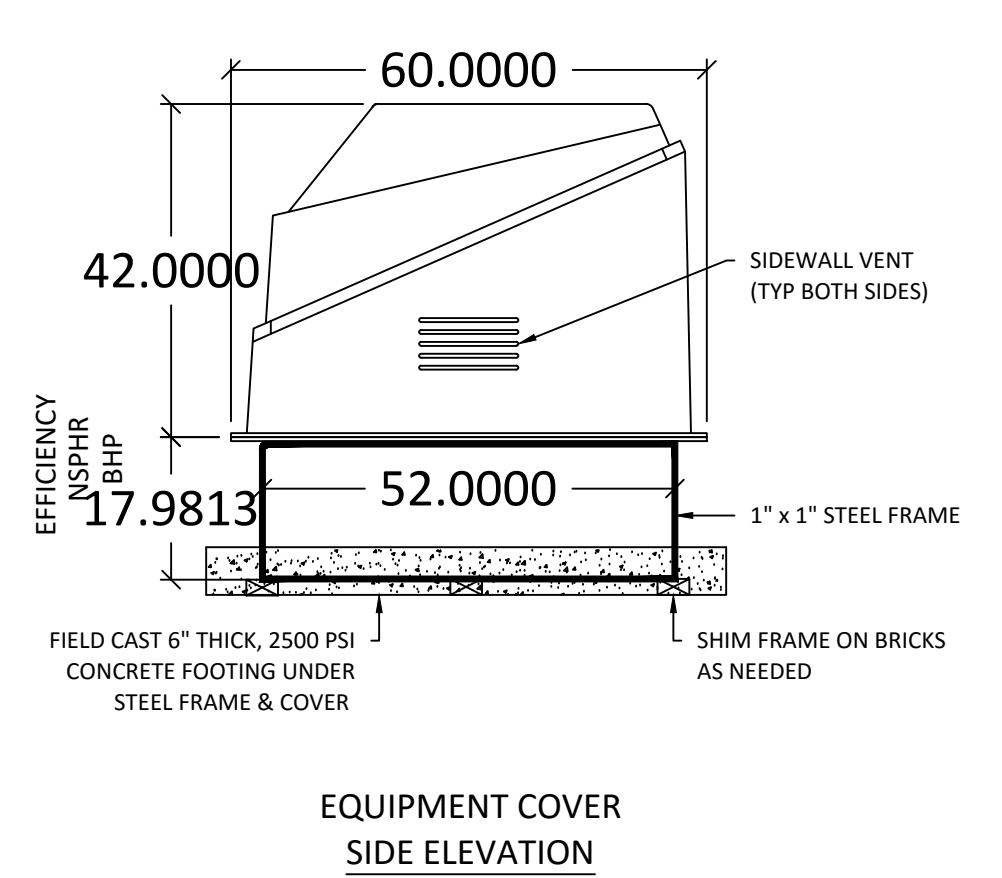
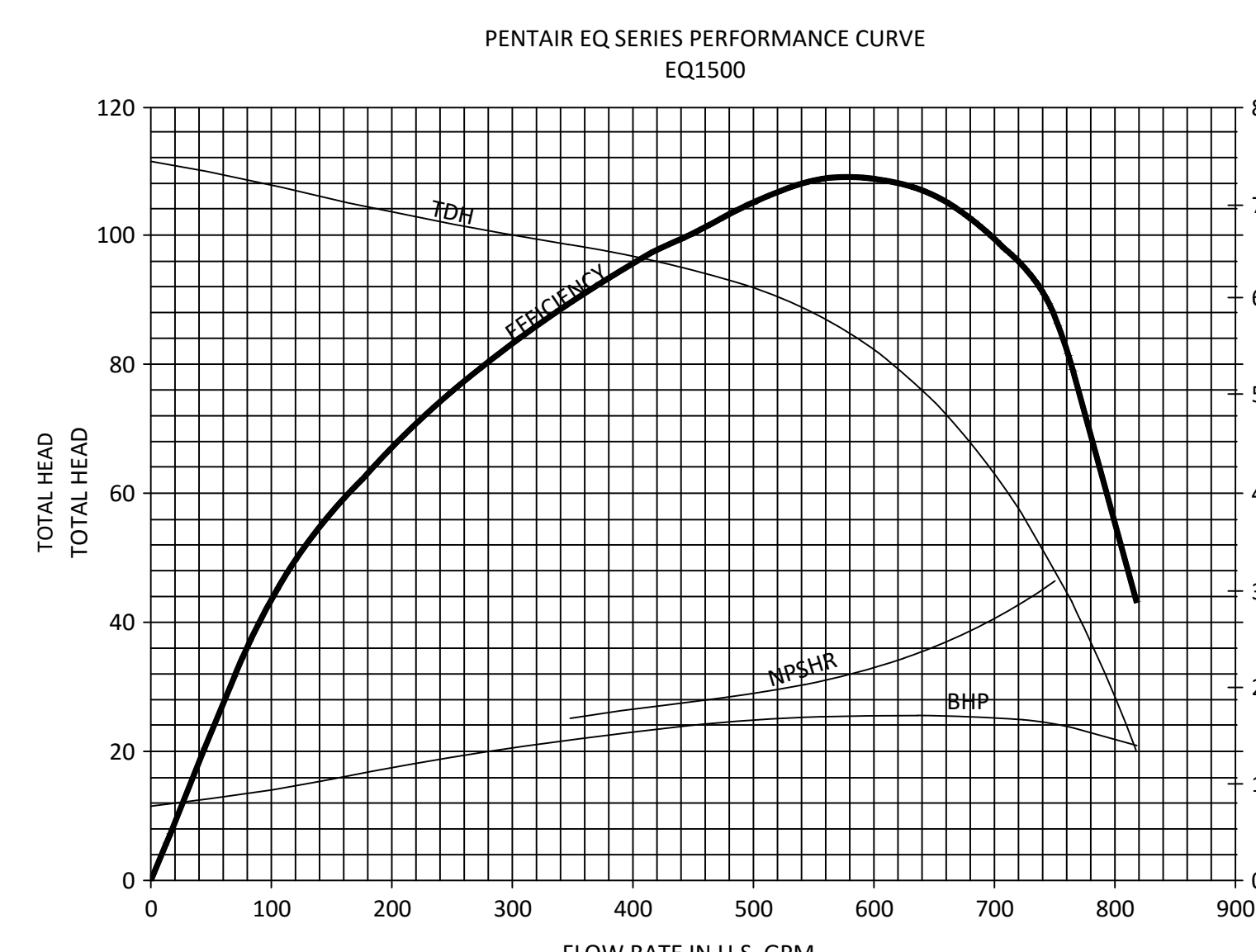
For: City of Clearwater  
 Parks and Recreation Department

Morningside Main and Activity Pool  
 Modification - Site Plan

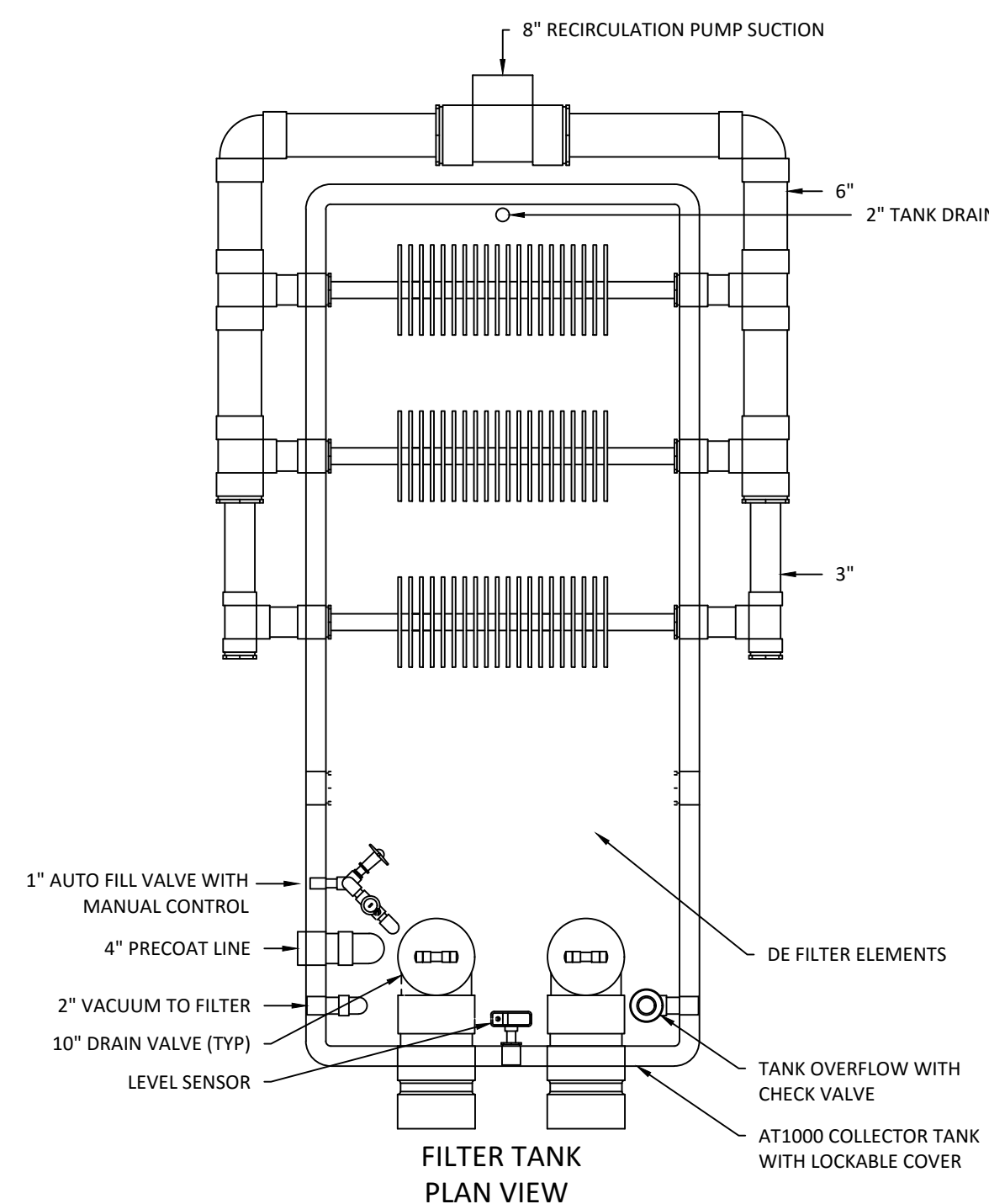
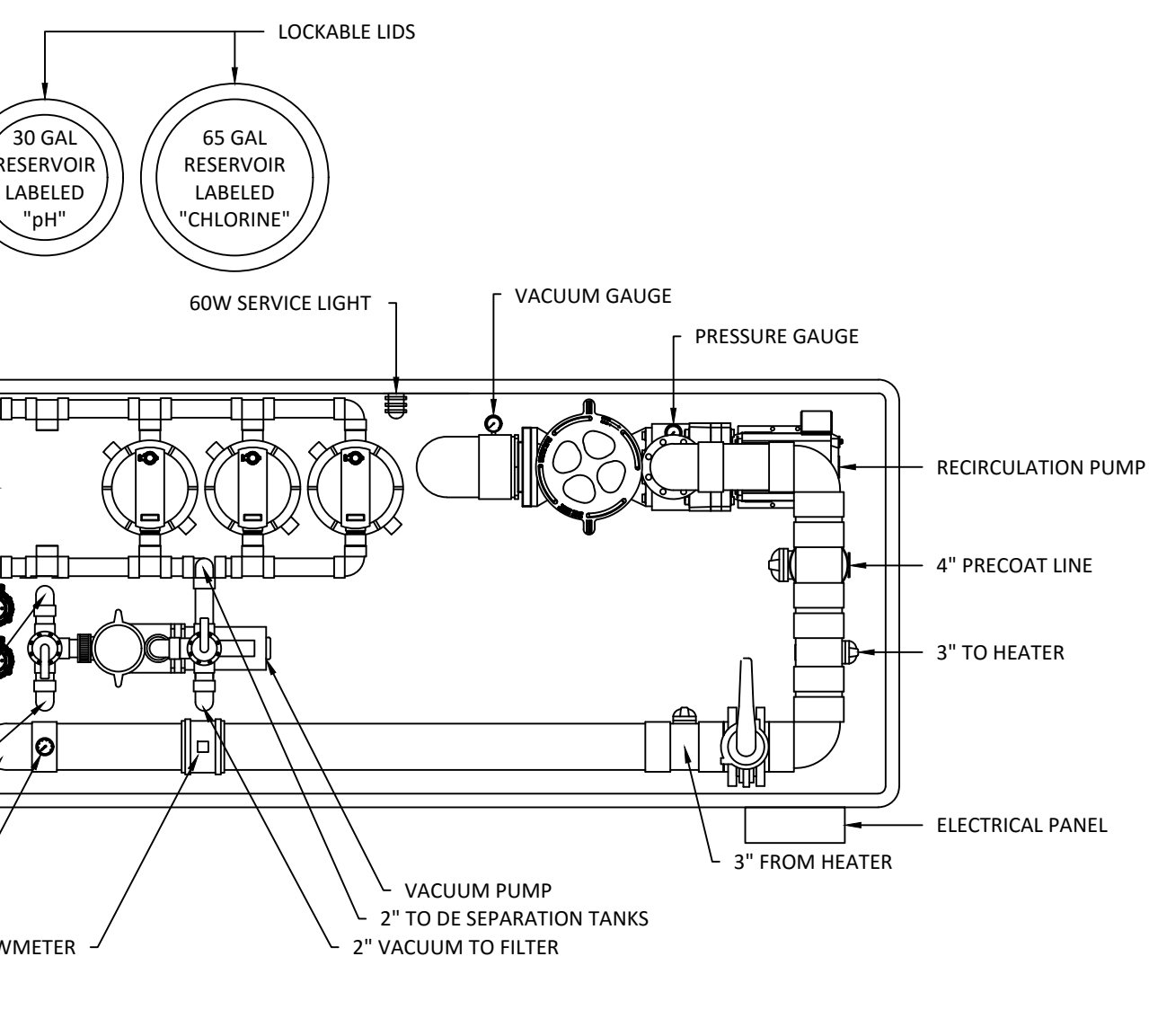
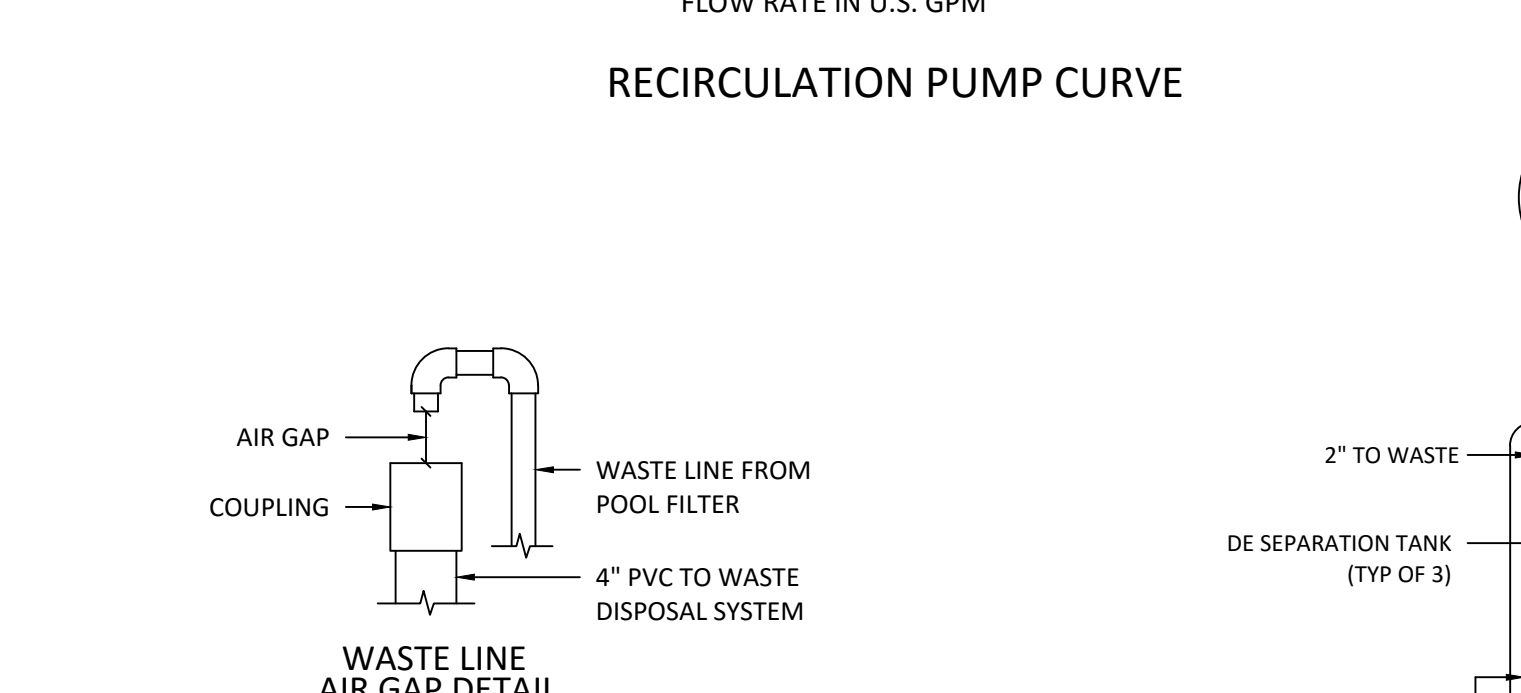
SAMUEL A. LIBERATORE, P.E. #65740

#	Revision Description	Date

Date: Sept 2, 2016  
 Drawn by: SAL



- NOTES:**
- PLUMBING - ALL PIPE & FITTINGS SHALL BE SCHEDULE 40 PVC PER ASTM D1785 AND N.S.F. APPROVED AND STAMPED FOR POTABLE WATER APPLICATIONS. JOINTS TO BE SOLVENT WELDED PER ASTM D2855. ALL PLUMBING AND MATERIALS TO CONFORM TO FLORIDA BUILDING CODE 2014 - FIFTH EDITION.
  - ELECTRICAL - ALL ELECTRICAL EQUIPMENT WIRING, INSTALLATION AND GROUNDING OF POOL COMPONENTS SHALL CONFORM TO NATIONAL FIRE PROTECTION ASSOC. 70, NATIONAL ELECTRICAL CODE (N.E.C.) LATEST EDITION AND ALL APPLICABLE LOCAL CODES. CHEMICAL FEED PUMPS TO BE INTERLOCKED WITH THE RECIRCULATION PUMP.
  - EQUIPMENT - ALL PUMPS, FILTERS AND DISINFECTION EQUIPMENT SHALL BE TESTED AND APPROVED BY THE PERTINENT MANUFACTURER USING THE NSF/ANSI STANDARD 50 AND LISTED AS APPROVED BY THE NSF.
  - THE FILTER ROOM FLOOR IS SLIP RESISTANT AND SLOPED TO FLOOR DRAINS
  - ALL PLASTIC PIPING SUBJECT TO PROLONGED SUNLIGHT EXPOSURE MUST BE COATED TO PROTECT IF FROM ULTRAVIOLET LIGHT DEGRADATION.
  - EACH WASTE LINE SHALL HAVE A UNIQUE AIR GAP. WASTE LINES FROM DIFFERENT SOURCES (E.G. POOL, SPA, OVERFLOW, SUMP PUMP) SHALL NOT BE TIED TOGETHER BUT MAY DISCHARGE INTO A COMMON SUMP OR RECEPTACLE.
  - THE WASTE LINE MUST BE CONNECTED TO AN APPROVED WASTE DISPOSAL SYSTEM ACCORDING TO LOCAL OR STATE CODES.
  - ALL COLLECTOR TANKS SHALL HAVE COVERED INTERSECTIONS AND SLOPE TO THE TANK DRAIN.
  - AN AUTOMATIC AND MANUAL WATER MAKEUP CONTROL MUST BE PROVIDED TO MAINTAIN THE WATER LEVEL AT THE LIP OF THE OVERFLOW GUTTER OR AT THE MOUTH OF THE RECESSED AUTOMATIC SKIMMERS AND MUST DISCHARGE THROUGH AN AIR GAP INTO A FILL PIPE OR COLLECTOR TANK. OVER THE RIM FILL SPOUTS ARE PROHIBITED.
  - A RATE OF FLOW INDICATOR, READING IN GPM, SHALL BE INSTALLED ON THE FILTER RETURN LINE. THE RATE OF FLOW INDICATOR SHALL BE PROPERLY SIZED FOR THE DESIGN FLOW RATE AND SHALL BE CAPABLE OF MEASURING FROM ONE HALF TO AT LEAST ONE-AND-ONE-HALF TIMES THE DESIGN FLOW RATE. THE CLEARANCES UPSTREAM AND DOWNSTREAM FROM THE RATE OF FLOW INDICATOR SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION SPECIFICATIONS.
  - THESE PLANS HAVE BEEN PREPARED IN COMPLIANCE WITH THE 2014 FLORIDA BUILDING CODE - FIFTH EDITION



**VACUUM DE FILTER EQUIPMENT LIST**

RECIRCULATION PUMP	PENTAIR EQ1500 WITH STRAINER, 15 HP, 700 GPM @ 50' TDH, 208-230/460V, 3Ø, MODEL 340035 THROTTLED TO 600
VACUUM PUMP	PENTAIR MAX-E-PRO P66GF-207L, 1.5 HP WITH INTEGRAL STRAINER, 230V, 1 Ø
FILTER TANK SIZE	AT1000, 1000 GALLON CAPACITY, 5' x 11' x 6' DEEP
DE FILTER ELEMENTS	(67) - 13.5" x 24" ELEMENTS, 4.5 SQ FT EACH, 301.5 SQ FT TOTAL
WATER LEVEL CONTROL	AQUATEK HYDRAULIC VALVE W/ MANUAL FILL VALVE & RESERVOIR
CHLORINE FEEDER	85M5
CHLORINE RESERVOIR TANK	65 GALLON WITH LOCKABLE LID
pH FEEDER	45M5
pH RESERVOIR TANK	30 GALLON WITH LOCKABLE LID
SEPARATOR TANK(S)	(3) - PENTAIR PEN100, 100 SQ FT EA, 300 SQ FT TOTAL
FLOWMETER	6" BLUE/WHITE F-30600P, 250 TO 1,050 GPM RANGE
THERMOMETER	PRECISION INSTRUMENT CO B2B1-K WITH 1/2" NPT THERMOWELL
VACUUM GAUGE	WIKA, 0-30 IN HG, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
PRESSURE GAUGE	WIKA, 0-60 PSI, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
CHEMISTRY CONTROLLER	N/A

**PIPE AND VALVES CHART**

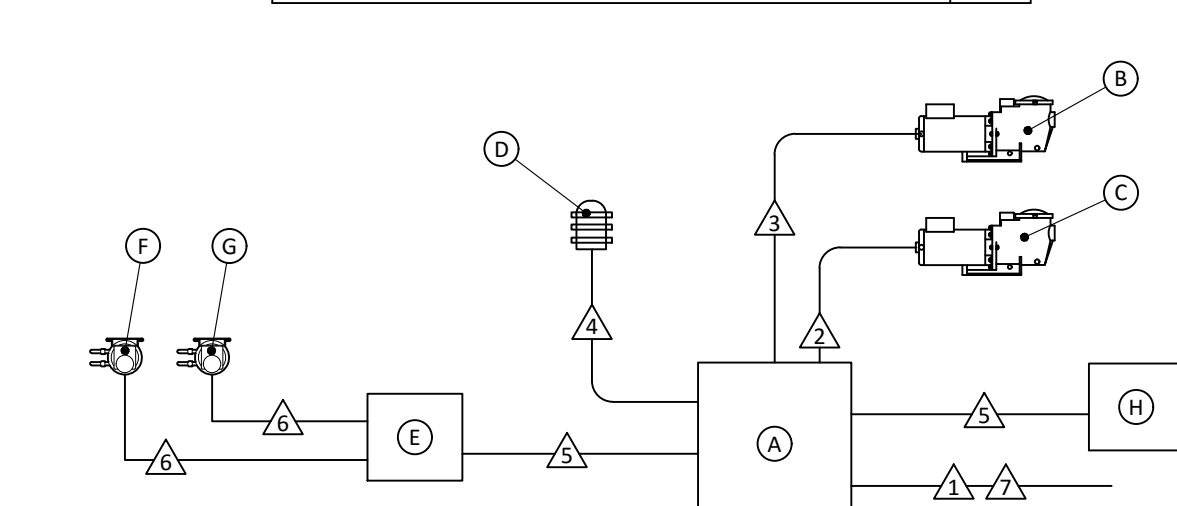
LINE FUNCTION	SIZE
FILTER TANK MAIN DRAIN	10"
GUTTER/SKIMMER	10"
STATIC LINE	2"
RECIRCULATION PUMP SUCTION	8"
RECIRCULATION RETURN	6"
VACUUM LINE TO POOL	2"
VACUUM TO FILTER	2"
VACUUM TO WASTE	2"
FILTER PRECOAT	4"
OVERFLOW	2"
TO HEATER	3"
FROM HEATER	3"

**PANEL SCHEDULE:**

CIRCUIT	POLE	TRIP	LOAD	AMPS
1	3	50A	RECIRC. PUMP W/ (2) INTERLOCKED CHEM. FEEDS	39.4
2	2	20A	VACUUM PUMP	8.0
3	1	15A	SERVICE LIGHT	1.5
4	1	20A	GFCI	3.0
TOTAL MAXIMUM LOAD				51.9

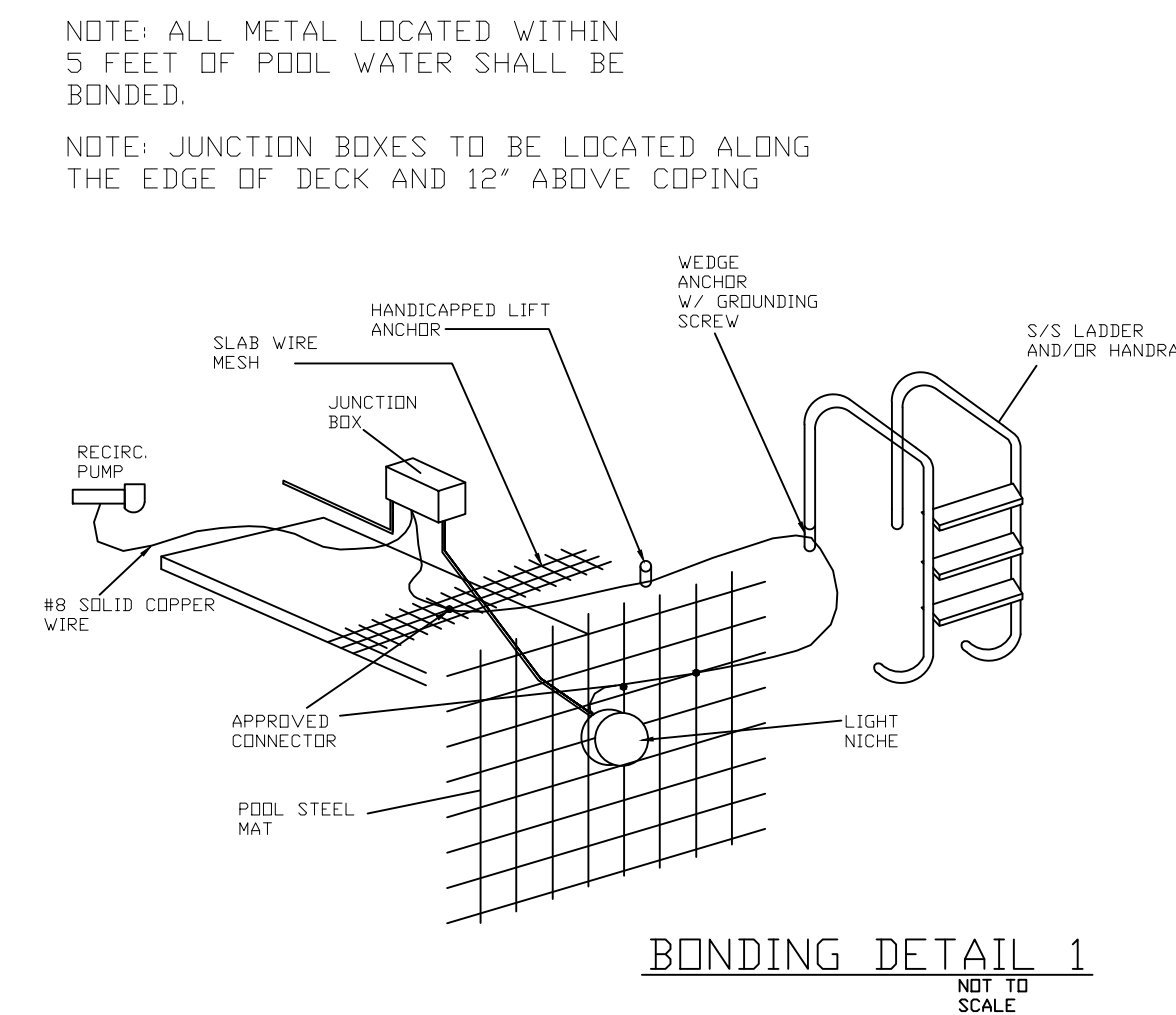
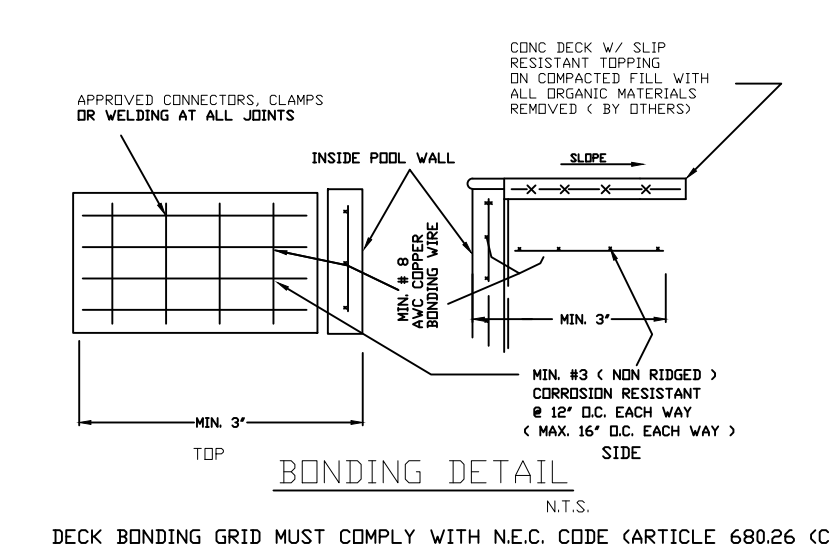
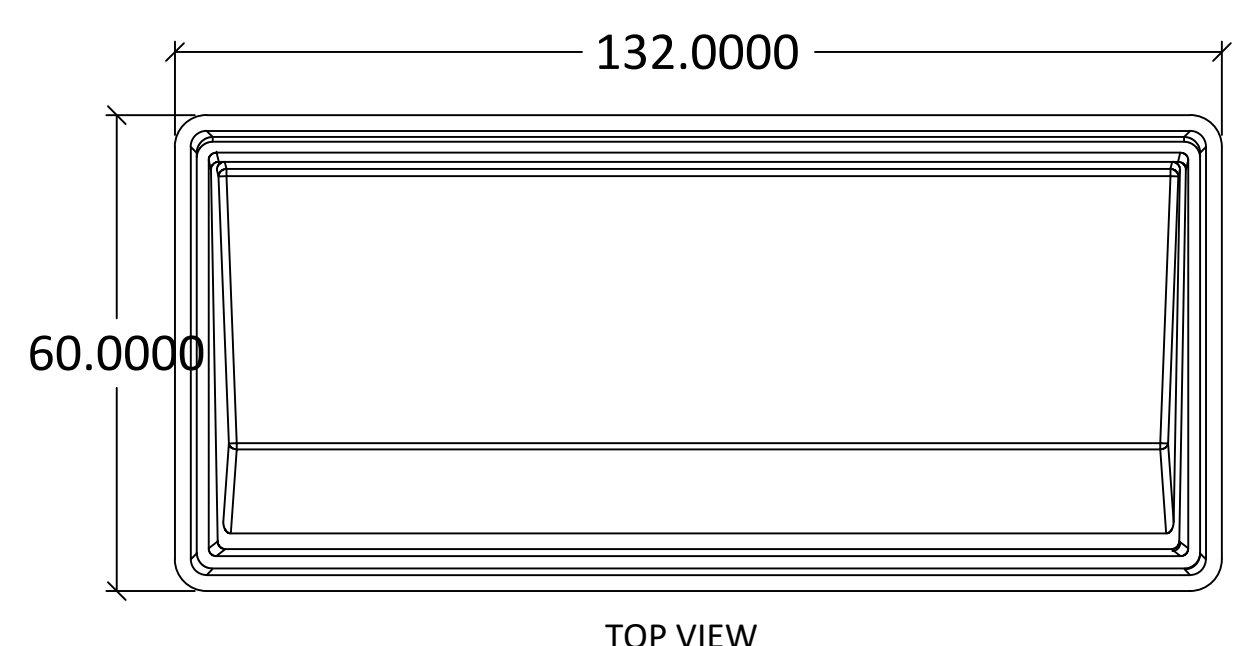
**FEEDER & CIRCUIT SCHEDULE:**

MARK	PHASE	CONDUCTORS	NEUTRAL	GROUND	CONDUIT	PANEL FEED	REMARKS
A	2	#12	1	#12	1/2"	UL SEALTITE	
B	3	#8	1	#8	3/4"	UL SEALTITE	
C	1	#12	1	#12	1/2"	SEALTITE TO LIGHT	
D	1	#12	1	#12	1/2"	SEALTITE TO PANEL	
E	1	#12	1	#12	1/2"	SEALTITE TO PANEL	
CONDUCTORS AND CONDUIT INSTALLED BY OTHERS							



**FIXTURE SCHEDULE:**

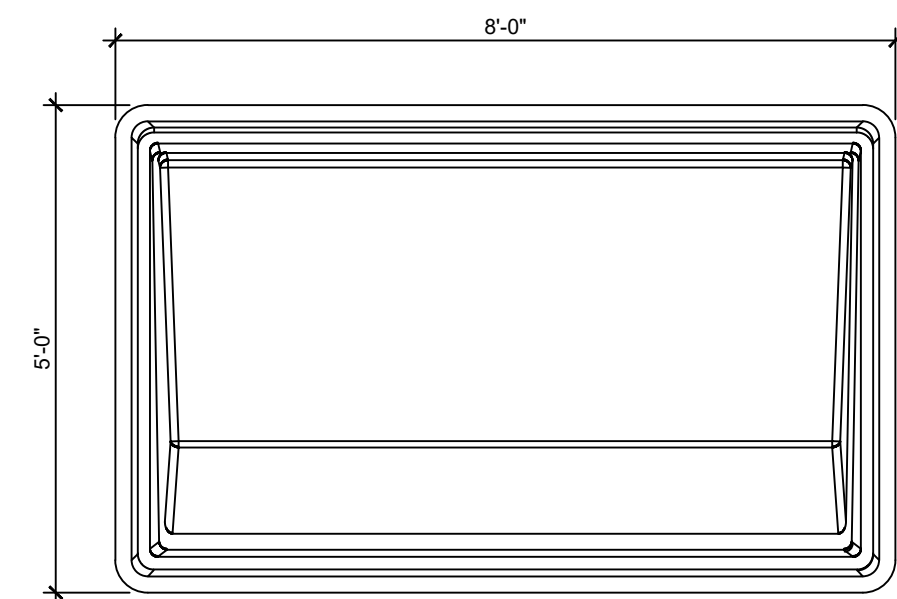
MARK	DESCRIPTION	VOLTAGE	MANUFACTURER & MODEL NO.
A	MAIN LUG BREAKER PANEL (20 CIRCUIT)	208-230/460V	EATON, 3BR1224L125R
B	RECIRCULATION PUMP	208-230/460V	PENTAIR, EQ1-1500, 340035
C	VACUUM PUMP	230V	STA-RITE MAX-E-PRO, P66GF-207L
D	100 WATT SERVICE LIGHT FIXTURE	115V	INTERMATIC, VPK611GCI 100W
E	GFCI	115V	PASS & SEYMOUR
F	CHLORINE FEEDER PUMP	115V	STENNER, 85M5
G	ACID FEEDER PUMP	115V	STENNER, 45M5
H	GFCI	115V	PASS & SEYMOUR



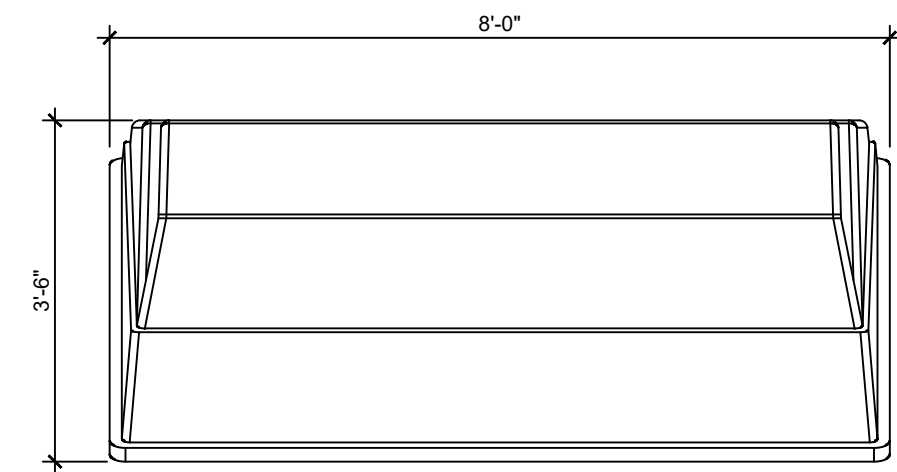
NOTE: ALL METAL LOCATED WITHIN 5 FEET OF POOL WATER SHALL BE BONDED.  
 NOTE: JUNCTION BOXES TO BE LOCATED ALONG THE EDGE OF DECK AND 12" ABOVE COPING

#	Revision Description	Date

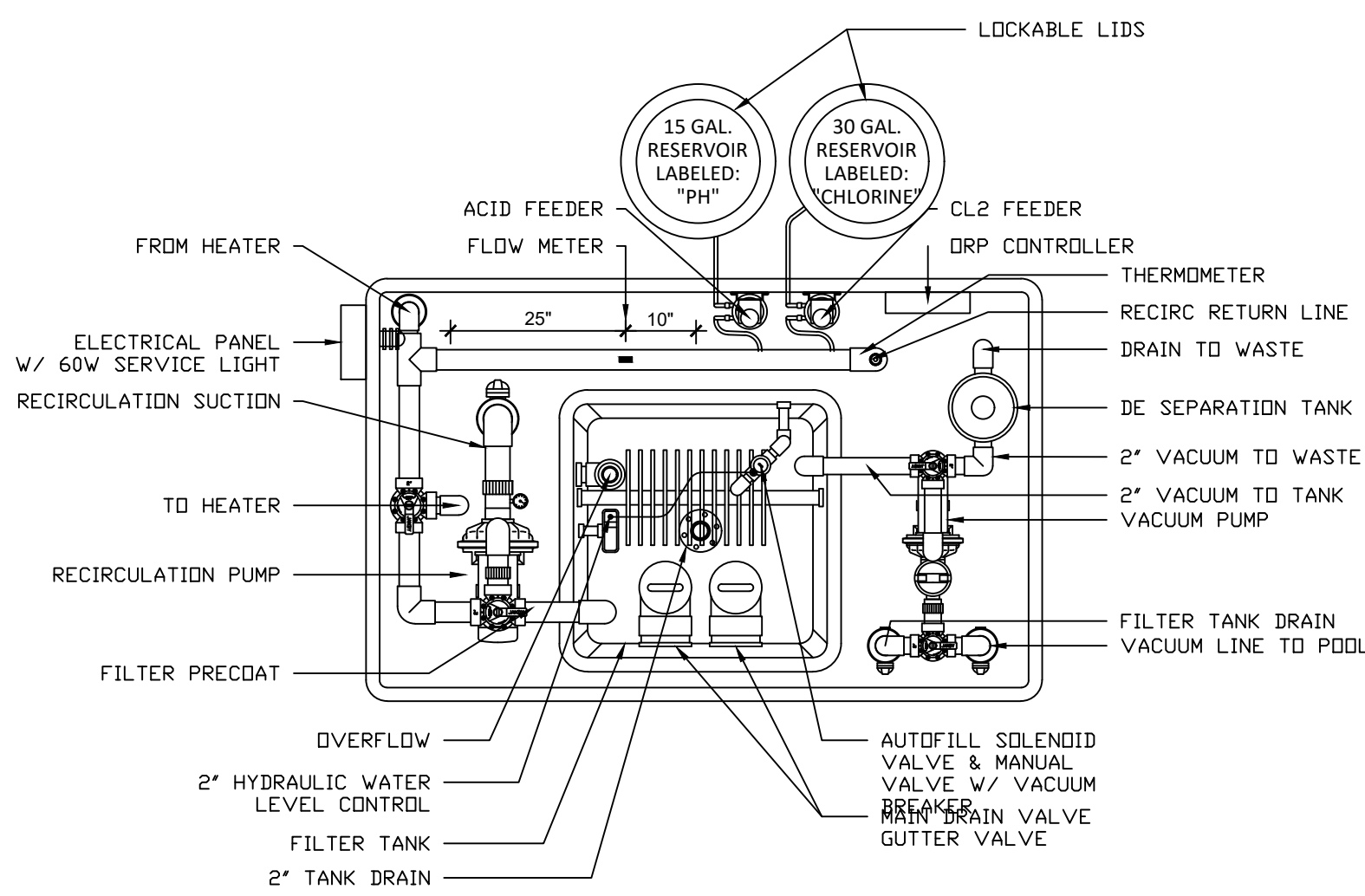
Date: Sept 2, 2016  
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TOP VIEW

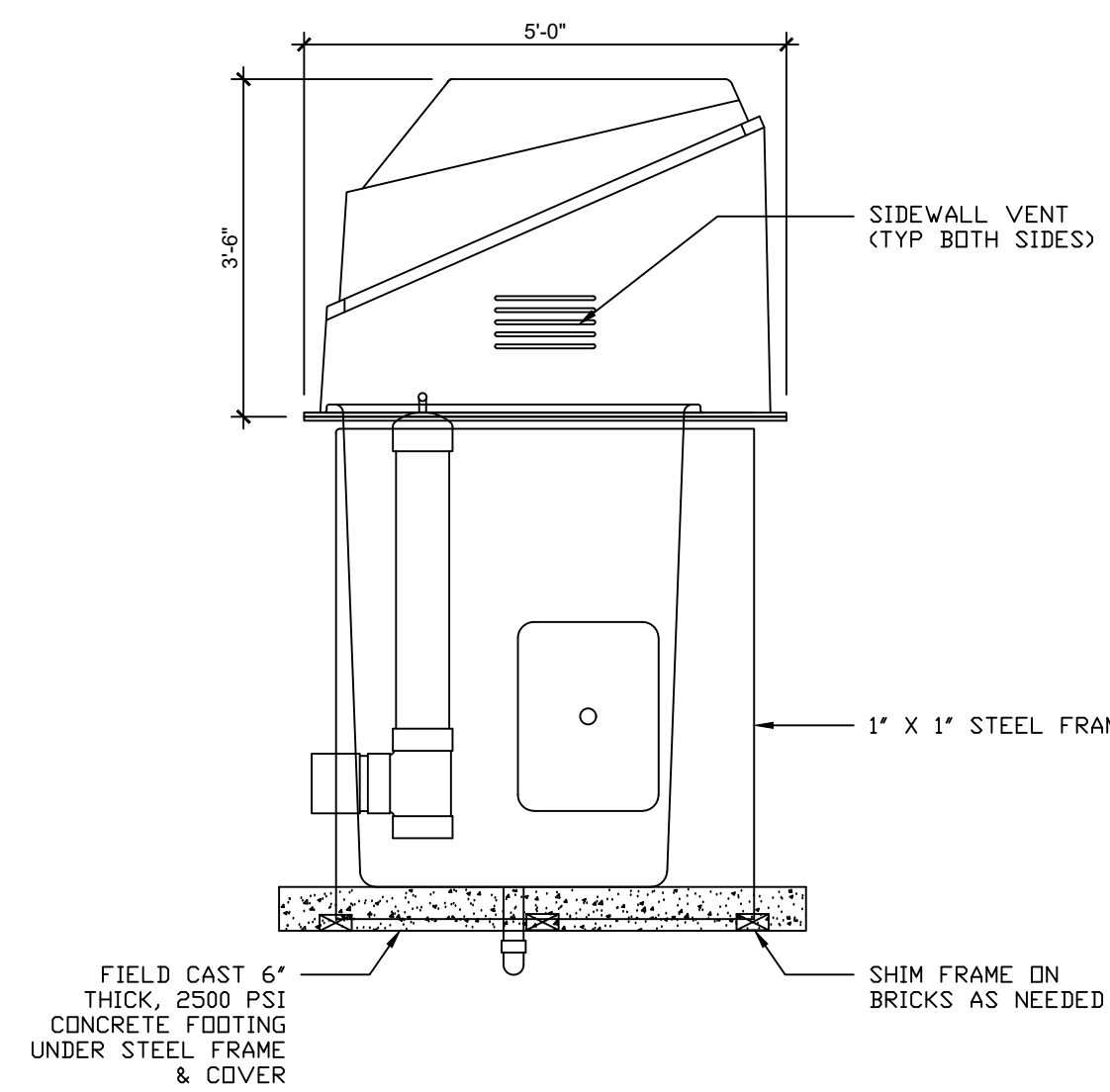


LID FRONT VIEW

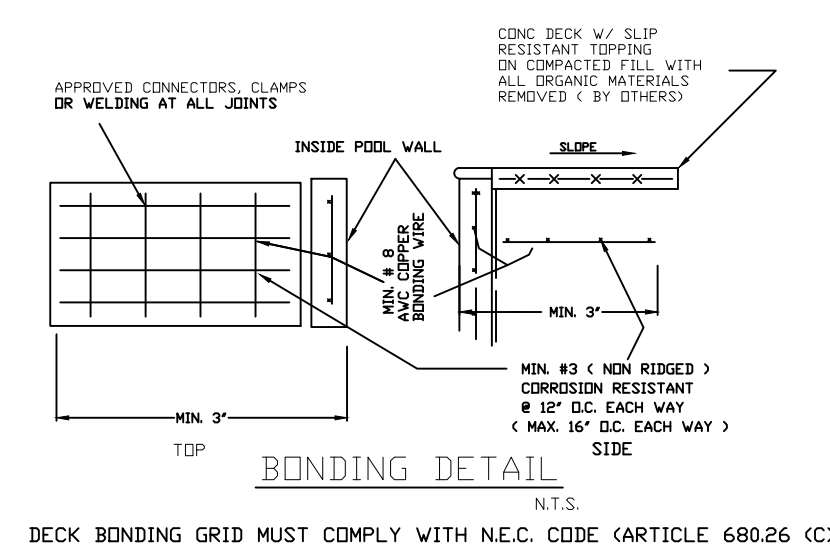


EQUIPMENT PLAN

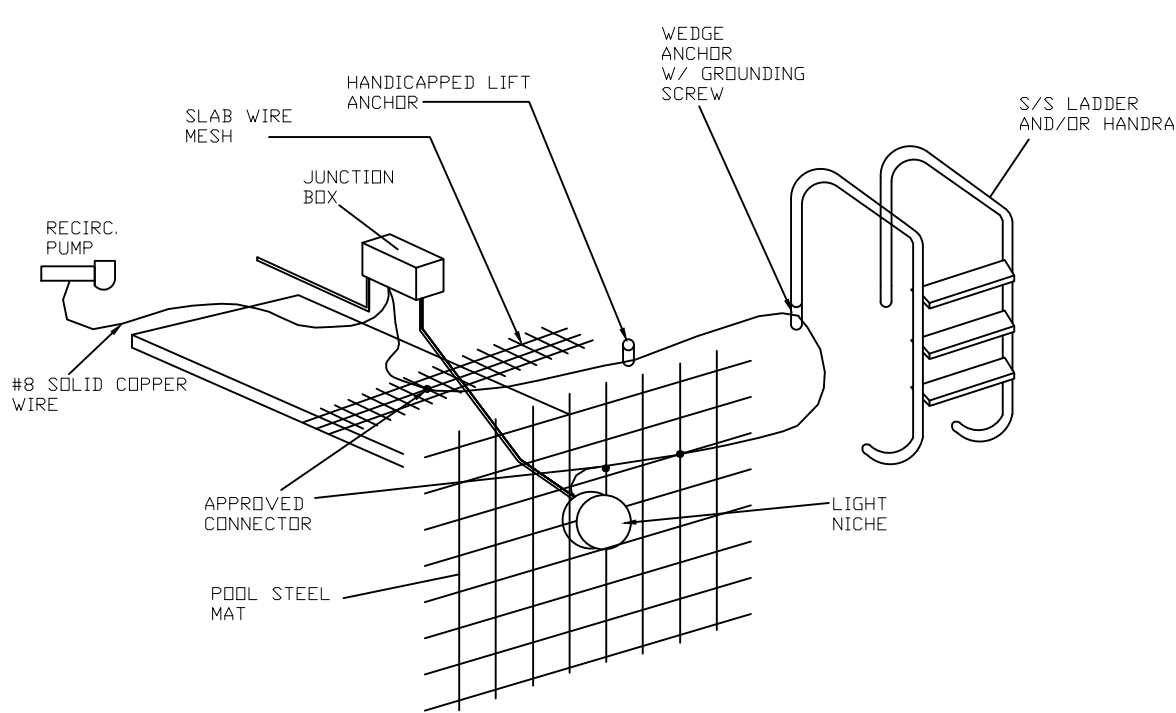
5'x8' CABINET - INTERNAL FILTER TANK



SIDE ELEVATION



BONDING DETAIL



BONDING DETAIL 1  
NOT TO SCALE

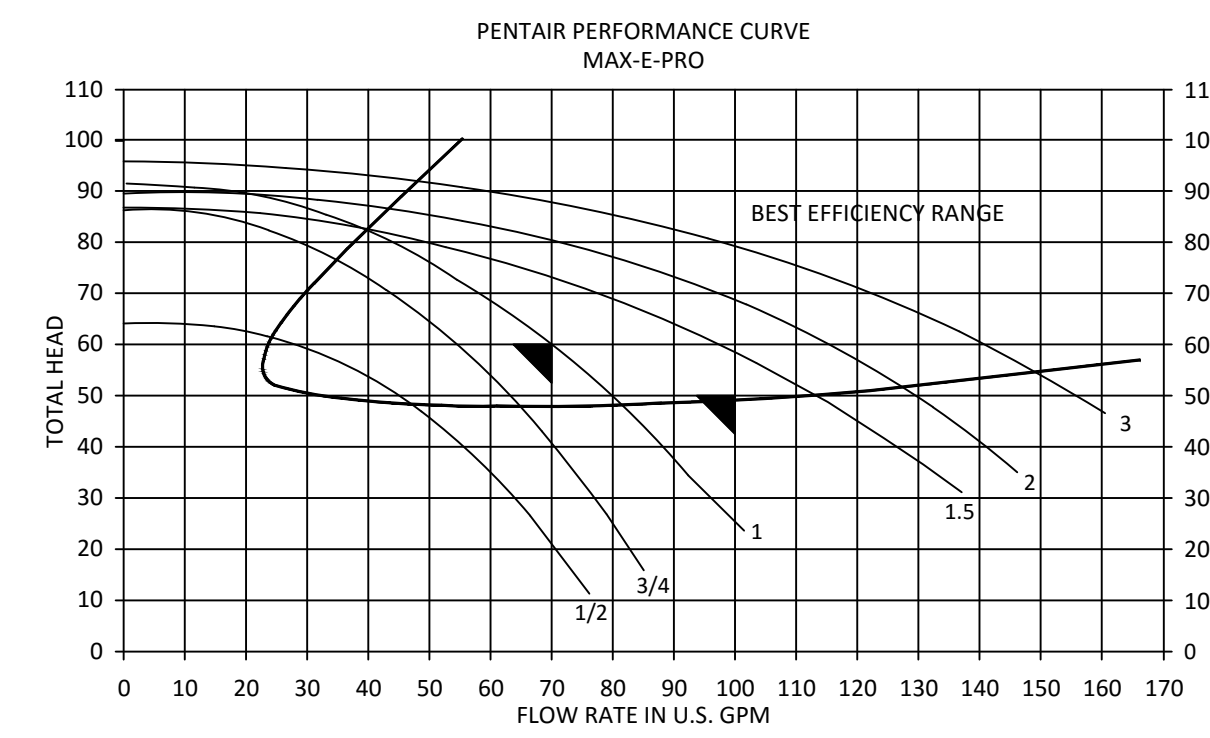
NOTE: ALL METAL LOCATED WITHIN 5 FEET OF POOL WATER SHALL BE BONDED.

NOTE: JUNCTION BOXES TO BE LOCATED ALONG THE EDGE OF DECK AND 12" ABOVE COPING

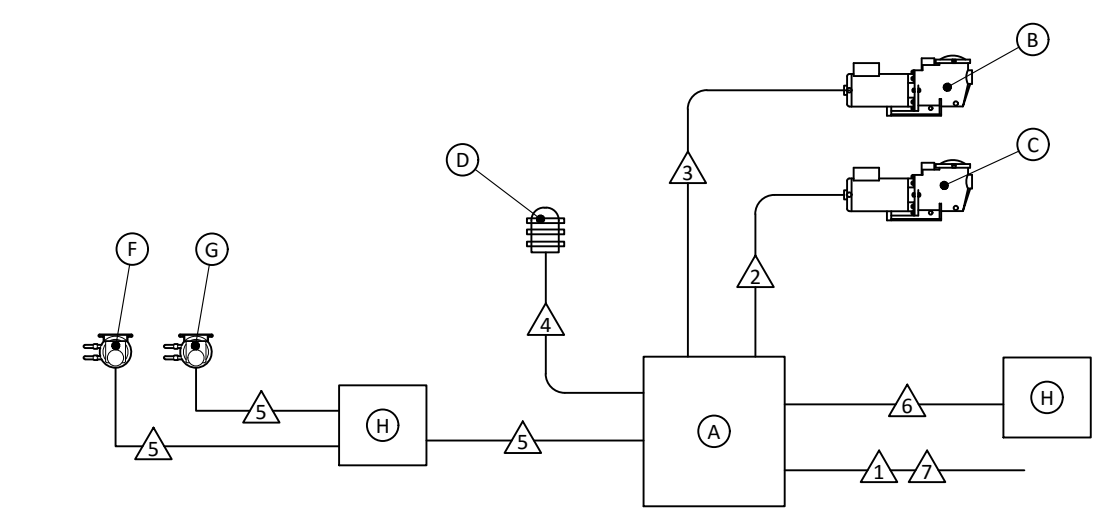
NOTES:

- PLUMBING - ALL PIPE & FITTINGS SHALL BE SCHEDULE 40 PVC PER ASTM D1785 AND N.S.F. APPROVED AND STAMPED FOR POTABLE WATER APPLICATIONS. JOINTS TO BE SOLVENT WELDED PER ASTM D2855. ALL PLUMBING AND MATERIALS TO CONFORM TO FLORIDA BUILDING CODE 2014 - FIFTH EDITION.
- ELECTRICAL - ALL ELECTRICAL EQUIPMENT WIRING, INSTALLATION AND GROUNDING OF POOL COMPONENTS SHALL CONFORM TO NATIONAL FIRE PROTECTION ASSOC. 70, NATIONAL ELECTRICAL CODE (N.E.C.) LATEST EDITION AND ALL APPLICABLE LOCAL CODES. CHEMICAL FEED PUMPS TO BE INTERLOCKED WITH THE RECIRCULATION PUMP.
- EQUIPMENT - ALL PUMPS, FILTERS AND DISINFECTION EQUIPMENT SHALL BE TESTED AND APPROVED BY THE PERTINENT MANUFACTURER USING THE NSF/ANSI STANDARD 50 AND LISTED AS APPROVED BY THE NSF.
- THE FILTER ROOM FLOOR IS SLIP RESISTANT AND SLOPED TO FLOOR DRAINS
- ALL PLASTIC PIPING SUBJECT TO PROLONGED SUNLIGHT EXPOSURE MUST BE COATED TO PROTECT IF FROM ULTRAVIOLET LIGHT DEGRADATION.
- EACH WASTE LINE SHALL HAVE A UNIQUE AIR GAP. WASTE LINES FROM DIFFERENT SOURCES (E.G. POOL, SPA, OVERFLOW, SUMP PUMP) SHALL NOT BE TIED TOGETHER BUT MAY DISCHARGE INTO A COMMON SUMP OR RECEPTACLE.
- THE WASTE LINE MUST BE CONNECTED TO AN APPROVED WASTE DISPOSAL SYSTEM ACCORDING TO LOCAL OR STATE CODES.
- ALL COLLECTOR TANKS SHALL HAVE COVER INTERSECTIONS AND SLOPE TO THE TANK DRAIN.
- AN AUTOMATIC AND MANUAL WATER MAKEUP CONTROL MUST BE PROVIDED TO MAINTAIN THE WATER LEVEL AT THE UP OF THE OVERFLOW GUTTER OR AT THE MOUTH OF THE RECESSED AUTOMATIC SKIMMERS AND MUST DISCHARGE THROUGH AN AIR GAP INTO A FILL PIPE OR COLLECTOR TANK. OVER THE RIM FILL SPOUTS ARE PROHIBITED.
- A RATE OF FLOW INDICATOR, READING IN GPM, SHALL BE INSTALLED ON THE FILTER RETURN LINE. THE RATE OF FLOW INDICATOR SHALL BE PROPERLY SIZED FOR THE DESIGN FLOW RATE AND SHALL BE CAPABLE OF MEASURING FROM ONE HALF TO AT LEAST ONE-AND-ONE-HALF TIMES THE DESIGN FLOW RATE. THE CLEARANCES UPSTREAM AND DOWNSTREAM FROM THE RATE OF FLOW INDICATOR SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION SPECIFICATIONS.
- THESE PLANS HAVE BEEN PREPARED IN COMPLIANCE WITH THE 2014 FLORIDA BUILDING CODE - FIFTH EDITION

AWDE100/12 EQUIPMENT LIST	
RECIRCULATION PUMP	STA-RITE MAX-E-PRO 1.5 HP P666F-207L, SELF PRIMING, 108 GPM @ 50' TDH, THROTTLE TO 75 GPM, 230V, 1φ, 10.4A
VACUUM PUMP	STA-RITE MAX-E-PRO 1 HP P666E-206L, SELF PRIMING, 70 GPM @ 60' TDH, 115/230V, 1φ, 16.0/8.0A
FILTER TANK SIZE	AT215, 215 GALLON CAPACITY
DE FILTER ELEMENTS	(12) - 13.5" x 24" ELEMENTS, 4.5 SQ FT EACH, 54 SQ FT TOTAL
SEPARATOR TANK	DE SEPARATION TANK, 80 SQ. FT.
WATER LEVEL CONTROL	AQUATEK HYDRAULIC VALVE W/ MANUAL FILL VALVE & RESERVOIR
CHLORINE FEEDER	STENNER 45M5, 50 GPD CAPACITY, 110V
CHLORINE RESERVOIR TANK	MIN. 30 GALLON WITH LOCKABLE LID
pH FEEDER	STENNER 45M2, 10 GPD CAPACITY, 110V
pH RESERVOIR TANK	MIN. 15 GALLON WITH LOCKABLE LID
FLOWMETER	BLUE/WHITE F-30250P, 2-1/2", 60 TO 240 GPM RANGE
THERMOMETER	PRECISION INSTRUMENT CO B281-K WITH 1/2" NPT THERMOWELL 30 TO 240°F RANGE
VACUUM GAUGE	WIKA, 0-30 IN HG, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
PRESSURE GAUGE	WIKA, 0-60 PSI, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
CHEMISTRY CONTROLLER	N/A



PIPE AND VALVES CHART	
LINE FUNCTION	SIZE
MAIN DRAIN	4"
GUTTER/SKIMMER	4"
STATIC LINE	2"
RECIRCULATION PUMP SUCTION	3"
RECIRCULATION RETURN	2-1/2"
FILTER PRECOAT	2-1/2"
VACUUM LINE TO POOL	2"
TANK DRAIN	2"
VACUUM TO FILTER TANK	2"
VACUUM TO WASTE	2"
FRESH WATER FILL LINE	1"
OVERFLOW	2"
TO HEATER	2"
FROM HEATER	2"



FEEDER & CIRCUIT SCHEDULE:							
MARK	PHASE	CONDUCTORS	NEUTRAL	GROUND	CONDUIT	REMARKS	
A		2	#12	1	#12	1/2"	PANEL FEED
B		2	#12	1	#12	1/2"	UL SEALTITE
C		1	#12	1	#12	1/2"	SEALTITE TO LIGHT
D		1	#12	1	#12	1/2"	SEALTITE TO PANEL
E		1	#12	1	#12	1/2"	SEALTITE TO PANEL

FIXTURE SCHEDULE:			
MARK	DESCRIPTION	VOLTAGE	MANUFACTURER & MODEL NO.
A	MAIN LUG BREAKER PANEL (20 CIRCUIT)	120/240V	EATON, BR2024NLSR
B	RECIRCULATION PUMP	230V	STA-RITE, MAX-E-PRO, P666F-207L, 1.5 HP
C	VACUUM PUMP	115/230V	STA-RITE, MAX-E-PRO, P666E-205L
D	100 WATT SERVICE LIGHT FIXTURE	115V	INTERMATIC, VPK1G100 100W
E			
F	CHLORINE FEEDER PUMP	115V	STENNER, 45M5
G	ACID FEEDER PUMP	115V	STENNER, 45M2
H	GFCI	115V	PASS & SEYMOUR

PANEL SCHEDULE:					
CIRCUIT	POLE	TRIP	LOAD	REMARKS	AMPS
1	2	20A	RECIRC. PUMP W/ (2) INTERLOCKED CHEM FEEDS		13.8
2	2	20A	VACUUM PUMP		6.9
3	1	15A	SERVICE LIGHT		1.5
4	2	20A	GFCI		3.0
TOTAL MAXIMUM LOAD:					25.2

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Date: Sept 2, 2016  
Drawn by: SAL