

CONSTRUCTION PLANS FOR CITY OF ANN ARBOR PARKS AND REC. MACK INDOOR POOL IMPROVEMENTS

CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN



PROJECT DESCRIPTION

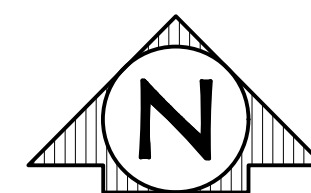
PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF THE EXISTING SAND FILTER AND MAIN PUMP. REMOVE AND REPLACE ALL EXISTING POOL PIPING, ASSOCIATED PNEUMATIC OPERATORS, POOL PUMP COMPONENTS, AND ASSOCIATED ELECTRICAL WORK TO BE INCLUDED. REGROUTING POOL TILES, REPLACEMENT TILES AND WIER COVERS AT SOME LOCATIONS.

SHEET INDEX

- 1 COVER SHEET
- 2 SP-1 MISC. PLANS & DETAILS
- 3 SP-2 NEW MECHANICAL PLAN & ELEVATIONS

LOCATION MAP

SCALE: 1"=200'



PROPERTY ADDRESS

CITY OF ANN ARBOR
MACK INDOOR POOL
715 BROOKS STREET
ANN ARBOR, MI 48103

OWNER INFORMATION

CITY OF ANN ARBOR PARKS AND
RECREATION DEPARTMENT
301 E. HURON STREET
ANN ARBOR, MI 48104

PARCEL INFORMATION

09-09-308-052



Know what's below.
Call before you dig.

PLAN SUBMITTALS AND CHANGES

BIDDING DOCUMENTS	
DATE	DESCRIPTION
----	ISSUED FOR BIDS

REV:

SHT# 1 OF 3

JOB No: 19C0049

PLAN DATE: MARCH 2019
PROJECT MGR: DRS
REVIEWER: DAS
SCALE: 1" = 200'

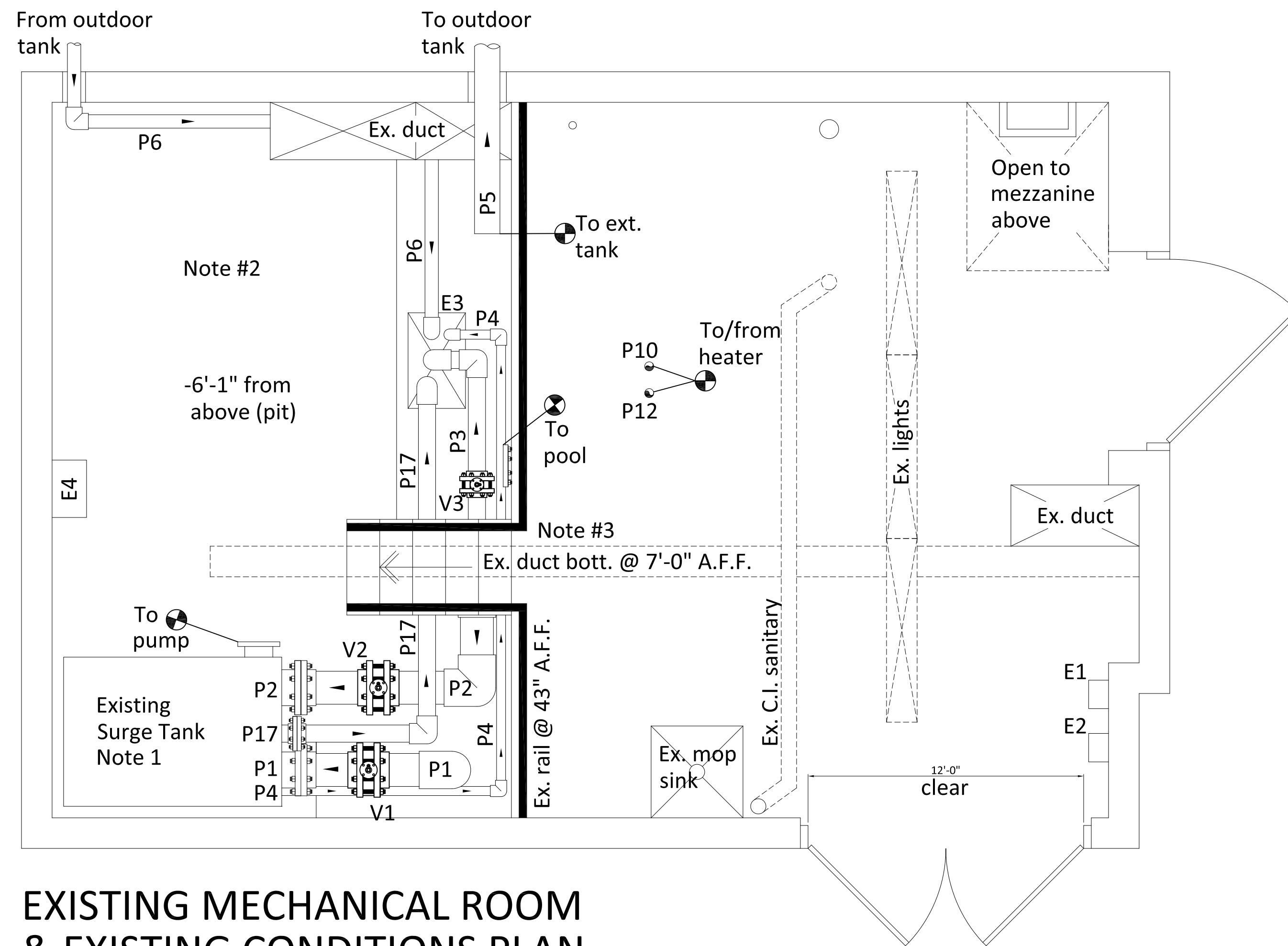
ROWE PROFESSIONAL SERVICES COMPANY



The Rowe Building
540 S. Saginaw St., Suite 200
Flint, MI 48502

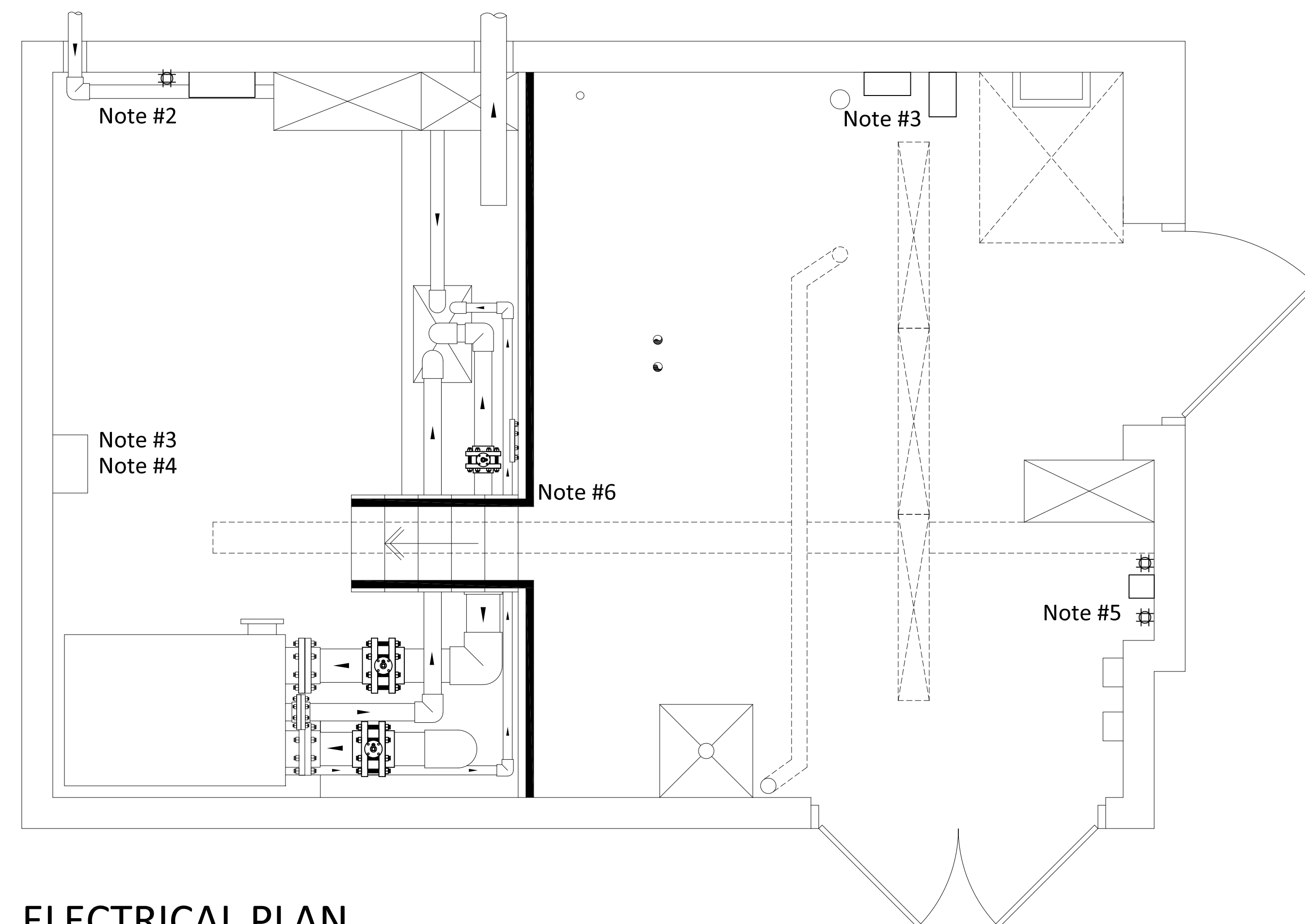
O: (810) 341-7500
F: (810) 341-7573
www.rowepsc.com

PREPARED FOR
**CITY OF ANN ARBOR PARKS AND REC.
MACK INDOOR POOL IMPROVEMENTS**
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN
COVER SHEET



EXISTING MECHANICAL ROOM & EXISTING CONDITIONS PLAN

SCALE: 1/2" = 1'-0"



ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

Demo & Ex. Equipment Notes:

Note #1- Existing surge tank approx. 693 gallons. Tank is to be re-used. Provide new PVC diversion valve in existing tank. Variance will be required to retain existing surge tank as it is undersized.

All flanged connections to surge tank are to have existing hardware replaced with stainless steel hardware and gaskets replaced with new EPDM gaskets.

Note #2- Completely remove existing steel sand filter, media, piping not scheduled to remain and all other equipment not scheduled to remain. Remove ex. pump pad.

Note #3- Remove uni-strut hoist beam and "H" rack above existing stairs in its entirety

Pipe Notes:

- P1- Install new valve per schedule
- P2- Install new valve per schedule
- P3- Install new valve per schedule
- P4- Remove ex. ball valve and replace with new ball valve per schedule
- P5- Cut pipe to backwash tank and connect new backwash piping as shown
- P6- Remove ex. ball valve and replace with new butterfly valve per schedule

Pool Filtration Data	
Pool Gallons:	167,000 GAL
Turnover:	6.0 HR
Turnover Rate:	464 GPM
Pool Area:	4,452 SQFT
Pool Perimeter:	296 LF
Existing Gutter:	Gutter has weirs
Filter Area:	30.8 SQFT
Filtration Rate:	15.07 GPM/SQFT < 20 GPM/SQFT

Electrical Notes:

Pool contractor is responsible for contracting with a licensed electrician in the State of Michigan for all electrical work required for installation of new filter, included but not limited to the following:

1. Bonding of new equipment to existing loop
2. Provide 115 volt, 20 amp GFCI protected quad outlet at UV control panel location. Dedicated
3. Provide new feeders from new VFD to new pump, including feeders for ex. motor starter
4. Disconnect existing motor starter and convert starter into disconnect. Insure functionality of chemical controller interlock remains intact
5. Provide two (2) quad outlets at location of new auto fill control box, 115 volt, 20 amp dedicated
6. Relocate existing Vantage pump power from unistrut leg over to wall adjacent to new Accu-Tab feeder. Re-route outlet that is fed from chemical controller to same area

All new control and power wiring is to be installed in schedule 40 rigid PVC conduit or flexible liquid tight conduit

All new feeders to be THWN coated copper wire

All electrical work must be permitted by the authorities having jurisdiction and inspected and passed by the same

All electrical work is to be assumed to be provided from Owner's existing 208/120 3-phase panel on mezzanine

Equipment Schedule		
Tag	Description	Qty.
E1	Existing CO2 feeder is to remain intact. Contractor to salvage ex. diffuser and re-install in new process plumbing with new tubing	1
E2	Existing chemical controller is to remain intact. Existing flow cell is to remain intact. Provide new tubing and 1/2" isolation true union ball valve from new process plumbing to flow cell inlet. Outlet to surge	1
E3	Existing drain sump is to remain intact	1
E4	Existing stainless steel pump motor starter is to remain intact. See electrical plans for modifications required to integrate existing starter into new VFD / by-pass panel configuration	1
E5	8" PVC diversion valve by Neptune Benson model #DVYMCAPVC08	1
E6	6" fiberglass strainer w/ two (2) stainless steel baskets by Neptune Benson model #1500NBF06GR1 strainer & NBBSK08EP baskets	1
E7	5" x 6" fiberglass eccentric reducer model #15006X5ECSFG by Neptune Benson- use top port for vacuum gauge	1
E8	New filtration pump by Bell & Gossett, Series e-1351, Model #48D. Pump capable of 464 gpm at 75' of TDH. Motor to be TEFC w/ premium efficiency and variable speed. 208 volt, 3 phase	1
E9	6" x 4" fiberglass concentric reducer model #15006X4CNSFG by Neptune Benson- install on head of pump	1
E10	New high rate sand filter by Neptune Benson model #6048SHFFG-3WLO-6 w/ linked face plumbing, site glass, auto air relief valve and bottom drain. Use rinsed 1/8" - 1/4" pea gravel support media to top of under drain laterals. Use only .45mm - .55mm #20 silica sand by TDS AquQuartz ONLY!!	1
E11	New Signet flow sensor model #2536 (blue cap) in PVC Signet saddle. Run wire to VFD aquatic controller in by-pass panel and set up system to run off of flow	1
E12	New low pressure ultra violet light disinfection system. Sentry UV by ChlorKing model #5AG720-A w/ amalgam bulbs. 110 volt, 7.2 amp system. Include control panel and strainer	1
E13	6" strainer spool provided with UV package. Install after UV effluent	1
E14	UV control panel w/ pressure switch. Plumb to pressure side of pump	1
E15	New calcium hypochlorite chlorination system by Accu-Tab model #3075 powerbase. Install with true union Y strainer on effluent and true union y check valve on effluent. Install cleaning loop	1
E16	New variable frequency drive by H2Flow model #EF-C-46-12-2. Include by-pass panel and aquatic controller. Program VFD for 6 hour turnover during operational hours and 8 hour turnover during unoccupied times. Integrate VFD w/ Signet flow meter. Verify voltage of pump before final order	1
E17	New auto-fill, Levelor model #K-1100. Install off of existing fresh water line in pit. Provide stilling well detail in existing surge tank and install sensor. Provide solenoid w/ isolation valves as shown	1
E18	6.5" Terice adjustable thermometer and brass well. Not shown	3
E19	4" dia. liquid filled compound gauges. Not shown	4

Pipe Schedule- Sch. 80 u.n.o.		
Tag	Size	Description
P1	8"	Main drain line- existing to remain intact
P2	8"	Gutter line- existing to remain intact
P3	4"	Gutter to waste- modified, see demo notes
P4	2"	Surge tank drain- modified, see demo notes
P5	6"	Backwash line out- modified, see demo notes
P6	3"	Treated backwash line in- modified, see demo notes
P7	6"	Pump influent line
P8	6"	Pump effluent line / filter influent line
P9	6"	Filter effluent line / return line
P10	2"	Heater influent line
P11	2"	Chlorinator influent line
P12	2"	Heater effluent line
P13	2"	Chlorinator effluent line
P14	6"	UV influent line
P15	6"	UV bypass line
P16	6"	UV effluent line
P17	4"	Surge tank overflow- existing to remain intact
P18	1"	Auto-fill line to surge tank

Valve Schedule			
Tag	Size	Description	Position
V1	8"	Butterfly valve w/ wheel operator (main drain isolation)	N.O.
V2	8"	Butterfly valve w/ wheel operator (gutter isolation)	N.O.
V3	4"	Butterfly valve w/ lever operator (gutter to waste)	N.C.
V4	2"	Sch. 80 PVC true union ball valve (surge tank drain) (not shown)	N.C.
V5	3"	Butterfly valve w/ lever operator (backwash in isolation)	N.C.
V6	6"	Butterfly valve w/ lever operator (surge tank isolation)	N.O.
V7	6"	Butterfly valve w/ lever operator (strainer isolation)	N.O.
V8	6"	Double door spring loaded check valve	N.O.
V9	6"	Butterfly valve w/ lever operator (pump throttle / isolation)	N.O.
V10	6"	Butterfly valve w/ chain operator (heater by-pass)	N.O.
V11	2"	Sch. 80 PVC true union ball valve (heater influent isolation)	N.O.
V12	2"	Sch. 80 PVC true union ball valve (chlorinator influent isolation) (not shown)	N.O.
V13	2"	Sch. 80 PVC true union ball valve (chlorinator cleaning line bypass) (not shown)	N.C.
V14	2"	Sch. 80 PVC true union ball valve (heater effluent isolation)	N.O.
V15	2"	Sch. 80 PVC true union ball valve (chlorinator effluent isolation) (not shown)	N.O.
V16	6"	Butterfly valve w/ lever operator (UV influent isolation)	N.O.
V17	6"	Butterfly valve w/ chain operator (UV by-pass)	N.C.
V18	6"	Butterfly valve w/ lever operator (UV effluent isolation)	N.O.
V19	6"	Butterfly valve w/ lever operator (return isolation)	N.O.
V20	1"	Sch. 80 PVC true union ball valve (solenoid influent isolation)	N.O.
V21	1"	Electronic solenoid valve provided with auto-fill system	N.C.
V22	1"	Sch. 80 PVC true union ball valve (solenoid effluent isolation)	N.O.

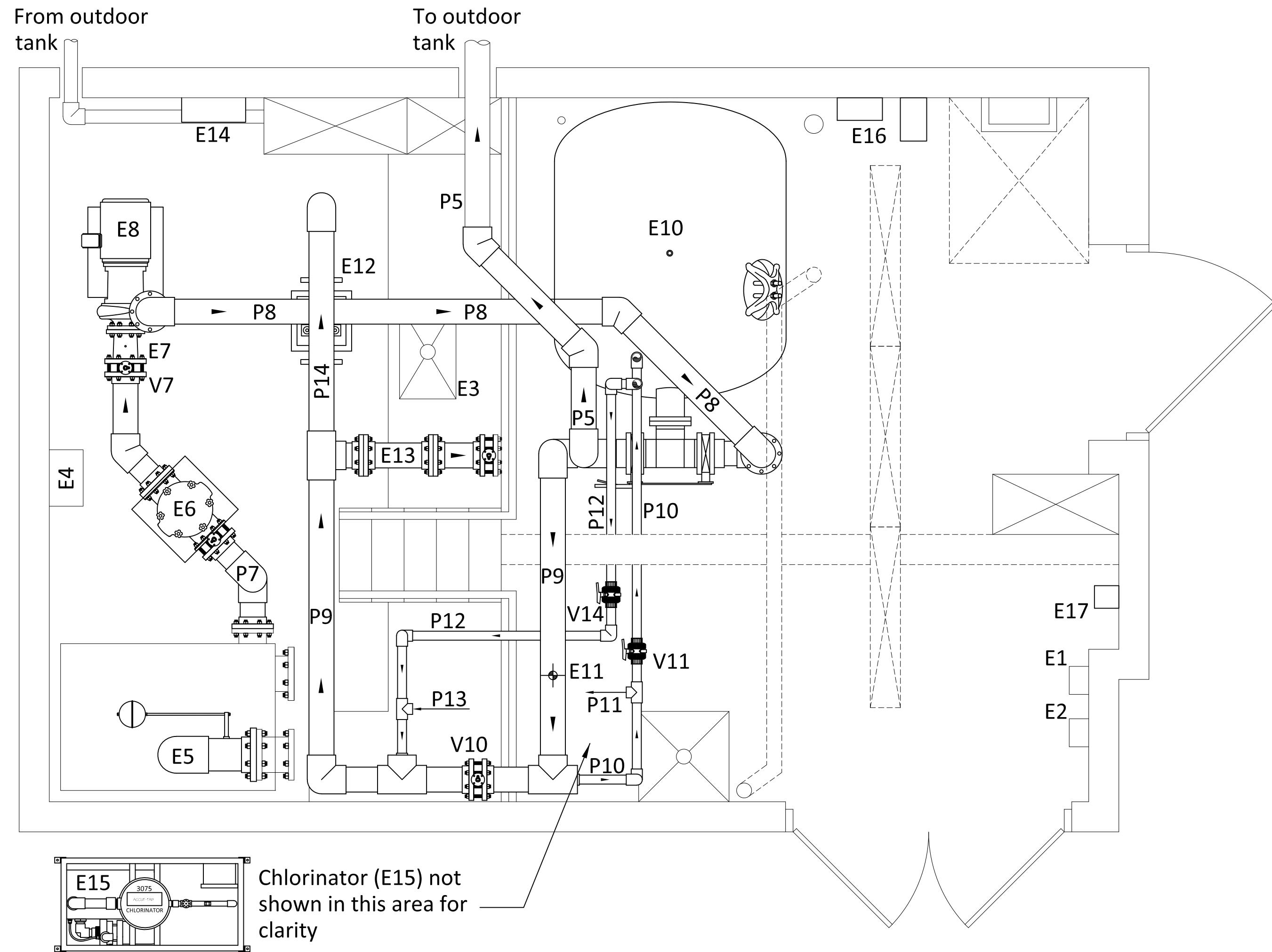
PROJECT #
04-19

Architect Information:
House - Seaman Architects, PLLC
5797 Felske Road
Brighton, MI 48116 phone : (810) 531-1902

Project: Mack Indoor Pool
New Mechanical Room
715 Brooks Street
Ann Arbor, MI 48103
SP #: 81-2770-01
Permit: 03/25/19 Construction: 00/00/00
Revision: 00/00/00

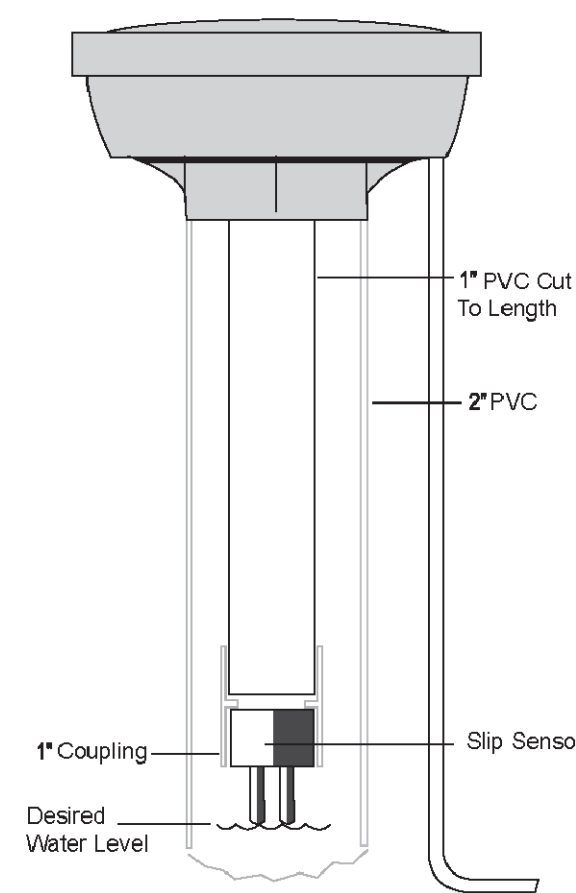
Drawing: Demo & Electrical
Schedules
Scale: 1/2" = 1'-0"
Date: 03-25-19

SP-1
SHEET #



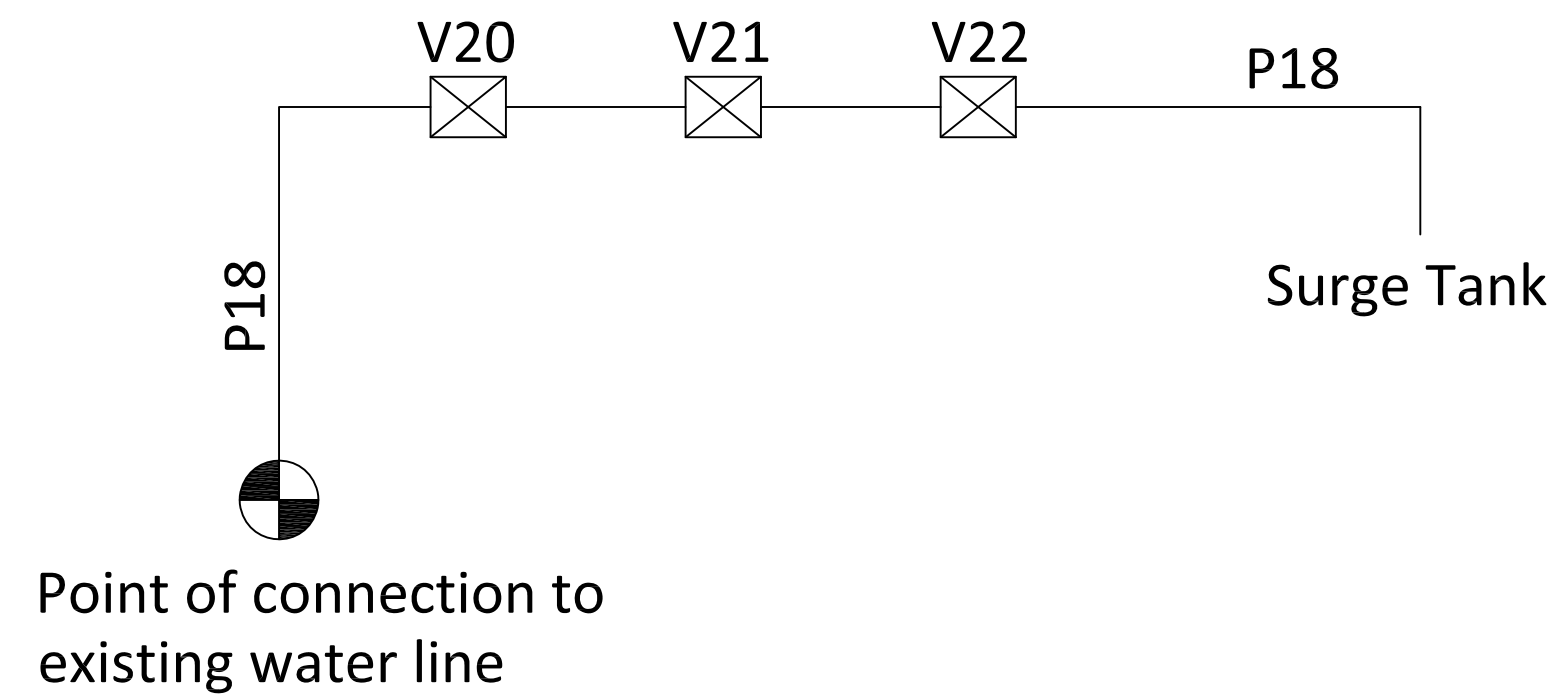
NEW MECHANICAL ROOM PLAN

SCALE: 1/2" = 1'-0"



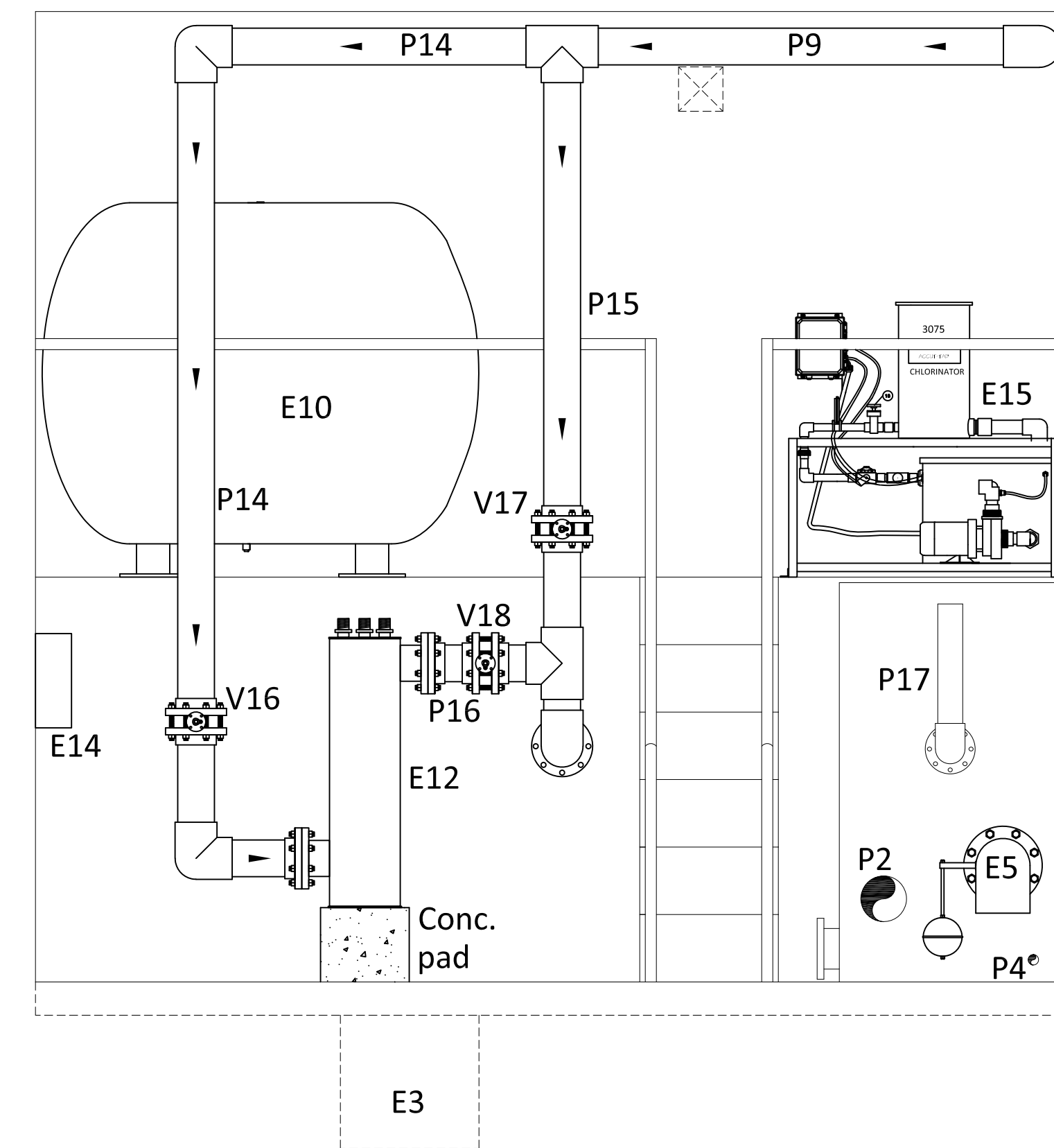
AUTO-FILL SENSOR DETAIL

SCALE: none



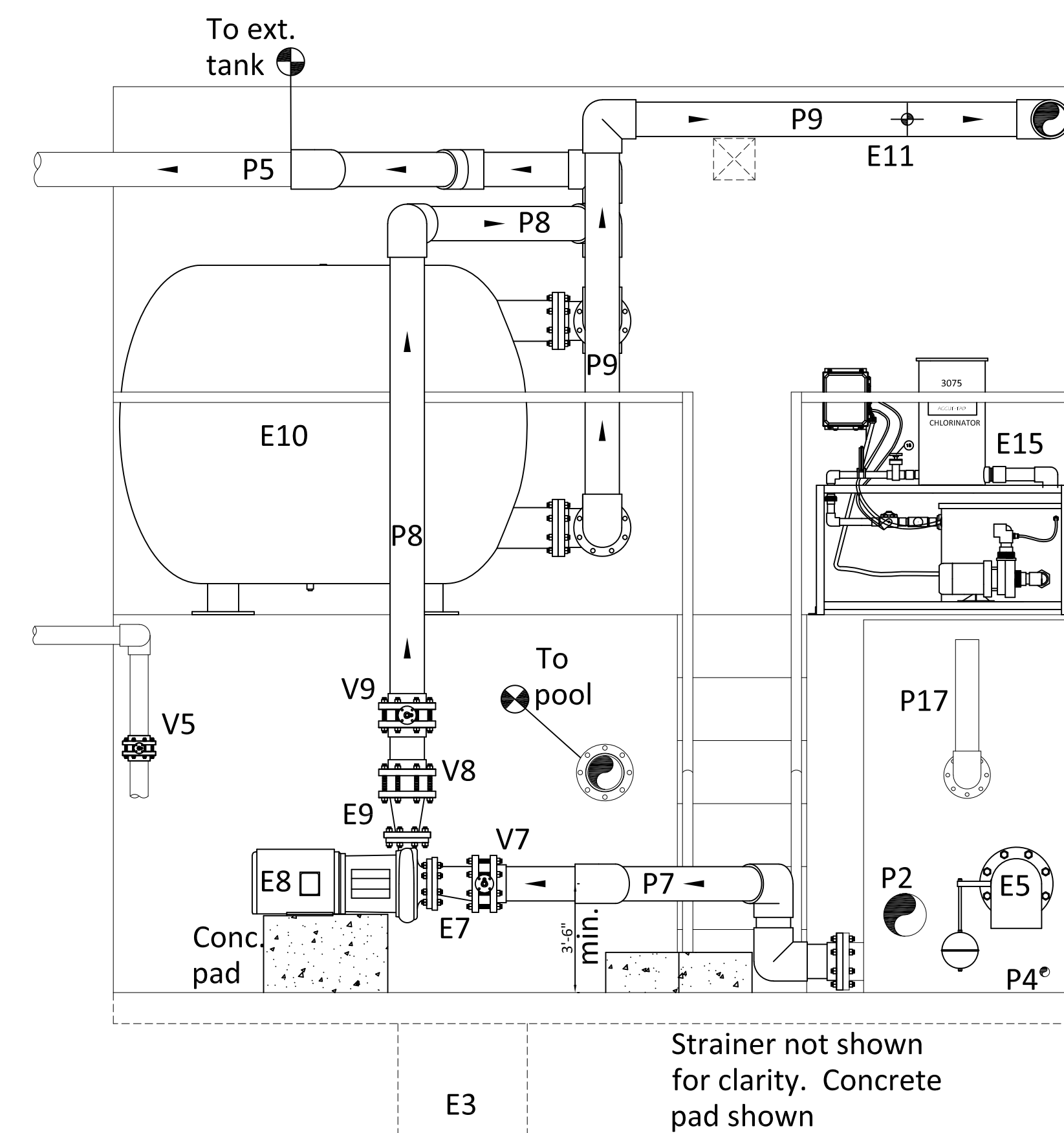
AUTO-FILL PIPING DETAIL

SCALE: none



U.V. PIPING ELEVATION

SCALE: 1/2" = 1'-0"



PUMP & FILTER PIPING ELEVATION

SCALE: 1/2" = 1'-0"

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Permit: 03/25/19 Construction: 00/00/00
Revision: 00/00/00

Drawing: New Mech. Rm. Plan
Auto-Fill Detail
Scale: 1/2" = 1'-0"
Date: 03-25-19

SP-2

SHEET #