CHEMKA POOL STORM DAMAGE 2021 RECOVERY

CHEMKA POOL PARK

JUNE 2022

OWNER

VILLAGE OF HASTINGS-ON-HUDSON DEPARTMENT OF PARKS AND RECREATION

HASTINGS ON HUDSON, NEW YORK 10706

ENGINEER

RIMKUNAS ENGINEERING, P.L.L.C.

AQUATIC ENGINEERING AND CONSTRUCTION MANAGEMENT
44 ELM STREET, SUITE 10
HUNTINGTON, NY 11743
631-470-6115

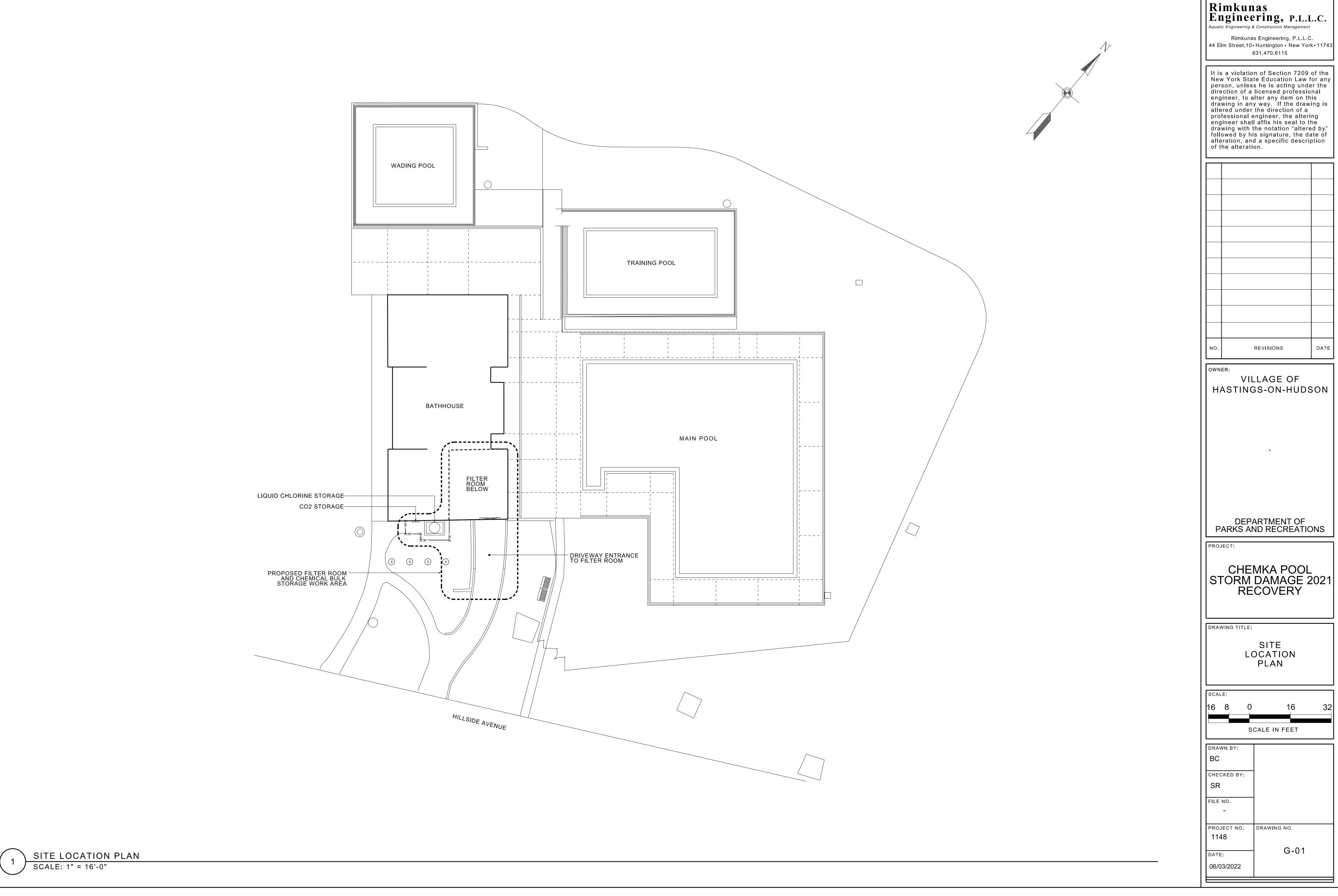
D.O.H. APPROVAL



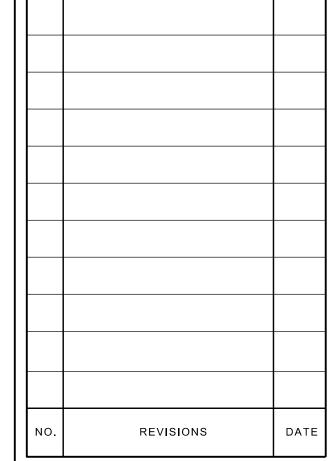
NOTE:
AUTHORIZED PROFESSIONAL ENGINEER
WILL CERTIFY THAT CONSTRUCTION
IS COMPLETED IN ACCORDANCE
WITH APPROVED DRAWINGS.

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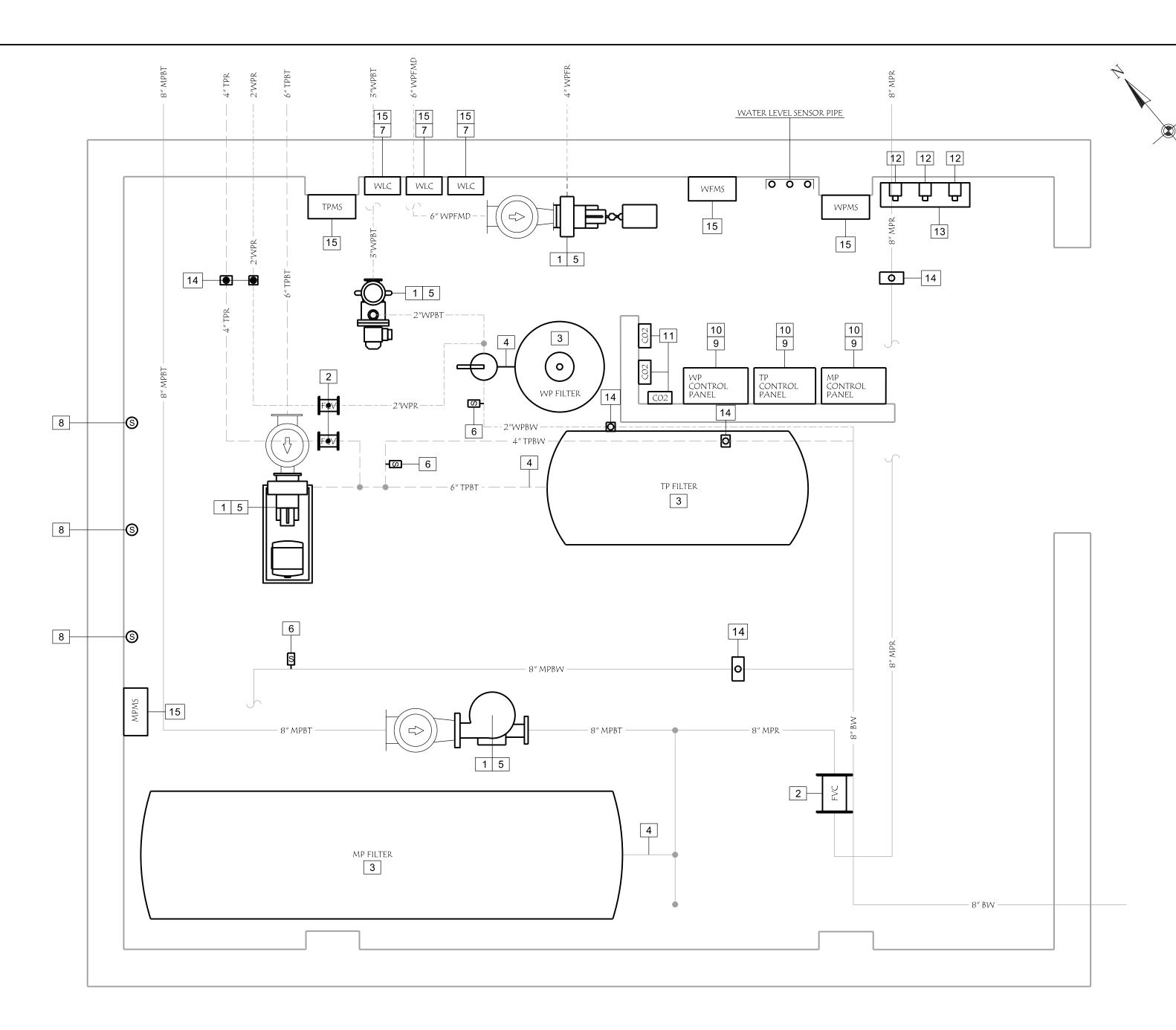
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5011 521)	SP-3	EXISITNG TRAINING POOL HYDRAULIC SCHEMATIC					
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PROJECT ENGINEER:



CHEMKA POOL STORM DAMAGE 2021 RECOVERY



LEGEND

MP MAIN POOL

TP TRAINING POOL

WP WADING POOL

WF WATER FEATURE

LLC LIQUID LEVEL CONTROL

WL WATER LEVEL

BT BALANCE TANK

BW BACKWASH
FMD FEATURE MAIN DRAIN PIPE

FR FEATURE RETURN PIPE

R FILTER RETURN

ST SURGE TRENCH

CO2 CO2 FEEDER

CC CHEMICAL CONTROLLER

FM FLOW METER

FLOW CONTROL VALVE

FLOW SENSOR

LIQUID CHEMICAL FEEDER

SIGHT GLASS

SOLENOID VALVE

GENERAL NOTES:

NOT ALL POOL PIPING AND ACCESSORIES SHOWN FOR CLARITY.

PRESERVE BONDING WIRE DURING DEMOLITION.

STRUCTURAL STEEL FRAMING NOT SHOWN.

THE DRAWINGS SHOW LOCATION OF ALL PIPING AND EQUIPMENT AND INDICATE THE REQUIRED SIZE AND POINTS OF TERMINATION OF THE PIPING AND SUGGEST PROPER ROUTING OF SAME. HOWEVER IT IS NOT THE INTENTION OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS, OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS WORK IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR WITHOUT FURTHER CONSTRUCTION OR COST WHILE MEETING MANUFACTURER'S RECOMMENDED INSTALLTIONS AND PRESERVING THE INTENT OF THE DESIGN.

ALL STRAINERS PROTECTING RECIRCULATION PUMPS ARE TO REMAIN AND BE REUSED, EXCEPT FOR THE INTEGRAL STRAINER FOR THE WADING POOL RECIRCULATION PUMP.

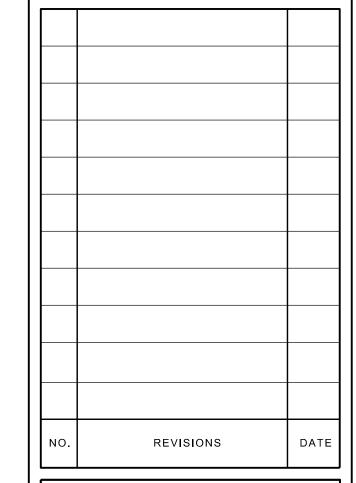
TAG	NOTE	MP	TP	WP	
G	ELECTRICAL DEMOLITION TO BE COMPLETED PRIOR TO FILTRATION EQUIPMENT DEMOLITION AND FILTER ROOM CLEAN OUT.				
G	NO ELECTRICAL NEW WORK TO BE COMPLETED PRIOR TO FILTRATION EQUIPMENT DEMOLITON AND FILTER ROOM CLEAN OUT.				
G	REMOVE RECIRCULATION PUMPS AND OPEN HAIR AND LINT STRAINERS, PRIOR TO START OF FILTER ROOM CLEAN OUT.				
G	POWER WASH INTERIOR OF FILTER ROOM TO REMOVE MUD AND DEBRIS FROM SURFACES OF WALLS, CEILING, FLOOR, PIPES, FILTERS AND REMAINING CONTROL BOXES. FILTER ROOM AND EQUIPMENT TO BE CLEANED OF ALL MUD AND DEBRIS.				
G	ALL POOL PIPING SYSTEMS (TYP. 4) ARE TO BE FLUSHED CLEAR INTO THE FILTER ROOM. MUD AND DEBRIS TO BE REMOVED FROM FILTER ROOM. FILTER ROOM TO BE CLEANED OF ALL MUD AND DEBRIS.				
G	ALL EQUIPMENT MARKED TO BE REMOVED SHALL BE REMOVED AND DISPOSED OF OFFSITE IN A LEGAL MANOR.				
1	REMOVE RECIRCULATION PUMP.	X	X	Х	
2	REMOVE GRISWOLD FLOW CONTROL VALVE FROM RECIRCULATION SYSTEM (TYP. 3) SEE PROPOSED PLAN FOR PIPING SPOOL REPLACEMENT.	X	Х	х	
3	REMOVE FILTER MEDIA FROM HRS FILTER (TYP. 3)	X	X	Х	
4	REMOVE 2 - PRESSURE GAUGES AT EACH FILTER FACE PANEL.	X	X	Х	
5	REMOVE VACUUM AND PRESSURE GAUGE AT EACH RECIRCULATION PUMP.	X	Х	Х	
6	REMOVE SIGHT GLASS FROM BACKWASH PIPE.				
7	REMOVE MAKE UP WATER CONTROLLER AND WIRING. ENCLOSURE TO REMAIN. (TYP. 3)	X	X	Х	
8	REMOVE SOLENOID VALVE FROM AUTOMATIC MAKE-UP WATER SYSTEM LOOP. (TYP. 3)	X	X	Х	
9	REMOVE EXISTING CONTROL PANEL INCLUDING ENCLOSURE, AND ALL CONTROLS. (TYP. 3)	X	X	X	
10	REMOVE CHEMICAL CONTROLLER AND FLOW CELL. (TYP. 3)	X	X	X	
11	REMOVE CO2 FEDER. (TYP. 3)	X	X	X	
12	REMOVE LIQUID CHLORINE FEEDER AND FLEXIBLE FEED TUBING SUPPLY AND DISCHARGE. (TYP. 3)	X	X	X	
13	REMOVE SHELF FOR CHLORINE FEEDER	X	X	Х	
14	REMOVE ROTORY PADDLE WHEEL FLOW SENSOR AND WIRING	X	X	Х	
15	SEE ELECTRICAL DEMOLITION DRAWING	X	X	X	

PROJECT ENGINEER:

Rimkunas Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10• Huntington• New York•11743 631.470.6115

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OWNE

VILLAGE OF HASTINGS-ON-HUDSON

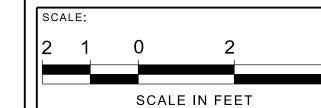
DEPARTMENT OF PARKS AND RECREATIONS

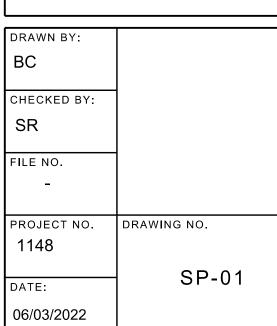
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CHEMKA POOL STORM DAMAGE 2021 RECOVERY

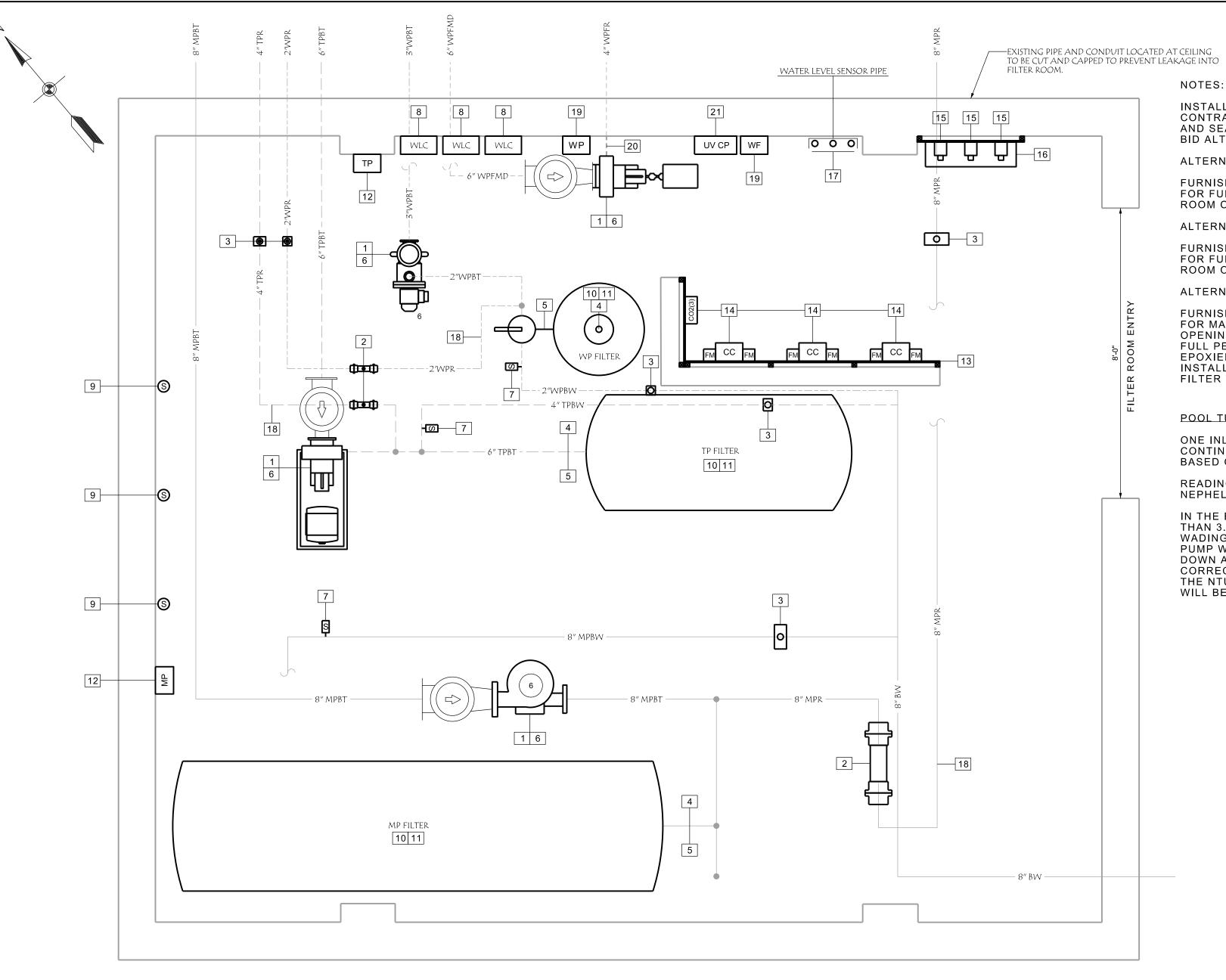
DRAWING TITLE:

FILTER ROOM EQUIPMENT DEMOLITION PLAN





FILTER ROOM DEMOLITION PLAN



NOTES:

INSTALL FLOOD PREVENTION ENTRY WAY CONTRACTOR TO PROVIDE NSYPE SIGNED AND SEALED SHOP DRAWING FOR SELECTED BID ALTERNATE

ALTERNATE 1:

FURNISH AND INSTALL HINGED WATERTIGHT DOOR FOR FULL HEIGHTAND WIDTH OF EXISTING FILTER ROOM OPENING.

ALTERNATE 2:

FURNISH AND INSTALL STOP LOG FLOOD BARRIER FOR FULL HEIGHT AND WIDTH OF EXISTING FILTER ROOM OPENING.

ALTERNATE 3:

FURNISH AND INSTALL HINGED WATERTIGHT DOOR FOR MANWAY, 46" X 79 1/4". EXISTING FILTER ROOM OPENING TO BE CLOSED OFF WITH POURED CONRETE FULL PERIMETER WATER STOP AND DRILLED AND EPOXIED DOWELS. NEW WATERTIGHT DOOR TO BE INSTALLED IN NEW WALL. DOOR WIDTH TO ALLOW MP FILTER TO BE REPLACED IN FUTURE.

POOL TURBIDITY NOTES:

ONE INLINE NEPHELOMETER TO BE INSTALLED TO CONTINUOUSLY MEASURE TURBIDITY IN THE POOL BASED ON THE EPA METHOD 180.1.

READINGS SHALL BE TAKEN AND DISPLAYED IN NEPHELOMETRIC TURBIDITY UNITS (NTU).

IN THE EVENT THAT THE NTU READING IS GREATER THAN 3.0, AN AUDIBLE ALARM WILL SOUND AND THE WADING POOL RECIRCULATION AND FEATURE SUPPLY PUMP WILL SHUT DOWN. THE POOL WILL BE SHUT DOWN AND BATHERS ASKED TO LEAVE THE POOL. CORRECTIVE ACTIONS SHALL BE TAKEN TO LOWER THE NTU READING BELOW 3.0 BEFORE BATHERS WILL BE ALLOWED BACK IN THE POOL.

TAG	NOTE	MP	TP	WP	WF
G	SEE EQUIPMENT LIST FOR ALL MAKE. MODEL AND SIZES.				
G	SEE DETAILS FOR PROPER INSTALLATION OF PROPOSED EQUIPMENT.				
G	COORDINATE INSTALLATIONS OF ALL EQUIPMENT WITH OTHER TRADES.				
G	IDENTIFY DAMAGED VALVES TO THE ENGINEER. VALVES TO BE REPLACED AS DIRECTED BY ENGINEER AS UNIT PRICE BID.				
1	INSTALL NEW RECIRCULATION PUMP AND VFD AS PER EQUIPMENT LIST.	Х	х	х	Х
2	INSTALL FLANGED PIPE SPOOL AS PER DETAIL AT LOCATIONS OF REMOVED FLOW VALVE.	Х	Х	х	
3	INSTALL NEW PADDLE WHEEL FLOW SENSOR (TYP. 6)	Х	х	х	
4	INSTALL AUTOMATIC AIR RELIEF VALVE AT EACH FILTER. (TYP. 3)	Х	Х	х	
5	INSTALL INFLUENT AND EFLUENT PRESSURE GAUGE AT FILTER PANEL. CONNECT TO EXISTING TUBING AND CONFIRM PROPER PERFORMANCE.	Х	X	х	
6	INSTALL VACUUM AND PRESSURE GAUGES AT RECIRCULATION PUMPS. (TYP. 3 PUMPS)	Х	X	x	Х
7	INSTALL NEW SIGHT GLASS.	Х	X	x	
8	COORDINATE MAKE UP WATER CONTROLLER AND POWER WIRING WITH ELECTRICIAN. (TYP. 3)	Х	X	х	
9	INSTALL NEW SOLENOID VALVE IN AUTOMATIC WATER SUPPLY LOOP. CONNECT TO NEW WIRING. (TYP. 3)	Х	Х	х	
10	INSPECT INTERIOR OF FILTER AND IDENTIFY ANY DAMAGE INCLUDING BROKEN LATERAL TO ENGINEER.	Х	Х	х	
11	INSTALL FILTER MEDIA. (TYP. 3)	Х	X	х	
12	INSTALL VFD FOR RECIRCULATION PUMP.	Х	х	х	
13	INSTALL PVC BOARD ON KINDORF TO MOUNT CHEMICAL CONTROLLER AND CO2 FEEDER.	Х	х	х	
14	INSTALL CHEMICAL CONTROLLER, FLOWCELL, FLOW METER FOR FR & BW, AND CO2 FEEDER. SEE DETAIL.	Х	х	х	
15	INSTALL PERISTATIC PUMP WITH NEW FLEXIBLE SUPPLY AND DISCHARGE PIPING FOR LIQUID CHLORINE INJECTION. (TYP. 3)	Х	x	х	
16	INSTALL CONTAINMENT SHELF FOR CHLORINE PUMPS ON KINDORF SUPPORT STRUCTURE.	Х	х	х	
17	CLEAN OUT WATER LEVEL SENSOR STILLING WELL PIPES AND RESET PROBES TO PROPER LEVELS.	Х	Х	х	
18	INSTALL FLOW SWITCH FOR CHEMICAL INTERLOCK SYSTEM. INSTALL RELAY AT CHEMICAL CONTROLLER.	Х	Х	X	
19	INSTALL MOTOR STARTER.			х	X
20	UV DISINFECTION UNIT.				X
21	UV CONTROL PANEL.				X

7. PROVIDE DRAIN VALVES AT LOW POINTS IN SYSTEM AND AUTOMATIC AIR RELIEF VALVES AT HIGH POINTS. 8. INSTALL EXPOSED PIPE PARALLEL AND PERPENDICULAR TO WALLS WITH

- ADEQUATE SUPPORTS AND ADEQUATE CLEARANCE FOR ACCESS TO ALL
- CONNECTIONS ON EITHER SIDE OF **EQUIPMENT TO PERMIT ITS REMOVAL**
- DIAMETER NON-CORROSIVE TAGS CORRESPONDS TO THE OPERATING CHART ON THE OPERATIONS CHART.
- CHART SHALL BE POSTED BEHIND PLASTIC OR GLASS IN THE EQUIPMENT ROOM.

- 12. CHLORINE AND pH CONTROL FLEXIBLE TUBING TO BE RUN WITHIN RIGID CONDUIT COLOR CODED AS PER DOH REQUIREMENTS.
- 13. THE PROGRAMMABLE VFD SHALL BE PROGRAMMED FOR MULTIPLE OPERATING CONDITIONS: RECIRCULATION RATE: THE PUMP SHALL NORMALLY OPERATE AT THE DESIGN FLOW RATE AS INDICATED IN THE POOL CALCULATIONS CHART.
- POOL DRAIN RATE: THE PUMP SHALL OPERATE AT AN ACCEPTABLE FLOW RATE SO AS NOT TO OVERWHELM THE POOL DRAIN SYSTEM.

SHUT DOWN AND START UP: THE PUMP SHALL RAMP UP/DOWN AT A SLOW RATE.

CHEMKA POOL STORM DAMAGE 2021 **RECOVERY**

DEPARTMENT OF PARKS AND RECREATIONS

DRAWING TITLE:

PROJECT ENGINEER:

Rimkunas

of the alteration.

|Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10 · Huntington · New York · 11743

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REVISIONS

VILLAGE OF HASTINGS-ON-HUDSON

OWNER:

engineer shall affix his seal to the

Aquatic Engineering & Construction Management

FILTER ROOM EQUIPMENT PROPOSED PLAN

2 1	0	2
	SCAL	E IN FEET
DRAWN B	Y:	

CHECKED BY: FILE NO. DRAWING NO. PROJECT NO. 1148 SP-02 DATE: 06/03/2022

GENERAL NOTES:

NOT ALL POOL PIPING AND ACCESSORIES SHOWN FOR CLARITY.

STRUCTURAL STEEL FRAMING NOT SHOWN

INDICATE THE REQUIRED SIZE AND POINTS OF TERMINATION OF THE PIPING AND SUGGEST PROPER ROUTING OF SAME. HOWEVER IT IS NOT THE INTENTION OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS, OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS WORK IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR WITHOUT FURTHER CONSTRUCTION OR COST WHILE MEETING MANUFACTURER'S RECOMMENDED INSTALLATIONS AND PRESERVING THE INTENT OF THE DESIGN.

THE DRAWINGS SHOW THE LOCATION OF ALL PIPING AND EQUIPMENT AND

ALL STRAINERS 6" AND ABOVE TO REMAIN AND TO BE REUSED.

AN AUTOMATIC DEVICE SHALL BE PROVIDED TO DEACTIVATE THE FOLLOWING EQUIPMENT WHEN THERE IS NO FLOW IN THE SYSTEM. 1. CHLORINE FEEDER

2. ACID FEEDER INSTALL FLOW SENSOR IN UNOBSTRUCTED LENGTH OF PIPE AS RECOMMENDED BY THE MANUFACTUER.

EXISTING CO2 STORAGE TANK LOCATED OUTSIDE OF BUILDING.

EXISTING STILLING WELL AND WATER LEVEL SENSOR LOCATED IN WOMENS' LOCKER ROOM TO REMAIN. NOT SHOWN FOR CLARITY.

WATER FEATURE SUPPLY PUMP TO DEACTIVATE WHEN RECIRCULATION PUMP IS OFF. SEE ELECTRICAL DRAWINGS FOR CONTROL WIRING.

- 1. ALL PIPING TO BE FULLY SUPPORTED AS PER MANUFACTURERS RECOMMENDATION. PROVIDE STEEL STRUT SUPPORTS AS NEEDED.
- 304L STAINLESS STEEL. 3. CONTRACTOR TO LAYOUT EQUIPMENT

2. PIPE SUPPORTS AND UNISTRUTTO BE

- AND RECEIVE FINAL APPROVAL FROM ENGINEER AND OWNER PRIOR TO INSTALLATION.
- 4. ALL PIPING TO BE PVC SCH. 80 UNLESS OTHERWISE NOTED.
- 5. FLOW SENSORS TO BE INSTALLED IN UNDISTURBED LENGTH OF PIPE AS SPECIFIED BY MANUFACTURER.
- 6. PIPES SHALL BE LABELED AND SHALL HAVE FLOW ARROWS. LABELS AND FLOW ARROWS TO BE WRAP-AROUND TYPE.
- OPERABLE VALVES, FLOW METERS AND ANCILLARY EQUIPMENT.
- 9. PROVIDE UNIONS OR FLANGED
- 10. ALL VALVES SHALL BE TAGGED WITH 2" LABELED WITH THE VALVE NUMBER THAT
- 11.THE HYDRAULIC SCHEMATIC AND VALVE

FILTER ROOM PROPOSED PLAN SCALE: 1/2" = 1'-0"

LEGEND

MAIN POOL

TRAINING POOL

WATER FEATURE

LLC LIQUID LEVEL CONTROL

WATER LEVEL

BACKWASH

BALANCE TANK

FMD FEATURE MAIN DRAIN PIPE

FILTER RETURN

SURGE TRENCH

FLOW SENSOR

SIGHT GLASS

SOLENOID VALVE

FLANGED PIPE SPOOL

CC CHEMICAL CONTROLLER

UV CP ULTRA VIOLET CONTROL PANEL

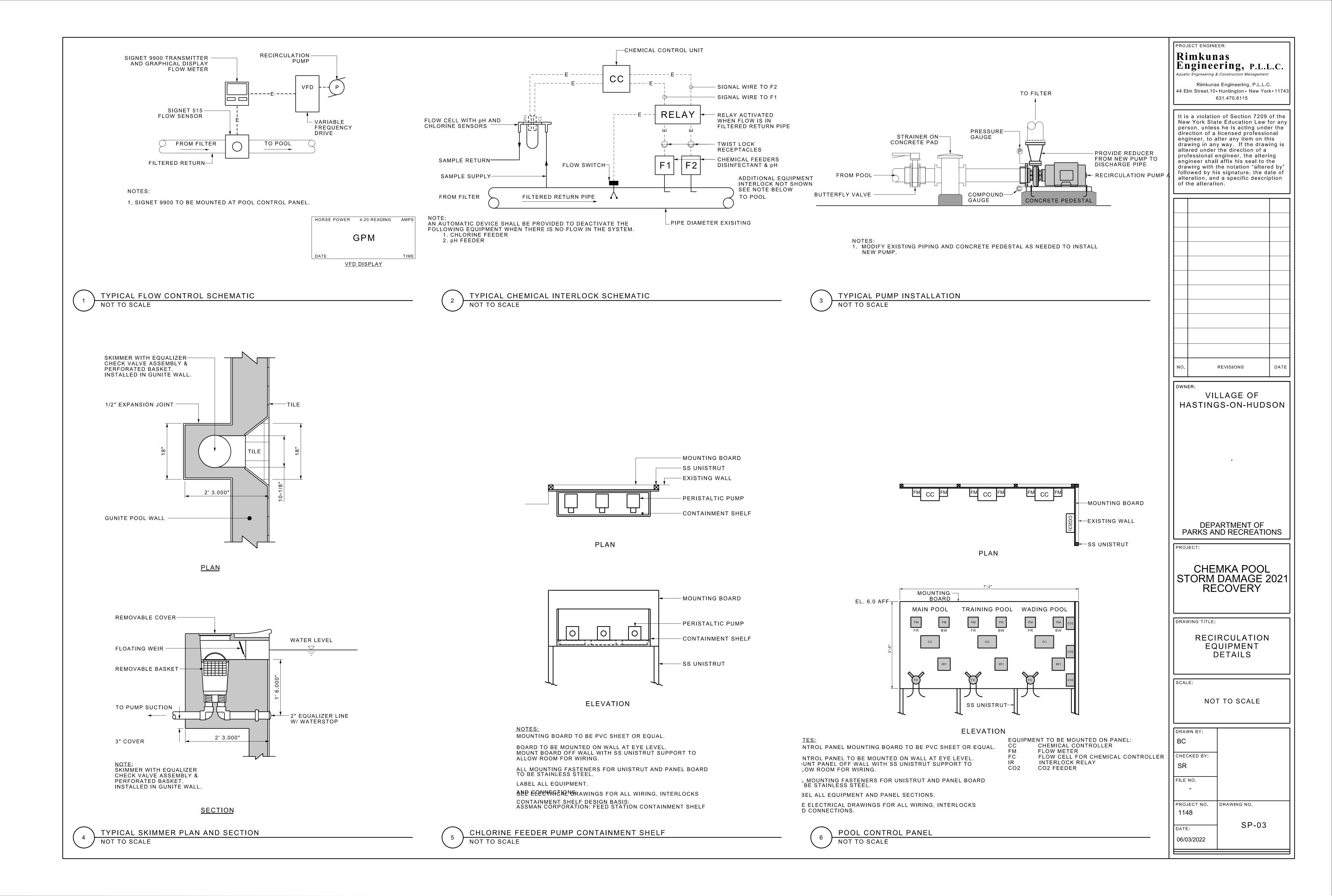
LIQUID CHEMICAL FEEDER

FLOW CONTROL VALVE

CO2 CO2 FEEDER

FM FLOW METER

FEATURE RETURN PIPE



ALTERNATE 1:

FURNISH AND INSTALL HINGED WATERTIGHT DOOR WITH COMPRESSION GASKET FOR FULL HEIGHT AND WIDTH OF EXISTING FILTER ROOM OPENING. CONTRACTOR TO PROVIDE NSYPE SIGNED AND SEALED SHOP DRAWING UPON APPROVAL OF ALTERNATE 1.

HINGED DOORS SHALL BE CONSTRUCTED OF STRUCTURAL SHAPES AND PLATES.

DOOR GASKET TO BE NEOPRENE MOLDED WITH FULLY MOLDED CORNERS.

HINGES TO BE STAINLESS STEEL WITH BRONZE OIL-IMPREGNATED THRUST BEARINGS. INCLUDE STAINLESS STEEL MOUNTING BOLTS.

WATER TIGHT DOORS TO PROVIDE 2:1 FACTOR OF SAFETY BASED ON MATERIAL YIELD STRENGTH.

DESIGN OF DOOR WILL TRANSFER LOAD FROM TO THE FRAME AND/OR DOGS.

PROVIDE A RECTANGLE OPENING WITH SQUARE

FRAME SHALL INCLUDE SUITABLE ANCHORS FOR IMBEDMENT IN CONCRETE.

ALTERNATE 2:

FURNISH AND INSTALL REMOVABLE STOP LOG BARRIER FOR FULL HEIGHT AND WIDTH OF EXISTING FILTER ROOM OPENING. CONTRACTOR TO PROVIDE NSYPE SIGNED AND SEALED SHOP DRAWING UPON APPROVAL OF ALTERNATE 2.

WATERPROOF BARRIER TO INCLUDE ALUMINUM PANELS INSERTED INTO STEEL CHANNELS WITH COMPRESSABLE GASKETS TO CREATE A RELIABLE BARRIER AGAINST FLOODS

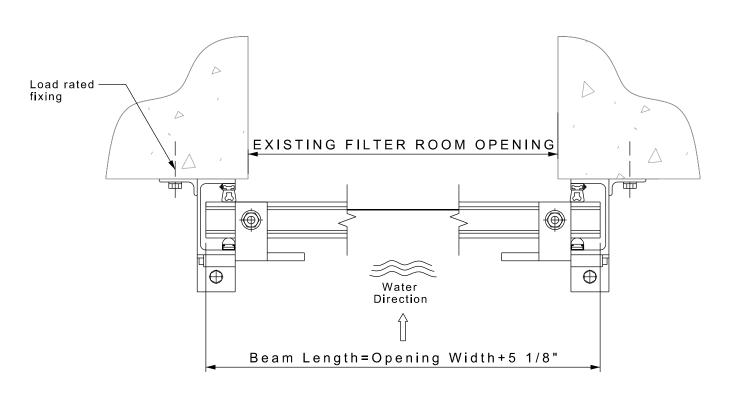
STOP LOG BARRIER TO BE REMOVABLE FOR THE POOL SEASON AND INSTALLED FOR THE OFF SEASON TO PROTECT AGAINST FLOODING. BARRIER TO BE EASILY INSTALLED WITH EARLY WARNING OF POTENTIAL FLOOD EVENT.

1. Walls & floor prepared with Sika Primer (if necessary) and sealed with grey Sikaflex at end support locations.

2. Structural foundations and/or walls required are to be built and checked by others. Dimensions shown are minimum for fixings criteria which does not include any structural check such as sliding, overturning and bearing checks which must be carried out by a third party/others.

3. It is client's responsibility to check wall strength and stability to withstand flood loading.

4. Ensure a smooth, flat, level, impervious surface.



PLAN EXTERNAL SURFACE MOUNT

ALTERNATE 2 - FULL OPENING FLOOD BARRIER

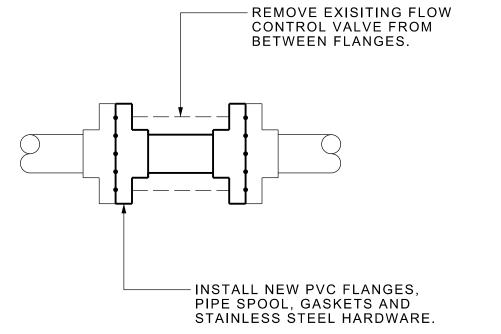
BUTTERFLY VALVE FROM FILTER → \ UV BY-PASS TEE — ISOLATION VALVE ISOLATION VALVE -UV STRAINER BASKET COMPOUND GAUGE INSIDE PIPING INSTALL TWO (2) FLANGE CONNECTIONS FOR EASE OF BASKET CONCENTRIC REDUCER -REMOVAL/CLEANING PROVIDE CHEMICAL INJECTION PORT WITH 1/2" SHUT OFF VALVE **EQUIPMENT PAD** GROUNDING/BONDING LUG -UV DISINFECTION UNIT DRAIN PLUG -

ALTERNATE 1 - FULL OPENING FLOOD DOOR

ALL PIPING AND FITTINGS TO AND FROM UV UNIT TO THE "UV BY-PASS TEES" SHALL BE SCHEDULE 80 PVC. CONTROL BOX SHALL BE INSTALLED WITHIN 10 FEET OF UNIT WHENEVER POSSIBLE. PROVIDE CLEARANCE AS REQUIRED ADJACENT TO UV UNIT FOR REMOVAL AND

REPLACEMENT OF UV LAMPS. DO NOT INSTALL VALVES DIRECTLY TO CHAMBER BODY.

UV DISINFECTION UNIT SCALE: 1/4" = 1'-0"



FLOW CONTROL VALVE REMOVAL SCALE: N.T.S

ALTERNATE 3:

FURNISH AND INSTALL HINGED WATERTIGHT MANWAY DOOR WITH COMPRESSION GASKET LOCATED IN NEW CONCRETE WALL RESTORATION. AT EXISTING FILTER ROOM OPENING. CONTRACTOR TO PROVIDE NSYPE SIGNED AND SEALED SHOP DRAWING UPON APPROVAL OF ALTERNATE 2.

HINGED DOORS SHALL BE CONSTRUCTED OF STRUCTURAL SHAPES AND PLATES.

DOOR GASKET TO BE NEOPRENE MOLDED WITH FULLY MOLDED CORNERS.

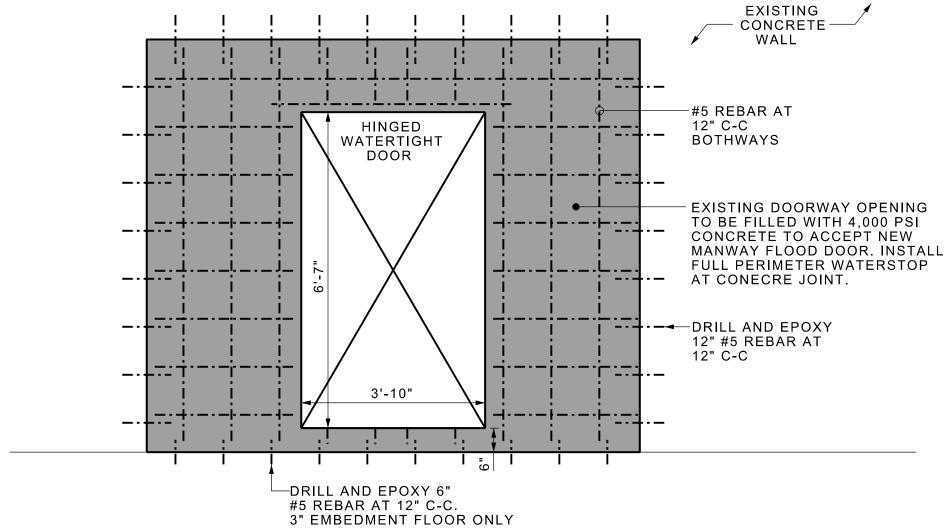
HINGES TO BE STAINLESS STEEL WITH BRONZE OIL-IMPREGNATED THRUST BEARINGS. INCLUDE STAINLESS STEEL MOUNTING BOLTS.

WATER TIGHT DOORS TO PROVIDE 2:1 FACTOR OF SAFETY BASED ON MATERIAL YIELD STRENGTH.

DESIGN OF DOOR WILL TRANSFER LOAD FROM TO THE FRAME AND/OR DOGS.

PROVIDE A RECTANGLE OPENING WITH SQUARE CORNERS.

FRAME SHALL INCLUDE SUITABLE ANCHORS FOR IMBEDMENT IN CONCRETE



ALTERNATE 3 - MANWAY HINGED FLOOD DOOR

APPROXIMATE LOCATIONS OF DEPTH MARKERS ARE INDICATED ON THE DRAWING. DEPTH MARKER INSTALLATION SHALL CONFORM TO THE

PERMANENT MARKERS SHALL BE INSTALLED ON THE POOL DECK AND WALL. DECK AND WALL MARKERS SHALL BE CERAMIC TILE.

DEPTH MARKERS SHALL BE INSTALLED AT POINTS OF MINIMUM AND MAXIMUM DEPTH, THE POOL BREAKPOINT, AND INCREMENTS OF 2' OF DEPTH. SPACING BETWEEN MARKERS SHALL NOT EXCEED 25' AROUND THE ENTIRE PERIMETER OF THE POOL. MARKERS SHALL BE LOCATED AT BOTH ENDS AND SIDES OF THE POOL.

WHEN COPING STONES ARE USED MARKERS SHALL BE INSTALLED IN THE STONE. MARKERS SHALL INDICATE THE DEPTH AS MEASURED 3' FROM THE POOL WALL.

MARKERS SHALL HAVE DEPTHS IN NUMBERS THAT ARE 4" HIGH FOLLOWED BY "FOOT DEPTH" OR "INCHES DEEP". SEE DETAIL BELOW.

"NO DIVING" MARKERS SHALL BE AT ALL LOCATIONS WITH DEPTHS LESS THAN 8FT AND AT LOCATIONS SHOWN ON PLANS.

CERAMIC TILES TO BE MANUFACTURED BY TILE SPECIALTIES: 6" X 6" NON-SKID DECK TILE

> - 4" BLACK LETTERING WHITE BACKGROUND

> > **DECK TILE**

TILE DECK DEPTH MARKER SCALE: N.T.S.

8" X 6" SMOOTH WALL TILE

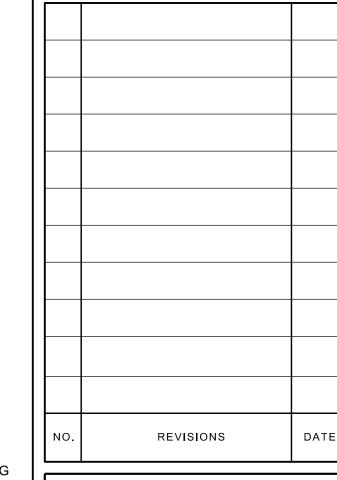
PROJECT ENGINEER:

Rimkunas |Engineering, P.L.L.C. Aquatic Engineering & Construction Management

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OWNER:

VILLAGE OF HASTINGS-ON-HUDSON

DEPARTMENT OF PARKS AND RECREATIONS

CHEMKA POOL STORM DAMAGE 2021 **RECOVERY**

DRAWING TITLE:

CONSTRUCTION DETAILS

SCALE:

SCALE AS SHOWN

DRAWN BY: CHECKED BY: SR FILE NO. PROJECT NO. DRAWING NO. 1148 SP-04 DATE: 06/03/2022

	NOTES
	GENERAL
ITEM	DESCRIPTION / REMARKS
Codes	The entire swimming pool facility shall be designed, constructed and maintained pursuant to the requirements of the New York State Sanitary Code, Chapter 1, Part 6 and Subpart 6-1 of the New York State Department of Health.
Codes	The swimming pool facility shall not be utilized until such time that an operation permit has been issued. Pool alarms are required pursuant to Title 19 (NYCRR), Chapter XXXIII, State Fire Prevention & Building Code
Codes	(Uniform Code), Part 1221, Section 1221.3 and are subject to approval by the local municipal code enforcement official. Pool alarm is not included as part of this Department of Health approval. Pool is designed in accordance with the 2010 Americans with Disabilities Act (ADA) Standards for Accessible
Coues	Design for swimming pools and spas. The Department of Justice is responsible for implementation and enforcemen of the regulations. Compliance with these standards is not included as part of the Department of Health approval.
ITEM	ELECTRICAL DESCRIPTION / PEMARKS
ITEM 6998	DESCRIPTION / REMARKS All electrical work shall conform to the Uniform Code and the National Electric Code. All electrical work shall be
Certification	performed by an electrician licensed in the project's jurisdiction. The Contractor shall secure an electrical inspection from an approved Electrical Inspection Agency for
Overhead Clearance	all electrical work performed, to be provided at time of final enineering inspection. No electrical wiring shall pass overhead within a 20 foot horizontal distance of the pool.
	Ground Fault Interrupter Circuits shall be provided for all lighting, equipment and electrical circuits in the pool
	area, as per the National Board of Fire Underwriters, The National Electric Code, and with the Underwriters Label of Certification.
Bonding	Metal and electrical parts in the pool area shall be electrically bonded in accordance with Article 680 of the National Electric Code.
Grounding	Equipment in the pool area and filter room shall be grounded in accordance with Article 680 of the National Electric Code.
Interlocks	Chemical feed equipment, UV system, pool heaters and all water treatment equipment shall be electrically interlocked with the pool pump so that they cannot operate when there is no flow in the pool return pipe. WATER AND WASTEWATER
ITEM	DESCRIPTION / REMARKS
Water Supply / Pressure	Water shall be supplied by the public water distribution utility. Pressure at point of connection is assumed to be 50 psi.
Backflow Prevention	All water introduced to the pool or pool systems shall be supplied through a 6" air to prevent backflow and back siphonage.
Pool Filter Waste	The pool filter waste shall be discharged to the public sanitray system through a 6" air gap.
Emptying Pool	The pool shall be emptied by pumping the volume to an on-site grassy detention area. A 6" air gap shall be provided prior to entering the area.
	POOL PIPING
ITEM Material	DESCRIPTION / REMARKS All buried pool piping shall be Schedule 80 PVC. Piping in equipment room shall be Schedule 80 PVC.
	Joints shall be solvent cement for exposed; push-on or solvent cement for buried.
Velocities	Pipe velocities shall be limited to 3 fps in gravity, 6 fps in suction, and 10 fps in pressure flow. See the hydraulic calculations on the hydraulic schematic drawing for actual velocities.
Color Coding	All exposed pipe shall be color coded in accordance with the Color Code Chart on the drawings. Pipes shall be labeled and shall have flow arrows. Labels and flow arrows to be wrap-around type.
Installation	Provide drain valves at low points in system and automatic air relief valves at high points. Install exposed pipe parallel and perpendicular to walls with adequate supports and adequate clearance for access to all operable valves, flow meters and ancillary equipment. Pipe shall be supported as per manufacturers recomendations.
Pitch	The piping shall pitch a minimum of 1" to 30' and equipped with low point accessible valves for draining when required.
Unions or Flanged Connections	Provide unions or flanged connections on either side of equipment to permit its removal.
Thrust Blocks	Install thrust blocks at all bends and valves in buried piping. Thrust block design shall be based on an assumed soil bearing capacity of 1 ton per square foot.
Buried Piping	Buried piping shall not be backfilled before it has been pressure tested and inspected by the DOH. Pressure testing shall be for 2 hours with Engineer present. Gravity and Suction Pipe = 20 psi; Pressure Pipe = 50 psi.
Valve Tags	All valves shall be tagged with 2" diameter brass tags labeled with the valve number that corresponds to the operating chart on the hydraulic schematic drawing.
Valve Chart	The hydraulic schematic and valve operation chart shall be posted behind plastic or glass in the
	equipment room indicating function and location of numbered valves. STRAINER AND PUMP
ITEM Strainer Open Area	DESCRIPTION / REMARKS Total open area in basket shall be 4 times the area of the incoming pipe.
	Strainer cover shall be secured with "T" type handles and shall have a clear vision panel. Provide spare basket
Strainer Design	Strainer cover shall be secured with "I" type handles and shall have a clear vision panel. Provide spare basket for each strainer. Maximum opening in basket shall be 1/8". Install 1/2" ball valve in lid of strainer for vacuum relief
Pump	Pump shall be NSF listed for swimming pools and shall provide the design flow rate at the head indicated in the hydraulic calculations on the hydraulic schematic drawing.
Pump Guages	Provide compund pressure/vacuum gauge at suction side of pump and pressure gauge at discharge side of pump
	NOTES
	FLOW MEASUREMENT AND CONTROL
Flow Measurement	A means of continuously measuring rate of flow shall be provided. Flow meaters shall be located at easily readable locations at eye level.
Flow Regulation	An automatic device for regulating the rate of flow shall be provided in the recirculation discharge piping. Multiple pumps or filters shall each have a flow regulating device installed.
ITEM	CHEMICAL TREATMENT
Disinfectant Feed Rate	DESCRIPTION / REMARKS Feeders shall be capable of supplying disinfectant to the pool in the range of 10mg/l chlorine or equivalent.
Chemical Storage	The disinfectant storage container and the pH adjustment storgae container must be distanced as much as feasible when located within the filter room.
	PROJECT CLOSE OUT
ITEM	DESCRIPTION / REMARKS
Start Up	Contractor shall fill and start up the pool, balance the water, and test all systems before turning pool over to Owner.
O&M Manual	Contractor shall provide the Owner with 2 bound Operation and Maintenance Manuals. Manuals shall include installation and operating guides for all equipment for use by a qualified swimming pool water treatment operator.
Training	The Contractor shall train the Owner's designated personnel using the O&M Manual in all of the pool operations.
Warranties	The Contractor shall provide the Owner with originals of all manufacturer's equipment warranties.

PI	PIPE LEGEND / COLOR CODE							
EXISTING	PROPOSED	PIPE / COLOR CODE						
MD	MD	MAIN DRAIN (BLACK)						
—— SK ——— G ——	— sк—— g —	SKIMMER/GUTTER (GREEN)						
	uw	UNFILTERED WATER (BLACK/GREEN)						
BW	BW	BACKWASH (DARK BROWN)						
FR	—— FR ——	FILTERED RETURN (AQUA)						
———Н5 ———	——нѕ——	HEATER SUPPLY (AQUA)						
——————————————————————————————————————	——HR ——	HEATER RETURN (AQUA)						
v	v	VACUUM (LIGHT PURPLE)						
с	— с —	CHLORINE (YELLOW)						
—— А ——	—— А ——	ACID OR CO2 (PINK)						
s	s	SAMPLING (DARK PURPLE)						
PW	PW	POTABLE WATER (DARK BLUE)						

2 PIPE LEGEND / COLOR CODE SCALE: N.T.S.

WADING POOL	
Project Information	
PROJECT NAME	Chemka Pool - WF
PROJECT NO.	1148
REVISION DATE	June 9, 2022
Design Data	
Pool Volume Gallons	2,295
Length If	30.00
Width If	30.00
Pool Area sf	900
Shallow Area(<5' deep)sf	900
Deep Area (>5' deep) sf	0
Pool Perimeter If	120
Minimum Depth	0'-0"
Maximum Depth	1'-0"
Maximum Slope in Shallow Area	1:15
Slope from Shallow to Deep	na
Wall Slope	Vertical
Surge Requirement gal	900
Design Flow Rate GPM	50
Flow Rate (cfs = gpm/448.8)	0.11
Turn Over Time (hrs)	0.8
Filters	HRS
Required Filtration Rate gpm/ 1 sf Design Filter Area (sf)	15 4.91
Number of Filters	1
Total Filter Area	4.9
Filtration Rate gpm/sf	10.2
,	
HRS Backwash	
Backwash Filtration Rate	15.0
Backwash Flow Rate at 15 gpm/sf (gpm) for 1 Filter	73.7
Backwash Flow Rate (cfs)	0.16
Backwash Volume for 5 Minute Backwash (cf)	49.23
Backwash Volume for 5 Minute Backwash (gal)	368.25
Chemical Treatment	
Disinfectant - Liquid Sodium Hypochlorite - 10% solution	
DOH Requirement (ppm)	10
% Solution	13%
Design Requirement (ppm)	13
GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Penuired Gallons per Day	0.005000
Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd	7.2
(input from Manufacturer's Spec)	10
Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd))	Stenner 45M2
pH- Balance Chemical	CO2
Length of 100% Flow Return Pipe from Injection Point to Tee (If)	177.0
Velocity in 100% Flow Return Pipe (fps)	1.9
Time in 100% Flow Return Pipe (sec)	93.2
Length of 50% Flow Return Pipe from Tee to Inlet (If)	3.5
Velocity in 50% Flow Return Pipe (fps)	2.2
Time in 50% Return Pipe (sec)	1.6

94.7

Project Information	
PROJECT NAME	Chemka Pool TF
PROJECT NO.	1148
REVISION DATE	March 26, 2022
	,
Design Data	
Pool Volume Gallons	24,007
Length If	50.00
Width If	25.00
Pool Area sf	1,250
Shallow Area(<5' deep)sf	1,250
Deep Area (>5' deep) sf	0
Pool Perimeter If	150
Minimum Depth	2'-0"
Maximum Depth	3'-0"
Maximum Slope in Shallow Area	1:41
Slope from Shallow to Deep	na
Wall Slope	Vertical
Surge Requirement gal	1,250
Design Flow Rate GPM	260
Flow Rate (cfs = gpm/448.8)	0.58
Tum Over Time (hrs)	1.6
Filters	HRS
Required Filtration Rate gpm/ 1 sf	15
Design Filter Area (sf)	20.30
Number of Filters	1
Total Filter Area	20.3
Filtration Rate gpm/sf	12.8
HRS Backwash Backwash Filtration Rate	15.0
Jack Wash Filliation Rate	13.0
Dealers In Eleve Data at 45 may (af (may) for 4 Filter	204.5
Backwash Flow Rate at 15 gpm/sf (gpm) for 1 Filter	304.5
Backwash Flow Rate (cfs)	0.68
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf)	0.68 203.54
Backwash Flow Rate (cfs)	0.68
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf)	0.68 203.54
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution	0.68 203.54 1522.50
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm)	0.68 203.54 1522.50
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm)	0.68 203.54 1522.50 10 13%
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm)	0.68 203.54 1522.50
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solution))	0.68 203.54 1522.50 10 13%
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant	0.68 203.54 1522.50 10 13% 13
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd	0.68 203.54 1522.50 10 13% 13 0.026000 37.4
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd))	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) % Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical Length of 100% Flow Return Pipe from Injection Point to Tee (lf)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2 105.0
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical Length of 100% Flow Return Pipe from Injection Point to Tee (If) Velocity in 100% Flow Return Pipe (fps)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2 105.0 7.3
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical Length of 100% Flow Return Pipe from Injection Point to Tee (lf) Velocity in 100% Flow Return Pipe (fps) Time in 100% Flow Return Pipe (sec)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2 105.0 7.3 14.5
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical Length of 100% Flow Return Pipe from Injection Point to Tee (lf) Velocity in 100% Flow Return Pipe (fps) Time in 100% Flow Return Pipe from Tee to Inlet (lf)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2 105.0 7.3 14.5 9.0
Backwash Flow Rate (cfs) Backwash Volume for 5 Minute Backwash (cf) Backwash Volume for 5 Minute Backwash (gal) Chemical Treatment Disinfectant - Liquid Sodium Hypochlorite - 10% solution DOH Requirement (ppm) Solution Design Requirement (ppm) GPM of Disinfectant (Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day (GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd (input from Manufacturer's Spec) Feeder Make and Model Max. Dosage with Selected Pump (ppm) (Design ppm * (Pump Rate gpd/Minimum Req. gpd)) DH- Balance Chemical Length of 100% Flow Return Pipe from Injection Point to Tee (lf) Velocity in 100% Flow Return Pipe (fps) Time in 100% Flow Return Pipe (sec)	0.68 203.54 1522.50 10 13% 13 0.026000 37.4 50 Stenner 45M5 17 CO2 105.0 7.3 14.5

MAIN POOL	
Project Information	
PROJECT NAME	Chemka Pool - MF
PROJECT NO.	1148
REVISION DATE	March 26, 2022
Design Data	
Pool Volume Gallons	211,600
Length If	80.82
Width If	41.25
Pool Area sf	5, 189
Shallow Area(<5' deep)sf	3,293
Deep Area (>5' deep) sf	1,896
Pool Perimeter If	340
Minimum Depth	3'-6"
Maximum Depth	8'-6"
Maximum Slope in Shallow Area	1.80%
Slope from Shallow to Deep	1:3
Wall Slope	Vertical
Surge Requirement gal	5, 189
Design Flow Rate GPM	650
Flow Rate (cfs = gpm/448.8)	1.45
Tum Over Time (hrs)	5.5
Filters	HRS
Required Filtration Rate gpm/ 1 sf	15
Design Filter Area (sf)	45.10
Number of Filters	1
Total Filter Area	45.1
Filtration Rate gpm/sf	14.4
HRS Backwash	
Backwash Filtration Rate	15.0
Backwash Flow Rate at 15 gpm/sf (gpm) for 1 Filter	676.5
Backwash Flow Rate (cfs)	1.51
Backwash Volume for 5 Minute Backwash (cf)	452.21
Backwash Volume for 5 Minute Backwash (gal)	3382.50
Chemical Treatment	
Disinfectant - Liquid Sodium Hypochlorite - 10% solution	
DOH Requirement (ppm)	10
% Solution	13%
Design Requirement (ppm) GPM of Disinfectant	13
(Flow Rate x (Design Req. ppm/1,000,000) / % Solutioin)) Minimum Required Gallons per Day	0.067600
(GPM*60min*24hrs) Pumping Rate for Selected Pump in gpd	97.3
(input from Manufacturer's Spec)	120
Feeder Make and Model Max. Dosage with Selected Pump (ppm)	Stenner 170DM4
(Design ppm * (Pump Rate gpd/Minimum Req. gpd))	16
pH- Balance Chemical	CO2
Length of 100% Flow Return Pipe from Injection Point to Tee (If)	45.0
Velocity in 100% Flow Return Pipe (fps)	4.6
Time in 100% Flow Return Pipe (sec)	9.8
Length of 50% Flow Return Pipe from Tee to Inlet (If)	45.0
Velocity in 50% Flow Return Pipe (fps)	2.5
Time in 50% Return Pipe (sec)	18.0
	27.8

	a violation of Section 7209								
New pers dire eng drav alte prof eng drav follo	New York State Education Law for any person, unless he is acting under the direction of a licensed professional engineer, to alter any item on this drawing in any way. If the drawing is altered under the direction of a professional engineer, the altering engineer shall affix his seal to the drawing with the notation "altered by" followed by his signature, the date of alteration, and a specific description of the alteration.								
NO.	REVISIONS	DATE							
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P/	DEPARTMENT OF ARKS AND RECREATIO	ONS							
PROJ	ECT:								
ST	CHEMKA POOL ORM DAMAGE 2 RECOVERY	2021							
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DRAWING TITLE:

DRAWN BY:

CHECKED BY:

PROJECT NO. **1148**

06/03/2022

SR

DATE:

FILE NO.

SWIMMING POOL NOTES AND CALCULATIONS

NOT TO SCALE

DRAWING NO.

SP-05

PROJECT ENGINEER:

Rimkunas Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10 • Huntington • New York • 11743 631.470.6115

1 GENERAL SWIMMING POOL NOTES
NOT TO SCALE

3 HYDRAULIC CALCULATIONS
NOT TO SCALE

Total Contact Time (sec)

	POOL CA	LCULATION	S - HEAD L	.OSS SUMMA	.KY	
POOL VOLUME (GAL)	-					
POOL FLOW RATE (GPM)	200					
FILTER BACKWASH RATE (GPM)	NA					
ITEM	UNIT	SIZE (IN)	VELOCITY	LOSS/UNIT	QTY	FT-HEAD
SUCTION PIPE - FULL FLOW	LF	6	2.5	0.0046	193	0.9
SUCTION FITTINGS	EA		2.5	0.0659	8	0.5
SUCTION VALVES	EA		2.5	0.0941	1	0.1
RETURN PIPE - FULL FLOW	LF	4	5.6	0.0338	138	4.7
RETURN PIPE - HALF FLOW	LF	4	2.8	0.0094	59	0.6
RETURN FITTINGS	EA		5.6	0.3386	6	2
RETURN VALVES	EA		5.6	0.4838	2	1
STRAINER	EA			2.3000	1	2.3
WATER FEATURES	EA			23.1000	1	23.1
TOTAL HEAD LOSS	-			-	1	35.2

WATER FEATURE SUPPLY PUMP CALCULATIONS

N.T.S.

	POOL CA	LCULATION	S - HEAD I	LOSS SUMMA	.RY	
POOL VOLUME (GAL) POOL FLOW RATE (GPM) FILTER BACKWASH RATE (GPM)	2,295 40 NA					
ITEM	UNIT	SIZE (IN)	VELOCITY	LOSS/UNIT	QTY	FT-HEAD
SUCTION PIPE - FULL FLOW	LF	3	1.9	0.0066	125	0.8
SUCTION FITTINGS	EA		1.9	0.0410	3	0.1
SUCTION VALVES	EA		1.9	0.0586	1	0.1
RETURN PIPE - FULL FLOW	LF	2	4.3	0.0470	178	8.4
RETURN PIPE - HALF FLOW	LF	2	2.2	0.0130	46	0.6
RETURN FITTINGS	EA		2.2	0.0513	5	0.3
RETURN VALVES	EA		2.2	0.0733	1	0.1
RETURN INLET	EA			8.8000	1	8.8
STRAINER	EA			2.3000	1	2.3
FILTER - HRS - Dirty	EA			34.6500	1	34.7
TOTAL HEAD LOSS					1	55.4

	POOL CA	LCULATION	S - HEAD L	OSS SUMMA	.RY	
POOL VOLUME (GAL)	24,007					
POOL FLOW RATE (GPM)	260					
FILTER BACKWASH RATE (GPM)	NA					
ITEM	UNIT	SIZE (IN)	VELOCITY	LOSS/UNIT	QTY	FT-HEAD
SUCTION PIPE - FULL FLOW	LF	6	3.2	0.0075	140	1.1
SUCTION FITTINGS	EA		3.2	0.1113	4	0.4
SUCTION VALVES	EA		3.2	0.1590	2	0.3
RETURN PIPE - FULL FLOW	LF	4	7.3	0.0549	114	6.3
RETURN FITTINGS	EA		7.3	0.5723	6	3.4
RETURN VALVES	EA		7.3	0.8176	1	0.8
RETURN INLET	EA			10.3000	1	10.3
STRAINER	EA			2.3000	1	2.3
FILTER - HRS - Dirty	EA			35.0000	1	35
TOTAL HEAD LOSS					1	59.9

POOL CALCULATIONS - HEAD LOSS SUMMARY						
POOL VOLUME (GAL)	211,600					
POOL FLOW RATE (GPM)	650					
FILTER BACKWASH RATE (GPM)	NA				_	
ITEM	UNIT	SIZE (IN)	VELOCITY	LOSS/UNIT	QTY	FT-HEAD
SUCTION PIPE - FULL FLOW	LF	8	4.6	0.0104	117	1.2
SUCTION FITTINGS	EA		4.6	0.2267	5	1.1
SUCTION VALVES	EA		4.6	0.3239	2	0.6
RETURN PIPE - FULL FLOW	LF	8	4.6	0.0104	100	1
RETURN PIPE - HALF FLOW	LF	8	2.3	0.0029	137	0.4
RETURN FITTINGS	EA		4.6	0.2267	5	1.1
RETURN VALVES	EA		4.6	0.3239	1	0.3
RETURN INLET	EA			18.4800	1	18.5
STRAINER	EA			2.3000	1	2.3
FILTER - HRS- Dirty	EA			35.0000	1	35
TOTAL HEAD LOSS					1	61.5

ALL PIPE HEADLOSSES BASED ON WILLIAMS AND HAZEN FORMULA USING CONSTANT 130 FOR A DIRTY PIPE.

WADING POOL RECIRCULATION PUMP CALCULATIONS

N.T.S.

TRAINING POOL RECIRCULATION PUMP CALCULATIONS

N.T.S.

(4

4 MAIN POOL RECIRCULATION PUMP CALCULATIONS
N.T.S.

	EQI	JIPMENT LIST
ITEM	MANUF./MODEL	DESCRIPTION / REMARKS
	RECIRCULA	TION SYSTEM & EQUIPMENT
Butterfly Valves	Hayward	PVC Body, EPDM Seat, Stainless Steel Stem, Polypropylene Disc, Lever Type Operators
Compound Gauge	Ashcroft 1000	4.5" Dia. Gauge, 30" Hg to 60 psi
Pressure Gauge	Ashcroft 1000	4.5" Dia. Gauge, 0 psi to 60 psi
Check Valves	Cepex Check Valve	PVC swing check valve, EPDM Lined, Corrosion Resistant Springs, Bubble Tight Shut Off.
Filter Media		For Hayward TR100 HRS Filter - Media to meet NSF Requirements No 20 Standrad Silica Sand = 600lbs.
Flow Meter Sensor	Signet 515 Rotor-X Paddlewheel	Paddle wheel flow sensor compatible with Signet 9900 transmitter. Provide extra paddle wheel.
Flow Meter Display	Signet 9900 Transmitter	Flow transmitter to receive signal from Signet 515 flow sensor. Display flow in GPM. Located at control panel.
Flow Switch	McDonnell & Miller Series FS4-3	Normally Open Flow Switch
Pump - Pool Recirculation	Pentair IntelliFlo VFS 011056	3450 RPM; 3HP; programable flow control pump rated for 40 gpm @ 47ft-hd
Sight Glass	Hayward	1-1/2" radially installed PVC sight glass
	WATE	R FEATURE EQUIPMENT
Pump - Water Feature Supply	Paco	200gpm @ 35fthd : 3hp as recommened by manufacturer for use with the VFD.
	LC 25707	Contractor to confirm available voltage in field. Provide with maximum Impeller
Ultra Violet Disinfectant System	ETS WAFER UV	diameter. Pump to be NSF approved for swimming pool use. 4" Medium Pressure UV Treatment system rated for 396 gpm max. Includes control system. Provide with 30ft cord. NYS VALIDATED.
Inline Nephelometer	WF-115-4-N Hatch TU5300SC	Inline Nephelometer to continously measure turbidity based on the EPA Method 180.1. Provide with Hatch SC200 Universal Controller.
	CHEMICAL TREA	TMENT AND CONTROL EQUIPMENT
CO2 Feeder	Treatment Specialties Pool link 200	Solenoid activated CO2 feeder with flow meter and adjustable feed rate.
Chlorine Feeder	Stenner Pumps Model # 45M2	Adjustable Output Pump. Provide 10 gpd maximum feed rate.
Pool / Chemistry Controller	Pool Link 501C	Chemical Control Unit with flow cell. Provide spare pH probe. Provide internet connection for remote monitoring and adjustment.
	MAKE-UP WAT	ER AND CONTROL EQUIPMENT
Solenoid Valve	ASCO	Two (2) way brass body, Buna seat, 24 volt, normally closed solenoid valve. 1-1/2" diameter.

	EQ	UIPMENT LIST
ITEM	MANUF./MODEL	DESCRIPTION / REMARKS
	RECIRCULA	TION SYSTEM & EQUIPMENT
Butterfly Valves	Hayward	PVC Body, EPDM Seat, Stainless Steel Stem, Polypropylene Disc, Lever Type Operators
Compound Gauge	Ashcroft 1000	4.5" Dia. Gauge, 30" Hg to 60 psi
Pressure Gauge	Ashcroft 1000	4.5" Dia. Gauge, 0 psi to 60 psi
Check Valves	Cepex Check Valve	PVC swing check valve, EPDM Lined, Corrosion Resistant Springs, Bubble Tight Shut Off.
Filter Media		For Neptune Benson HRS Filter Model 3672SHFFG-4 .4555MM Sand at 9" deep = 15cf. 1/8" - 1/4" Support Gravel = 9cf; Media to meet NSF requierments
Flow Meter Sensor	Signet 515 Rotor-X Paddlewheel	Paddle wheel flow sensor compatible with Signet 9900 transmitter. Provide extra paddle wheel.
Flow Meter Display	Signet 9900 Transmitter	Flow transmitter to receive signal from Signet 515 flow sensor and provide control signal to compatible VFD. Display flow in GPM. Located at control panel.
Flow Switch	McDonnell & Miller Series FS4-3	Normally Open Flow Switch
Pump - Pool Recirculation	Paco LC25957	260gpm @ 60fthd: 7.5hp as recommened by manufacturer for use with the VFD. Contractor to confirm available voltage in field. Provide with maximum Impeller diameter. Pump to be NSF approved for swimming pool use.
Variable Frequency Drive	Pentair Water VLT Acu-Drive	Coordinate with pump size. Variable frequency drive to recieve flow signal from Signet 9900 Flow Transmitter.
Sight Glass	Hayward	1-1/2" radially installed PVC sight glass
	CHEMICAL TREA	TMENT AND CONTROL EQUIPMENT
CO2 Feeder	Treatment Specialties Pool link 200	Solenoid activated CO2 feeder with flow meter and adjustable feed rate.
Chlorine Feeder	Stenner Pumps Model # 45M5	Adjustable Output Pump. Provide 50 gpd maximum feed rate.
Pool / Chemistry Controller	Pool Link 501C	Chemical Control Unit with flow cell. Provide spare pH probe. Provide internet connection for remote monitoring and adjustments.
	MAKE-UP WAT	ER AND CONTROL EQUIPMENT
Solenoid Valve	ASCO	Two (2) way brass body, Buna seat, 24 volt, normally closed solenoid valve. 1-1/2" diameter.

	EQ	UIPMENT LIST
ITEM	MANUF./MODEL	DESCRIPTION / REMARKS
	RECIRCULA	ATION SYSTEM & EQUIPMENT
Butterfly Valves	Hayward	PVC Body, EPDM Seat, Stainless Steel Stem, Polypropylene Disc, Lever Type Operators
Compound Gauge	Ashcroft 1000	4.5" Dia. Gauge, 30" Hg to 60 psi
Pressure Gauge	Ashcroft 1000	4.5" Dia. Gauge, 0 psi to 60 psi
Check Valves	Cepex Check Valve	PVC swing check valve, EPDM Lined, Corrosion Resistant Springs, Bubble Tight Shu Off.
Filter Media		For Neptune Benson HRS Filter Model 42144SHFFG-64555MM Sand at 12" deep = 44cf. 1/8" - 1/4" Support Gravel = 18cf : Media to meet NSF requirements.
Flow Meter Sensor	Signet 515 Rotor-X Paddlewheel	Paddle wheel flow sensor compatible with Signet 9900 transmitter. Provide extra paddle wheel.
Flow Meter Display	Signet 9900 Transmitter	Flow transmitter to receive signal from Signet 515 flow sensor and provide control signal to compatible VFD. Display flow in GPM. Located at control panel.
Flow Switch	McDonnell & Miller Series FS4-3	Normally Open Flow Switch
Pump - Pool Recirculation	Paco VLS 5095 A	650gpm @ 62fthd : 15hp as recommened by manufacturer for use with the VFD. Contractor to confirm available voltage in field. Provide with maximum Impeller diameter. Pump to be NSF approved for swimming pool use.
Variable Frequency Drive	Pentair Water VLT Acu-Drive	Coordinate with pump size. Variable frequency drive to recieve flow signal from Signe 9900 Flow Transmitter.
Sight Glass	Hayward	1-1/2" radially installed PVC sight glass
	CHEMICAL TREA	TMENT AND CONTROL EQUIPMENT
CO2 Feeder	Treatment Specialties Pool link 200	Solenoid activated CO2 feeder with flow meter and adjustable feed rate.
Chlorine Feeder	Stenner Pumps Model # 170DM4	Adjustable Output Pump. Provide 120 gpd maximum feed rate.
Pool / Chemistry Controller	Pool Link 501C	Chemical Control Unit with flow cell. Provide spare pH probe. Provide internet connection for remote montoring and adjustment.
	MAKE-UP WAT	FER AND CONTROL EQUIPMENT
Solenoid Valve	ASCO	Two (2) way brass body, Buna seat, 24 volt, normally closed solenoid valve. 1-1/2" diameter.

WADING POOL EQUIPMENT LIST

6 TRAINING POOL EQUIPMENT LIST N.T.S.

7 MAIN POOL EQUIPMENT LIST N.T.S.

NO. REVISIONS DATE

VILLAGE OF HASTINGS-ON-HUDSON

PROJECT ENGINEER:

Rimkunas

Engineering, P.L.L.C.

Aquatic Engineering & Construction Management

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10• Huntington• New York•11743 631.470.6115

It is a violation of Section 7209 of the New York State Education Law for any person, unless he is acting under the direction of a licensed professional engineer, to alter any item on this drawing in any way. If the drawing is altered under the direction of a professional engineer, the altering engineer shall affix his seal to the drawing with the notation "altered by" followed by his signature, the date of alteration, and a specific description of the alteration.

DEPARTMENT OF PARKS AND RECREATIONS

PROJEC⁻

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

DRAWING TITLE:

SWIMMING POOL EQUIPMENT LIST

SCALE:

NOT TO SCALE

DRAWN BY:
BC

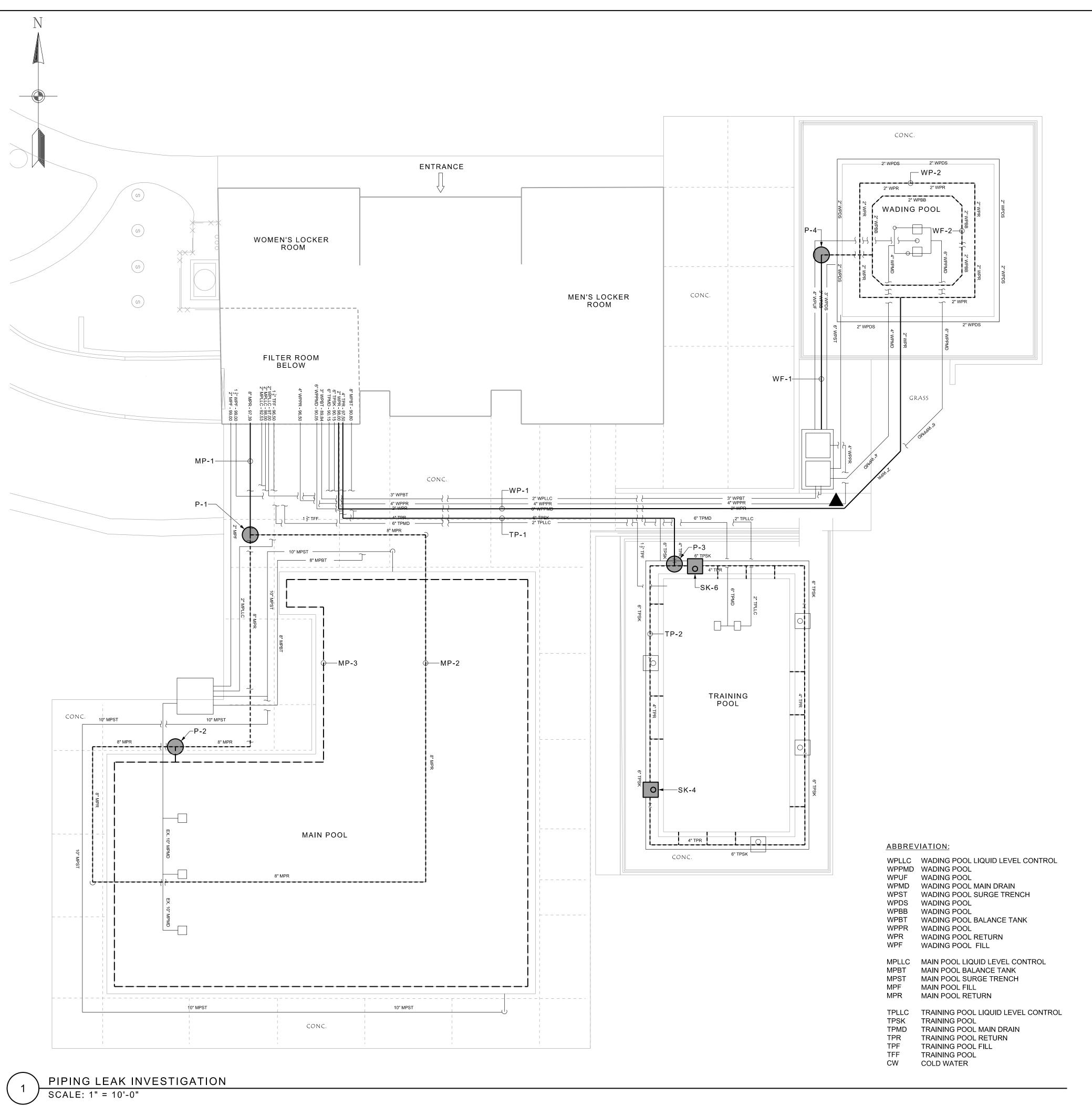
CHECKED BY:
SR

FILE NO.

PROJECT NO.
1148

DATE:
06/03/2022

SP-06



SELECT PIPE TESTING

BASED ON FINDINGS FROM THE PIPE PRESSURE TEST REPORT DATED NOVEMBER 14, 2021 TEST PITS WILL BE OPENED IN THE POOL DECK TO EXPOSE PIPING AND CONDUCT FURTHER TESTING. IT IS THE INTENT OF THE TESTING TO DETERMINE THE LOCATION OF THE LEAK. TEST PITS AND PIPE TESTING TO BE INCLUDED IN BASE BID. LEAK REPAIR WILL BE PAID FOR BASED ON TIME AND MATERIALS.

THE FOLLOWING TEST PITS AND PIPE TESTING ARE REQUIRED.

MAIN POOL FILTERED RETURN PIPE OPEN TEST PIT P-1 AND P-2 EXPOSE 8" FILTER RETURN PIPE ISOLATE AND TEST PIPE RUNS: MP-1: FILTER ROOM TO TEE

EXPOSE 4" FILTER RETURN PIPE ISOLATE AND TEST PIPE RUNS:

MP-2 : FLOOR RETURN LOOP MP-3 : THE RETRUN TUBE OF THE STAINLESS STEEL GUTTER.

TRAINING POOL FILTERED RETURN PIPE OPEN TEST PIT P-3

TP-1: FILTER ROOM TO TEE
TP-2: RETURN LOOP AND FITTINGS

WADING POOL FILTERED RETURN PIPE NO TEST PIT REQUIRED. TEE LOCATED WITHIN THE GUTTER TRENCH. ISOLATE AND TEST PIPE RUNS:

WP-1 : FILTER ROOM TO TEE WP-2 : RETURN LOOP AND FITTINGS

WADING POOL WATER FEATURE BUBBLER PIPE OPEN TEST PIT P-4 (OUTSIDE OF POOL LINER) ISOLATE AND TEST PIPE RUNS

WF-1 : VAULT TO TEE WF-2 : BUBBLER RETURN LOOP

CONTRACTOR TO PROVIDE WRITTEN REPORT OF LOCATIONS OF IDENTIFIED LEAKS ALONG WITH ITEMIZED TIME AND MATERIAL COST TO REPAIR.

TEST PIT TO INCLUDE ALL LABOR, EXCAVATION, EQUIPMENT AND MATERIALS TO BREAK THE CONCRETE DECK, REMOVE CONCRETE, EXCAVATE TO EXPOSE BURIED POOL PIPING, MATERIALS TO PLUG PIPE TO PERFORM PRESSURE TEST, RESTORATION OF PIPING, BACKFILL, AND CONCRETE DECK REPLACEMENT WITH POLYSULFIDE EXPANSION JOINT SEALANT. NEW DEPTH MARKERS TO BE INSTALLED IF REMOVED WITH TEST PIT.

SURGE TANK WATERPROOFING

THE SURGE TANK AT THE MAIN POOL AND THE TRAINIG POOL HAVE BOTH FAILED THE WATERTIGHTNESS TEST. THE FOLLOWING WORK WILL BE REQUIRED AT EACH

- 1 CLEAN FLOOR AND WALLS OF ALL DEBRIS, LOOSE OR DELAMINATING WATERPROOFING AND SCRAPED CLEAN OF ANY PAINT.
- 2- PIPE PENETRATIONS TO BE CHIPPED OF LOOSE MATERIAL AND SURFACE PREPPED TO ACCEPT NEW HYDRAULIC CEMENT. INSTALL NEW HYDRAULIC AT EACH PIPE PENETRATION TO SEAL PIPE PERIMETER.
- 3- APPLY MASTERSEAL 583 CEMENTIOUS WATERPROOFING ON INTERIOR FLOOR AND WALLS OF TANK.
- 4 TANK SHALL BE FILLED AND TESTED FOR WATER TIGHTNESS FOR 24 HOURS UPON COMPTETION OF WORK. IN THE EVENT THAT THE TANKS ARE NOT WATER TIGHT, CONTRACTOR SHALL REPEAT PROCESS OR TAKE STEPS TO REPAIR IDENTIFIED LEAKS AND RETEST TANK. THIS PROCESS SHALL BE REPEATED UNTIL TANK IS WATERTIGHT.

SKIMMER REPLACEMENT



REMOVE, FURNISH AND INSTALL
SKIMMERS #4 AND #6 LOCATED IN TRAINING POOL

SAFETY SIGNS



INSTALL SAFETY SIGN PROVIDED BY VILLAGE

APPROXIMATE LOCATIONS OF DEPTH MARKERS ARE INDICATED ON THE DRAWING. DEPTH MARKER INSTALLATION SHALL CONFORM TO THE FOLLOWING:

PERMANENT MARKERS SHALL BE INSTALLED ON THE POOL DECK AND WALL. DECK AND WALL MARKERS SHALL BE CERAMIC TILE.

DEPTH MARKERS SHALL BE INSTALLED AT POINTS OF MINIMUM AND MAXIMUM DEPTH, THE POOL BREAKPOINT, AND INCREMENTS OF 2' OF DEPTH. SPACING BETWEEN MARKERS SHALL NOT EXCEED 25' AROUND THE ENTIRE PERIMETER OF THE POOL. MARKERS SHALL BE LOCATED AT BOTH ENDS AND SIDES OF THE POOL.

WHEN COPING STONES ARE USED MARKERS SHALL BE INSTALLED IN THE STONE.

MARKERS SHALL INDICATE THE DEPTH AS MEASURED 3' FROM THE POOL WALL.

MARKERS SHALL HAVE DEPTHS IN NUMBERS THAT ARE 4" HIGH FOLLOWED BY "FOOT DEPTH" OR "INCHES DEEP". SEE DETAIL BELOW.

"NO DIVING" MARKERS SHALL BE AT ALL LOCATIONS WITH DEPTHS LESS THAN 8FT AND AT LOCATIONS SHOWN ON PLANS.

CERAMIC TILES TO BE MANUFACTURED BY TILE SPECIALTIES: 6" X 6" NON-SKID DECK TILE 8" X 6" SMOOTH WALL TILE

4" BLACK LETTERING
WHITE BACKGROUND

THE BACKGROUND

DECK TILE

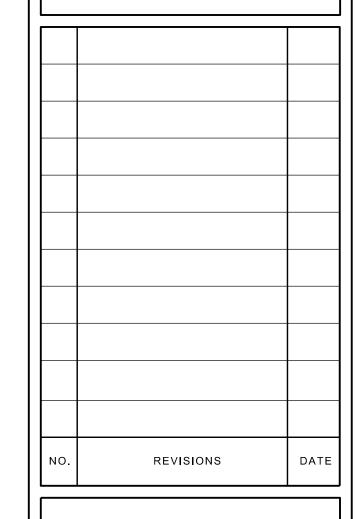
DEPTH MARKER (TYP.)

PROJECT ENGINEER:

Rimkunas Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10• Huntington• New York•11743 631.470.6115

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VILLAGE OF HASTINGS-ON-HUDSON



DEPARTMENT OF PARKS AND RECREATIONS

PROJEC

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

DRAWING TITLE:

MISCELLANEOUS PIPING AND ACCESSORY REPAIR

ı					
	SCAL	E:			
	10	5	0	10	20
			SCAL	E IN FEET	

S	SCALE IN FEET		
DRAWN BY:			
BC			
CHECKED BY:			
SR			
FILE NO.			
-			
PROJECT NO.	DRAWING NO.		
1148			
	SP-07		
DATE:	3F-07		
06/03/2022			

ELECTRICAL SPECIFICATION

WORK INCLUDED

1. Work under the electrical contract shall include all labor, materials, equipment, plant services and administrative tasks required to complete and make operable the electrical work shown on the pool electric drawings and specified herein, including but not limited to the following:

a. Prepare and submit shop drawings, diagrams and illustrations to the owner.

b. Procure necessary permits and approvals and paying required fees and charges in connection with the work.

c.Protect, test, balance, clean adjust and guarantee all of the work to safely, properly and

d.Submit as-built drawings, operating and maintenance instructions and manuals.

e.Provide identification labels, tags, charts and diagrams.

f.Execute all cutting, drilling, rough and finish patching of existing or newly installed construction required for the work.

g.Excavation and back filling for the electrical work.

h.Provide hangers, supports, foundations, structural framing supports and bases for conduit and equipment provided or installed.

i.Provide counter flashing, sleeves and seals for roof, floor and wall penetrations.

j.Temporary light and power for construction purposes.

k. Electrical demolition as indicated

I. Complete wiring systems for power installations and branch circuits to equipment including connections to exisiting wiring to remain

m. Install and Connect variable frequency drives furnished by others.

n. Install and connect UV control panel and lamps provided by others.

o. Panel boards and service equipment

p. Motor starters, control wiring and contactors, relays and control panels as shown on the drawings.

q. Provide and install leak detection and overfill alarm panels

r. Branch circuits extending to all equipment and receptacles.

s. Receptacles, local switches and miscellaneous wiring devices as indicated.

t. Lighting fixtures and controls.

u. Grounding of electrical systems and equipment and pool equipment per Articles 250 and

680 of the NATIONAL ELECTRIC CODES.

v. Balance all loads on panelboards.

GENERAL REQUIREMENTS

1.GENERAL

a. After carefully studying the drawings and specifications, and before submitting the proposal, visit the site to ascertain conditions of the site, and the nature and exact quantity of work to be performed. No extra will be allowed for failure to notify the owner in writing of any discrepancies noted between the existing conditions and drawings and specifications.

b. Verify all measurements at the site, and be responsible for correctness of same.

2.CODES, REGULATIONS AND STANDARDS

a. Work shall comply with the requirements of the following codes:

1.Federal, State and Local codes having jurisdiction.

2.National Fire Protection Association

3. National Electrical Code (NEC).

3.FEES

a.Include in bid the cost of all required permits, fees, inspections, tests and certificates of approval.

4.QUALITY, WORKMANSHIP, MATERIALS AND SAFETY

a. Work shall be first-class in every respect and shall be neatly performed in a practical and workmanlike manner by sufficient electricians skilled in the work they are to do using the best practices of their trade, and under continuous, competent supervision. The work shall be organized in advance of operation and carried out efficiently without delays which would impede progress or the quality of the work of other trades and the work as a whole.

b.Materials and equipment provided shall be new and approved for the application and shall conform to the specified codes and standards. Defective or damaged materials shall be replaced or repaired in a manner approved by the owner.

c.Equipment shall bear the UL label and shall meet or exceed NEMA standards.

5.GUARANTEE

a. Furnish in writing, a complete guarantee against defective materials and improper workmanship, satisfactory to owner, for all parts, components and operation for a period of one year from the date of acceptance of the complete installation by the owner.

b.Guarantee shall include complete maintenance of the system, including replacement parts, all labor and materials to maintain the system in proper operating condition for the guarantee period.

6.CLEANING

a. Remove all construction debris resulting from the work.

b.Clean equipment and systems following the detailed procedures specified herein, or as directed.

7.COORDINATION AND SUPERVISION

a. The work shall be carefully laid out in advance to avoid unnecessary cutting, channeling, chasing or drilling of floor, walls, partitions, ceilings or other surfaces. Where such work is necessary, however, the work shall be patched and/or repaired in an approved manner by skilled mechanics at no additional cost to the owner.

SPECIAL REQUIREMENTS

1.SUBMITTALS

a.SHOP DRAWINGS

1. Shop drawings submittals shall consist of one reproducible and three prints, or six photocopies.

2. Submit shop drawings of the following:

1)Controls

2)Wiring Devices

3)Panel boards, lighting fixtures, control devices

4)Conduit, boxes and fittings

5)Name plates and legends.

6)Motor Starter and Disconnect Switch

7)Lighting Contractor and Time Switch

8)Leak Detection and Overfill Panel

3.AS-BUILT DRAWINGS

1)Upon completion of the work, furnish to the owner in AutoCAD, "AS-BUILT" drawings on CD-ROM media and one set of Mylar reproducibles. Drawings shall include all field changes and dimensions to accurately locate all outlets, devices, equipment and the like.

4.SERVICE MANUALS

1)Provide three complete sets of instructions for all electrical equipment installed.

5.CUTTING AND PATCHING

1)Provide all cutting, drilling, rough and finish patching required for the work

2)Provide all drilling and patching for expansion bolts, hangers and other supports for proper and safe installation of work.

6.PHASE ROTATION TESTS

1)Properly test the phase rotation of feeder and branch circuits, and make such changes and alterations necessary to ensure the correct rotation of all motor driven equipment throughout the new installation.

7.ELECTRICAL SERVICE CHARACTERISTICS

1)The characteristics of the secondary electric service and distribution system are 120/208 volts, three phase, four wire plus ground.

8.TESTS, INSPECTIONS AND APPROVAL

1)Inspect all equipment, components and materials installed or connected to

(a)Proper conditions.

(b)Components are in place aligned and secure.

(c)Proper internal connections.

2)The complete electrical system shall be free of grounds and short circuits.

RACEWAYS

1.All wiring shall be installed in conduit systems in accordance with the following:

a.Interior wiring shall be installed in rigid schedule 40 PVC conduit with solvent welded fittings. b.All underground wiring shall be installed in rigid schedule 80 PVC conduit with solvent

c.All work installed in the filter room shall be run exposed: Conduits shall not be embedded

d.Minimum size conduit shall be 3/4 inch trade size unless otherwise indicated.

e. Final connections to motors and vibrating equipment shall be installed in liquid-tight flexible metal conduit. Minimum length 12-inches.

f.The routing of conduits indicated on the drawings is diagrammatic. Before installing any work examine the working layouts and shop drawings of the other trades to determine the exact locations and clearance.

1. Where circuit make-up is not indicated on plans refer to one-line diagram for circuit make-up.

g.Conduit fittings, connectors, coupling, ells, nipples and the like shall be of material and construction suitable for the conduit system used.

WIRES AND CABLES

1. Wire and cable shall be 600 volt, copper, with THHN/THWN-2 90 degrees C. insulation except as noted or otherwise specified herein.

2.Underground wiring shall be copper. Use - XHHW insulated.

2. Wire shall be not less than No. 12 AWG. Wire No. 8 and larger shall be stranded.

3. Wires shall be color-coded as follows for 208 volt system:

Black, Red and Blue

Neutral - White

Equipment Ground - Green

Provide a green insulated ground conductor with all feeders and branch circuits.

JUNCTION BOXES

1.Boxes for wiring devices, junction points, switching relays, and the like in the Filter Area shall be of proper size and type as required by the building and circuit conditions and shall be fabricated of fiberglass reinforced polyester or PVC with stainless steel screws and shall be UL listed for outdoor use. 2.Conduit fittings, connectors, couplings and the like in the Pool Building shall be of material and construction suitable for the conduit system uses.

WIRING DEVICES

1.RECEPTACLES

a. Straight balde receptacles shall be termination type duplex ground fault circuit interrupter. Receptacle device rated 20 ampere, 125 volts, Arrow Hart No. GF8300 or approved equal.

b. Twist lock receptacles shall be yellow, corrosion resistant, NEMA L5-201R rated 20A, 125 volt. Mounted in fiberglass reinforced polyester or PVC outlet box with cover. Hubbell HBL 23CM10 or equal.

c. Twist lock plugs shall be yellow corrosion resistant, NEMA L5-20P, Attachment cord mounted, Hubbell HBL2311VY or equal.

DEVICE PLATES

1.In general, plates for all wiring devices, except as specified otherwise, shall be .040 inch satin finished stainless steel. A common plate shall cover all devices which are indicated at the same

2.On the inside of each device plate, write the panelboard designation and circuit number of the circuit serving the device.

3. Device plates for outdoor receptacles shall be weatherproof with "in-use" covers.

4. Device plates shall be secured with stainless steel screws.

PANELBOARDS

1. Panels shall consist of an assembly of molded case circuit breakers and bus assembly installed in a stainless steel NEMA 4X cabinet, surface mounted as indicated on the drawings.

2. The panel sections shall be mounted away from the back of the cabinet trim and framed.

a. The gutter space on sides, top and bottom shall be of sufficient size to prevent overcrowding of wires and cables, and overheating of the circuit breakers.

b. Cabinets shall be complete with door in door, hinged doors with cylinder lock, directory frame and neatly typed directory charts.

c. Provide an angle piece on the inside of the bottom of each trim for ease of installation.

3. The branch circuit breakers, in general, shall be molded case, bolt-on type, thermal magnetic trip,

single, two or three pole as indicated on the drawings.

a. Multiple pole breakers shall be single handle, common trip.

b. Where breakers of larger capacity are required, they shall have circuit characteristics as

c. Breakers shall be 22,000 A.I.C. for 120/208 volt service, unless otherwise indicated. d. Main buswork shall be high conductivity copper, and shall as a minimum, be designed to

carry the full rating of the feeder breaker or switch supplying the panel without perceptible

e. Branch circuit breakers shall be arranged so that each breaker is readily removable from the

panel without disturbing adjacent breakers. Phase legs shall be alternately bussed to each circuit breaker in a manner to effect balancing the branch circuit connections as nearly as possible over each phase.

f. Panels shall be equipped with a key-lockable door.

MOTOR STARTERS AND CONTROLS

4. Panels by Square D/Schneider Electric, Eaton/Cutler-Hammer or Siemans, and meeting these specifications shall be acceptable.

1. Motor Starters, auxiliary contacts, interlock wiring, selector switches, pilot lights, pushbuttons, control relays and other control devices, provided under this division, shall be in accordance with the drawings and as specified herein, to provide a complete operating system.

2. Starters for motors shall be of the combination magnetic type, size as indicated. Non-reversing, full voltage, as required for the motor served. Starters shall be furnished with the following:

a. Front operated motor circuit protector mechanically-interlocked with the starter enclosure cover to prevent opening the starter unless the protector is in the open position, and lockable in the

open position. b.Magnetic, across-the-line contactor with overload protection and under-voltage protection or

c.Control transformer, fused secondary, for 120 volt control. d.Start-Stop push buttons shall be door mounted. Provide manufacturer's standard legend. e.Running pilot lights of the oil-tight push-to-test neon-type with lamp and red lens shall be door mounted. Provide manufacturer's standard legend.

f. Three phase motor starters shall be furnished with auxillary contacts as follows: 1) Provide the correct number of contacts required by the control system. g.Starters shall be wall mounted in NEMA 4X enclosures unless otherwise indicated.

Enclosures shall be constructed of stainless steel per NEMA and UL standards and shall bear UL listing.

h. Provision to automatically disconnect any seperate source control voltage. i. Starters shall be equipped with front-operated reset pushbutton providing class 20 operation.

3.MOTOR STARTERS AND CONTROLS SHALL BE MANUFACTURED BY:

b.Square D / Schneider Electric

c Siemans Corp.

IDENTIFICATION AND TAGGING

1. Panels, cabinets, etc. shall be properly identified with permanent nameplates securely fastened with screws to the front of equipment. "Stick-on" type letters or plates shall not be used.

a.Identify equipment and key equipment components with nameplates of black laminated phenolic material.

b.Coordinate nameplates with actual equipment installed.

c.Submit cut sheet of nameplates for approval prior to purchase and installation.

d.Minimum size nameplates shall be three inches long with 1/4 inch lettering.

2. Conductors in troughs, pull boxes, gutters, etc. shall be identified by means of tags indicating both terminating points.

GROUNDING AND BONDING

1.General

a. Provide all grounding and bonding conductors and connections as indicated, and in accordance with the requirements of the NEC and all local authorities having jurisdiction.

b.All major parts not carrying current, including the following items, shall be properly grounded with a green insulated grounding conductor:

i.Metallic junction boxes and disconnect switches.

ii.All metallic raceways, conduits and outlet boxes.

iii.Motor and equipment housings and metallic control panels

c.Provide a "green" wire grounding conductor for all equipment and as indicated on the Drawings

2.Products

a. Conductors and Connections:

i.Hard-drawn, stranded (ASTM B8) copper.

ii.Accessible grounding conductors shall be annealed copper with 600 volt, green type THW insulation. Conductors shall be stranded except pool bonding conductors which shall be solid.

iii.Accessible connections shall be made with multiple bolt silicon bronze connectors specifically designed and approved for the connection to be made. Grounding connectors shall be individually selected for each application, as recommended by the conductor manufacturer.

third, compatible conductive material. Exothermic welds of copper to steel are acceptable.

v.Inaccessible connections shall be made with exothermic welds (Cadweld or equal).

iv. Where connections involve dissimilar metals contributing to corrosion, interpose a

b.Grounding connectors shall be manufactured by:

i.Burndy Corp.

ii.Dossert Corp. iii.OZ/Gedney Co.

3 Execution

a. Maintain all existing grounding. Replace missing ground conductors and connectors.

b. Neutral connections to building steel or other ground source shall be made and sized so that

ground fault currents do not result in damage to materials or connections. c. Panelboards and feeder pull boxes shall be grounded by means of insulated grounding

bushings on all incoming and outgoing conduits 1-1/4 inches and larger. d. Wherever plastic or flexible conduit without internal ground conductor is used for part of a conduit run, a grounding conductor shall be provided in or external to the conduit and

connected to grounding connectors at each end of run.

in report form to the Engineer for approval.

f. Contractor shall megger the bonded equipment and submit results in report format to the Engineer for approval.

Ohms. Contractor shall test ground resistance with a megger ohmmeter and submit results

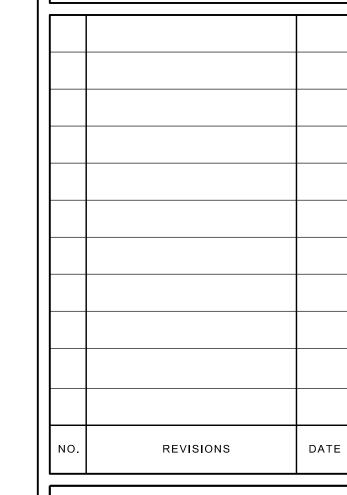
e. The resistance to ground of any part or system specified to be grounded shall not exceed 25

Rimkunas |Engineering, p.L.L.C.

PROJECT ENGINEER:

quatic Engineering & Construction Management Rimkunas Engineering, P.L.L.C. 44 Elm Street, 10 • Huntington • New York • 11743 631.470.6115

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OWNER: VILLAGE OF HASTINGS-ON-HUDSON



DEPARTMENT OF PARKS AND RECREATIONS

PROJECT:

CHEMKA POOL STORM DAMAGE 2021 **RECOVERY**

DRAWING TITLE:

SCALE:

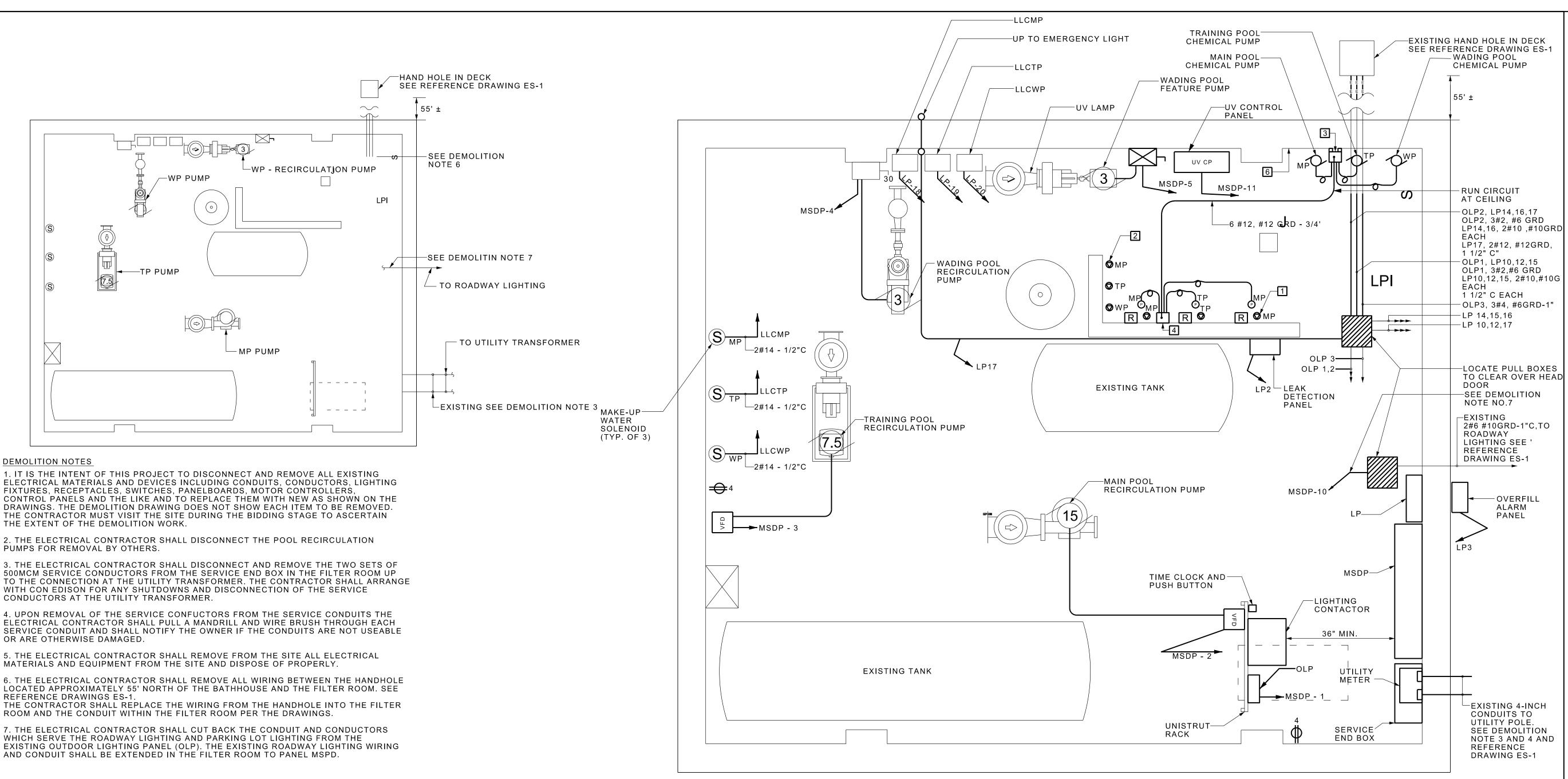
NOT TO SCALE

ELECTRICAL

SPECIFICATIONS

DRAWN BY:	
ВС	
CHECKED BY:	
SR	
FILE NO.	
-	
PROJECT NO.	DRAWING NO.
1148	
	E 04
DATE:	E-01
06/03/2022	

ELECTRICAL SPECIFICATIONS NOT TO SCALE



FILTER ROOM PLAN - DEMOLITION

SCALE: 1/4"=1'-0"

LEGEND				
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
\Box	RECEPTACLE, 20A, 125 V, GFI, UON, NUMERICAL NDICATES CIRCUIT NO IN PANEL LP.	R	RELAY	
\$	TOGGLE SWITCH 20A, 125V, UON.	A	CHAIN OR STEM HUNG LED LIGHTING FIXTURE.	
⊠₁	COMBINATION MOTOR STARTER. I INDICATES NEMA SIZE.	— E—	UNDERGROUND ELECTRIC CIRCUIT(S)	
VFD	VARIABLE FREQUENCY DRIVE		BRANCH CIRCUIT WIRING	
30	UNFUSED DISCONNECT SWITCH, 30 INDICATES SWITCH SIZE.	0	FLEXIBLE CORD	
	PULLBOX		15A, 125VOLT TWIST LOCK RECEPTACLE	
MSDP	HOMERUN SHOWN, TO PANEL MSDP CIRCUIT 2 #12, @12 GRD - 3/4" C, NUMBER OF ARROWS INDICATE NUMBER CIRCUITS	P	15A, 125VOLT TWIST LOCK PLUG	

ABREVATIONS MAIN POOL TRAINING POOL WADING POOL FEATURE PUMP RECIRCULATION PUMP UNLESS OTHERWISE NOTED

VARIABLE FREQUENCY DRIVE

ELECTRICAL LEGEND SCALE: N.T.S.

LLC LEVEL CONTROL PANEL

1	NOTES RECEPTACLE (15A, 125VOLT, TWIST LOCK, GROUNDING) FOR CHEMICAL CONTROLLERS, CHANGE CHEMICAL CONTROLLER PLUG TO MATCHING TWIST-LOCK PLUG. TYPICAL
	OF THREE.
	OF THREE.

2 RECEPTACLE (15A, 125VOLT, TWIST LOCK, GROUNDING) FOR CO2 PUMPS CHANGE PLUGS ON CO2 PUMPS TO MATCHING TWIST-LOCK PLUG. TYPICAL OF THREE.

3 PROVIDE 6"x6"x4" DEEP DAMP LOCATION, POLYCARBONATE JUNCTION BOX WITH GASKET, SCREW COVER. MOUNT ON VERTICAL FIBERGLASS UNISTRUT SO THE BOX IS NOT IN CONTACT WITH THE WALL. CUT THE PLUGS FROM CHEMICAL PUMP CORDS AND SPLICE THE CORDS CONDUCTORS IN THE JUNCTION BOX TO THE CONDUCTORS RUNNING OVERHEAD IN CONDUIT. THE OVERHEAD CONDUCTORS ARE RUN TO THE SECOND JUNCTION BOX WHERE THEY SHALL BE SPLICED TO CORDS FOR CONNECTION TO THE CHEMICAL CONTROLLERS. PROVIDE CORD GRIPS AT EACH JUNCTION BOX FOR CORDS ENTERING THE JUNCTION BOX.

4 PROVIDE JUNCTION BOX, SAME AS NOTE 3 AND MOUNT OFF WALL. SPLICE INCOMING #12 CONDUCTORS TO SJ CORDS. PROVIDE NEW 15AMP, 125 VOLT TWIST LOCK PLUGS ON SJ CORDS. CHANGE RECEPTS ON CHEMICAL CONTROLLER CORDS TO MATCHING TWIST LOCK 15A, 125VOLT

SEE CONTROL DIAGRAM ON DRAWING E-04 FOR [1,2,3,4, AND RELAY R.

RECEPTACLES ON FIBERGLASS UNISTRUT SO THEY ARE NOT IN CONTACT WITH THE WALL.

DEPARTMENT OF PARKS AND RECREATIONS **CHEMKA POOL** STORM DAMAGE 2021 SCALE: SCALE AS SHOWN DRAWN BY: вс CHECKED BY: SR FILE NO. PROJECT NO. 1148 DATE: 06/03/2022

PROJECT ENGINEER:

of the alteration.

Rimkunas

|Engineering, p.L.L.C.

Rimkunas Engineering, P.L.L.C.

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followed by his signature, the date of alteration, and a specific description

REVISIONS

VILLAGE OF

HASTINGS-ON-HUDSON

RECOVERY

ELECTRICAL

DEMOLITION

AND

PROPOSED

PLAN

DRAWING NO.

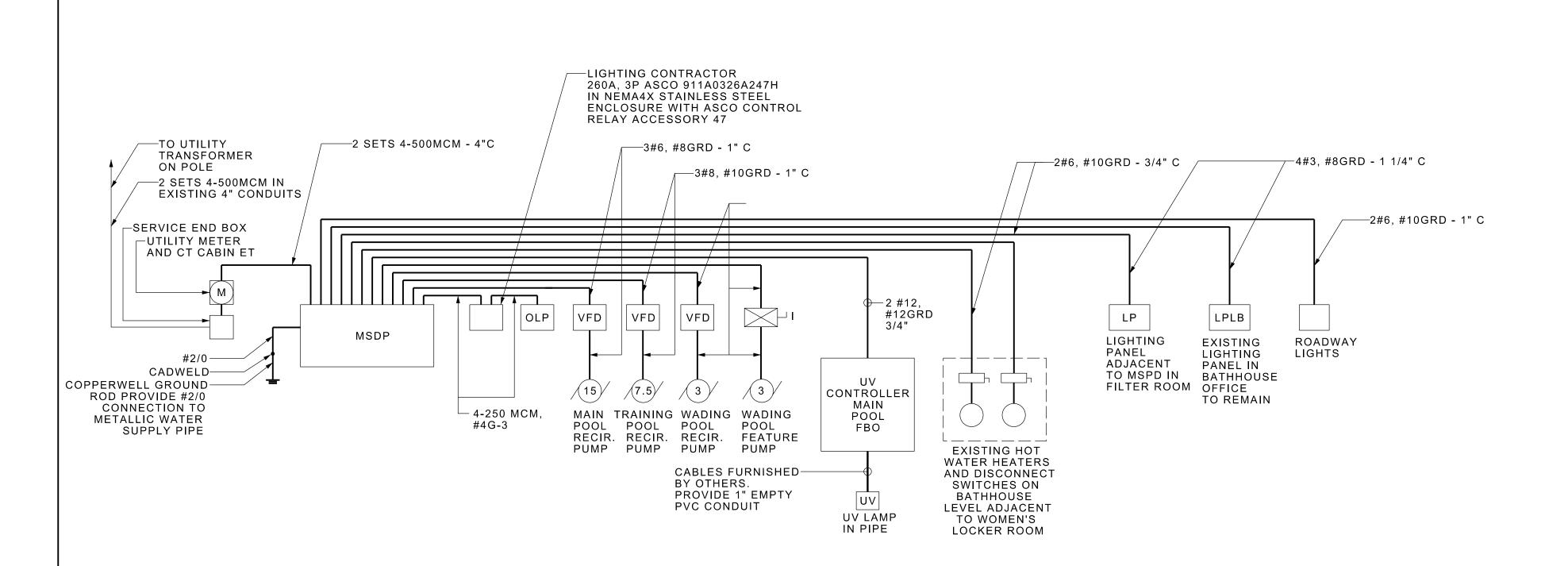
E-02

OWNER:

Aquatic Engineering & Construction Management

6 MOUNT ALL EQUIPMENT ON NORTH WALL, INCLUDING

FILTER ROOM PLAN - NEW WORK SCALE: 1/2"= 1'-0"

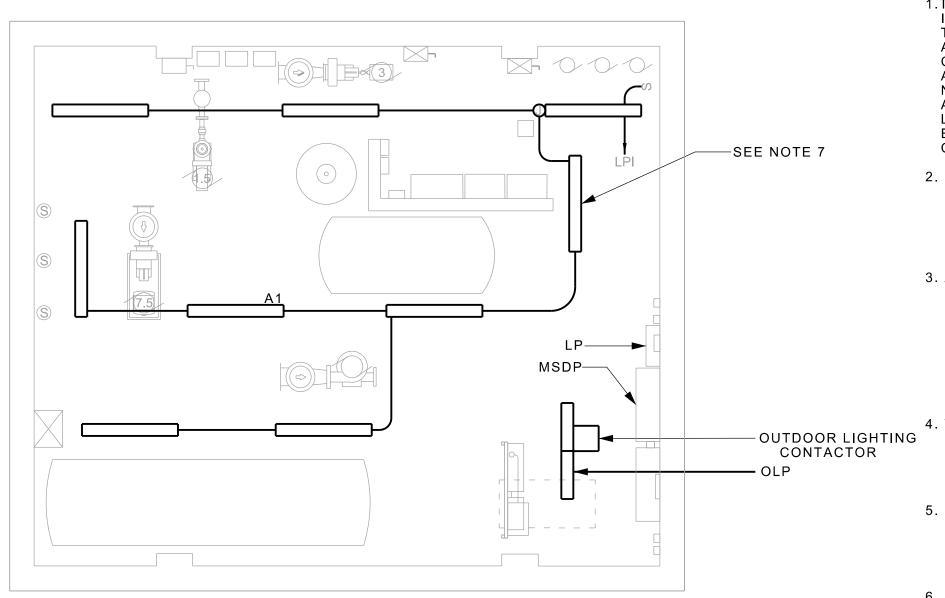


1. PANEL MSDP SHALL BE 600A, 120/208 VOLTS, 3 PHASE, 4-WIRE PLUS GROUND 100 AIC, IN A NEMA4X STAINLESS STEEL ENCLOSURE AND SHALL BE LISTED AS A SERVICE PANEL. PANEL MSDP SHALL INCLUDE A 600A, MAIN SERVICE SWITCH FUSED AT 600A AND THE FOLLOWING 3 POLE SWITCHES FUSED AND NUMBER OF POLES AS INDICATED. 1. 400A/275AF, 3P - OUTDOOR LIGHTING CONTACTOR AND PANEL OLP 2. 100A/80AF, 3P - MAIN POOL RECIRCULATION PUMP 3. 60A/80AF, 3P - TRAINING POOL RECIRCULATION PUMP 4. 30A/15AF, 3P - WADING POOL RECIRCULATION PUMP 5. 30A/15AF, 3P - WADING POOL FEATURE PUMP STARTER 6. 60A/45AF, 2P - EXISTING HOT WATER HEATER 1 7. 60A/45AF, 2P - EXISTING HOT WATER HEATER 2 8. 100A/100AF, 3P - PANEL LP 9. 100A/100AF, 3P - PANEL LPBH 10. 100A/35AF, 3P - ROADWAY LIGHTS 11. 30A/20AF, 2P - UV CONTROL PANEL 12. 100A SPARE 3 POLE SWITCH 2. PANEL OLP SHALL BE 400A, 120/208 VOLTS, 3 PHASE, 4 WIRE PLUS GROUND MLO IN A NEMA4X STAINLESS STEEL ENCLOSURE. PANEL SHALL THE FOLLOWING 3-POLE CIRCUIT BREAKERS. 1. 100/90 NIGHT SWIMMING FIELDS, POLE P1 2. 100/90 NIGHT SWIMMING FIELDS, POLE P1 3. 100/80 NIGHT SWIMMING FIELD, POLE P2 4. 100/ - BUSSED SPACE 5. 100/ - BUSSED SPACE 3. PANEL LP SHALL BE 100A, 120/208 VOLTS, 3 PHASE, 4-WIRE PLUS GROUND MLO IN A NEMA4X STAINLESS STEEL ENCLOSURE AND SHALL INCLUDE THE FOLLOW SINGLE POLE BRANCH CIRCUIT BREAKER CKT 1, 100/20 FILTER ROOM LIGHTING CKT 2, 100/20 LEAK ALARM PANEL CKT 3, 100/20 OVERFILL ALARM PANEL CKT 4, 100/20 FILTER ROOM RECEPTACLES CKT 5, 100/20 OUTDOOR LIGHTING REMOTE SWITCH CKT 6, 100/15 MAIN POOL - CHEMICAL CONTROL CKT 7, 100/15 TRAINING POOL - CHEMICAL CONTROL CKT 8, 100/15 WADING POOL - CHEMICAL CONTROL *CKT 9, 100/20 OUTSIDE LIGHTING ** *CKT 10, 100/20 OUTDOOR CONV. RECEPT.** CKT11, 100/20 SPARE *CKT 12, 100/20 VACUUM CLEANING RECEPTACLE *CKT 13, 100/20 AIR COMPRESSOR RECEPT.** *CKT 14, 100/20 VACUUM CLEANING RECEPT.** *CKT 15, 100/20 VACUUM CLEANING RECEPT.** *CKT 16, 100/20 VACUUM CLEANING RECEPT.** *CKT 17, 100/20 EMERGENCY LIGHT UNITS** CKT 18, 100/20 LIQUID LEVEL CONTROL PANEL LLCMP CKT 19, 100/20 LIQUID LEVEL CONTROL PANEL LLCTP CKT 20, 100/20 LIQUID LEVEL CONTROL PANEL LLCWP CKT 21, 36 BUSSED SPACE **EACH CIRCUIT - 2#10, #10 GROUND TO HAVE GFI CIRCUIT BREAKER

*INDICATES CIRCUIT WILL FEED EXISTING EXTERIOR CIRCUITS AT

HANDHOLE NORTH OF BATHHOUSE. SEE REFERENCE DRAWING ES-1.

ONE LINE DIAGRAM SCALE: N.T.S.



<u>NOTES</u>

1.THE LIGHTING ARRANGEMENT INDICATED IS GENEREAL AND IS 18 INTENDED TO SET THE QUANTITY OF FIXTURES AND APPROXIMATE SPACING REQUIRED. THE CONTRACTOR SHALL MAKE APPROPRIATE FIELD ADJUSTMENTS AS NEEDED TO AVOID INTERFERENCES AND/ OR CONFLICTS WITH THE FINAL LOCATIONS OF ALL MECHANICAL EQUIPMENT, PIPING, AND ELECTRICAL CONDUITS.

2. FIXTURE SHALL BE PENDANT MOUNTED 8'-6" AFF TO FIXTURE BOTTOM UNLESS NOTED OTHERWISE. ADJUSTMENTS TO MOUNTING HEIGHT SHALL BE MADE WHERE NECESSARY TO AVOID INTERFERANCES.

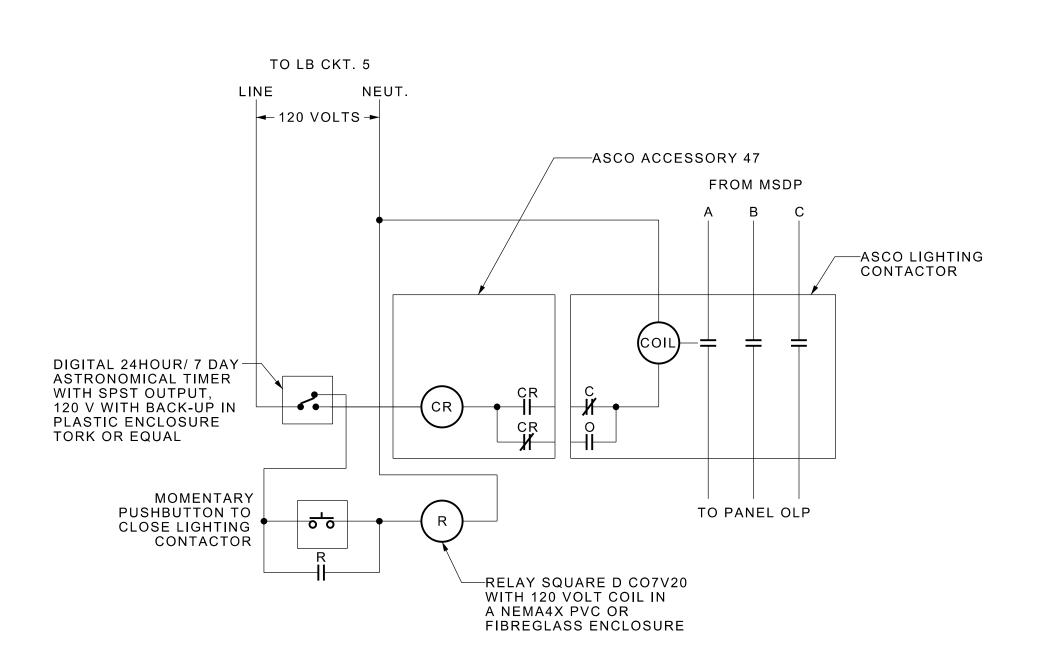
3. ALL FIXTURES SHALL BE 4'-LED,3000 LUMENS, 4000K COLOR TEMPERATURE LISTED FOR DAMP/WET LOCATION WITH POLYCARBONATE HOUSING AND GASKETED POLYCARBONATE LENS WITH STAINLESS STEEL LATCHES.FIXTURE SHALL BE LITHONIA CSVT48 3000LMM VOLT 40K STSL FIXTURE LABELED A1 SHALL CONTAIN AN EMERGENCY BATTERY UNIT.

4. WIRE AND CONDUIT BETWEEN LIGHTING -OUTDOOR LIGHTING FIXTURES, AND BETWEEN FIXTURES AND SWITCH NOT SHOWN. PROVIDE WIRE AND CONDUIT AS REQUIRED (2#12, #12GRD-3/4"C) TO PROVIDE COMPLETE CIRCUITRY.

> 5. FIXTURES WITH SELF-CONTAINED BATTERY UNITS SHALL BE SWITCHABLE WITH SEPARATE HOT LEG FROM LINE SIDE OF CIRCUIT BREAKER CONNECTED TO BATTERY ONLY.

6. ROUTE ALL LIGHTING CIRCUITS TO LIGHTING PANEL LP.

7. MOUNT FIXTURE TO AVOID INTERFERENCE WITH ROLL-UP DOOR AND DOOR SUPPORT STEEL.



POOL OUTDOOR LIGHTING CONTROL DIAGRAM SCALE: N.T.S.

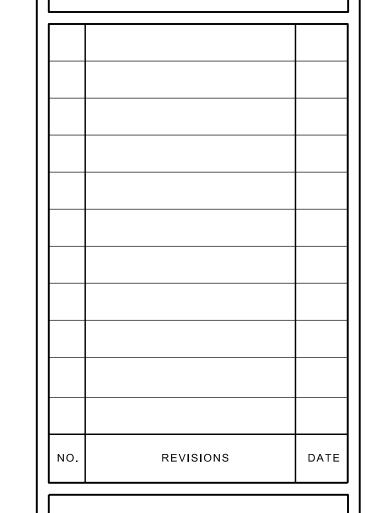
Rimkunas |Engineering, P.L.L.C. Aquatic Engineering & Construction Management

PROJECT ENGINEER:

44 Elm Street,10• Huntington • New York•11743 631.470.6115

Rimkunas Engineering, P.L.L.C.

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VILLAGE OF HASTINGS-ON-HUDSON



DEPARTMENT OF PARKS AND RECREATIONS

CHEMKA POOL STORM DAMAGE 2021 **RECOVERY**

DRAWING TITLE:

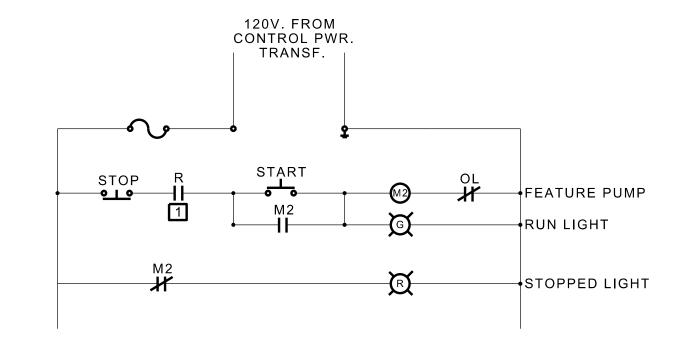
ELECTRICAL ONE-LINE DIAGRAM PANEL SCHEMATIC LIGHTING

SCALE:

NOT TO SCALE

DRAWN BY:	
ВС	
CHECKED BY:	
SR	
•••	
FILE NO.	
_	
PROJECT NO.	DRAWING NO.
1148	
DATE:	E-03
DATE.	
06/03/2022	

FILTER ROOM LIGHTING PLAN SCALE: 1/4"=1'-0"

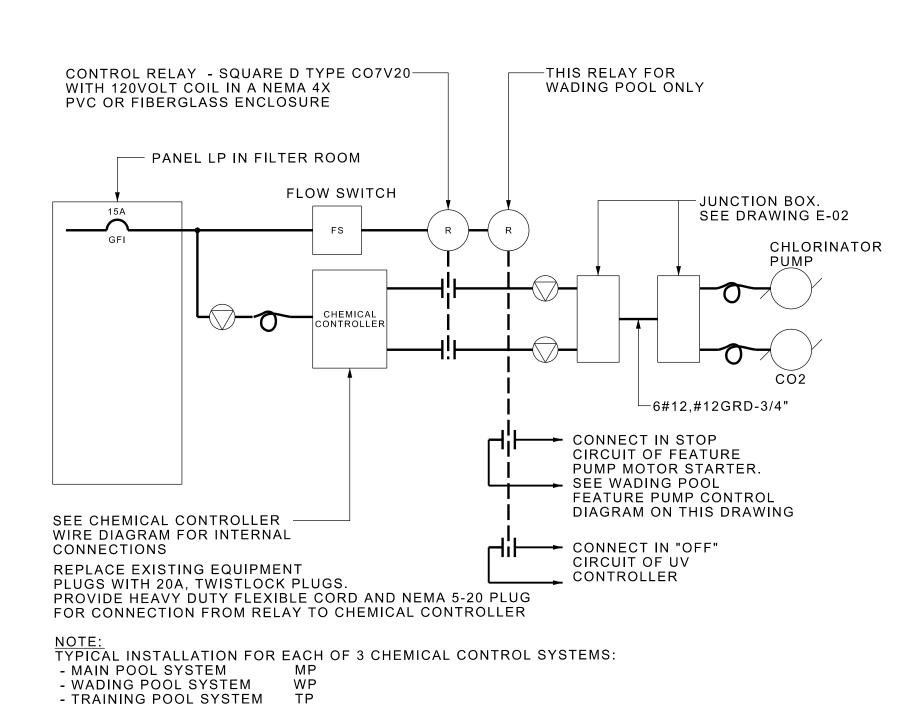


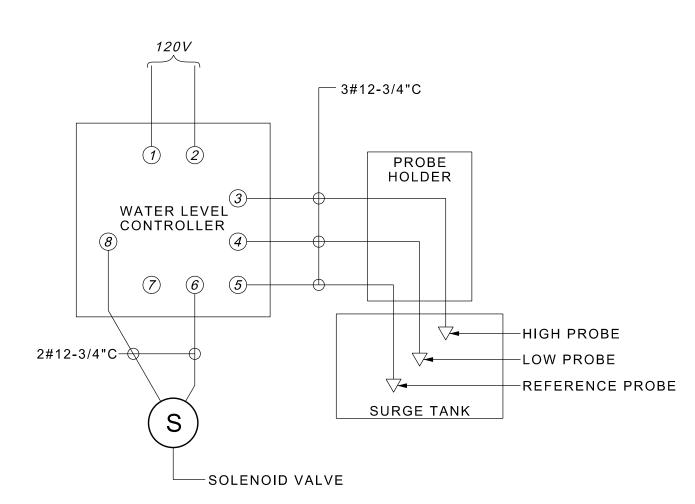
1 CONTACT FROM WADING POOL RECIRCULATING PUMP FLOW SWITCH RELAY TO INDICATE THAT WADING POOL PUMP IS RUNNING.

WADING POOL FEATURE PUMP CONTROL DIAGRAM

CHEMICAL CONTROL WIRING DIAGRAM

N.T.S.



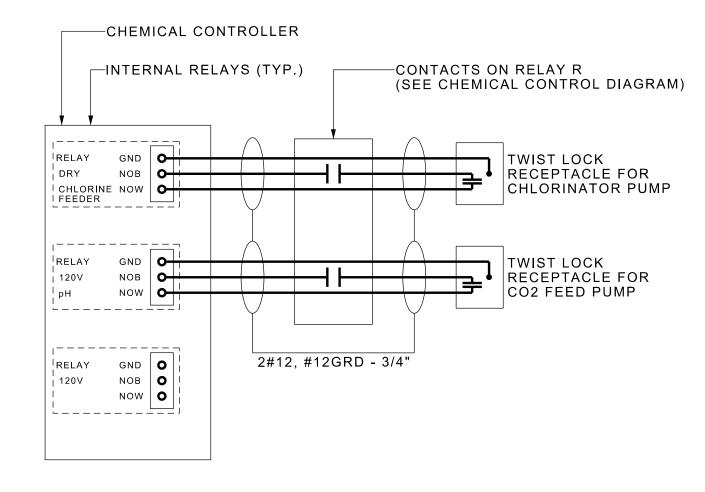


WATERLEVEL CONTROLLER WIRING

1. TYPICAL FOR EACH OF THREE POOLS; - MAIN POOL

- TRAINING POOL

- WADING POOL 2. SURGE TAK AND PROBES ARE LOCATED IN THE BATHHOUSE ABOVE THE FILTER ROOM. 3. TO BE PROVIDED BY OTHERS, WIRING BY ELECTRICAL CONTRACTOR



CHEMICAL CONTROLLER WIRING DIAGRAM

1. TYPICAL INSTALLATION FOR EACH OF THREE CHEMICAL CONTROL SYSTEMS

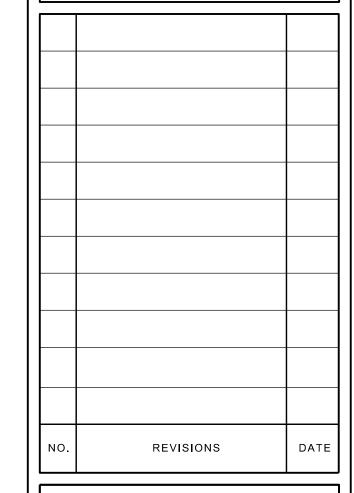
- MAIN POOL SYSTEM

- TRAINING POOL SYSTEM TP - WADING POOL SYSTEM WP PROJECT ENGINEER:

Rimkunas |Engineering, P.L.L.C. Aquatic Engineering & Construction Management

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10 · Huntington · New York · 11743 631.470.6115

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OWNER:

VILLAGE OF HASTINGS-ON-HUDSON



DEPARTMENT OF PARKS AND RECREATIONS

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

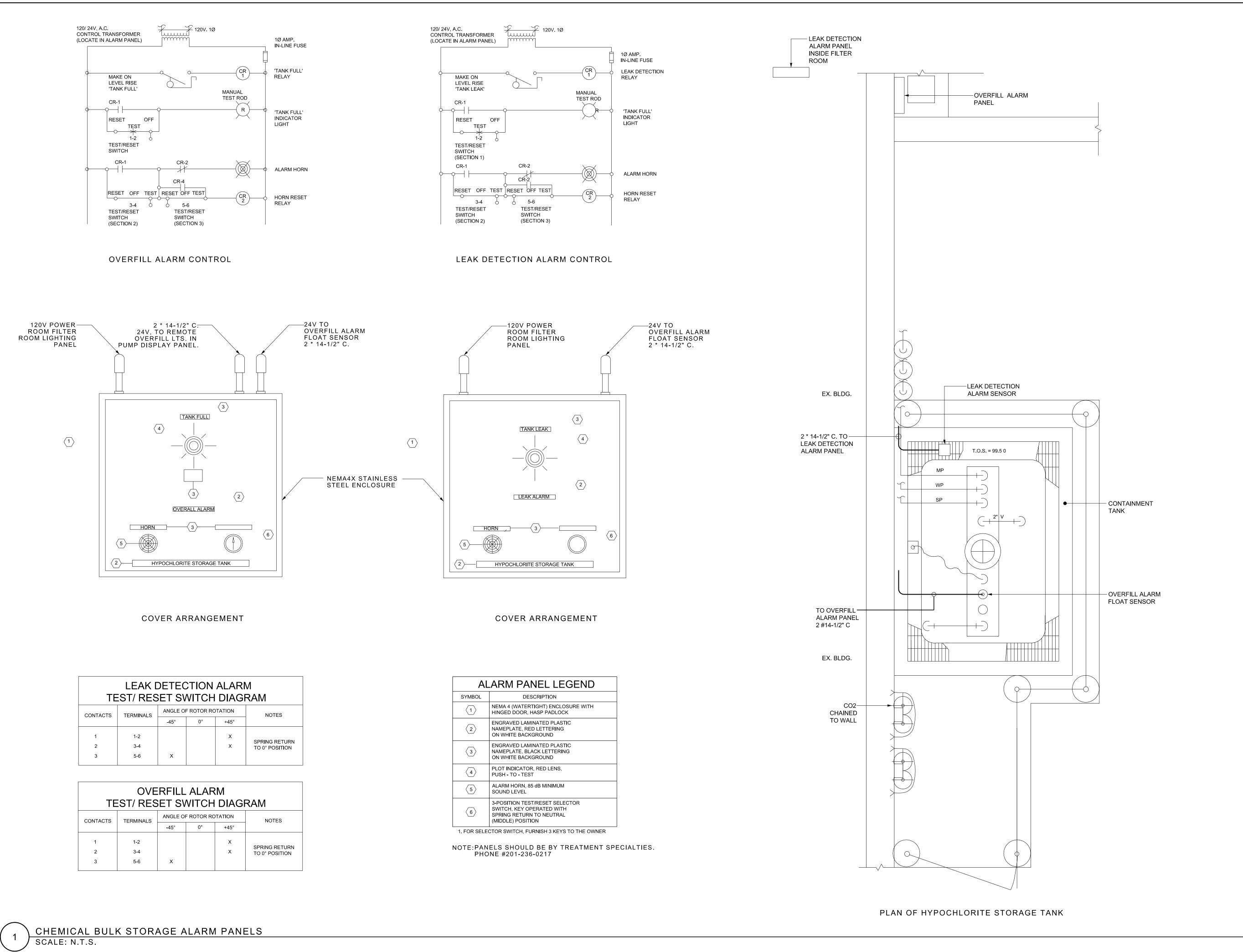
DRAWING TITLE:

POOL CHEMICAL CONTROL DIAGRAMS

SCALE:

NOT TO SCALE

DRAWN BY: ВС CHECKED BY: SR FILE NO. PROJECT NO. DRAWING NO. 1148 E-04 DATE: 06/03/2022

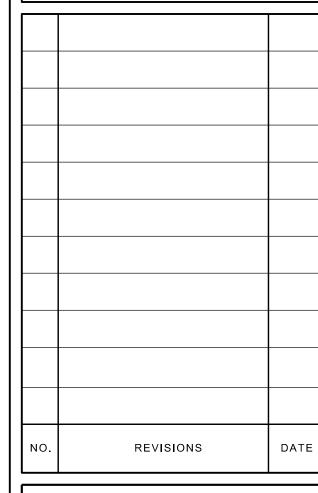


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DEPARTMENT OF PARKS AND RECREATIONS

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

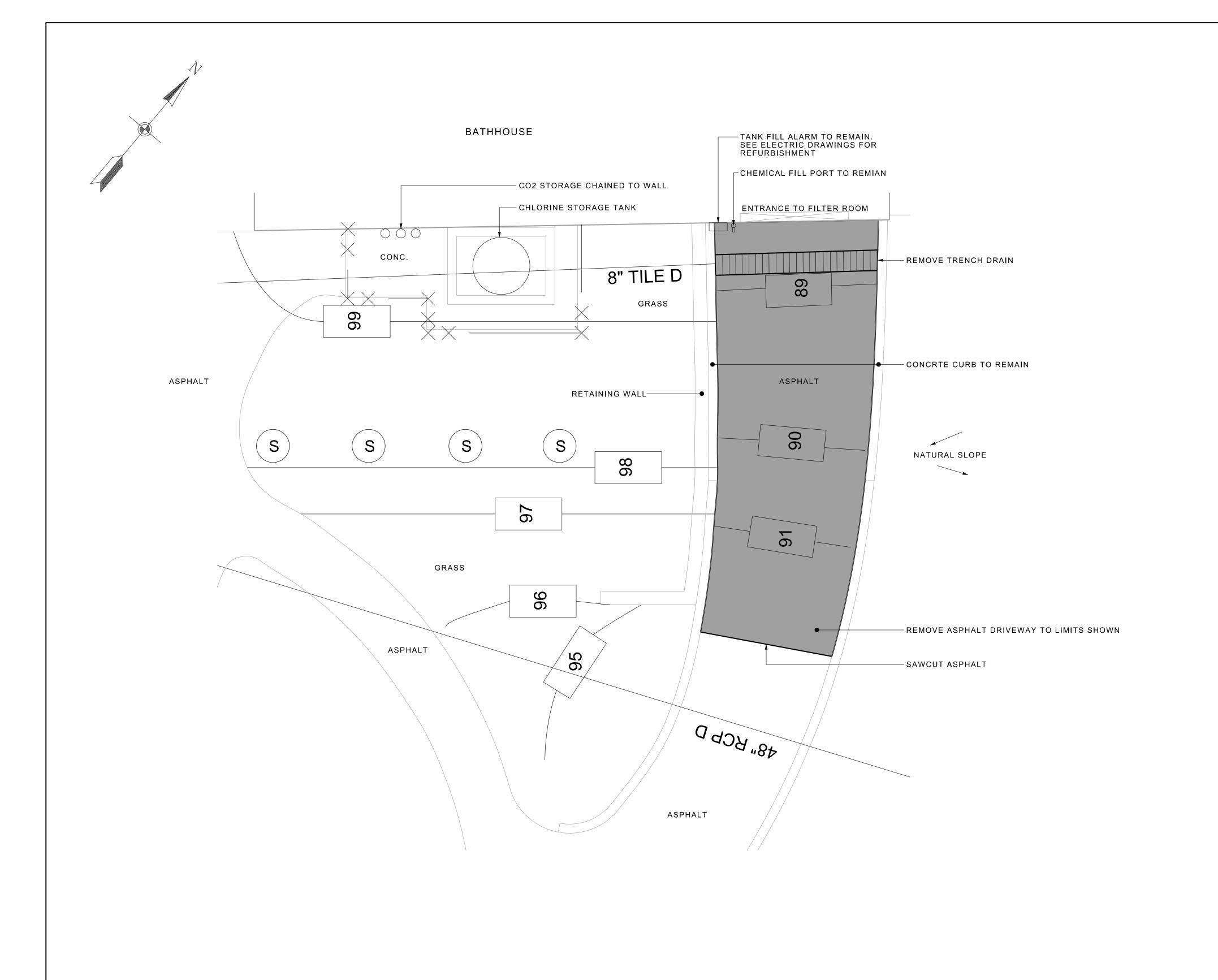
DRAWING TITLE:

CHEMICAL BULK STORAGE ALARM SYSTEM

SCALE:

NOT TO SCALE

DRAWN BY: CHECKED BY: SR FILE NO. PROJECT NO. DRAWING NO. 1148 E-05 DATE: 06/03/2022



DEMOLITION NOTES:

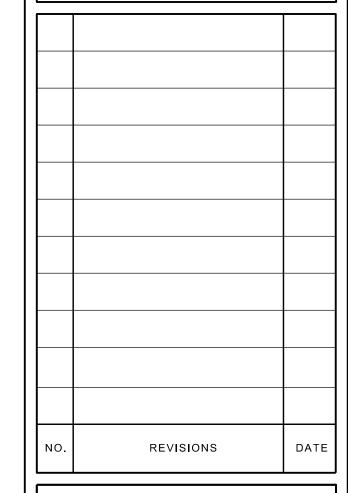
- 1. SAWCUT TOP OF DRIVEWAY AT LOCATION SHOWN.
- REMOVE EXISTING ASHPALT DRIVEWAY FROM SAWCUT DOWN TO CONCRETE FLOOR OF FILTER ROOM.
- 3. REMOVE TRENCH DRAIN. PROTECT EXSITING PIPE EXITING TRENCH FOR NEW CONNECTION.
- 4. PROTECT EXISTING CONCRETE CURB AND RETAINING WALL.
- 5. CHLORINE TANK OVERFILL ALARM TO REMAIN IN PLACE. SEE ELECTRICAL DRAWINGS FOR RECONSTRUCTION OF ALARM PANEL.
- 6. TANK FILL PORT TO REMIAN IN PLACE.
- 7. REMOVE EXISTING CHAINLINK FENCE GATES TO FILTER ROOM.
 INSTALL TEMPORARY FENCING TO PREVENT ENTRY INTO
 FILTER ROOM DURING CONSTRUCTION.

PROJECT ENGINEER:

Rimkunas Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C.
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631.470.6115

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| | own

VILLAGE OF HASTINGS-ON-HUDSON

DEPARTMENT OF PARKS AND RECREATIONS

PROJEC

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

DRAWING TITLE:

TRANSFER PAD SITE DEMOLITION

SCALE:
4 2 0 4 8

SCALE IN FEET

DRAWN BY:
BC

CHECKED BY:
SR

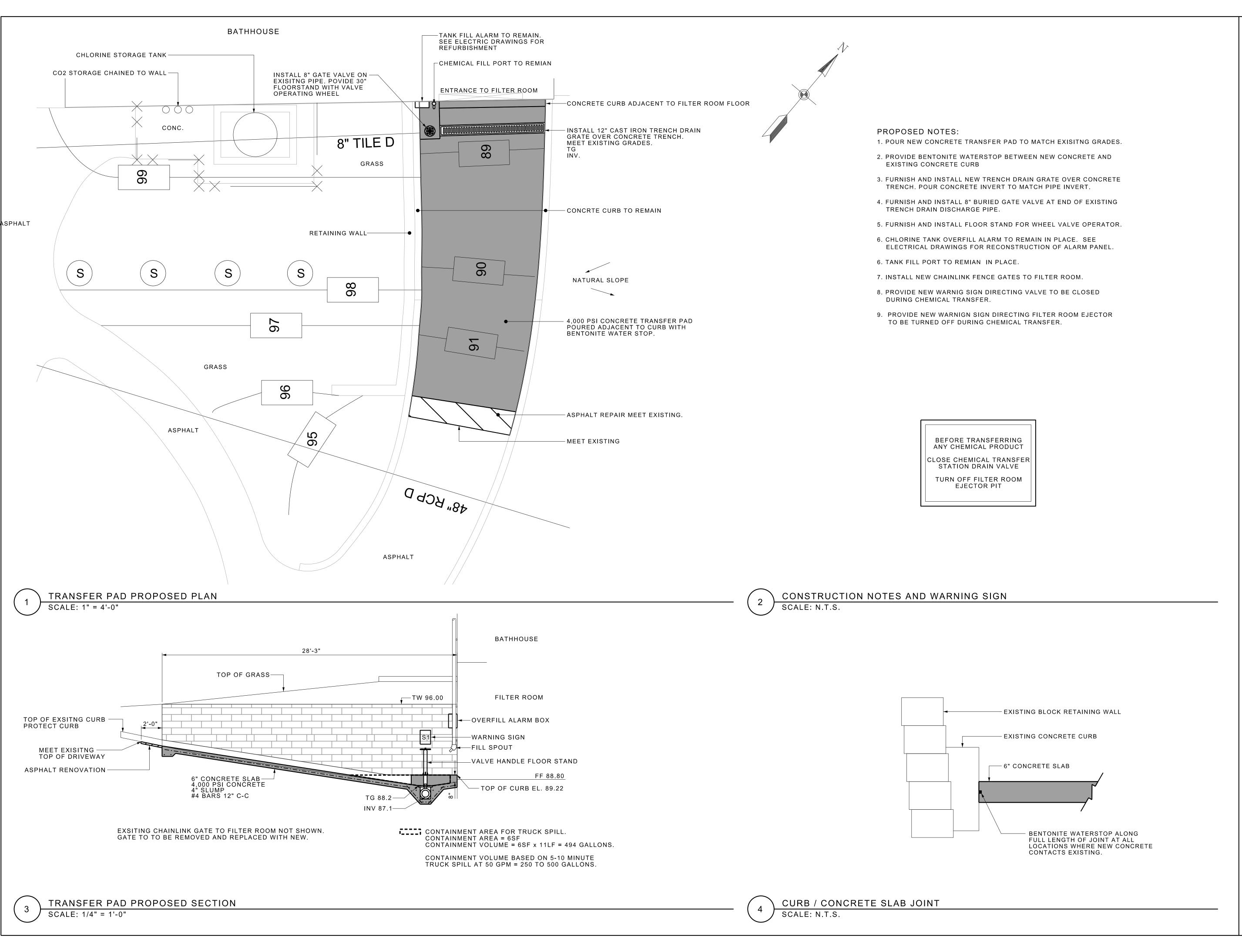
FILE NO.

PROJECT NO.
1148

DATE:
06/03/2022

CBS-01

1 TRANSFER PAD DEMOLITION PLAN
SCALE: 1" = 4'-0"

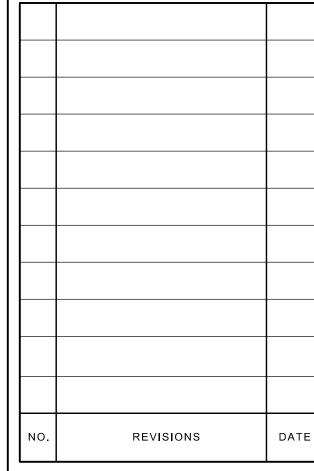


PROJECT ENGINEER:

Rimkunas Engineering, P.L.L.C.

Rimkunas Engineering, P.L.L.C. 44 Elm Street,10• Huntington• New York•11743 631.470.6115

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OWNER:

VILLAGE OF HASTINGS-ON-HUDSON

DEPARTMENT OF PARKS AND RECREATIONS

PROJEC

CHEMKA POOL STORM DAMAGE 2021 RECOVERY

DRAWING TITLE:

TRANSFER PAD SITE PROPOSED

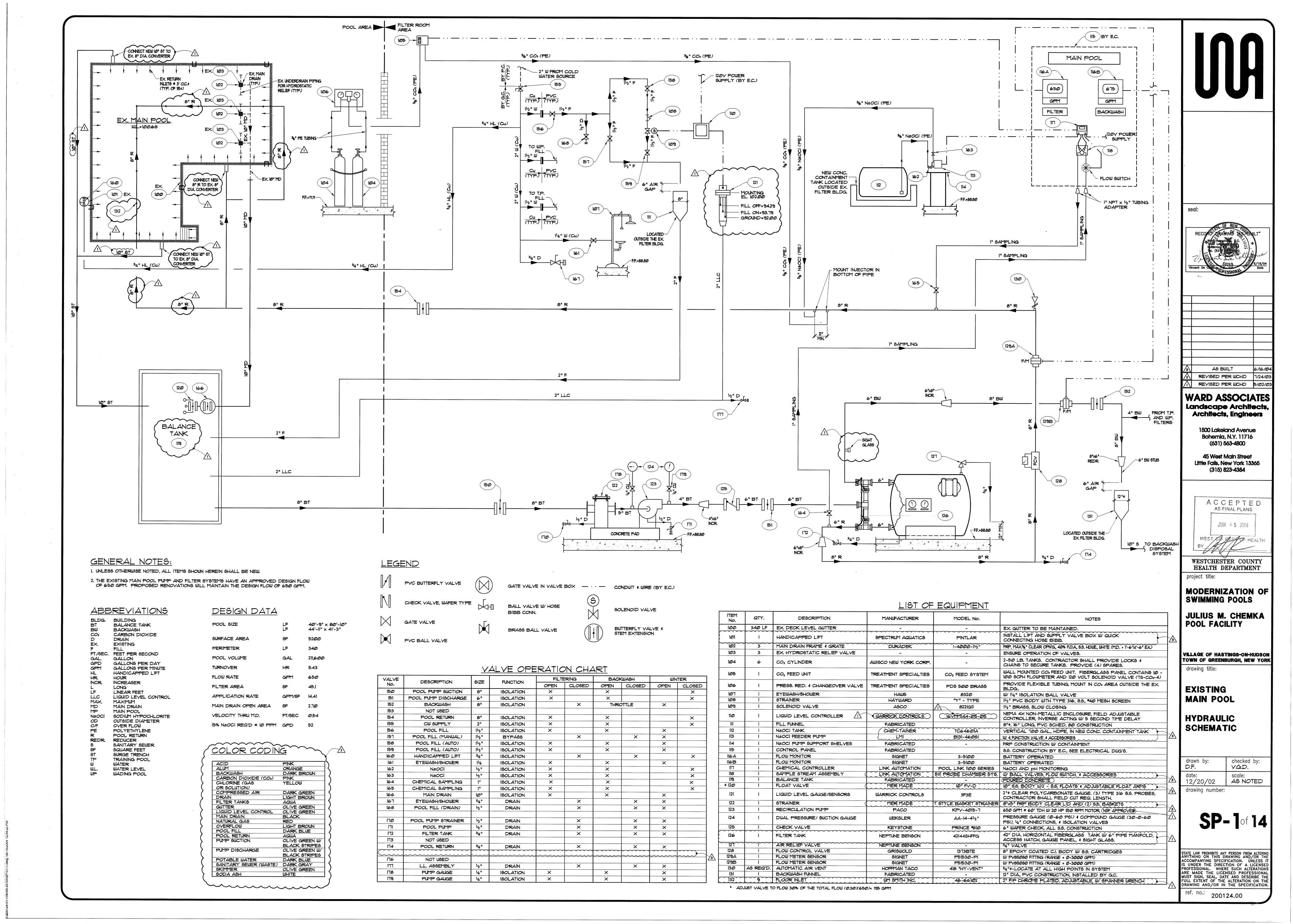
SCALE:

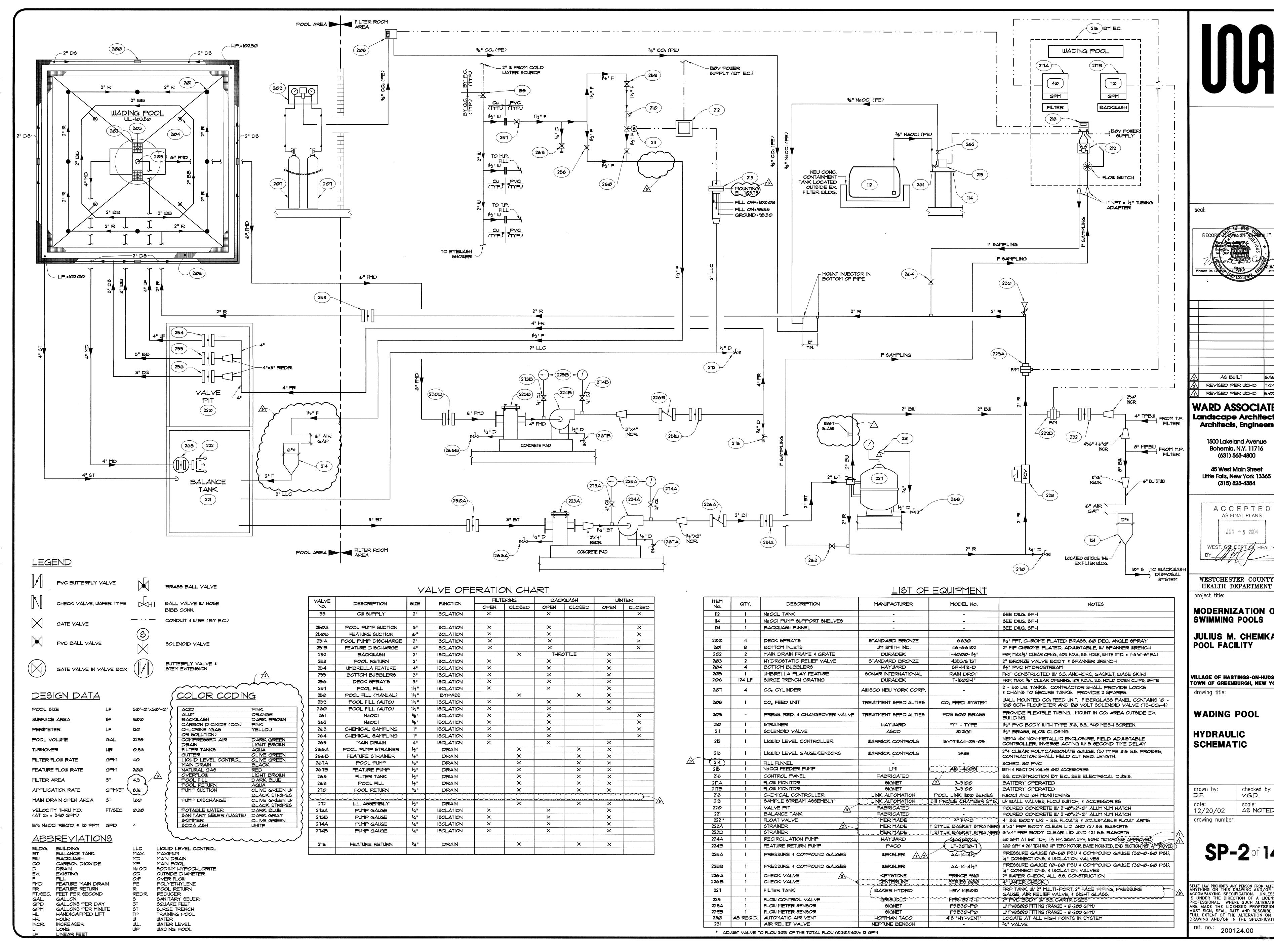
SCALE AS SHOWN

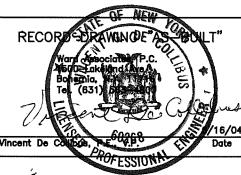
DRAWN BY:
BC
CHECKED BY:
SR
FILE NO.
PROJECT NO.
1148

DATE:
06/03/2022

CBS-02







REVISED PER WCHD REVISED PER WCHD 5/02/0 WARD ASSOCIATES Landscape Architects,

> 1500 Lakeland Avenue Bohemla, N.Y. 11716 (631) 563-4800

45 West Main Street Little Falls, New York 13365 (315) 823-4384

ACCEPTED AS FINAL PLANS JUN 4 5 2004

WESTCHESTER COUNTY HEALTH DEPARTMENT

MODERNIZATION OF

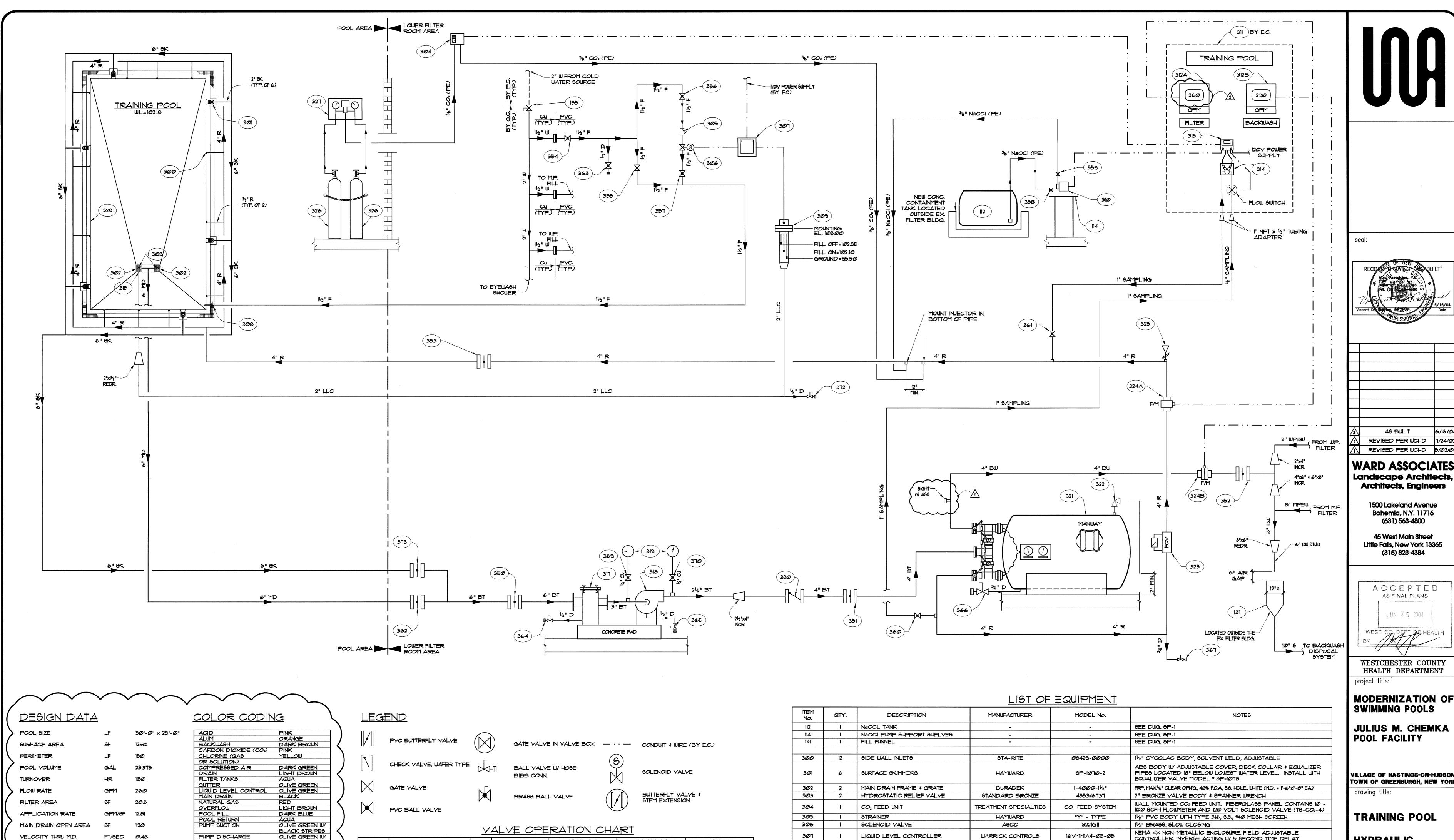
JULIUS M. CHEMKA

VILLAGE OF HASTINGS-ON-HUDSON TOWN OF GREENBURGH, NEW YORK

checked by:

V.G.D. AS NOTED

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LIQUID LEVEL CONTROLLER

LIQUID LEVEL GAUGE/SENSORS

NaOCI FEEDER PUMP

FLOW MONITOR

FLOW MONITOR

OUTLET FITTING

CHECK YALVE

FILTER TANK

AS REQ'D. AUTOMATIC AIR VENT

CO2 CYLINDER

160 LF PRECAST COPING STONE

AIR RELIEF YALVE

FLOW CONTROL VALVE

FLOW METER SENSOR

FLOW METER SENSOR

NOT USED

STRAINER

PUMP DISPLAY PANEL

CHEMICAL CONTROLLER

RECIRCULATION PUMP

PRESSURE & COMPOUND GAUGES

PRESS. RED. & CHANGEOVER VALVE

308

309

312B

316 317

318

319

321

324A

326

327

WARRICK CONTROLS

STANDARD BRONZE

WARRICK CONTROLS

FABRICATED

SIGNET

LINK AUTOMATION

HAYWARD

MER MADE

PACO

WEKSLER

KEYSTONE

NEPTUNE BENSON

NEPTUNE BENSON

GRISWOLD

SIGNET

SIGNET

HOFFMAN TACO

AWISCO NEW YORK CORP.

TREATMENT SPECIALTIES

/3

16VMM1A4-05-05

7256

A161- 46051

3-5100

LF-2595-1

AA-14-41/2"

PRINCE *810

36725HFFG

1325BTE

P51530-P0

P51530-P0

PDS 500 BRASS

TRAINING POOL

HYDRAULIC SCHEMATIC

NEMA 4X NON-METALLIC ENCLOSURE, FIELD ADJUSTABLE

CONTROLLER, INVERSE ACTING W/ 5 SECOND TIME DELAY

11/2" FIP, WHITE. INSTALL W/ 11/2" OUTLET GRATE INSERT MODEL NO. SP-1026

(260 GPM • 64) TDH W/ 71/2 HP 1750 RPM TEFC MOTOR, BASE MOUNTED, END SUCTION, NSF APPROVED

PRESSURE GAUGE (0-60 PSI) & COMPOUND GAUGE (30-0-60 PSI),

36" DIA. HORIZONTAL FIBERGLASS TANK, GAUGE PANEL, SIGHT

4" POXY COATED WAFER TYPE W/ *3411 METER KIT

CHAINS TO SECURE TANKS. PROVIDE (2) SPARES.

REINFORCED, 5000 PSI CONCRETE, WITH BULLNOSE

2-50 LB. TANKS. CONTRACTOR SHALL PROVIDE LOCKS 4

PROVIDE FLEXIBLE TUBING, MOUNT IN CO2 AREA OUTSIDE THE EX.

WATER LEVEL AND NEAR A HANDRAIL.

1/4" CONNECTIONS, & ISOLATION VALVES

W/ PV85040 FITTING (RANGE = 0-780 GPM)

LOCATE AT ALL HIGH POINTS IN SYSTEM

W/ PV89040 FITTING (RANGE = 0-180 GPM)

4" WAFER CHECK, ALL S.S. CONSTRUCTION

WITH 4 FUNCTION VALVE AND ACCESSORIES

BATTERY OPERATED

BATTERY OPERATED

T STYLE BASKET STRAINER 6 X3" FRY BODY) CLEAR LID AND (2) S.S. BASKETS

GLASS, AND 4" MANIFOLD

34" VALVE

POOL LINK 1100 SERIES | CaOCI AND PH MONITORING

LINK AUTOMATION 5111 PROBE CHAMBERSYS. W BALL VALVES, FLOW SWITCH, 4 ACCESSORIES

CONTRACTOR SHALL FIELD CUT REQ. LENGTH.

S.S. CONSTRUCTION BY E.C., SEE ELECTRICAL DUG'S.

 $1\frac{1}{2}$ " MPT, STAINLESS STEEL. INSTALL TO ALLOW 6" AIR GAP ABOVE

2" OLEAR POLYCARBONATE GAUGE. (3) TYPE 316 S.S. PROBES,

checked by: Y.G.D. 12/20/02 AS NOTED drawing number:

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VALVE OPERATION CHART

VALVE No.	DESCRIPTION	SIZE	FUNCTION	FILTERING		BACKWASH		WINTER	
				OPEN	CLOSED	OPEN	CLOSED	OPEN	CLOSED
15 5	CW SUPPLY	2"	ISOLATION	×		×			×
350	POOL PUMP SUCTION	6"	ISOLATION	×		×			×
351	POOL PUMP DISCHARGE	4"	ISOLATION	×		×			×
352	BACKWASH	4"	ISOLATION		×	THROTTLE			×
35 3	POOL RETURN	4"	ISOLATION	×		×			×
354	POOL FILL	½"	ISOLATION	×		×		×	
355	POOL FILL (MANUAL)	11/2"	BYPA66		×		×	×	
356	POOL FILL (AUTO)	11/2"	ISOLATION	×		×		×	
357	POOL FILL (AUTO)	1/2"	ISOLATION	×		×		×	
358	NaOCI	3/8"	ISOLATION	×		×			×
359	Na <i>OC</i> I	3/611	ISOLATION	×		×			×
360	CHEMICAL SAMPLING	1"	ISOLATION	×		×			×
361	CHEMICAL SAMPLING	1"	ISOLATION	×		×			×
362	MAIN DRAIN	6"	ISOLATION	×		×		×	
363	POOL FILL	1/2"	DRAIN		×	`	×	×	
364	POOL PUMP STRAINER	1/2"	DRAIN		×		×	×	
365	POOL PUMP	1/2"	DRAIN		×		×	×	
366	FILTER TANK	3/4"	DRAIN		×		×	×	
367	POOL RETURN	3/4"	DRAIN		×		×	×	
~~~~								~~~~	
369	PUMP GAUGE	14"	ISOLATION	×		×		×	
370	PUMP GAUGE	14"	ISOLATION	×		×		×	
371	LL. ASSEMBLY	2"	ISOLATION	×		×		×	
372	LL. ASSEMBLY	1/2"	DRAIN		×		×	×	
272	GUIMMED	61	IGOL ATION			~		~	

VALVE No.	DESCRIPTION	SIZE	FUNCTION	FILTERING		BACKWASH		WINTER	
				OPEN	CLOSED	OPEN	CLOSED	OPEN	CLOSED
155	CW SUPPLY	2"	ISOLATION	×		×			×
350	POOL PUMP SUCTION	6"	ISOLATION	×		×			×
351	POOL PUMP DISCHARGE	4"	ISOLATION	×		×			×
352	BACKWASH	4"	ISOLATION		×	THROTTLE			×
353	POOL RETURN	4"	ISOLATION	×		×			×
354	POOL FILL	الأراا	ISOLATION	×		×		×	
355	POOL FILL (MANUAL)	11/2"	BYPA66		×		×	×	
356	POOL FILL (AUTO)	11/2"	ISOLATION	×		×		×	-
357	POOL FILL (AUTO)	11/2"	ISOLATION	×		×		×	
358	Na <i>OC</i> I	3/8"	ISOLATION	×		×			×
359	Na <i>O</i> Cl	³⁄e"	ISOLATION	×		×			×
360	CHEMICAL SAMPLING	1"	ISOLATION	×		×			×
361	CHEMICAL SAMPLING	1"	ISOLATION	×		×			×
362	MAIN DRAIN	6"	ISOLATION	×		×		×	
363	POOL FILL	l⁄2"	DRÁIN		×	`	×	×	
364	POOL PUMP STRAINER	V2"	DRAIN		×		×	×	
365	POOL PUMP	1/2"	DRÁIN		×		×	×	
366	FILTER TANK	3/4"	DRAIN		×		×	×	
367	POOL RETURN	3/4"	DRÁIN		×		×	×	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
369	PUMP GAUGE	1/4"	ISOLATION	×		×		×	
370	PUMP GAUGE	1 ₄ "	150LATION	×		×		×	
371	LL. ASSEMBLY	2"	ISOLATION	×		×		×	
372	LL. ASSEMBLY	1/2"	DRÁIN		×		×	×	
373	SKIMMER	6"	ISOLATION	×		×		×	

15% NaOCI REQ'D @ 10 PPM GPD BLDG. BUILDING CO FMD

LIQUID LEVEL CONTROL BALANCE TANK MAX. MAXIMUM MD BACKWASH MAIN DRAIN CARBON DIOXIDE MAIN POOL DRAIN SODIUM HYPOCHLORITE EXISTING OUTSIDE DIAMETER OVER FLOW POLYETHYLENE FEATURE MAIN DRAIN FEATURE RETURN FEET PER SECOND GALLONS PER DAY GALLONS PER MINUTE HANDICAPPED LIFT WATER INCREASER LONG

POOL RETURN REDUCER SANITARY SEWER SQUARE FEET SURGE TRENCH TRAINING POOL WATER LEVEL WADING POOL

PUMP DISCHARGE

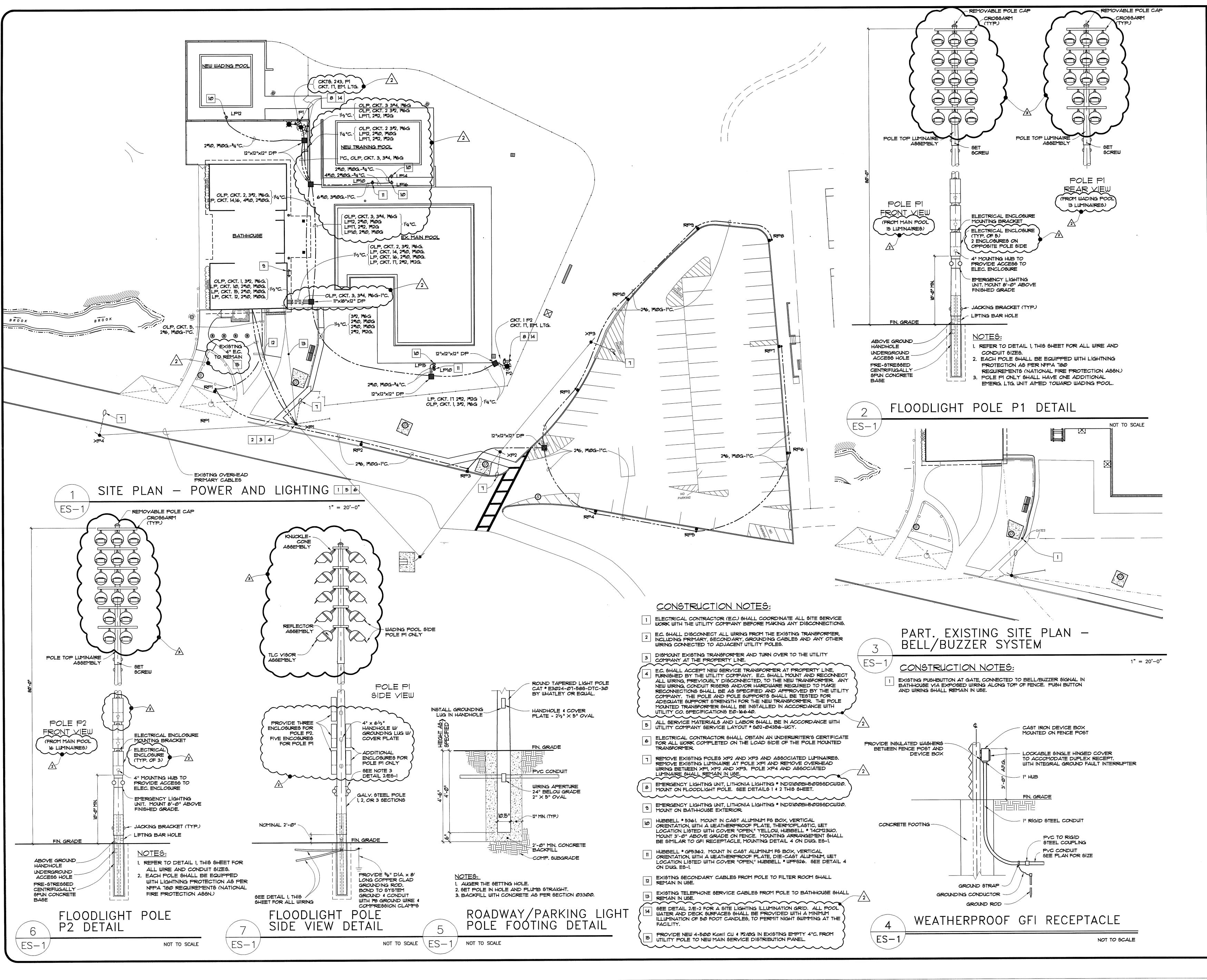
SANITARY SEWER (WAST

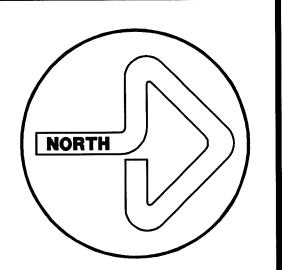
BLACK STRIPES DARK BLUE

DARK GRAY OLIVE GREEN

INCR LINEAR FEET

ref. no.: 200124.00







AS BUILT REVISED PER WCHD

WARD ASSOCIATES Landscape Architects Architects, Engineers

REVISED PER WCHD

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ACCEPTED AS FINAL PLANS JUN 25 2004

WESTCHESTER COUNTY HEALTH DEPARTMENT

project title: **MODERNIZATION OF**

JULIUS M. CHEMKA **POOL FACILITY**

SWIMMING POOLS

VILLAGE OF HASTINGS-ON-HUDSON TOWN OF GREENBURGH, NEW YORK

ELECTRICAL SITE PLAN

drawing title:

POWER AND LIGHTING

checked by: S.K. scale: AS NOTED 12/20/02 drawing number:

ES-1of 2

STATE LAW PROHIBITS ANY PERSON FROM ALTERING ANYTHING ON THIS DRAWING AND/OR THE ACCOMPANYING SPECIFICATION. UNLESS IT IS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL. WHERE SUCH ALTERATIONS ARE MADE THE LICENSED PROFESSIONAL MUST SIGN, SEAL, DATE AND DESCRIBE THE FULL EXTENT OF THE ALTERATION ON THE DRAWING AND/OR IN THE SPECIFICATION.

ref. no.: 200124.00