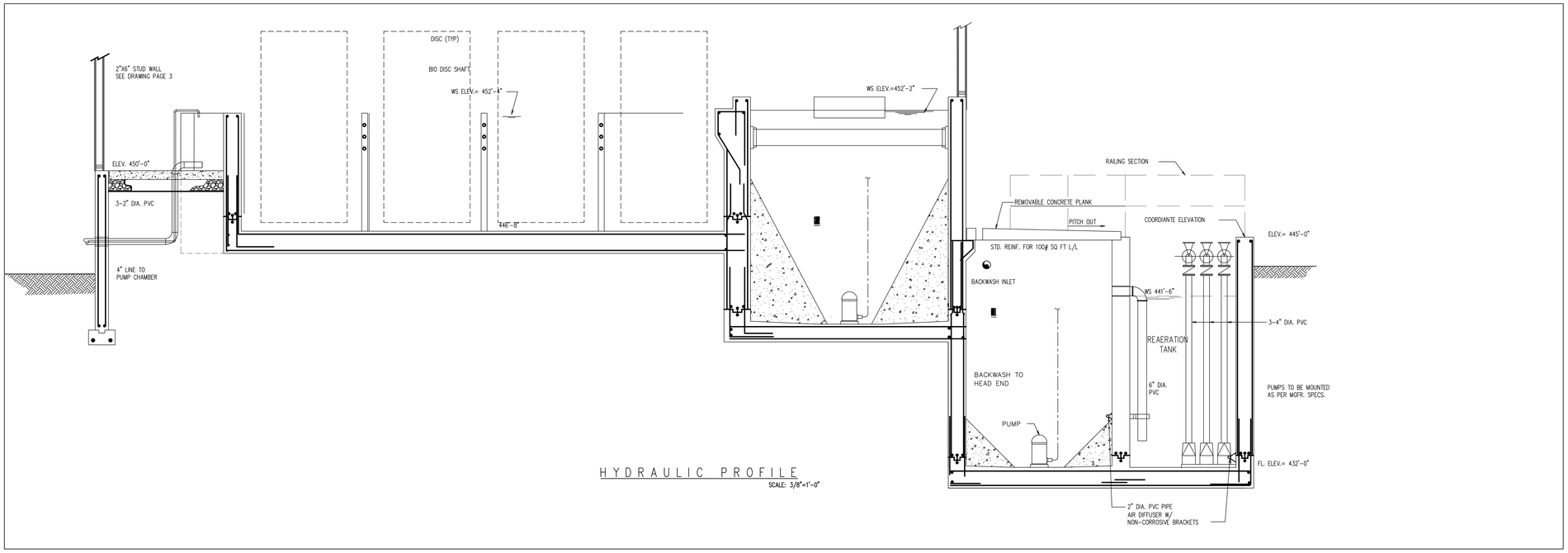


HYDRAULIC PROFILE

SCALE: 3/8"=1'-0"

EQUIPMENT LIST

1. EQUALIZATION PUMPS – 3 – ALTERNATING GOULD MODEL WP-3882-0512-1/2HP, 230V, 1Ø, OR APPROVED EQUAL.
2. ROTATING BIOLOGICAL CONTACTORS – 1 ENVIROQUIP MODEL D-45, GEAR DRIVEN, TOTAL SURFACE AREA= 45,000 S.F. – 3HP – 230V 1Ø MOTOR OR APPROVED EQUAL.
3. SOLIDS CONTACTOR CHAMBER – 1 – DOUBLE COMPARTMENT SOLIDS CONTACT CLARIFIER WITH BRIDGE AND SLUDGE RETURN PUMP.
4. RAPID SAND FILTERS – 2 – TWO CELL 5' x 5' – LYCO FILTERS – HMG. GRAVITY WASTEWATER FILTER WITH AUTOMATIC CONTROLS, FILTER BOTTOM, FILTER MEDIA (MIN & AL) REQUIRED BALDES. SUPPLY TWO (2) AIR COMPRESSORS CAPABLE OF SUPPLYING 3 CFM @ 100 PSIG @ 60 GALLON RECEIVER AND DRYER AS MANUFACTURED BY THE WORTHINGTON COMPANY.
5. BACKWASH PUMP – 2 – ZONE #2 (STANDBY) – GOULD MODEL WP-3983-3202-3HP 230V – 3Ø, 1725 RMP OR APPROVED EQUAL. SELECTOR SWITCH FOR WHICH TWO PUMPS ARE IN OPERATION SHALL BE MOUNTED ON ROBERTS FILTER CONTROL PANEL.
6. MUDWELL PUMPS – 2 – GOULD MODEL WP-3881-0312S-1/2HP – 230V – 1Ø 1725 RPM OR APPROVED EQUAL. ONE STANDBY
7. ALUM FEEDER – 1 – BALLAZ & TEXNAN MODEL 84 – 100 METERING PUMP RATED @ 20 GPD-115V WITH 1000 GALLON FIBERGLASS ALUM STORAGE TANK AS MANUFACTURED BY OWENS-CORNING.
8. BLOWERS – 3 – ROOTS MODEL 1702 – 27 CFMØ9 PSI-2HP 230 VOLTS 1Ø. BLOWERS TO BE SUPPLIED WITH INLET MUFFLER FILTER AND OUTLET SILENCERS.
9. DIFFUSERS – 30 – CHICAGO PUMP-MODEL DIFFUSER-HP DIFFUSION UNITS #(1/4)W PIPE THREAD ADAPTER.
10. GENERATOR – 1 – 50 KW – PROPANE FUEL OPERATED WITH AUTOMATIC BATTERY CHARGER, RESIDUAL MUFFLER, OVERSPEED OUTPUT – AUTO SHUT OFF AND MAIN LINE CIRCUIT BREAKER, 1 ZENITH AUTO TRANSFER SWITCH AND 1 – 250 POUND PROPANE STORAGE TANK. THE TRANSFER SWITCH SHALL TRANSFER POWER TO THE FOLLOWING UNITS: 2 BACKWASH PUMPS, 1 DISC MOTOR, 3 INLET PUMPS, 1 MUDWELL PUMP, 2 BLOWERS, CHLORINATORS AND ALL LIGHT CIRCUITS. U.V. & LIGHTING
11. CONTROL PANEL – 1 – WATER GUARD CONTROLS – THE CONTROL PANEL SHALL OPERATE ALL MOTORS AND PUMPS WITHIN THE TREATMENT FACILITY WITH THE EXCEPTION OF THE RAPID SAND FILTER AND BACKWASH PUMPS WHICH SHALL BE OPERATED BY ITS OWN PANEL. EACH MOTOR AND/OR PUMP SHALL BE CONTROLLED BY A HAND-OFF-AUTOMATIC SWITCH AND RUN AND FAIL LIGHTS. THE PANEL SHALL HAVE AUDIBLE ALARM AND DRY CONTACTS FOR REMOTE READ OUT. THE PANEL SHALL CONTAIN ALL REQUIRED STARTER AND ALTERNATING SWITCHES AS REQUIRED.
12. FLOW METER – 1 – ISCO & PORTER PARTIAL FLUME FLOWMETER TYPE 10F 1275 (3-6 INCHES) WITH 4 – 20 MADC OUTPUT SIGNAL. THE TRANSMITTER SHALL BE RECORDER WITH 12" DIAMETER 7 DAY CHART.
13. EXHAUST FANS – 1 – SWARTDIT MODEL 210FX–1/20 HP @ 1000 CFM @ 1/4" STATIC PRESSURE BLADES TO BE PVC COATED.
14. U.V. DISINFECTION SYSTEM FOR 20,000 GPD/UNIT. USE U.V. PURIFICATION SYSTEM MODEL EP-4S EACH RATED 50 GPM.

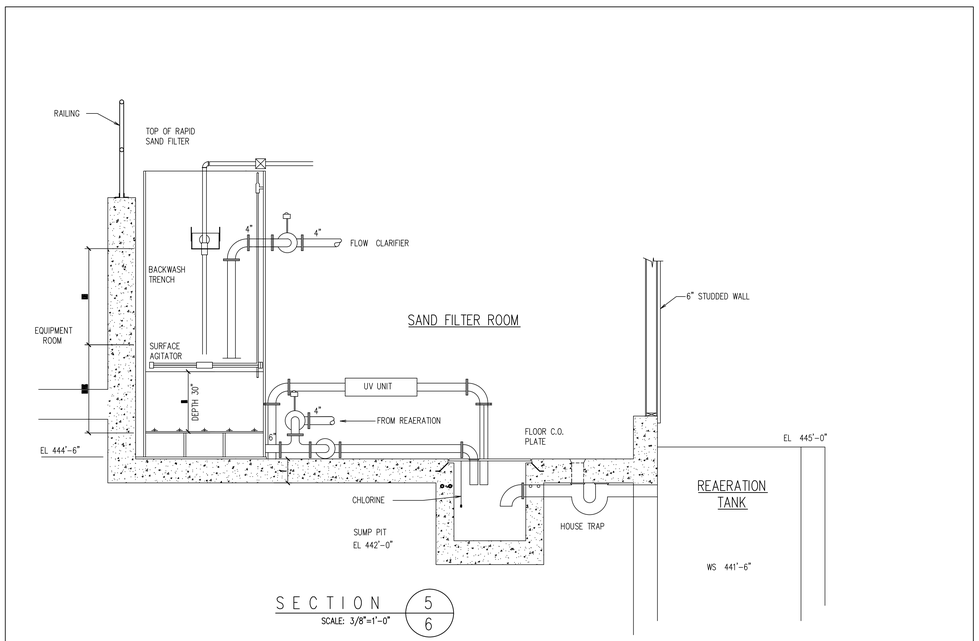
EQUIPMENT LIST

		TOTAL HP
3	BACKWASH PUMPS WP4483Z	3HP 230V 3 — 15
1	DISC MOTORS TEFC	7.5 — 7.5
1	SURGE TANKS PUMPS WP3712	1/2HP 230V 1 — 1
2	MUDWELL PUMP WP3512E	1/3HP 230V — 2/3
2	SLUDGE PUMP WP 3	1/3HP 230V — 2/3
3	BLOWER ROOTS	3HP 230V 1 — 9
1	CHLORINATOR	1/4HP 115V — 1/4
2	U.V. DISINFECTION LIGHTING MODELUMEDIS	1/6HP 115V — 1/3 100 WATTS — 1 2000 WATTS

GENERATOR LOAD MANUAL TRANSFER

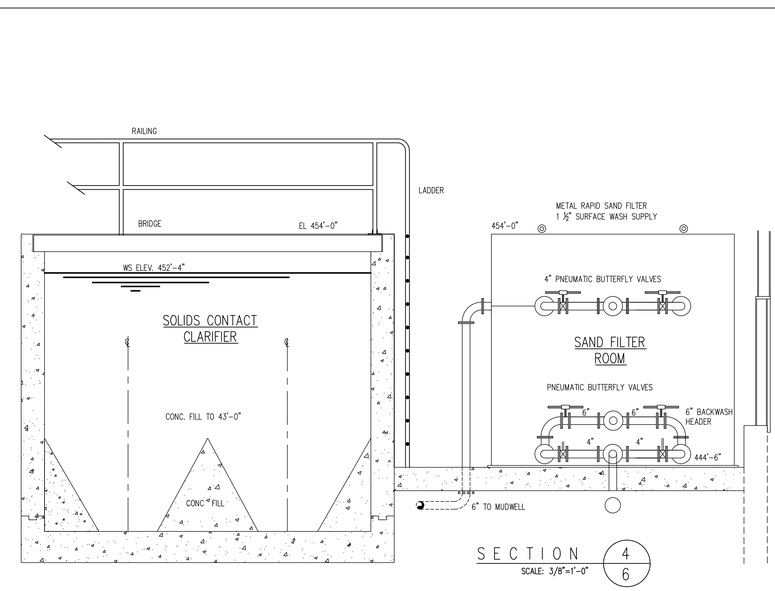
1	BACKWASH	15 HP	LIGHTS & U.V. DISINFECTION & CHLORINATOR
1	DISC MOTORS	7.5	
2	SURGE TK	1	
1	MUDWELL	1/3	
1	SLUDGE PUMP	1/3	
2	BLOWER	9	
		30 #	1500W

USE 50 KW GENERATOR W/AUTO. TRANSFER SWITCH



SECTION 5/6

SCALE: 3/8"=1'-0"



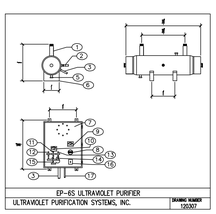
SECTION 4/6

SCALE: 3/8"=1'-0"

ULTRAVIOLET PURIFICATION SYSTEMS, INC.

SPECIFICATIONS FOR UV PURIFIER HI-TECH EP-4S

OPERATING PRESSURES	150 PSI
SHELL MATERIAL	TYPE 304 SS PASSIVATED
CAPACITY D.I. RO WATER	AND ELECTROPOLISHED
CLEAR FRESH WATER	80 GPM
PRESSURE DROP	65 GPM
NO. OF ULTRAVIOLET LAMPS	LESS THAN 2 PSI
EFFECTIVE ARC LENGTH OF LAMP	6
WAVE LENGTH	30"
RENTENTION TIME	2537A
INLET & OUTLET PIPING CONNECTIONS	MINIMUM OF 5 SECONDS
INPLACE CLEANING CONNECTIONS	2" NPT.
SAMPLE PORTS	1/4" NPT
OVERALL DIMENSIONS	1/4" NPT
POWER REQUIREMENT	36" x 19" x 10"
REMOTE CONTROL BOX OVEM 16"STAINLESS	115V 60HZ 3.4A
HOUSING ALL DISPLAYS AND ELECTRICALS	24" x 20" x 8"
REMOTE ILLUMINATED UV LAMP STATUS DISPLAY	
HI-TECH INDIVIDUAL LAMP WARNING SYSTEM WITH ALARM	
UV INTENSITY MONITORING WITH ALARM AND PUSH-BUTTON TEST CIRCUIT	
ELAPSED TIME INDICATOR	
VOLTMETER	
* 5 YEAR CONTACT CHAMBER WARRANTY	



EP-6S ULTRAVIOLET PURIFIER
ULTRAVIOLET PURIFICATION SYSTEMS, INC. — DRAWING NUMBER 120307

1) 2" INLET OR OUTLET NIPPLE (FLANGE OPTIONAL)
2) PHOTOCELL
3) 3/4" FLEXIBLE CONDUIT (18' OR AS REQUIRED)
4) 3/4" IN-PLACE CLEANING NIPPLE & CAP
5) 3/4" DRAIN & CAP
6) MOUNTING FRAME WITH 1/2" HOLES
7) LAMP INDICATOR LIGHTS
8) ELAPSED TIME INDICATOR
9) VOLTMETER
10) WATER QUALITY METER
11) "LOW INTENSITY" PILOT LIGHT
12) "FAILURE" PILOT LIGHT
13) "SAFE" PILOT LIGHT
14) PUSH TO TEST BUTTONS
15) "FAILURE" BUZZER SWITCH
16) "ON/OFF" TOGGLE SWITCH
17) 5' LINE CORD

NOTE:
10" DIAMETER CHAMBER
24" X 28" X 6" NEMA 12 CONTROL BOX

REV.	DESCRIPTION	BY	DATE
1	TOWN PLANNER MEMO (7/8/2010) & TOWN ENGINEER MEMO (7/9/2010)	PL	December 29, 2010
2	TOWN PLANNER MEMO (9/9/2011) & TOWN ENGINEER MEMO (9/3/2011)	DPG	February 24, 2012
3	COMPLETENESS SUBMISSION	DPG	July 31, 2012
4	ACCEPTED DRAWING SET	DPG	September 12, 2012
5	RESOLUTION 139-13	PJG	April 22, 2013

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

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P.E. for Civil Engineering Only

HYDRAULIC PROFILE
WASTEWATER TREATMENT FACILITY
HIGHGATE - WOODLANDS AT NORTH SALEM
REED ROAD AND HARDSCRABBLE ROAD
TOWN OF NORTH SALEM
COUNTY OF WESTCHESTER
STATE OF NEW YORK

DRAWN BY: RN	CHECKED BY: DC
SCALE: AS NOTED	
DATE: NOVEMBER 1, 2005	
JOB NUMBER	SHEET
	HP-1, WWTP 6 OF 15