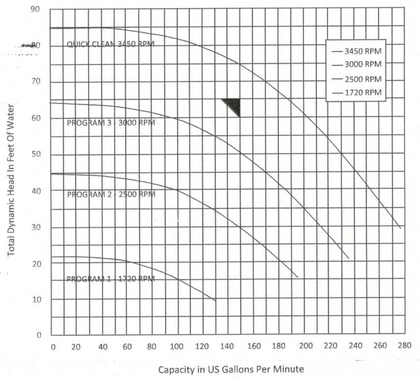
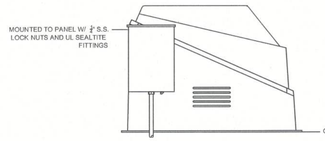
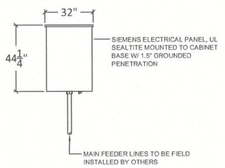
PROFORMANCE CURVES-MAX-E-PRO XF VS COMMERCIAL PUMP



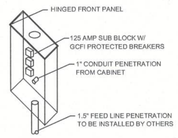
RECIRCULATION PUMP CURVE



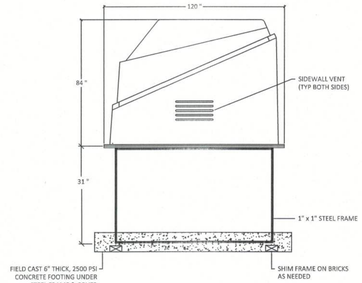
EQUIPMENT CABINET W/ ELECTRICAL PANEL
LEFT SIDE ELEVATION



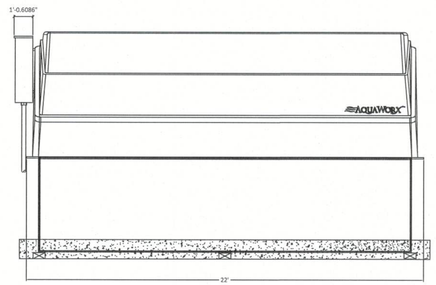
ELECTRICAL PANEL
FRONT ELEVATION



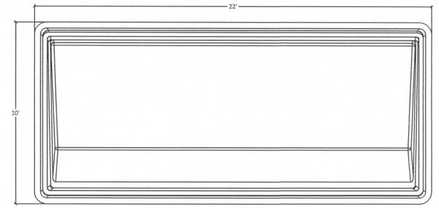
ELECTRICAL PANEL
ISOMETRIC



EQUIPMENT COVER
SIDE ELEVATION



EQUIPMENT COVER
FRONT ELEVATION



EQUIPMENT COVER
PLAN

NOTES:

1. PLUMBING - ALL PIPE & FITTINGS SHALL BE SCHEDULE 40 PVC PER ASTM D1785 AND N.S.F. APPROVED AND STAMPED FOR POTABLE WATER APPLICATIONS. JOINTS TO BE SOLVENT WELDED PER ASTM D2855. ALL PLUMBING AND MATERIALS TO CONFORM TO FLORIDA BUILDING CODE 2020 - SEVENTH EDITION.
2. ELECTRICAL - ALL ELECTRICAL EQUIPMENT WIRING, INSTALLATION AND GROUNDING OF POOL COMPONENTS SHALL CONFORM TO NATIONAL FIRE PROTECTION ASSOC. 70, NATIONAL ELECTRICAL CODE (N.E.C.) LATEST EDITION AND ALL APPLICABLE LOCAL CODES. CHEMICAL FEED PUMPS TO BE INTERLOCKED WITH THE RECIRCULATION PUMP.
3. EQUIPMENT - ALL PUMPS, FILTERS AND DISINFECTION EQUIPMENT SHALL BE TESTED AND APPROVED BY THE PERTINENT MANUFACTURER USING THE NSF/ANSI STANDARD 50 AND LISTED AS APPROVED BY THE NSF.
4. THE FILTER ROOM FLOOR IS SLIP RESISTANT AND SLOPED TO FLOOR DRAINS
5. ALL PLASTIC PIPING SUBJECT TO PROLONGED SUNLIGHT EXPOSURE MUST BE COATED TO PROTECT IT FROM ULTRAVIOLET LIGHT DEGRADATION.
6. EACH WASTE LINE SHALL HAVE A UNIQUE AIR GAP. WASTE LINES FROM DIFFERENT SOURCES (E.G. POOL, SPA, OVERFLOW, SUMP PUMP) SHALL NOT BE TIED TOGETHER BUT MAY DISCHARGE INTO A COMMON SUMP OR RECEPTACLE.
7. THE WASTE LINE MUST BE CONNECTED TO AN APPROVED WASTE DISPOSAL SYSTEM ACCORDING TO LOCAL OR STATE CODES.
8. ALL COLLECTOR TANKS SHALL HAVE COVED INTERSECTIONS AND SLOPE TO THE TANK DRAIN.
9. AN AUTOMATIC AND MANUAL WATER MAKEUP CONTROL MUST BE PROVIDED TO MAINTAIN THE WATER LEVEL AT THE LIP OF THE OVERFLOW GUTTER OR AT THE MOUTH OF THE RECESSED AUTOMATIC SKIMMERS AND MUST DISCHARGE THROUGH AN AIR GAP INTO A FILL PIPE OR COLLECTOR TANK. OVER THE RIM FILL SPOUTS ARE PROHIBITED.
10. A RATE OF FLOW INDICATOR, READING IN GPM, SHALL BE INSTALLED ON THE FILTER RETURN LINE. THE RATE OF FLOW INDICATOR SHALL BE PROPERLY SIZED FOR THE DESIGN FLOW RATE AND SHALL BE CAPABLE OF MEASURING FROM ONE HALF TO AT LEAST ONE-AND-ONE-HALF TIMES THE DESIGN FLOW RATE. THE CLEARANCES UPSTREAM AND DOWNSTREAM FROM THE RATE OF FLOW INDICATOR SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION SPECIFICATIONS.
11. THESE PLANS HAVE BEEN PREPARED IN COMPLIANCE WITH THE FLORIDA BUILDING CODE 2020 - SEVENTH EDITION

FILTER EQUIPMENT LIST

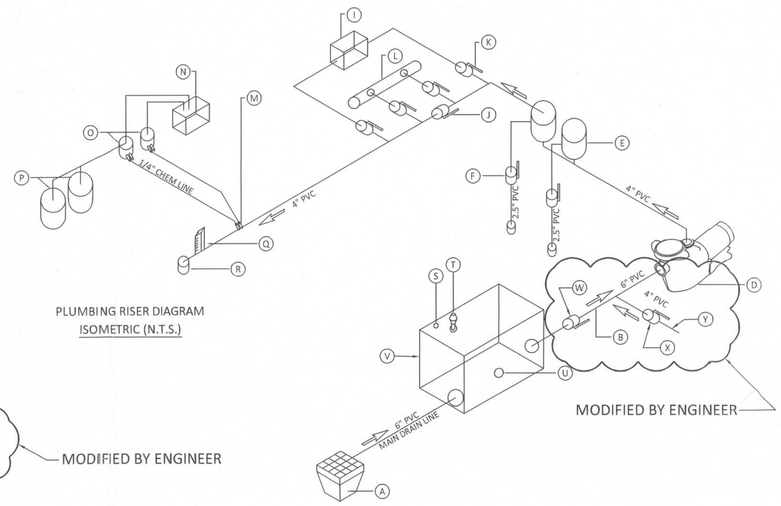
RECIRCULATION PUMP	MAX-E-PRO XF VS, 023035, 5 HP WITH INTEGRAL BASKET STRAINER, 150 GPM @ 65' TDH, 208-230V, 1ϕ, 21.0A
COLLECTOR TANK	AT215, 250 GALLON CAPACITY
WATER LEVEL CONTROLLER	AQUAWORX, MANUAL AUTOFILL SYSTEM
FILTER ELEMENTS (2)	TRITON, TR140C SAND FILTERS 7.06 SQFT, 141 GPM EACH
CHLORINE FEEDER	STENNER 45M5, 50 GPD CAPACITY, 110V
CHLORINE RESERVOIR TANK	30 GALLON WITH LOCKABLE LID
pH FEEDER	STENNER 45M3, 22 GPD CAPACITY, 110V
pH RESERVOIR TANK	30 GALLON WITH LOCKABLE LID
MULTIPORT VALVE (2)	PENTAIR 261050 HI FLOW
BACKWASH SIGHTGLASS (2)	HAYWARD SP1074S
FLOWMETER	4" BLUE/WHITE F-30400, 75 TO 420 GPM RANGE
THERMOMETER	PRECISION INSTRUMENT CO B281-K WITH 1/2" NPT THERMOWELL 30° TO 240°F RANGE
PRESSURE GAUGE (4)	WIKA, 0-100 IN PSI, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
CHEMISTRY CONTROLLER	HAYWARD CAT 2000, 115V

ISOMETRIC RISER DIAGRAM KEY

A	MAIN DRAIN FROM POOL
B	6" SUCTION LINE
C	(NOT USED)
D	5 HP RECIRC PUMP
E	SAND FILTER (2)
F	2.5" BACKWASH TO WASTE (2)
G	(NOT USED)
H	(NOT USED)
I	SECONDARY SANITIZER (OPTIONAL)
J	4" BYPASS VALVE
K	2" HEATER VALVES (TYP OF 4)
L	HEATER
M	CHEMICAL INJECTION PIONTS
N	AUTOMATED CHEMISTRY CONTROLLER (OPTIONAL)
O	LIQUID CHLORINE & ACID STENNERS
P	30 GALLON CHEMICAL RESERVOIR (TYP OF 2)
Q	4" FLOWMETER
R	4" RECIRC RETURN TO POOL
S	1" FRESH WATER FILL LINE
T	2" OVERFLOW
U	2" STATIC WATER LEVEL CONTROL
V	250 GALLON COLLECTOR TANK

W	6" VALVE
X	4" VALVE
Y	4" DIRECT SUCTION SKIMMER LINE

MODIFIED BY ENGINEER

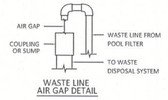


PLUMBING RISER DIAGRAM
ISOMETRIC (N.T.S.)

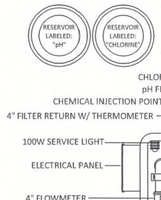
MODIFIED BY ENGINEER

PIPE AND VALVES CHART

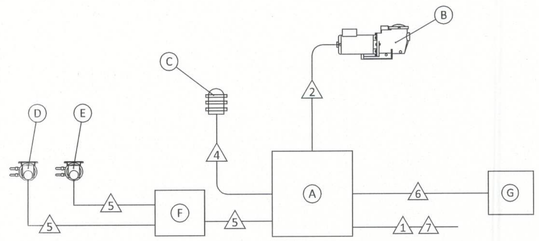
LINE FUNCTION	SIZE
MAIN DRAIN	6"
GUTTER DRAIN	6"
RECIRCULATION PUMP SUCTION	6"
RECIRCULATION RETURN	4"
FILTER INFLUENT/EFFLUENT	3"
SIGHTGLASS TO WASTE	2.5"
TO HEATER	2"
FROM HEATER	2"
FRESH WATER AUTOFILL	1"
OVERFLOW LINE	2"
STATIC LEVEL CONTROL LINE	2"



WASTE LINE
AIR GAP DETAIL



COMPONENTS ID
PLAN



ELECTRICAL RISER DIAGRAM
ISOMETRIC (N.T.S.)

FIXTURE SCHEDULE:

MARK	DESCRIPTION	VOLTAGE	MANUFACTURER & MODEL NO.
A	MAIN LUG BREAKER PANEL (12 CIRCUIT)	120/240V	SIEMENS, PW1224L3125CU
B	RECIRCULATION PUMP	208-230V	MAX-E-PRO XF VS, 023035, 5 HP
C	100 WATT SERVICE LIGHT	115V	INTERMATIC, VPXG11GCI 100W
D	CHLORINE FEEDER PUMP	115V	STENNER, 45M5
E	ACID FEEDER PUMP	115V	STENNER, 45M3
F	CHEMISTRY CONTROLLER	115V	HAYWARD CAT2000
G	GFCI	115V	PASS & SEYMOUR

FEEDER & CIRCUIT SCHEDULE:

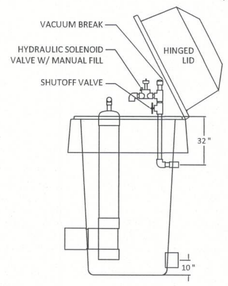
MARK	CONDUCTORS PHASE	NEUTRAL	GROUND	CONDUIT	REMARKS
1					PANEL FEED
2	3 -#8		1 - #8	1"	UL SEALTITE
3	1 -#12	1 - #12	1 - #12		SEALTITE TO PANEL
4	1 -#12	1 - #12	1 - #12	1/2"	SEALTITE TO LIGHT
5	1 -#12	1 - #12	1 - #12	1/2"	SEALTITE TO PANEL
6	1 -#12	1 - #12	1 - #12	1/2"	SEALTITE TO PANEL
7	CONDUCTORS AND CONDUIT INSTALLED BY OTHERS				

PANEL SCHEDULE:

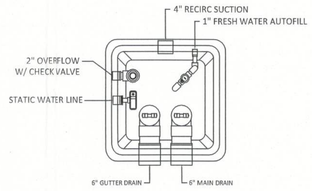
THREE PHASE, 4-WIRE -- 208Y/120 VAC OR 240 VAC INSULATED/BONDABLE NEUTRAL
CURRENT WITHSTAND RATING MAX. RMS. SYM. 10,000A 12/240V

CIRCUIT	POLE	TRIP	LOAD	AMPS
1-3	3	50A GFI	RECIRC. PUMP W/ (2) INTERLOCKED CHEMS	24.4
4	1	20A	SERVICE LIGHT	1.5
5	1	20A	GFCI	3.0
6-12		SPARE	TOTAL MAXIMUM LOAD	28.9

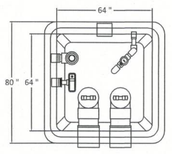
COLLECTOR TANK
FRONT ELEVATION



COLLECTOR TANK
SIDE ELEVATION



COLLECTOR TANK
PLAN VIEW



COLLECTOR TANK
PLAN VIEW

DRAWING BY AQUAWORX

MCDOWELL ENGINEERING, INC.
1608 BECK AVENUE
PANAMA CITY, FLORIDA 32405
PHONE: (850) 872-0988
FAX: (850) 872-0992
CA. LIC. No. 9955

DESIGNED BY: MCDOWELL DATE: 6/21/23
DRAWN BY: MCDOWELL DATE: 6/21/23
CHECKED BY: DATE: 6/21/23
REVISION: DATE:
REVISION: DATE:
REVISION: DATE:

1"
IF THIS LINE DOES NOT MEASURE TO BE ONE INCH IN LENGTH, THEN

JOHN ROGER MCDOWELL ☆ LICENSE No. 38727 ☆ STATE OF FLORIDA ☆ PROFESSIONAL ENGINEER

John R McDowell
Digitally signed by John R McDowell
Date: 2023.06.21 21:36:32 -05'00'

SWIMMING POOL FOR COURTYARD MARRIOT IN LAKE CITY

EQUIPMENT

SHEET 4 OF 4

P4