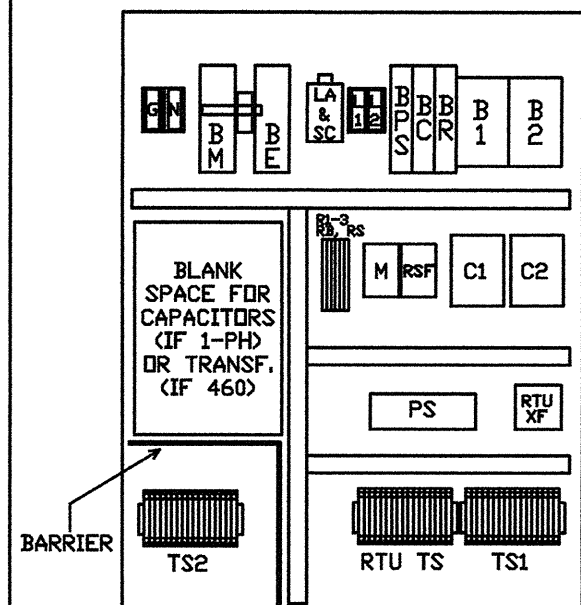


PROJECT MANAGER: C:\PW\WORK\MURKIN\03146037\CD-PLTS-LIFT STATION DETAILS P-03.DWG - P-3 - PLOTTED 5/14/2012 11:03 AM BY HORNE, MICHAEL

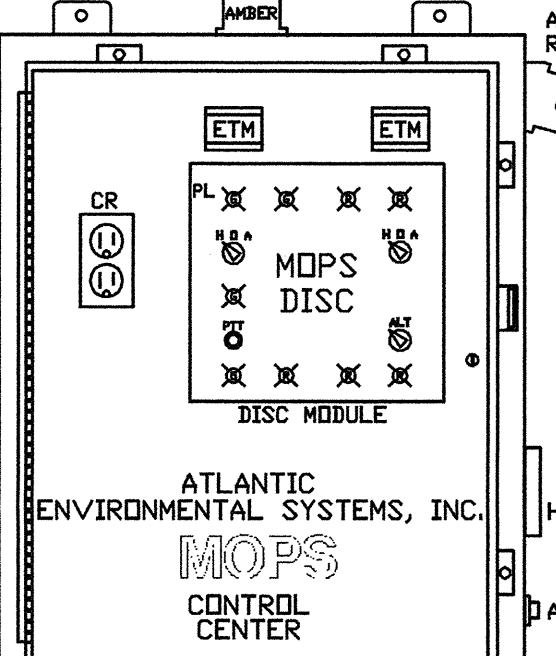
CONTROL CENTER DESIGNED
& MANUFACTURED TO MEET
ALL D.E.P. REQUIREMENTS

MOPS CONTROL CENTER

SEE SCHEDULE FOR
ELECTRICAL SERVICE REQUIREMENTS



INTERIOR LAYOUT
SEE MOPS PUMP STATION
SCHEDULE FOR PROJECT
SPECIFIC INFORMATION
I.E. VOLTAGE, PHASE, ETC.



DEAD FRONT LAYOUT
(DOOR NOT SHOWN FOR CLARITY)

PANEL COMPONENTS

ALT ALTERNATOR (ON DISC)
AS ALARM SILENCE SWITCH
BI-2 MOTOR BREAKERS
BC CONTROL BREAKER
BE EMERGENCY BREAKER
BM MAIN BREAKER
BPS POWER SUPPLY BREAKER
BR RECEPTACLE BREAKER
CI-2 CONTACTOR, MOTOR START
CR CONVENIENCE RECEPTACLE
DISC DUPLEX INTRINSICALLY
SAFE CONTROLLER
ETM ELAPSED TIME METER
GR GENERATOR RECEPTACLE
HORN
HDA HAND-OFF-AUTO SWITCH
(ON DISC)
LA LIGHTNING ARRESTOR
M MONITOR 1PH=VOLT, 3PH=PHASE
PL PILOT LIGHT (ON DISC)
PS POWER SUPPLY
SC SURGE CAPACITOR
TS1 TERMINAL STRIP FOR PUMPS
RI-3 RELAYS
RB BATTERY RELAY
RS SILENCE RELAY
RSF SEAL FAIL RELAY
RTUX RTU TRANSFORMER
RTU TS RTU TERMINAL STRIP

NOTES

A) NEMA 4X Stainless Steel Enclosure
Aluminum Inner (Dead Front) Door
30"H x 24"W x 8"D

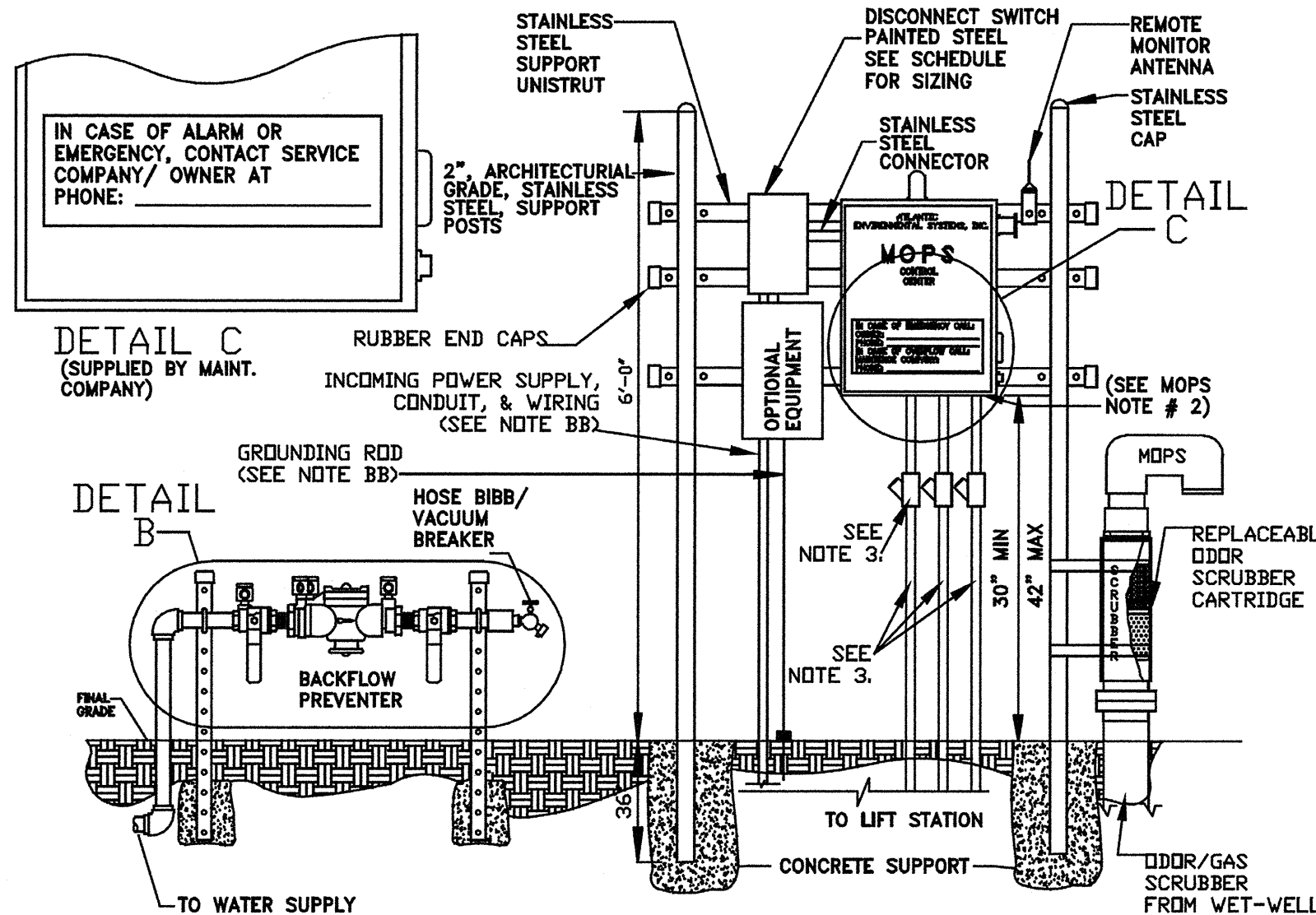
B) PANEL LABEL FOR UL 508A
"MOTOR CONTROL CENTERS" AND
UL 698A "HAZARDOUS LOCATION PANELS"
(INTRINSICALLY SAFE)

C) COMPLETE BACK-UP, SELF-CHARGING
BATTERY, VISUAL/AUDIO ALARM SYSTEM,
PER RSFV-45

TS1 TERMINAL SCHEDULE											
RTU	PUMP	MOTOR	MT1	MT2	MT3	MT4	MT5	MT6	MT7	MT8	MT9
1	2	3	4	5	6	7	8	9	10	11	12

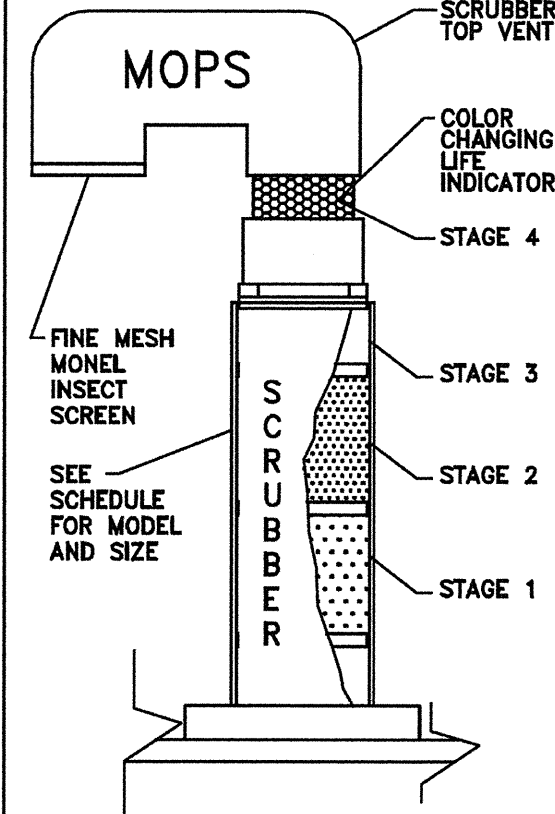
TS2 TERMINAL SCHEDULE							
RTU	PUMP	MOTOR	MT1	MT2	MT3	MT4	MT5
1	2	3	4	5	6	7	8

THE MOPS CONTROL ASSEMBLY CONSISTING OF: CONTROL CENTER
DISCONNECT SWITCH, MOUNTING ASSEMBLY, ELECTRICAL CONDUITS AND
SEAL-OFFS, ARE TO BE SUPPLIED AND INSTALLED BY THE MOPS PUMP
STATION MANUFACTURER TO VALIDATE MOPS WARRANTY PROGRAM.

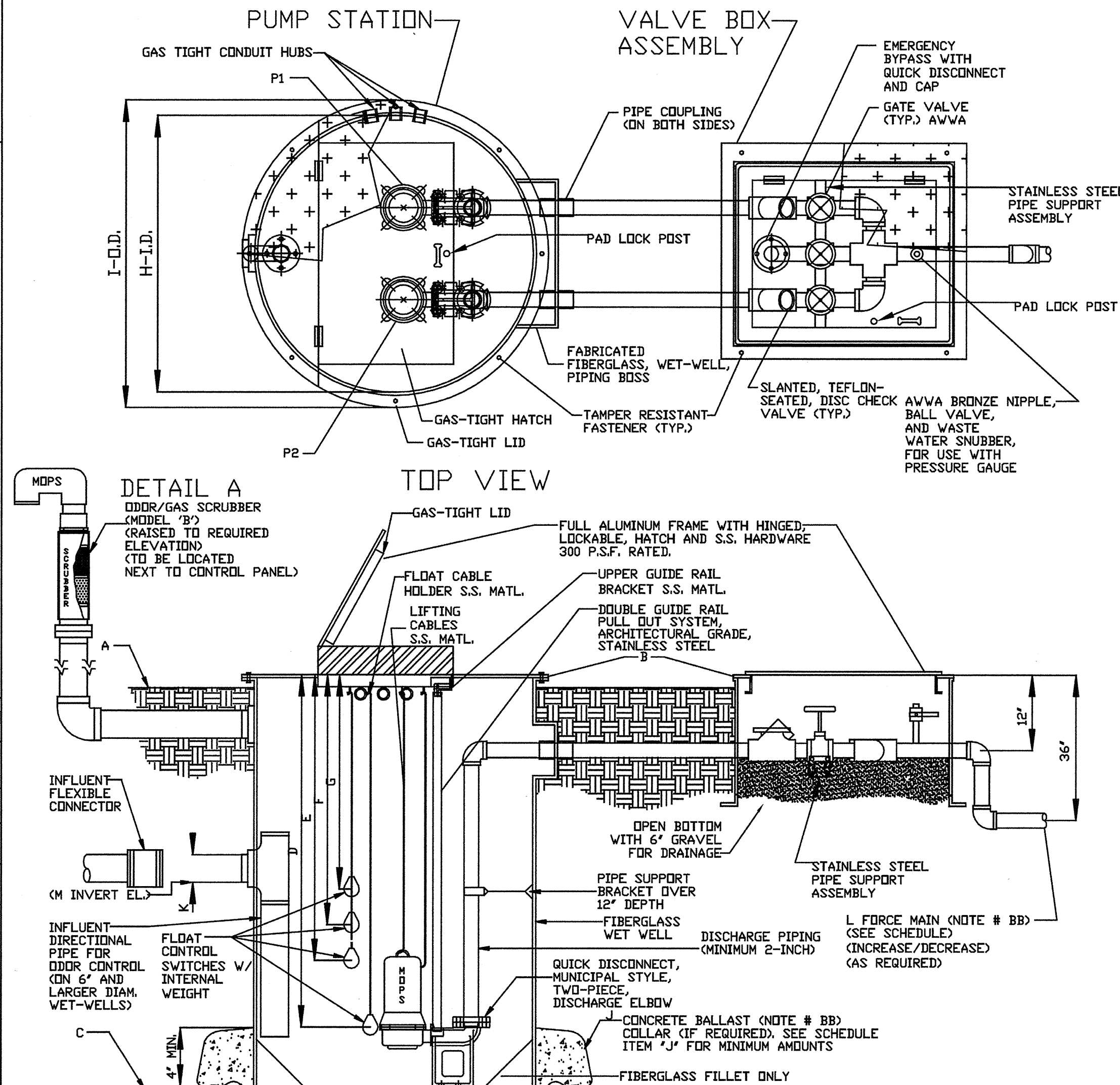


CONTROL CENTER ASSEMBLY AND INSTALLATION

DETAIL A



MOPS ODOR/GAS SCRUBBER
NOTES:
1) SCRUBBER DESIGNED TO REMOVE
TOXIC SEWAGE GASES, H₂S, AND
OFFENSIVE ODORS SUCH AS
SKATOLES AND MERCAPTANS.
2) SCRUBBER'S LIFE EXPECTANCY
CALCULATIONS ARE INCLUDED
IN SHOP DRAWING SUBMITTALS.
3) SCRUBBER UNIT CAN BE MOUNTED
INSIDE WET-CELL OR TOP MOUNTED.
4) SEE MOPS NOTES # 9.
5) MODEL 'B' SHOWN



NOTE: ALL METAL ITEMS IN CONTACT WITH SEWAGE
GASES ARE ALUMINUM AND STAINLESS STEEL
EXCEPT EPOXY COATED PUMPS AND DISCHARGE
ELBOW

MOPS

MANUFACTURED ODORLESS PUMP STATION
ATLANTIC ENVIRONMENTAL SYSTEMS, INC.
LAKE WORTH, FL 33461
PH: (561) 547-8080 FAX: (561) 547-3999

PRIVATE SERIES

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MOPS PUMP STATION SCHEDULE

MOPS SERIES	ITEM	DESCRIPTION
INITIAL DESIGN FLOW (G.P.M.)	25	100 YEAR FLOOD ELEVATION
INITIAL DESIGN HEAD (T.D.H.)	74	25 YEAR FLOOD ELEVATION
SECONDARY DESIGN FLOW (G.P.M.)	35	A GRADE ELEVATION
SECONDARY DESIGN HEAD (T.D.H.)	46	B TOP ELEVATION OF WET WELL
RATED PERFORMANCE SPEED	3450 RPM	C BOTTOM ELEVATION OF WET WELL
RATED MOTOR HORSEPOWER	3.0	D ALL PUMPS OFF ELEVATION
SUBMERSIBLE PUMP TYPE (P-1,P-2)	GRINDER	E LEAD PUMP ON ELEVATION
PUMP MODEL NUMBER	MOPS	F LAG PUMP ON ELEVATION
SERVICE ENTRANCE VOLTAGE	460	G HIGH ALARM ELEVATION
SERVICE ENTRANCE PHASE	3	H INSIDE DIAMETER OF WET-WELL
CONTROL CENTER FULL LOAD AMPS	15	I OUTSIDE DIAMETER OF ANTI-FLOATATION RING
NEMA 3R PAINTED STEEL DISCONNECT SWITCH, RATED AMPS	30	J MINIMUM CUBIC FEET OF CONCRETE BALLAST (CU YDS)
WET WELL SCOURER SYSTEM	N/A	K INVERT PIPE DIAMETER
REMOTE STATION MONITOR (TELEMETRY)	N/A	L FORCE MAIN DIAMETER
ON-SITE GENERATOR SYSTEM	N/A	M PRIMARY INVERT ELEVATION
	N	SECONDARY INVERT ELEVATION

MOPS EQUIPMENT IDENTIFICATION	QTY.	MODEL DESIGNATION
MOPS PUMP STATION	1	B22-48144-D-3.0
MOPS VALVE BOX ASSEMBLY (VBA)	1	VBA-22
MOPS ODOR/GAS SCRUBBER (OGS)	1	OGS-B
MOPS R.P.Z. ASSEMBLY	1	75
MOPS CONTROL CENTER	1	PSC-232-3.0
MOPS DISCONNECT SWITCH	1	FDS-30-3-4-PS
MOPS CONTROL CENTER MOUNTING ASSEMBLY	1	CCMA-22SS
MOPS WET WELL SCOURER SYSTEM	0	N/A
MOPS REMOTE STATION MONITOR	1	PROVIDED WITH SERVICE AGREEMENT
1st YEAR SERVICE/MAINTENANCE CONTRACT	1	LEVEL 1 (REQUIRED SERVICE)
MOPS ON-SITE GENERATOR SYSTEM	0	N/A
MOPS FIELD SERVICE WORK	1	CONTROL INSTALLATION & START-UP

MOPS PUMP STATION COMPLIANCE NOTES

THIS PUMP STATION DESIGN COMPLIES WITH THE FOLLOWING REQUIRED STANDARDS:

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARDS,
FLORIDA ADMINISTRATIVE CODE (F.A.C.) 62-640.400-COLLECTION SYSTEMS AND
TRANSMISSION SYSTEMS,
NATIONAL ELECTRIC CODE (NEC) FOR CLASS 1, DIVISION 1, GROUP D-HAZARDOUS LOCATIONS,
UNDERWRITER'S LABORATORIES (UL) 508A-MOTOR CONTROL CENTERS AND UL 698A-
INTRINSICALLY SAFE CONTROL CENTERS,
RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (1997 EDITION)

- PUMPS ARE RATED BY FACTORY MUTUAL FOR CLASS 1, DIVISION 1, GROUP D ATMOSPHERES
AS REQUIRED BY NEC.
- THE CONTROL CENTER INCORPORATES INTRINSICALLY SAFE RELAYS AND IS LISTED TO
UL698A INTRINSICALLY SAFE FOR CLASS 1, DIVISION 1 ATMOSPHERES.
- THE CONDUIT PROVIDED, ALONG WITH CONDUIT GAS-SEAL-OFFS, ARE RATED FOR
CLASS 1, DIVISION 1 LOCATIONS.
- THE WASTEWATER PUMPS AND THE CONTROL CENTER INCORPORATE A MECHANICAL
SEAL FAILURE DETECTION AND NOTIFICATION SYSTEM.
- THE CONTROL CENTER INCLUDES EITHER A REMOTE TELEMETRY UNIT (RTU) OR A
SELF-CHARGING, BACK-UP ALARM SYSTEM TO OPERATE ON POWER FAILURE.
- PUMP STATION INCORPORATES AN ODORLESS DESIGN WITH A SCRUBBER SYSTEM TO
CONTROL TOXIC GASES AND ODORS FOR COMPLIANCE TO F.A.C. 62-604.400.
- THE BOTTOM OF THE TOP RIM ELEVATION OF PUMP STATION MUST BE LOCATED AT
A HIGHER ELEVATION THAN THE PUBLISHED 25 YEAR FLOOD ELEVATION.
- THE BOTTOM ELEVATION OF THE MOPS CONTROL CENTER MUST BE LOCATED AT A
HIGHER ELEVATION THAN THE PUBLISHED 100 YEAR FLOOD ELEVATION.
- THE MOPS PUMP STATION, WITH ODOR/ GAS SCRUBBER AND OTHER RELATED DESIGNS
OF PUMP STATION, COMPLIES AND FULFILLS RULES OF THE F.A.C.

MOPS ENGINEERING NOTES

- AA. THE HORSEPOWER SHOWN ON THE SCHEDULE IS A MINIMUM HORSEPOWER REQUIREMENT
BASED ON STATION'S DESIGN CRITERIA AND REQUIRED TORQUE REQUIREMENTS. (LOWER
RATED HORSEPOWER EQUIPMENT WILL NOT BE ACCEPTABLE).
- BB. THESE ITEMS ARE NOT SUPPLIED BY A.E.S. WITH THE MOPS PUMP STATION.
- CC. INVERT ELEVATION BASED ON INSIDE BOTTOM OF PIPE.

THE MOPS WASTEWATER PUMP STATION DESIGN AND EQUIPMENT SHOWN ON THIS DRAWING HAS
BEEN REVIEWED, PERMITTED, AND CERTIFIED AS COMPLYING WITH ALL THE STATE OF FLORIDA
D.E.P. AND LOCAL REQUIREMENTS. ANY SUBSTITUTION FROM THIS DESIGN MAY REQUIRE NEW PERMITS,
APPLICATION FEES, AND ENGINEERING SERVICES FOR RE-CERTIFICATION AND DESIGN REVIEW.

P.E. CERTIFICATION

Daniel J. Moss, P.E. License # 56885
V.P. of Engineering
Atlantic Environmental Systems, Inc., C A # 26398
2244 4th Ave. North, Lake Worth, Florida 33461
Ph: 561-547-8080 / Fax: 561-547-3999

PRIVATE PUMP STATION

REVISION	DATE
01	05/24/12
02	06/25/12
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Project:	NEFCO DOMESTIC WASTE PUMP STATION
Prepared For:	WADE TRIM
Address:	3790 DIXIE HWY., PALM BAY, FL 32905

Project No:	678
Date:	05/10/12

Page No:	678-9
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SWA BIOSOLIDS PROCESSING FACILITY
INDUSTRIAL WASTE FORCE MAIN PROJECT
PALM BEACH COUNTY, FLORIDA

ISSUED FOR: DATE: BY:
75% REVIEW 05/02/12 CEM
100% REVIEW 05/15/12 CEM
FINAL DESIGN 7-6-12 CEM
ENV. PERMITS 9/17/12 CEM

JOB NO.
NEF2001-01L
SHEET
P-3

WADE TRIM

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SWA