COASTAL RESOURCES MANAGEMENT COUNCIL

Oliver Stedman Government Center
4808 Tower Hill Road; Suite 116
Wakefield, RI 02879
401-783-3370

PUBLIC NOTICE

File Number: 2012-07-001 Date: August 20, 2012

This office has under consideration the application of:

Sakonnet Point Club
50 Sakonnet Point Road
Little Compton, RI 02837

for a State of Rhode Island Assent to: relocate reverse osmosis (RO) discharge outfall to Sakonnet Harbor.

Project Location:	11 Bluff Head Avenue
City/Town:	Little Compton
Plat/Lot:	9 / 434-1
Waterway:	Sakonnet Harbor

Plans of the proposed work may be seen at the CRMC office in Wakefield.

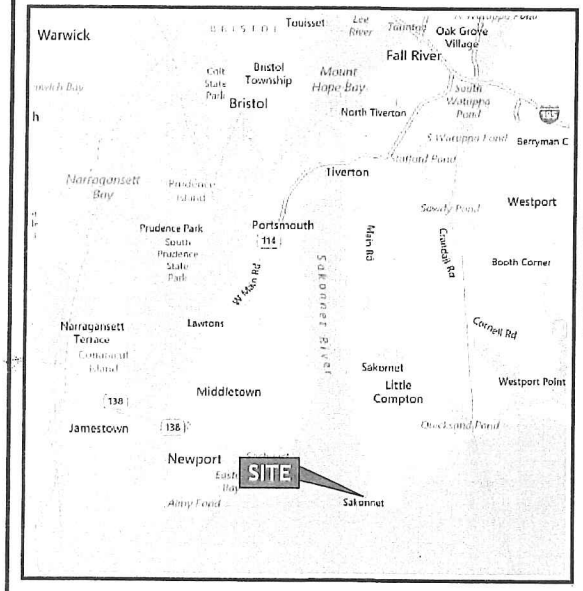
In accordance with the Administrative Procedures Act (Chapter 42-35 of the Rhode Island General Laws) you may request a hearing on this matter.

You are advised that if you have good reason to enter protests against the proposed work it is your privilege to do so. It is expected that objectors will review the application and plans thoroughly, visit site of proposed work if necessary, to familiarize themselves with the conditions and cite what law or laws, if any, would in their opinion be violated by the work proposed.

If you desire to protest, you must attend the scheduled hearing and give sworn testimony. A notice of the time and place of such hearing will be furnished you as soon as possible after receipt of your request for hearing. If you desire to request a hearing, to receive consideration, it should be in writing (**with your correct mailing address, e-mail address and valid contact number**) and be received at this office on or before September 20, 2012.

REVERSE OSMOSIS EFFLUENT DISCHARGE PIPELINE

Sakonnet Point Club
Little Compton, Rhode Island



SITE VICINITY MAP

INDEX OF DRAWINGS			
CATEGORY	SHEET	DRAWING	TITLE
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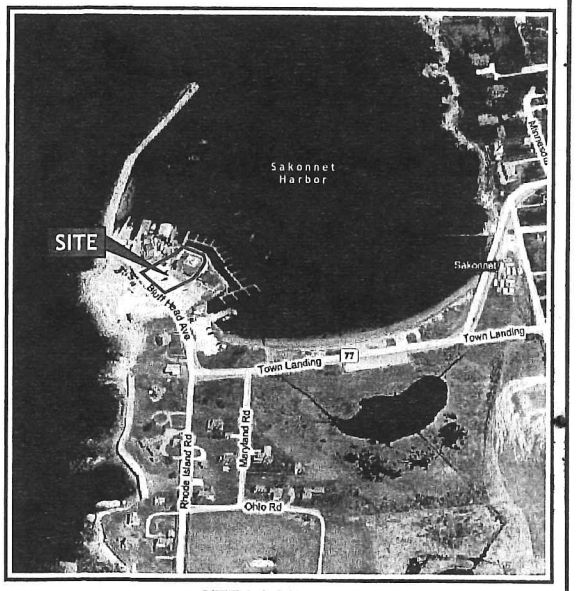
	9	D-04	DETAILS - 4

STEVEN W. OTTEN
No. 8429
REGISTERED PROFESSIONAL ENGINEER
CIVIL

JUNE 26, 2012



SITE LOCATION MAP

PERMIT SUBMISSION
NOT FOR CONSTRUCTION
THIS DRAWING IS HALF SIZE

RT Group, Inc.
Engineered from the Ground Up
197 Taunton Avenue, Suite 202
East Providence, Rhode Island 02914
T 401 438 3103 F 401 438 5275
Geotechnical Waterfront Structural Civil Environmental

DSGN	SWO
DR	SWO/DJA
CHK	JBR
APVD	JBR

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 ——— 1"
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REVERSE OSMOSIS EFFLUENT DISCHARGE PIPELINE
Sakonnet Point Club
11 Bluff Head Ave.
Little Compton, Rhode Island

TITLE, INDEX OF DRAWINGS, LOCATION AND VICINITY MAPS

SHEET	1 OF 9
DWG No.	G-01
DATE	MAY 2012

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GENERAL NOTES:

1. THE SITE IS LOCATED IN LITTLE COMPTON, RHODE ISLAND.
2. RIDOT STANDARD SPECIFICATIONS, WHEN REFERENCED IN THESE DRAWINGS, SHALL MEAN THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION). PARTS OF THE STANDARD SPECIFICATIONS THAT ARE SPECIFICALLY REFERENCED SHALL BECOME PART OF THESE DRAWINGS AS THOUGH STATED HEREIN IN FULL. IN CASE OF A DISCREPANCY BETWEEN THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS STATED WITHIN THE DRAWINGS, THE REQUIREMENTS STATED WITHIN THE DRAWINGS SHALL PREVAIL.
3. THIS PROJECT IS PRIVATELY OWNED AND FUNDED. THEREFORE, SOME OF THE REFERENCES AND TERMINOLOGY OF THE STANDARD SPECIFICATIONS MAY SEEM OUT OF PLACE. THE OWNER IS THE SAKONNET POINT CLUB. THE ENGINEER FOR THIS PROJECT IS RT GROUP, INC. (RTG). THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION IS NOT A PARTY INVOLVED IN THIS PROJECT.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. SAFETY PROVISIONS SHALL COMPLY WITH OSHA AND ALL OTHER FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. THESE REQUIREMENTS SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT DIG SAFE (1-888-DIG-SAFE) 3 BUSINESS DAYS BEFORE COMMENCING WITH ANY EXCAVATION/GRADING, IN ORDER THAT ALL AFFECTED UTILITY COMPANIES ARE NOTIFIED PRIOR TO STARTING WORK.
6. IF CONDITIONS ARE DIFFERENT THAN THOSE INDICATED IN THESE DRAWING AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.

LAYOUT WORK:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL LAYOUT WORK USING THE INFORMATION PROVIDED.
2. ELEVATIONS SHOWN ARE REFERENCED TO MEAN LOW WATER.

DESIGN BASIS:

1. THE PIPELINE BALLAST BLOCKS HAVE BEEN DESIGNED TO REMAIN SUBMERGED WHILE THE PIPE CONTAINS 10% AIR.
2. THE PIPELINE BALLAST BLOCKS HAVE BEEN DESIGNED ASSUMING THE CLAMPING FORCE OF THE ANCHOR RODS IS MAINTAINED LONGTERM.
3. THE DESIGN OF THE MARINE PIPELINE TO BE INSTALLED WITHIN THE SAKONNET HARBOR WAS BASED ON A 100-YEAR STORM EVENT. BOTH STORM SURGE AND WAVE ACTION WERE ANALYZED TO DETERMINE THE MAXIMUM BOTTOM VELOCITIES THAT THE PIPELINE WOULD NEED TO ENDURE. THE VELOCITIES ASSOCIATED WITH THE STORM SURGE (BASED ON THE 1938 HURRICANE HYDROGRAPH) WERE NEGLIGIBLE COMPARED TO THE WAVE INDUCED VELOCITIES WHICH RANGED FROM 1.3 FT./SEC. TO 4.0 FT./SEC.. THE ANCHOR BLOCKS WERE DESIGNED TO WITHSTAND 4.0 FT./SEC

EARTHWORK:

1. THE GROUND OR OTHER SURFACE OVER WHICH THE PIPE IS TO BE MOVED TO THE WATER SHOULD BE RELATIVELY SMOOTH AND FREE OF ROCKS, DEBRIS OR OTHER MATERIAL THAT MAY DAMAGE THE PIPE OR INTERFERE WITH ITS PROPER LAUNCHING.
2. EXISTING 4-INCH PVC SLEEVES WILL BE UTILIZED FROM THE WATER FRONT TO THE MANHOLE LOCATED BELOW THE DECK. INSTALLATION OF A NEW 6-INCH PVC SLEEVE FROM THE MANHOLE TO THE BUILDING SHALL BE THE CONTRACTOR'S RESPONSIBILITY INCLUDING CORING THE FOUNDATION AND INSTALLING A WATERTIGHT SEAL AT THE FOUNDATION/SLEEVE PENETRATION.
3. THE FINAL TRENCH SLOPE GEOMETRY AND THE PROTECTION OF EXISTING STRUCTURES AND UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY.
4. GRAVEL FOR GRANULAR BASE SHALL CONFORM TO ITEM M.01.02 OF THE STANDARD SPECIFICATIONS.
5. STONE FOR SCOUR PROTECTION AROUND THE BALLAST BLOCKS SHALL BE IMPORTED MATERIAL CONFORMING TO ITEM M.10.03.01, FS-3 OF THE RIDOT STANDARD SPECIFICATIONS (100% PASSING 6 ½", 50% PASSING 2 ½", AND 15% PASSING No. 4 SIEVE).
6. GEOTEXTILE FABRIC SHALL BE NONWOVEN AND NEEDLE PUNCHED PERVIOUS SHEETS OF POLYESTER, POLYETHYLENE, NYLON, OR POLYPROPYLENE FILAMENTS FORMED INTO A UNIFORM PATTERN, GEOTEXTILE FABRIC SHALL BE STYLE 1160N AS MANUFACTURED BY MIRAFI OR APPROVED EQUAL.

CONCRETE:

1. CONCRETE FOR BALLAST BLOCKS SHALL CONFORM TO SECTION 601 AND 604, CLASS HP(AE), ¾" AGGREGATE, f'c = 5,000 PSI, OF THE STANDARD SPECIFICATIONS.
2. ALL WELDED WIRE FABRIC REINFORCING STEEL SHALL BE EPOXY COATED SMOOTH BAR CONFORMING TO ASTM A 185.
3. CONCRETE SHALL BE PLACED, POURED, AND CURED IN ACCORDANCE WITH SECTION 600 OF THE RIDOT STANDARD SPECIFICATIONS.
4. ANCHOR RODS SHALL BE 316 STAINLESS STEEL CONFORMING TO ASTM F593 OR APPROVED EQUAL.
5. NUTS SHALL BE 316 STAINLESS STEEL AND CONFORM TO ASTM F594 OR APPROVED EQUAL.
6. WASHER PLATES SHALL BE 316 STAINLESS STEEL OR APPROVED EQUAL.

HDPE PIPE:

1. HDPE PIPE SHALL BE DRISCOPLEX 4100 HDPE, DR17 (125PSI) WITH A 6.625-INCH O.D., 5.798-INCH AVERAGE I.D. (MARINE PIPELINE) AND 3.5-INCH O.D., 3.063-INCH AVERAGE I.D. (LAND PIPELINE) BY PERFORMANCE PIPE OR APPROVED EQUAL.
2. BLIND FLANGES AND ALL FITTINGS SHALL BE DRISCOPLEX HDPE STANDARD FLANGES AND FITTINGS SPECIFICALLY MANUFACTURED FOR THE SPECIFIED PIPE.
3. ALL BLIND FLANGES, BACKER RINGS, BOLTS, AND ASSOCIATED HARDWARE THAT ARE TO BE A PERMANENT PART OF THE ASSEMBLY, SHALL BE 316 STAINLESS STEEL.
4. DIFFUSER VALVES SHALL BE TIDEFLEX SERIES TF-2 WITH 316 STAINLESS STEEL MOUNTING BANDS BY TIDEFLEX TECHNOLOGIES.

MISCELLANEOUS ITEMS:

1. ALL BOLTS USED IN TIMBER CONSTRUCTION SHALL BE HOT-DIPPED GALVANIZED, A307 BOLTS. ALL THREADED ROD SHALL BE HOT-DIPPED GALVANIZED A36 STEEL.
2. ALL MISCELLANEOUS STEEL USED FOR THE SUPPORT BRACKETS SHALL CONFORM TO ASTM A572, GRADE 50 AND SHALL BE HOT-DIPPED GALVANIZED (POST FABRICATED).
3. ALL TIMBER CROSS BRACING IN THE SPLASH ZONE SHALL BE CCA TREATED TO 0.60 PCF (MIN).
4. ALL PRESSURE TREATED TIMBER THAT HAS BEEN FIELD CUT, DRESSED, OR DRILLED SHALL BE COATED WITH TWO (2) COATS OF COPPER NAPTHENATE PRESERVATIVE, INCLUDING THE ENDS OF ANY SPLICED SEGMENTS.
5. PRECAST CONCRETE HANDHOLE SHALL BE THE DUAL METER BOX NO. B24 BOX WITH THE B24D LID BY OLD CASTLE PRECAST OR APPROVED EQUAL.
6. THE FOUNDATION/PIPE SLEEVE SEALS SHALL BE LINK-SEAL MODULAR SEAL BY PIPELINE SEAL AND INSULATOR, INC. (PSI) OR APPROVED EQUAL.

PIPELINE ASSEMBLY:

1. THE BUTT FUSION OF INDIVIDUAL LENGTHS INTO A LONG STRING OF PIPE SHOULD BE CONDUCTED BY TRAINED PERSONNEL AND BY MEANS OF APPROPRIATE EQUIPMENT. THE HEAT FUSION PARAMETERS (E.G., TEMPERATURE, INTERFACIAL PRESSURE, HEATING AND COOLING TIMES) SHOULD BE AS RECOMMENDED BY THE PIPE MANUFACTURER FOR THE PARTICULAR PIPE MATERIAL AND THE JOINING CONDITIONS, INCLUDING OUTDOOR TEMPERATURE AND WIND.
2. UPON THE COMPLETION OF THE HEAT FUSING OF ADDED INDIVIDUAL LENGTH TO THE PIPELINE, THE RESULTANT LONGER PIPE STRING SHALL BE FURTHER MOVED INTO THE WATER. THE PIPE SHOULD ALWAYS BE MOVED TO THE WATER USING SUITABLE MECHANICAL EQUIPMENT THAT WILL CAUSE NO DAMAGE TO THE PIPE OR TO THE PIPE ENDS.
3. BALLAST WEIGHTS ARE TO BE MOUNTED BEFORE THE PIPE STRING REACHES THE WATER. DO NOT LIFT THE PIPE STRING SUCH THAT THE BALLAST BLOCKS ARE "HANGING" ON THE PIPE STRING. ALWAYS LIFT FROM THE BOTTOM OF THE BALLAST BLOCKS.

MOUNTING THE BALLAST WEIGHTS:

1. EVERY OTHER BALLAST BLOCK WILL BE INSTALLED FOR THE FLOAT-IN OPERATION AS SHOWN ON THESE PLANS. THE REMAINING INTERMEDIATE BLOCKS WILL BE INSTALLED FOLLOWING THE SINKING OPERATIONS AT THE FINAL POSITION.
2. PLACE THE NEOPRENE PAD AROUND THE PIPE. THIS CAN BE DONE BY FIRST PLACING A PAD OVER THE LOWER HALF OF THE BALLAST WEIGHT AND THEN PLACING A SIMILAR PAD OVER THE TOP OF THE PIPE BEFORE THE UPPER HALF OF THE BALLAST IS LOWERED INTO POSITION.
3. THE NEOPRENE PAD SHALL BE SNUG BETWEEN THE BALLAST BLOCKS AND THE ENTIRE CIRCUMFERENCE OF THE PIPE BEFORE TIGHTENING THE ANCHOR RODS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL NEOPRENE AS REQUIRED.
4. LIFT THE PIPE AND POSITION THE LOWER HALF OF THE BALLAST WEIGHT (PIECE No. 1) UNDER THE PIPE.
5. LOWER THE PIPE SO THAT IT SITS IN THE LOWER HALF OF THE BALLAST WEIGHT.
6. POSITION AND LOWER THE UPPER HALF (PIECE No. 2) OF THE BALLAST SO IT SITS ON TOP OF THE PIPE.
7. INSTALL THE PLATE WASHERS AND NUTS AND TIGHTEN THE NUTS TO THE SPECIFIED TORQUE SO THAT THE BALLASTS ARE HELD FAST TO THE PIPE. BEFORE SUBMERSION, CHECK AND RETIGHTEN THE NUTS IF REQUIRED.

LAUNCHING THE PIPELINE INTO THE WATER:

1. INSTALL BLIND FLANGES AND VALVES AS INDICATED ON THE DRAWINGS AND CLOSE ALL VALVES PRIOR TO LAUNCHING.
2. FOLLOWING THE INSTALLATION OF THE BALLAST WEIGHTS, MOVE THE PIPELINE STRING TOWARDS THE WATER. ROLLERS AND RAILS MAY BE USED AS REQUIRED.
3. THE CONTRACTOR HAS THE OPTION OF USING THE EXISTING CONCRETE BOAT RAMP FOR LAUNCHING THE ASSEMBLED MARINE PIPELINE. THE CONTRACTOR SHALL USE RAILS OR TIMBERS SO AS NOT TO DRAG THE CONCRETE BLOCKS DIRECTLY ON THE BOAT RAMP SURFACE. IF AN ALTERNATE MEANS AND METHOD IS PROPOSED BY THE CONTRACTOR, IT SHALL BE APPROVED BY THE ENGINEER.
4. IF REQUIRED, THE PIPE SHOULD ONLY BE LIFTED USING SLINGS OR BY OTHER MEANS THAT AVOIDS THE DEVELOPMENT OF CONCENTRATED POINT LOADING.
5. PRIOR TO LAUNCHING OF THE PIPE INTO THE WATER, A STRATEGY SHOULD BE WORKED OUT TO CONTROL THE FLOATING PIPELINE AS IT MOVES INTO THE WATER UNTIL SUCH TIME AS THE ENTIRE LENGTH IS READY FOR SUBMERGING. FOR THIS PURPOSE, SUITABLE MARINE EQUIPMENT (E.G., BOATS THAT HAVE ADEQUATE TUGGING POWER AND MANEUVERABILITY) MAY NEED TO BE ON HAND.

SUBMERSION OF THE PIPELINE USING THE FLOAT-AND-SINK METHOD:

1. TO PREPARE THE PIPELINE FOR SUBMERSION, ACCURATELY POSITION IT OVER ITS INTENDED LOCATION. THE SINKING OPERATION BASICALLY CONSISTS OF THE CONTROLLED ADDITION OF WATER FROM ONE END OF THE PIPE AND THE RELEASE OF THE ENTRAPPED AIR FROM THE OPPOSITE END.
2. THE SUBMERSION OF THE PIPELINE SHALL BE PERFORMED AT A CONTROLLED RATE TO MINIMIZE PIPE BENDING AND TO ALLOW THE PIPELINE TO ADJUST AND CONFORM TO THE MUDLINE SO THAT IT IS EVENLY SUPPORTED ALONG ITS ENTIRE LENGTH.
3. AS WATER IS BEING ADDED AT ONE END OF THE PIPE, AIR MUST BE ALLOWED TO ESCAPE FROM THE OPPOSITE END. TO ENSURE THAT WATER WILL NOT ENTER THROUGH THE AIR RELEASE VALVE, A LENGTH OF HOSE MAY BE CONNECTED TO THE VALVE, AND THE FREE END HELD ABOVE WATER ON A BOAT OR BY MEANS OF A FLOAT. AFTER THE COMPLETION OF THE SUBMERSION, A DIVER CAN REMOVE THE HOSE.
4. AFTER THE PIPELINE HAS BEEN SUBMERGED AND IS IN ITS FINAL POSITION AND HAS ADJUSTED TO ITS ENVIRONMENT, RE-TIGHTEN NUTS TO THE SPECIFIED TORQUE AS REQUIRED.

POST INSTALLATION INSPECTION:

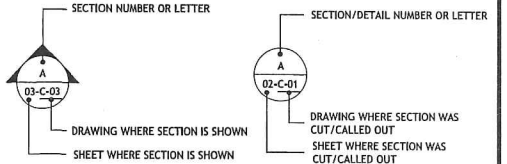
1. UPON COMPLETION OF THE INSTALLATION OF A SUBMERGED PIPELINE, IT IS ADVISABLE TO HAVE THE COMPLETE LINE VIDEO SURVEYED BY A COMPETENT DIVER TO ENSURE THAT:
   - 1.1. ALL BALLAST BLOCKS ARE SITTING PLUMB ON THE HARBOR BOTTOM AND NO BLOCKS ARE SUSPENDED OFF THE BOTTOM. THE DIVER SHALL USE A PROBE UNDER EACH BLOCK TO CONFIRM THAT UNIFORM CONTACT EXISTS.
   - 1.2. THE HDPE PIPE IS NOT RESTING ON OR UP AGAINST ANY ROCKS, DEBRIS, OR MATERIAL THAT COULD CAUSE DAMAGE OR CONCENTRATED LOADS TO DEVELOP.
   - 1.3. ANY AUXILIARY LINES, SUCH AS HOSES, ROPES, BUOYANCY BAGS, OR ANY OTHER EQUIPMENT USED DURING THE INSTALLATION HAS BEEN REMOVED.
   - 1.4. ALL OTHER INSTALLATION REQUIREMENTS ESTABLISHED BY THE DESIGNER FOR THE SUBJECT APPLICATION HAVE BEEN COMPLIED WITH.

CIVIL LEGEND

EXISTING	PROPOSED
APPROX. PROPERTY LINES	
APPROX. NAVIGATIONAL CHANNEL	
FEMA FLOOD BOUNDARY LINE	
CONTOUR LINES	
PIPE LINE	

ABBREVIATIONS

BOT.	BOTTOM
BOP	BOTTOM OF PIPE
CVR	COVER
DH	DRILL HOLE
DIA.	DIAMETER
EA.	EACH
EL.	ELEVATION
EXIST	EXISTING
FT	FEET
HDPE	HIGH DENSITY POLY ETHYLENE
I.D.	INSIDE DIAMETER
LF	LINEAR FEET
MAX.	MAXIMUM
MHW	MEAN HIGH WATER
MIN.	MINIMUM
MLW	MEAN LOW WATER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
TYP.	TYPICAL
WWF	WELDED WIRE FABRIC



SECTION / DETAIL — DETAIL AND SECTION DESIGNATION

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RT Group, Inc.
Engineered from the Ground Up
197 Taunton Avenue, Suite 202
East Providence, Rhode Island 02914
T 401 438 5102 F 401 438 5275
Geotechnical Waterfront Structural Civil Geo-Environmental

DSGN	SWO
DR	SWO/DJA
CHK	JBR
APVD	JBR

No.	DATE	REVISIONS	BY	APVD

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11 Bluff Head Ave.
Little Compton, Rhode Island

LEGEND, ABBREVIATIONS, AND GENERAL NOTES

SHEET	2 OF 9
DWG No.	G-02
DATE	MAY 2012

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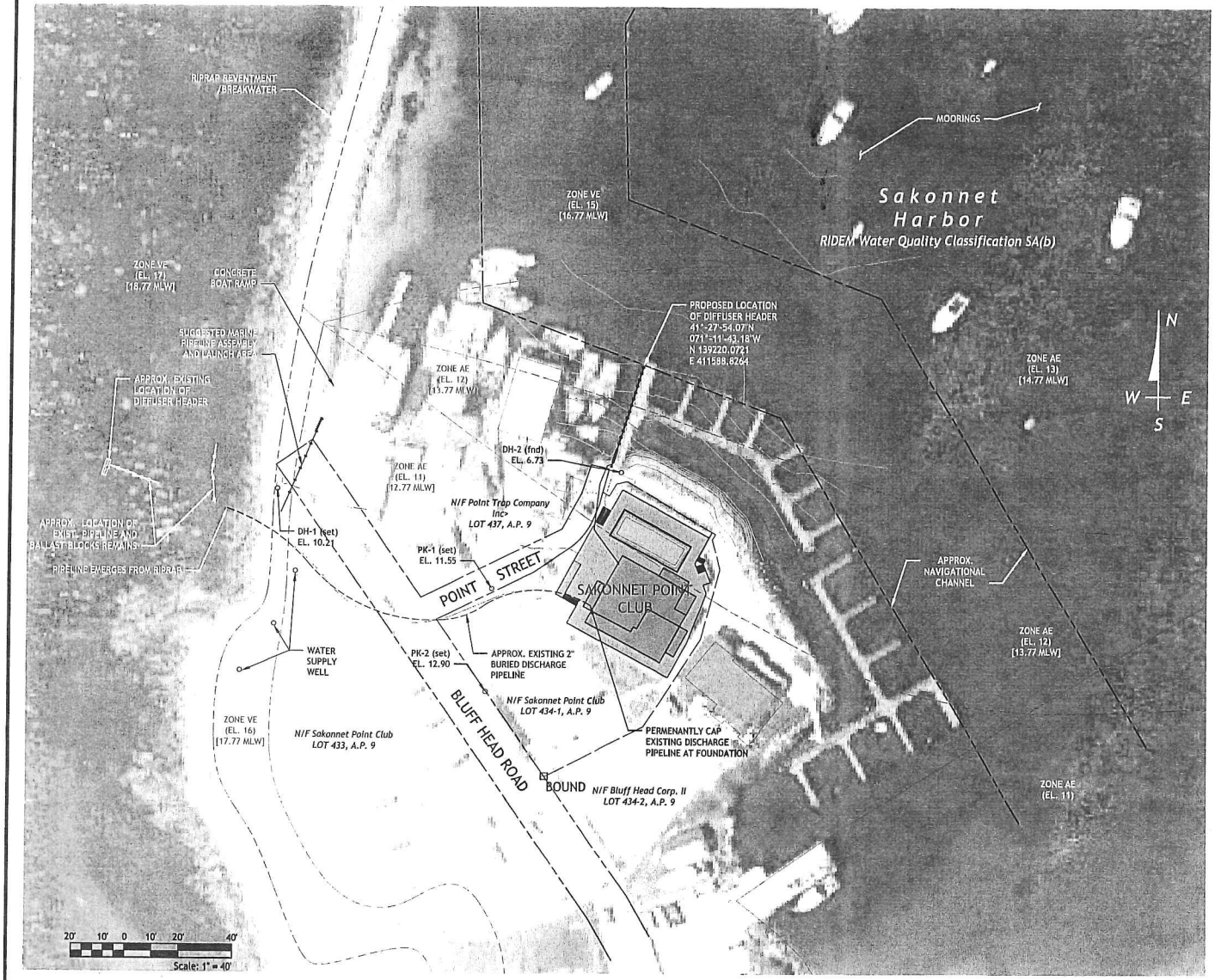

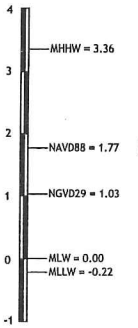

VERTICAL DATUM CONVERSION DIAGRAM

REFERENCES

1. THE ELEVATION DATA ABOVE WAS COMPUTED FROM THE U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL OCEAN SERVICE, FROM:
   STATION ID: 8450768
   NAME: TIDAL 1 BENCHMARK LW0620
   LOCATION: Little Compton, Rhode Island
2. ALL ELEVATIONS SHOWN ON THESE PLANS ARE RELATIVE TO LOCAL MLW DATUM AS ESTABLISHED BY RT GROUP, INC. IN APRIL 2008.
3. FEMA FLOOD ELEVATION INFORMATION SHOWN ON THIS PLAN WAS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM), NEWPORT COUNTY, RHODE ISLAND, PANEL 204 OF 226, FIRM MAP NUMBER 44005C0204H, EFFECTIVE DATE APRIL 5, 2010. ELEVATION SHOWN IN PARENTHESIS ARE RELATIVE TO NAVD 88.
4. THE ENTIRE PROJECT SITE IS WITHIN THE SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD.
5. PROPERTY LINES AS SHOWN ON THESE PLANS WERE TAKEN FROM A PLAN ENTITLED: *PLAN OF BLUFF HEAD AVENUE AND POINT STREET IN AND FOR THE TOWN OF LITTLE COMPTON, RHODE ISLAND*, PREPARED BY: STANLEY ENGINEERING, INC., SCALE: 1"=20', DATED: JANUARY, 1997. PROPERTY LINES AS SHOWN ARE CONSIDERED APPROXIMATE.

VERTICAL CONTROL

PROJECT BENCHMARK:
GEODETIC DISK LW0620,
ELEVATION=5.99 FEET (NAVD88) 7.76 FEET (MLW)

HORIZONTAL CONTROL

HORIZONTAL DATUM BASIS IS RHODE STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 (NAD 83).

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OVERALL SITE PLAN

SHEET	3 OF 9
DWG No.	C-01
DATE	MAY 2012
PROJ No.	11107.02

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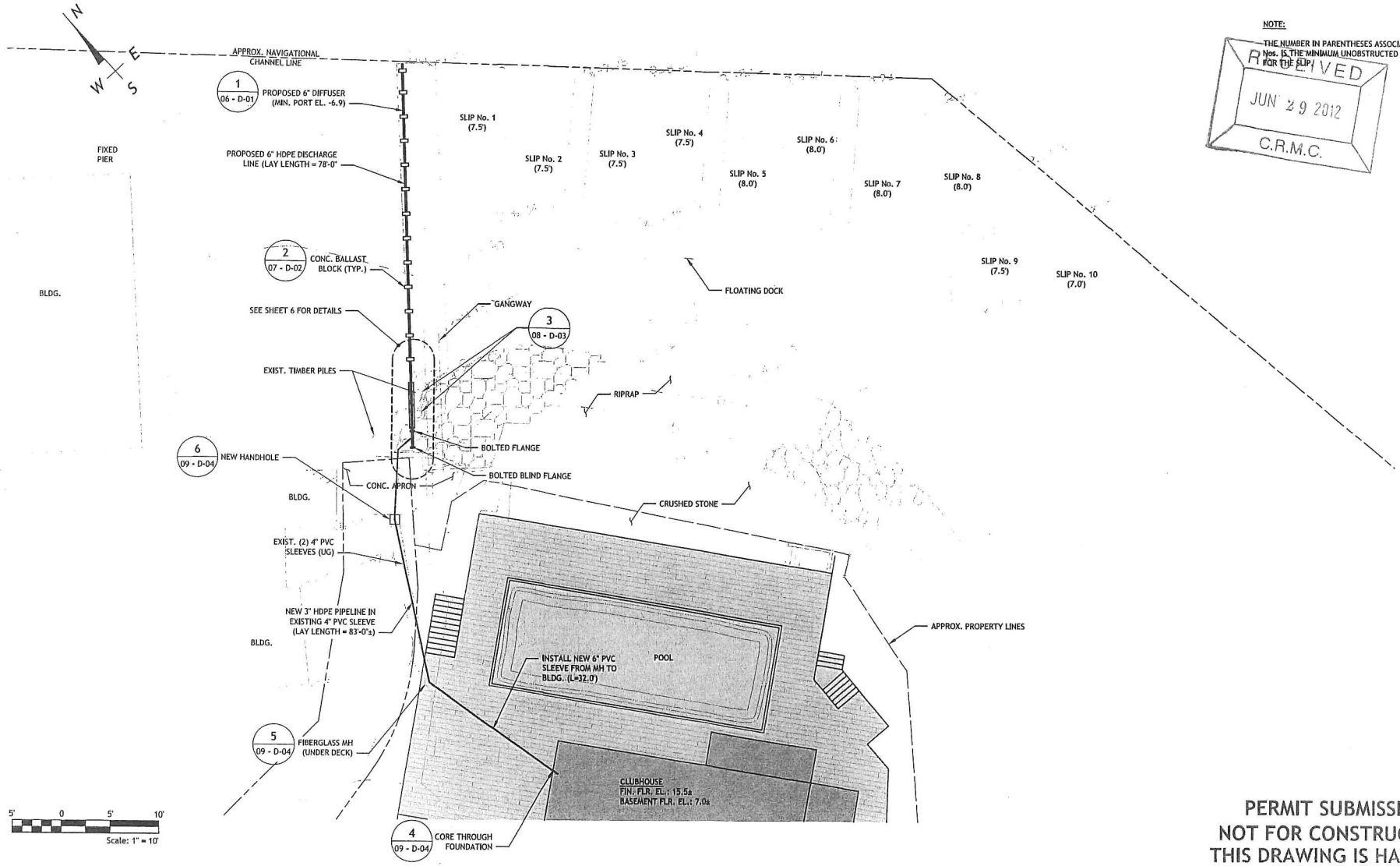

NOTE:

THE NUMBER IN PARENTHESES ASSOCIATED WITH SLIP Nos. IS THE MINIMUM UNOBSTRUCTED WATER DEPTH FOR THE SLIP.

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SITE PLAN

SHEET	4 OF 9
DWG No.	C-02
DATE	MAY 2012
PROJ No.	11107.02

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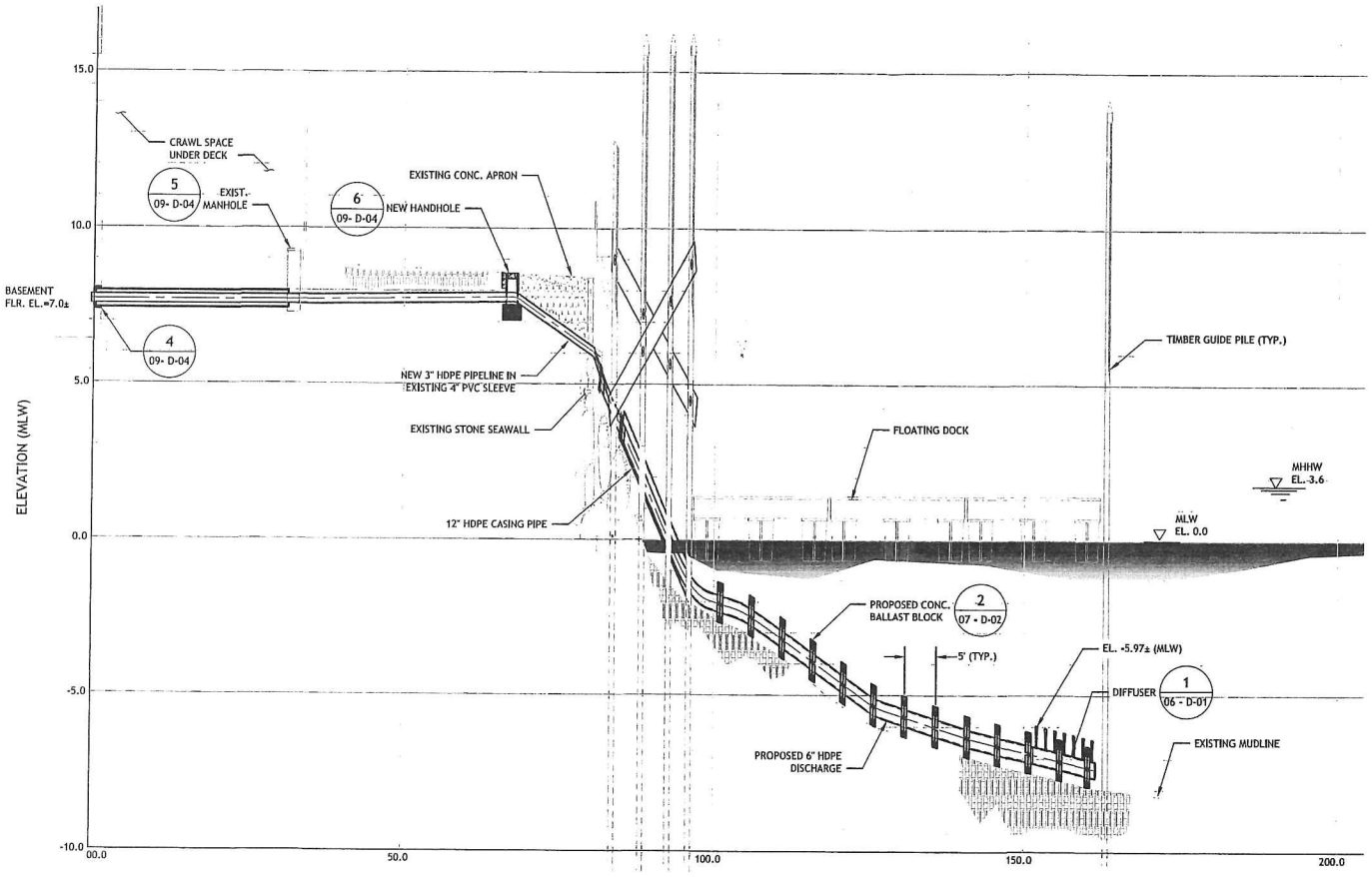

PROFILE
SCALE: HORZ. 1"=2'
VERT. 1"=10'

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DISCHARGE OUTFALL PROFILE

SHEET	5 OF 9
DWG No.	C-03
DATE	MAY 2012
PROJ No.	11107.02

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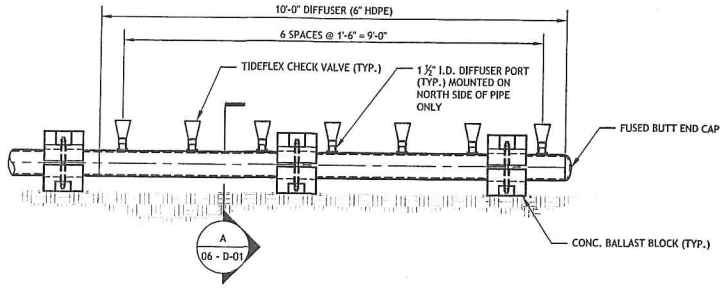
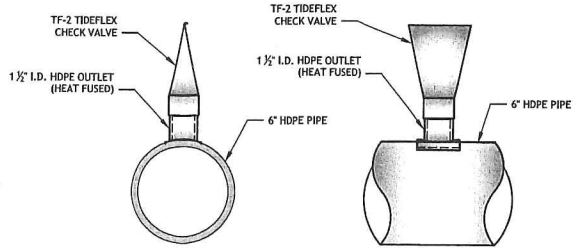


DIFFUSER DETAIL (1 / 04- C-01)

SCALE: ¾" = 1'-0"



DIFFUSER PORT DETAIL (A / 06 - D-01)

SCALE:3" = 1'-0"

Series TF-2

- 100% elastomer construction
- Will not rust or corrode
- Will not warp or freeze open or shut
- Custom built to customer specifications
- Low cracking pressure, low headloss
- Eliminates backflow

Materials of Construction
Neoprene, Hypalon , Buna-N, EPDM, Viton .

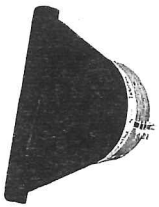
Mounting Bands
304 or 316 Stainless steel

The Tideflex® Check Valve is a revolutionary design for backflow prevention. It offers low cracking pressure to eliminate standing water and very low headloss that is not affected by rust, corrosion or lack of lubrication. Tideflex® Check Valves are cost effective because they require no maintenance or repairs and have a long operational life span. Tideflex® operates using line pressure and backpressure to open and close so no outside energy source is required.

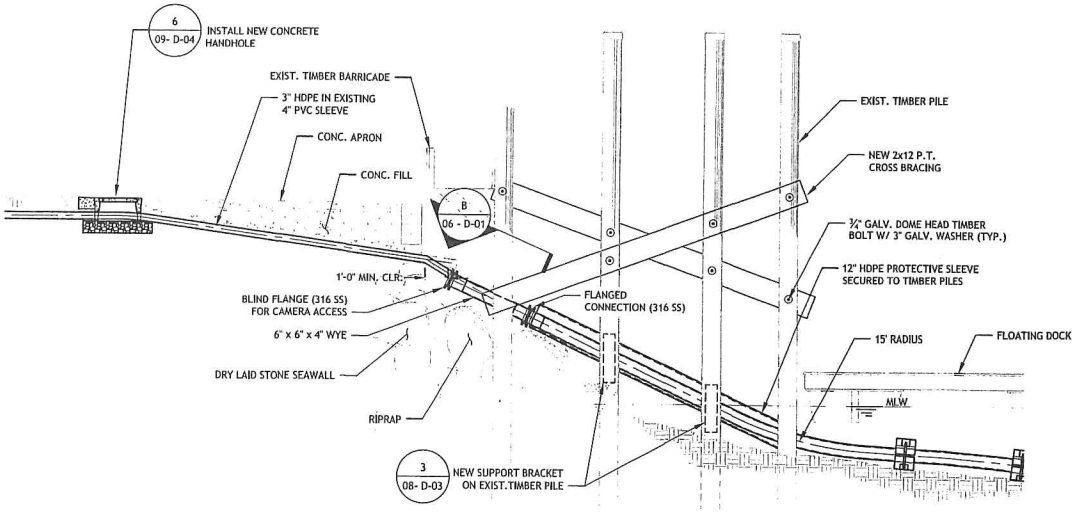
Tideflex® valves are excellent replacements for ineffective metal flapgate valves because they will not warp or freeze and are virtually maintenance free.

The inside diameter of the TF-2's cuff is constructed to exactly match the outside diameter of the pipe.

The valve is slid onto the pipe and held in place with steel or stainless steel band clamps, thus making flanging costs. Tideflex® TF-2 valves are constructed with a curved full access bend.

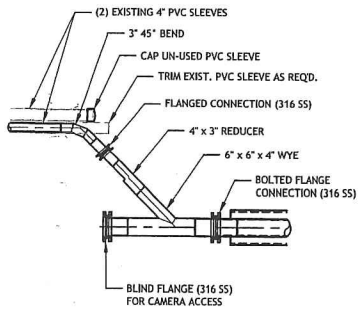


Pipe O.D.	Length	Fill Height	Cuff Length
1/2	3	1 1/2	1/2
3/4	3	2	1
1	4	2	1
1 1/2	6	3	1
2	6	4	1
2 1/2	6	5	1
3	9	6	1 1/2
4	12	7	1 1/2
5	16	9	2
6	16	11	2
8	17	13	2
10	22	17	2
12	27	21	4
14	28	22	4
16	28	27	6
18	30	27	6
20	34	32	8 1/2
22	38	33	8
24	42	39	6
26	42	39	8
28	42	39	8
30	48	50	8
32	48	53	10
36	50	61	10
38	50	61	10
40	50	61	10
42	55	71	10
44	55	71	10
48	60	78	12
50	60	78	12
54	72	97	13
60	72	97	13
66	75	97	15
68	75	97	15
72	95	115	17
84	92	111	17
90	102	119	17
92	102	119	17
96	102	119	17



PROFILE AT SEAWALL

SCALE: ⅜" = 1'-0"



PLAN VIEW (B / 06 - D-01)

SCALE:½" = 1'-0"

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DSGN	SWO
DR	SWO
CHK	JBR
APVD	SWO

No.	DATE	REVISIONS	BY	APVD

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REVERSE OSMOSIS EFFLUENT DISCHARGE PIPELINE
Sakonnet Point Club
11 Bluff Head Ave.
Little Compton, Rhode Island

DETAILS - 1

SHEET	6 OF 9
DWG No.	D-01
DATE	MAY 2012
PROJ No.	11107.02

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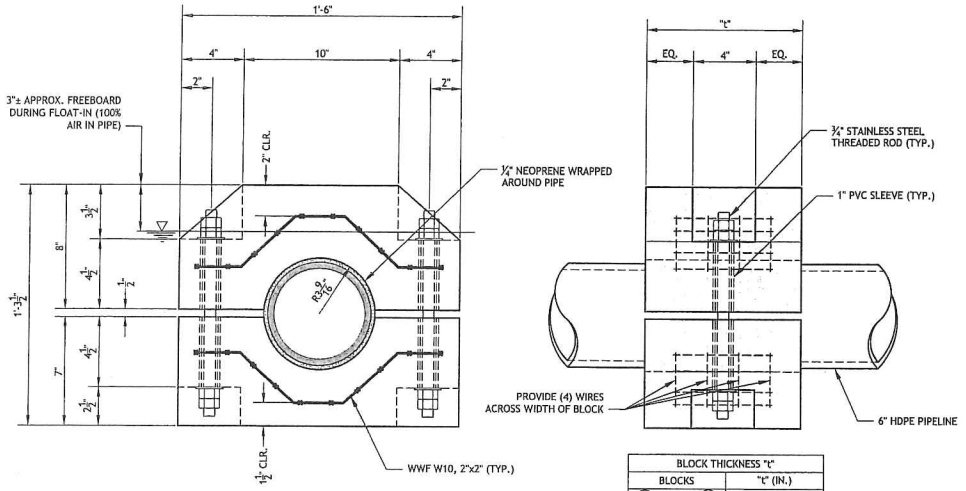


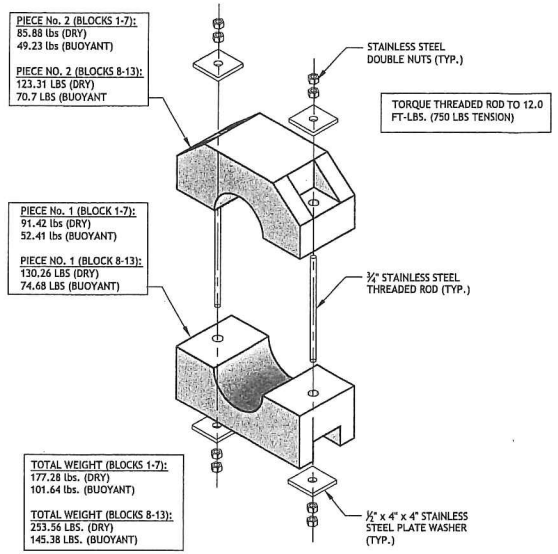
FRONT VIEW

SIDE VIEW

BLOCK THICKNESS "t"	
BLOCKS	"t" (IN.)
(1) THROUGH (7)	10
(8) THROUGH (13)	14

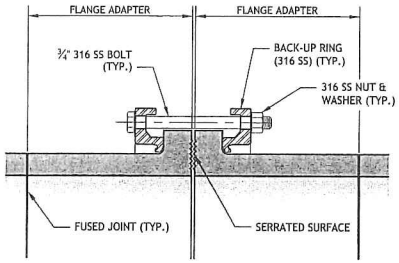
CONCRETE BALLAST BLOCK DETAIL

SCALE: 3" = 1'-0"



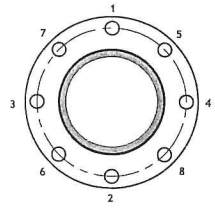
EXPLODED VIEW

SCALE:NONE



FLANGE CONNECTION DETAIL

SCALE: NONE

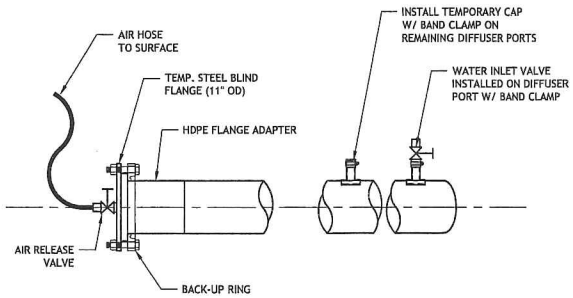


FLANGE BOLT TIGHTENING PATTERN

SCALE: 3" = 1'-0"

FLANGE CONNECTION NOTES:

1. TIGHTEN EACH FLANGE NUT ACCORDING TO THE SEQUENTIAL NUMBER PATTERN SHOWN. TIGHTEN COMPLETELY THROUGH THE NUMBER PATTERN BEFORE CHANGING TO A HIGHER TORQUE.
2. ESTABLISH AN INITIAL SEALING SURFACE PRESSURE BY TIGHTENING TO AN INITIAL TORQUE VALUE OF 5 FT-LBS, THEN INCREASE TIGHTENING TORQUE IN INCREMENTS OF ABOUT 35%, 70%, AND 100% OF FINAL TORQUE FOLLOWING THE CRISS-CROSS PATTERN SHOWN.
3. TIGHTEN BOLTS TO A FINAL TORQUE VALUE AS RECOMMENDED BY THE GASKET OR PIPE MANUFACTURER.
4. 12 TO 24 HOURS AFTER THE FIRST TIGHTENING TO THE FINAL TORQUE VALUE, RETIGHTEN EACH FLANGE BOLT NUT TO THE FINAL TORQUE VALUE. RETIGHTEN IN THE SAME PATTERN SEQUENCE AND INCREMENTS OF 15 FT-LBS OR LESS.
5. MATING FLANGES MUST BE ALIGNED TO EACH OTHER BEFORE TIGHTENING. TIGHTENING MISALIGNED FLANGES CAN CAUSE LEAKAGE OR FLANGE FAILURE. DO NOT TRY TO ALIGN FLANGE FACES BY TIGHTENING BOLTS.
6. BEFORE FIT UP, LUBRICATE FLANGE BOLT THREADS, WASHERS, AND NUTS WITH A NON-FLUID LUBRICANT GREASE. FLANGE SEALING SURFACES MUST BE CLEAN AND FREE OF CUTS OR GOUGES.



BLIND FLANGE DETAIL

SCALE: 1 ½" = 1'-0"

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DR	SWO
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APVD	SWO

No.	DATE	REVISIONS	BY	APVD

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DETAILS - 2

SHEET	7 OF 9
DWG No.	D-02
DATE	MAY 2012
PROJ No.	11107.02

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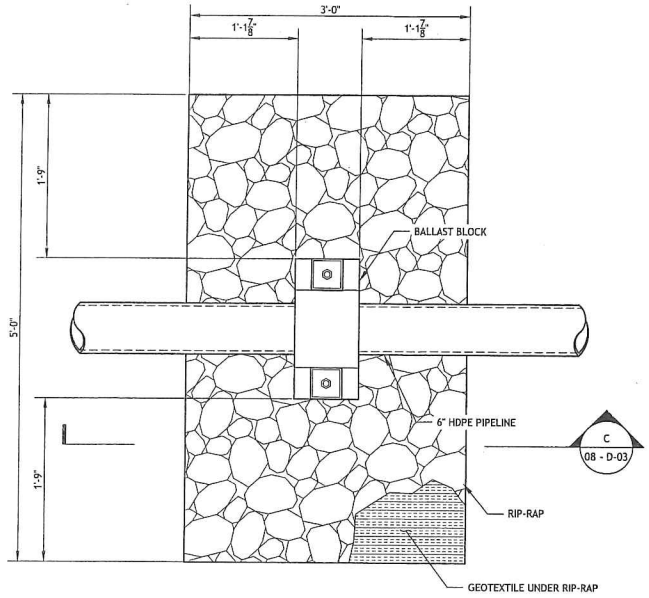
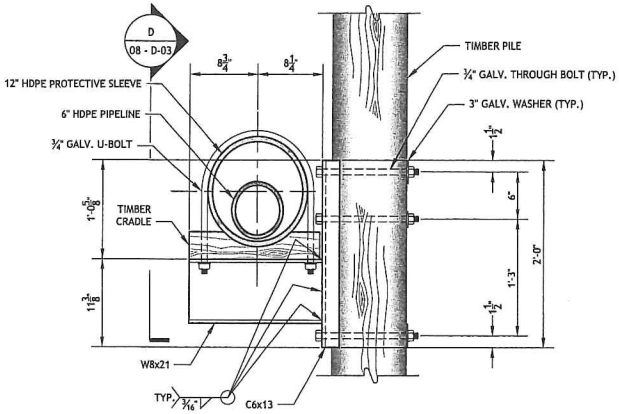


SCOUR PROTECTION PLAN

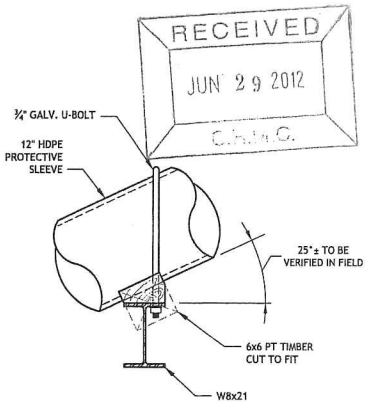
SCALE: 1 ½" = 1'-0"



PILE SUPPORT BRACKET

3 / 04 - C-02

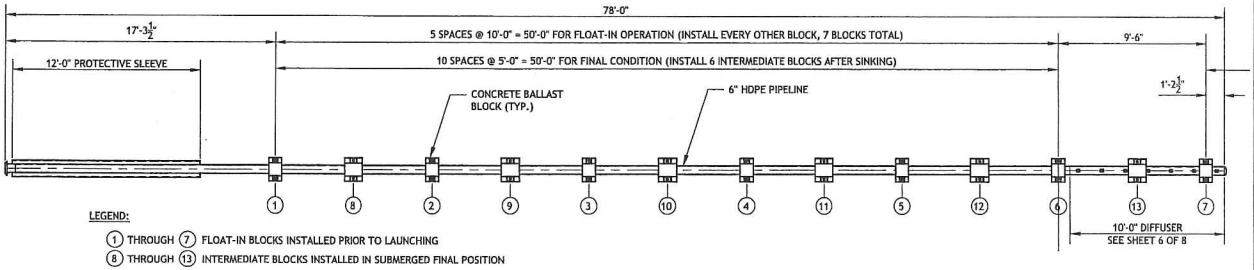
SCALE: 1 ½" = 1'-0"



SECTION

D / 08 - D-03

SCALE: 1½" = 1'-0"



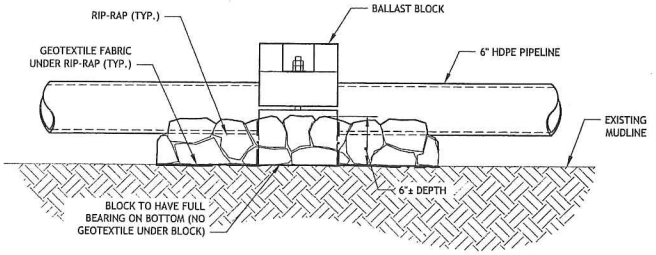
LEGEND:

(1) THROUGH (7) FLOAT-IN BLOCKS INSTALLED PRIOR TO LAUNCHING

(8) THROUGH (13) INTERMEDIATE BLOCKS INSTALLED IN SUBMERGED FINAL POSITION

MARINE SEGEMENT OF PIPELINE ASSEMBLY PLAN

SCALE: ¼" = 1'-0"



SECTION

C / 08 - D-03

SCALE: 1½" = 1'-0"

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CHK	JBR
APVD	SWO

No.	DATE	REVISIONS	BY	APVD

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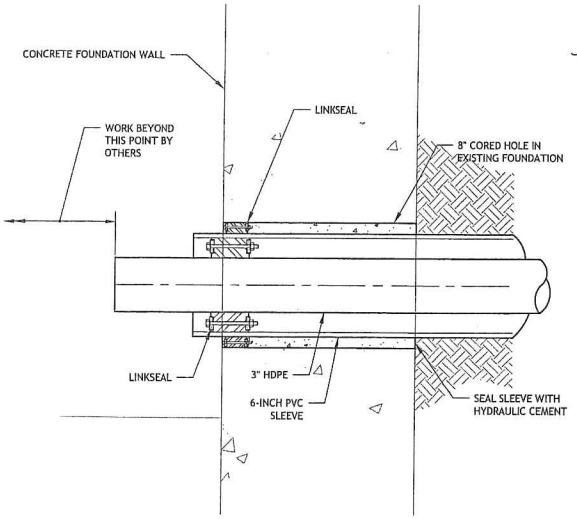
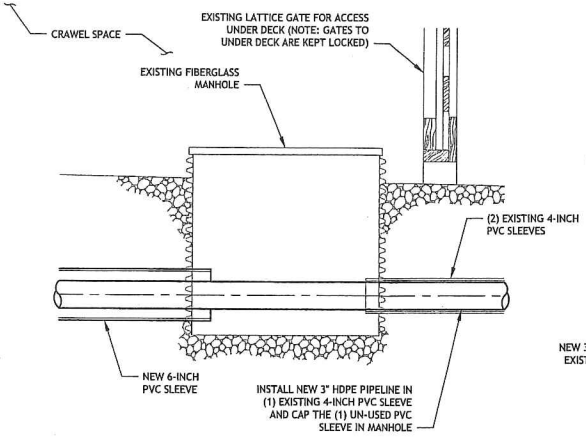
DETAILS - 3

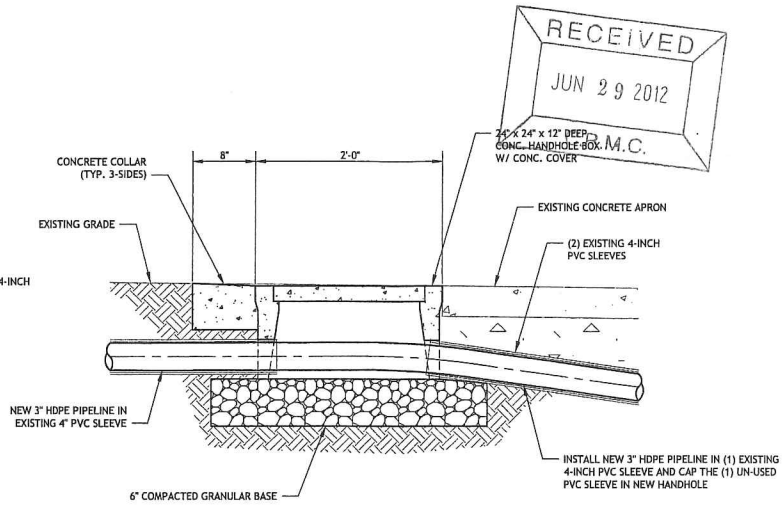
SHEET	8 OF 9
DWG No.	D-03
DATE	MAY 2012
PROJ No.	11107.02



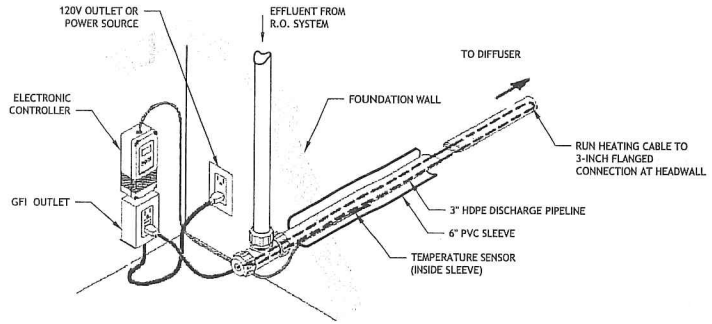
FOUNDATION PENETRATION (4 / 04 - C-02)
SCALE: 3" = 1'-0"



MANHOLE DETAIL (5 / 04 - C-02)
SCALE: 1½" = 1'-0"



HANDHOLE DETAIL (6 / 04 - C-02)
SCALE: 1½" = 1'-0"



NOTE:
THE SYSTEM SHOWN IS SCHEMATIC ONLY. FINAL DESIGN SHALL BE BY A LICENSED ELECTRICIAN AND/OR PLUMBER.

RECOMMENDED HEAT TAPE INSTALLATION (BY OTHERS)
SCALE: NONE

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APVD	SWO

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DETAILS - 4

SHEET	9 OF 9
DWG No.	D-04
DATE	MAY 2012
PROJ No.	11107.02

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