



**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
ONSITE WASTEWATER TREATMENT SYSTEM CONSTRUCTION PERMIT**

www.dem.ri.gov/septic



FOR RIDEM USE ONLY

APPLICATION No. 1919-016 DATE RECEIVED 5/10/22 AMOUNT RECEIVED \$ 0 CHECK # 0 NOTE 0

TYPE OF APPLICATION (CHECK ALL THAT APPLY)

- | | |
|---|---|
| <input checked="" type="checkbox"/> NEW BUILDING CONSTRUCTION | <input checked="" type="checkbox"/> A/E TECHNOLOGY TYPE <u>ADVANTIX</u> |
| <input type="checkbox"/> ALTERATION | <input type="checkbox"/> VARIANCE <u>w/ BSF</u> |
| <input type="checkbox"/> REPAIR | <input type="checkbox"/> REDESIGN |
| <input type="checkbox"/> TRANSFER | <input type="checkbox"/> JOINT OWTS / WETLANDS PD |

CERTIFICATION

I, CERILYN SMITH (print), the undersigned licensed OWTS designer, certify that I prepared this application and accompanying forms, submittals, plans and sketches in accordance with the RULES of the RIDEM pertaining to OWTS and that all the information provided on this application and accompanying forms, submittals, plans and sketches is true and accurate.

Designer's Signature [Signature] License # D3089

Designer's Email lynsmith@earthlink.net Phone # 401-897-0810

Business/Company Name NORTHCAST ENGINEERS & CONSULTANTS, INC.

I certify that a) I am the owner of the property indicated under the site information on this application, b) I will hire a licensed OWTS installer to install the system proposed herein, c) the system will be installed in strict accordance with this application, d) I will hire and retain the licensed OWTS designer of record to witness and inspect the installation of the system, e) I assume all responsibility for the truth and accuracy of this application and all liability and responsibility for any improper installations of the system on this site and agree to hold the RIDEM harmless from any and all claims relating whatsoever to the system. In the case of a transfer application, I acknowledge that the permit application and plans previously approved and accompanying this application are the operative documents subject to certification.

Owner's Phone Number 401-378-4532

Owner's Email web@isping.com

Owner(s) Signature Thomas P. Welch

SITE INFORMATION

NO. STREET FAYAL LANE CITY/TOWN MIDDLETOWN POLE # _____
 PLAT NUMBER 124 LOT NUMBER 11 SUBDIVISION LOT NUMBER 2
 LOT SIZE 50164 SF/ACRES
 SUBDIVISION NAME N/A
 SUBDIVISION SITE SUITABILITY CERTIFICATION # N/A

OWNER INFORMATION

LAST-NAME WELCH FIRST NAME THOMAS M.I. _____
 NO. STREET 536 MIDDLETON'S LN CITY/TOWN MIDDLETOWN ZIP CODE 02842

RIDEM APPLICATION HISTORY

PREVIOUS SITE TESTING YES NO APPLICATION # 1919-1716
 DEPTH TO APPROVED WATER TABLE 30 HOW DETERMINED BY DESIGN
 TEST HOLE # 1 DATE EXCAVATED 10/7/12 WETLANDS within 200' OF OWTS YES NO
 WETLAND DETERMINATION YES NO RIDEM FILE # N/A DATE - / - / -
 LARGE SYSTEM YES NO OCI FILE # IF APPLICABLE N/A

DESIGN INFORMATION

BUILDING USE: Residential Commercial APR 28 2022
 Other _____
 WATER SUPPLY: public water public well private well Office of Water Resources
 # OF DESIGN UNITS 3 BEDROOMS
 UNIT DESIGN FLOW 115 gallons per 115 (unit) TOTAL DAILY FLOW 345 gallons
 TANK SIZE 1,500 gallons DESIGN LOADING RATE _____ gpd/sf
 MINIMUM REQUIRED LEACHFIELD AREA 230 square feet
 LEACHFIELD TYPE BIODIVERSITY SAND FILTER
 TOTAL AREA OF LEACHFIELD PROVIDED 230 square feet

PERMIT APPROVAL SECTION: DO NOT WRITE BELOW THIS LINE

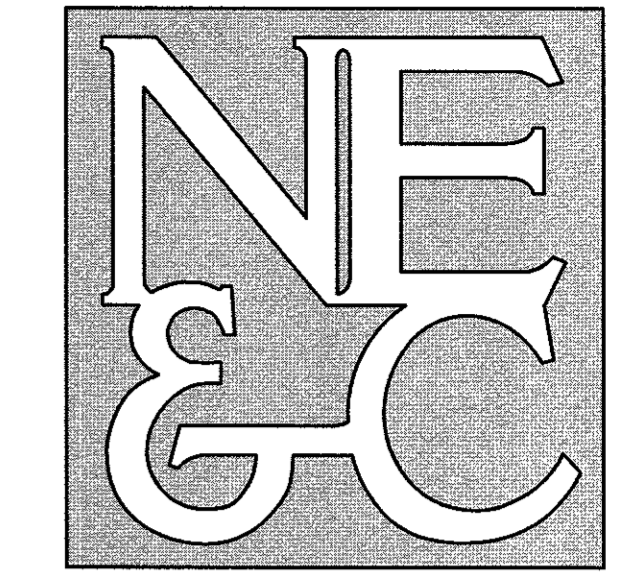
Based upon the representations of the owner and the owner's agents, including the representations of the owner's OWTS designer, and the truth and accuracy of all information submitted, this application for an OWTS is hereby approved. The RIDEM assumes no responsibility or liability for the future safe operation or maintenance of the aforesaid system, of the fitness or suitability of this system to this site, nor does it assume any responsibility for the accuracy and truth of the owner's, or the owner's agent's representations. This approval is subject to future suspension or revocation in the event that subsequent examination reveals any data indicated on any application, form, submittal, plan or sketch to be incorrect, or not in compliance with the RULES or any conditions at the site are such that the approved design is not in accordance with the RULES, or in the event that the system discharges inadequately treated wastewater to waters of the State or fails to operate satisfactorily in any other manner.

IMPORTANT: Additional terms of approval as circled.

- A. Area of leaching area excavation must be inspected by the RIDEM prior to placement of any gravel or stone.
- B. System installation must be inspected by RIDEM prior to covering any component of the system with backfill.
- C. Applicant shall comply with all requirements, conditions and stipulations of variance(s) approved on _____.
- D. Joint Permit: Designer of record must contact RIDEM prior to start of any site construction.
- E. A/E Technology: additional installation, operation or maintenance requirements may apply (see A/E Technology Certification.)
- F. Copy of this form and Operation/Maintenance contract must be filed in land evidence records prior to conformance.
- G. Proposed construction falls within "Coastal Zone". Contact Rhode Island Coastal Resources Management Council.
- H. Proper erosion and sedimentation controls must be installed prior to start of construction.
- I. Refer to: See original permit for all applicable conditions.
- J. Other _____

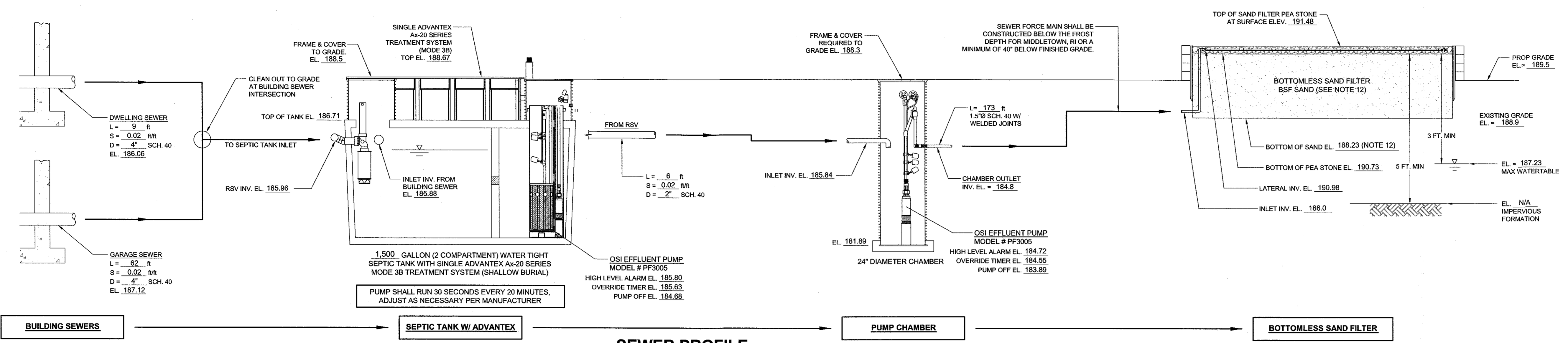
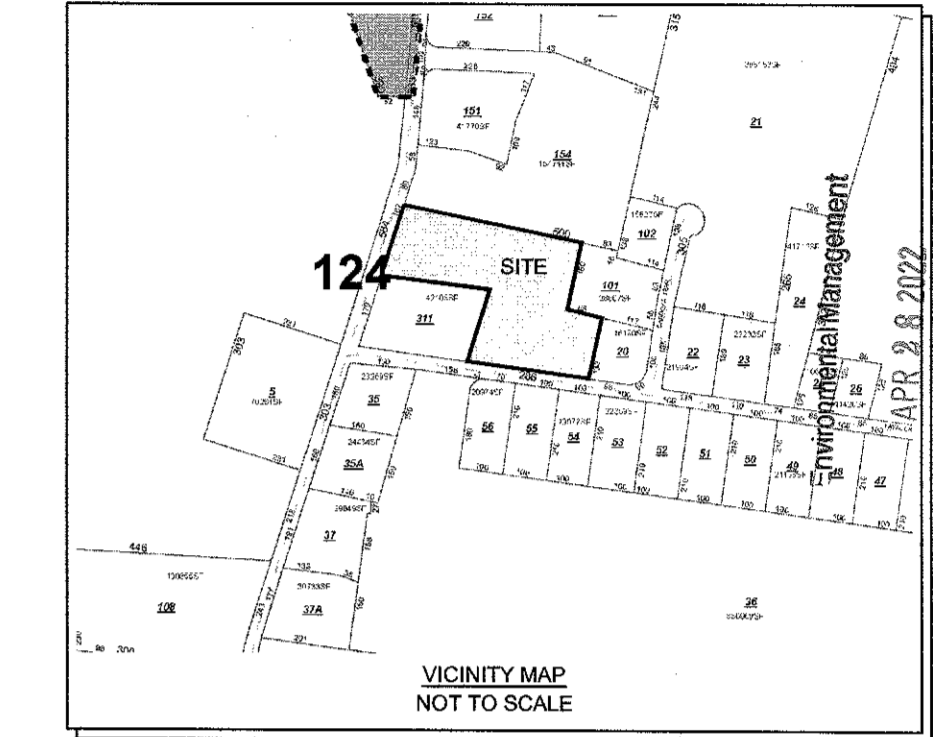
Signature of RIDEM Official [Signature] Date of Approval 5/10/22 Date of Expiration 5/10/27

DESIGNER



A KNOWLEDGE CORPORATION®

6 VALLEY ROAD MIDDLETOWN RHODE ISLAND 02842
PHONE (401) 849-0810 FAX (401) 846-4169
WWW.NORTHEASTENGINEERS.COM



DESIGN COMPUTATION		
DESIGN PERC. RATE	DESIGN APP. RATE	SEEPAGE SYSTEM
CATEGORY 9	1.5 gal/SF/day	SINGLE ADVANTEX AX-20 W/ A BOTTOMLESS SAND FILTER
DESIGN WATER TABLE:		
TH 1: WT = 20" (WET SEASON)		
TH 2: WT = 20" (WET SEASON)		
SEWAGE FLOW:		
3 BEDROOMS x 115 g/day = 345 g/day		
SEPTIC TANK:		
CAPACITY PROVIDED: 1,500 GALLONS		
TOTAL LEACHING AREA REQUIRED: 230 SF		LEACHING AREA PROVIDED: 230 SF
NUMBER OF LATERALS: 5		LENGTH OF SAND FILTER: 23 FT
WIDTH OF SAND FILTER: 10 FT		

LEGEND:

- PROPERTY LINE
- ADJUTERS PROPERTY LINE
- EDGE OF PAVEMENT
- 187.7 EXISTING CONTOUR
- 187.5 EXISTING SPOT ELEVATION
- STONE WALL
- CHAIN LINK FENCE
- SPLIT RAIL FENCE
- EXISTING SUBSURFACE DRAIN
- PROPOSED SUBDIVISION LINE
- S PROPOSED SEWER LINE
- SFM PROPOSED SEWER FORCE MAIN
- -188 PROPOSED CONTOUR
- +188.5 PROPOSED SPOT ELEVATION
- S.F. SILT FENCE
- EXISTING DRAIN MANHOLE
- EXISTING CESSPOOL
- EXISTING WELL
- PROPOSED WELL
- REBAR / PIPE / SPIKE
- MAG NAIL
- TEST PIPE

GENERAL OWTS SYSTEM NOTES:

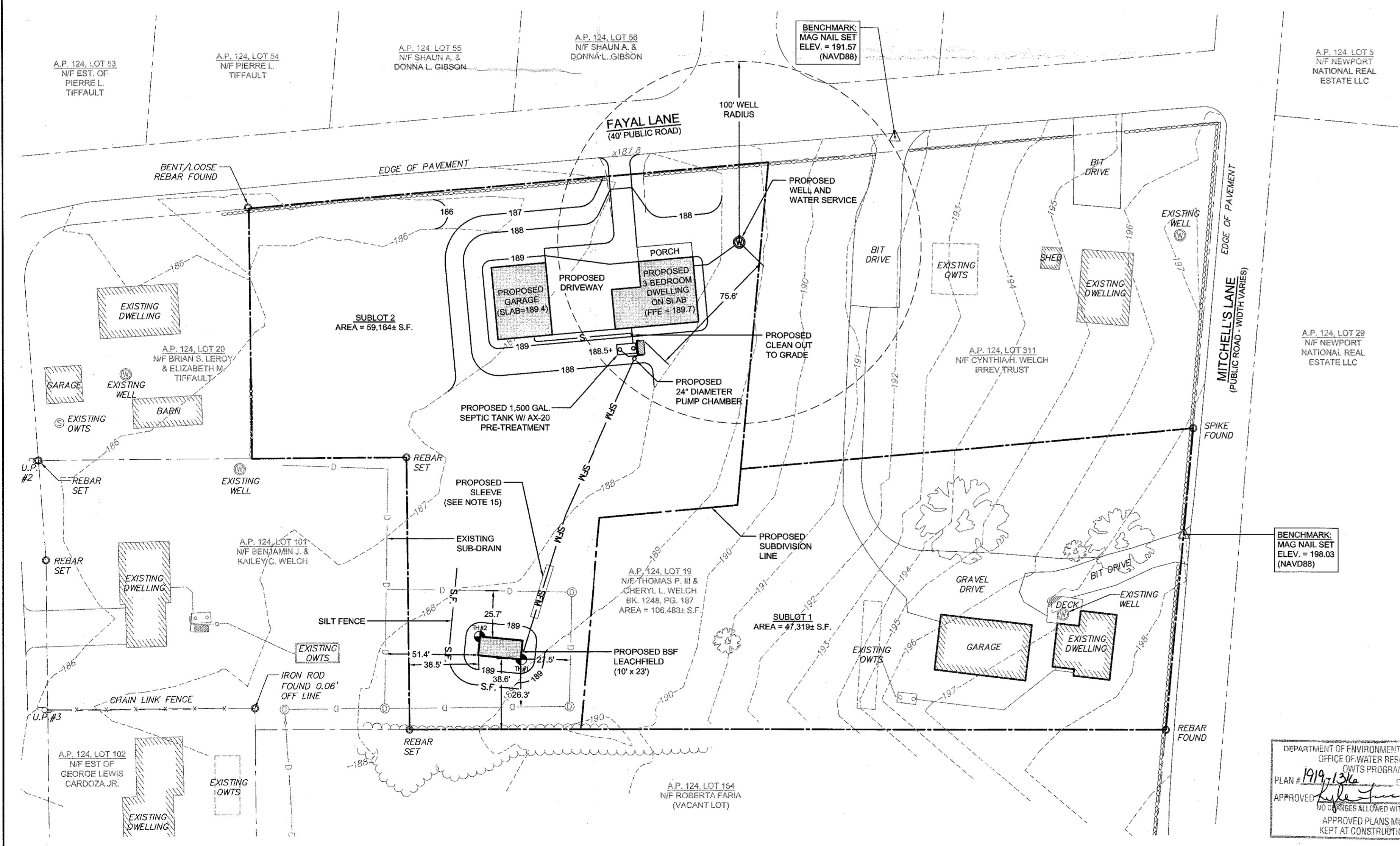
- ALL BRUSH AND TREES WILL BE CLEARED WITHIN (10) FT OF THE SYSTEM.
- A MINIMUM ELEVATION OF 188.73, CORRESPONDING TO 2 FEET BELOW THE BOTTOM OF THE PEASTONE, SHOULD BE MAINTAINED WITHIN 5 FEET OF OWTS.
- ALL EXISTING AND PROPOSED PRIVATE WELLS WITHIN 200R OF OWTS ARE SHOWN. ALL PUBLIC WELLS EXISTING OR PROPOSED WITHIN 500' ARE SHOWN.
- NO DRAINS OR WATER LINES ARE KNOWN TO EXIST OR ARE TO BE CONSTRUCTED IN THE PROXIMITY OF THE SYSTEM WITHIN THE DISTANCES SPECIFIED IN RIDEM OWTS TABLE 6.23.
- PROPOSED TANKS, INLETS, OUTLETS, & PIPING MUST BE WATERTIGHT TO PREVENT THE INFILTRATION OF GROUND WATER.
- THE SYSTEM FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE STATE OF RHODE ISLAND, DEPARTMENT ENVIRONMENTAL MANAGEMENT, "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION, AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS."
- THE DESIGN INTENT IS TO MEET THE STATE STANDARDS. SINCE THIS PLAN HAS BEEN CREATED TO GAIN THE NECESSARY PERMITTING, NO CONSTRUCTION INSTALLATIONS HAVE COMMENCED. BECAUSE THIS IS NOT A "RECORD DRAWING OF AS-BUILT CONDITIONS" AND NOTHING HAS BEEN INSTALLED, THE ENGINEER SIGNING AND STAMPING THIS PLAN IS NOT GUARANTEEING THE OPERATION OF THE INSTALLED SEPTIC SYSTEM UPON THE APPROVED SYSTEM INSTALLATION. THE DESIGN ENGINEER WILL SUPERVISE, VERIFY, AND CERTIFY THAT THE SYSTEM WAS INSTALLED AS SPECIFIED ON THE APPROVED PLAN.
- ANTI-FLOATATION DEVICES AS PROVIDED BY THE MANUFACTURER SHALL BE USED FOR THE PROPOSED ADVANTEX POD.
- NO FOUNDATION DRAIN LINES ARE TO BE CONSTRUCTED WITHIN 25 FT. OF THE OWTS OR BUILDING SEWER.
- SEWER FORCE MAIN SHALL BE CONSTRUCTED BELOW THE FROST DEPTH FOR MIDDLETOWN, RI OR A MINIMUM OF 40" BELOW FINISHED GRADE.
- LAND OWNER MUST MINIMIZE SHADING OF THE BOTTOMLESS SAND FILTERS. THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RECOMMENDS THAT BOTTOMLESS SAND FILTERS BE EXPOSED TO THE SUNLIGHT TO PREVENT FREEZING DURING THE WINTER MONTHS.
- ANY FILL OR A₂ HORIZON BENEATH THE BOTTOMLESS SAND FILTERS SHALL BE REMOVED AND REPLACED WITH ASTM C-33 SAND. TWO (2) FEET BELOW THE BOTTOM OF PEASTONE SHALL BE FILLED WITH BSF SAND IN ACCORDANCE WITH RIDEM OWTS RULE 6.37.C.2.D.
- SEPTIC TANK INLET AND OUTLET PIPES SHALL BE CONNECTED TO THE TANK WITH WATERTIGHT SEALED FLEXIBLE JOINTS. THE PIPE GASKET SHALL BE AN INTEGRAL PART OF ALL TANKS AND THE PIPE GASKET SHALL BE FASTENED TO THE PIPE WITH A STAINLESS STEEL RETRACTABLE CLAMP PER RIDEM RULE 6.27.F.3.
- THE PROPOSED LEACHFIELD AREAS SHALL BE PROTECTED FROM ANY ACTIONS THAT COULD RESULT IN THE COMPACTION OF SOILS INCLUDING PARKING, VEHICLE TRAFFIC, STAGING AREAS, ETC.
- ANY SEWER LINE OR SEWER FORCE MAIN WITHIN 15' OF A DRAIN LINE SHALL BE SLEEVED IN ACCORDANCE WITH RIDEM OWTS RULE 6.23.B (NOTE 7).
- PROPOSED GRADING SHOWN IS THE MINIMUM NECESSARY TO MEET OWTS COVER REQUIREMENTS.
- PROPERTY LINES AND NORTH ARROW TAKEN FROM PLAN ENTITLED, "ADMINISTRATIVE SUBDIVISION PLAN", PREPARED BY NORTHEAST ENGINEERS & CONSULTANTS, INC. DATED JUNE 2017.
- EXISTING CONDITIONS & TOPOGRAPHY ARE THE RESULT OF A FIELD SURVEY BY NE&C ON DECEMBER 3, 2016 AND MARCH 29, 2022.
- BASE OF ELEVATIONS REFERENCES NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- ADJUTERS WELLS, LEACHFIELDS, AND CESSPOOLS SCALED FROM PLANS PROVIDED BY RIDEM AND FIELD OBSERVATIONS AND SHOULD BE CONSIDERED APPROXIMATE.
- SOIL EVALUATION PERFORMED BY DANIEL WELCH ON OCTOBER 9, 2019. WET SEASON READINGS CONDUCTED AND VERIFIED BY RIDEM IN 2021.
- CONTRACTOR TO TRANSFER BENCHMARK ELEVATION WITHIN 150' OF OWTS PRIOR TO CONSTRUCTION.
- ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION AT 1-888-344-7233, AND/OR ALL LOCAL UTILITY COMPANIES).

SOIL EVALUATION DATA											
TP#	HORIZON	DEPTH (INCHES)	HORIZON BOUNDARIES		SOIL COLORS		RE-DOX DESCRIPTION	TEXTURE	STRUCTURE	CONSISTENCE	SOIL CATEGORY
			DIST	TOPO	MATRIX	RE-DOX FEATURES					
1	Ap	0-11	a	w	10YR 3/2	7.5YR 3/4	c,f,d	l	1mgr	fr	3
	Bw	11-23	a	s	2.5Y 4/3	10YR 4/6 5Y 5/1	m,m,p m,m,d	l	1msbk	fr	3
	Cd	23-96	-	-	5Y 3/2	10YR 4/6 5Y 5/1	m,c,p m,c,f	chl	0-m	vfl	9
2	Ap	0-10	a	s	10YR 3/2	7.5YR 4/4	c,f,d	l	1mgr	fr	3
	Bw1	10-13	c	s	2.5Y 4/3	10YR 4/6 5Y 5/1	c,m,p c,m,d	l	1msbk	fr	3
	Bw2	13-24	c	w	5Y 4/3	10YR 4/6 5Y 5/1	m,m,p m,m,d	l	1msbk	fr	3
	Cd	24-96	-	-	5Y 4/2	10YR 4/6 5Y 5/1	m,c,p m,c,f	chl	0-m	vfl	9

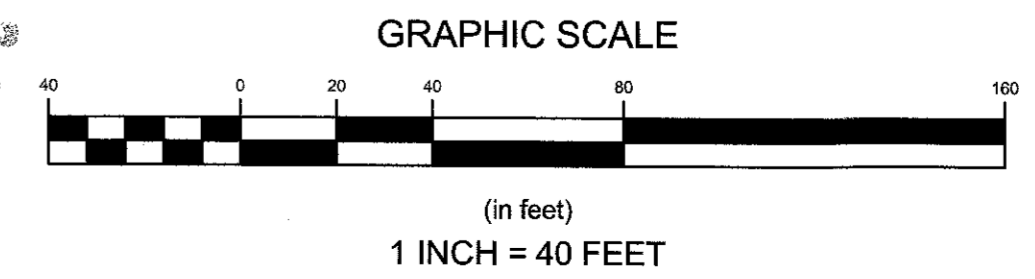
No.	Revision	Date	App.
Designed By:	DJW	Drawn by:	DJW
Checked by:	GES	Scale:	1" = 40'
Date:	21APR22	Project Title:	
A.P. 124, LOT 19 (SUBLOT 2) FAYAL LANE MIDDLETOWN, RHODE ISLAND			
Client/Owner:			
THOMAS WELCH 536 MITCHELL'S LANE MIDDLETOWN, RI 02842			
Issued for:			
RIDEM			
Drawing Title:			
PROPOSED OWTS PLAN			
Drawing Number:			
C-1			
Sheet 1 of 2			
Project Number:			
14178.2			
Survey Index:			
13 - 124 - 19			

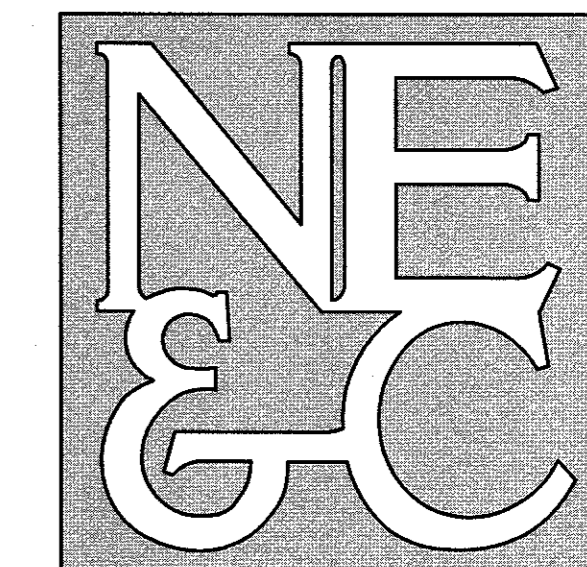
GERALD E. SMALL
 No. 8550
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 OWTS PROGRAM
 PLAN # 1919-1-01a DATE 5/14/22
 APPROVED: [Signature]
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE KEPT AT CONSTRUCTION SITE

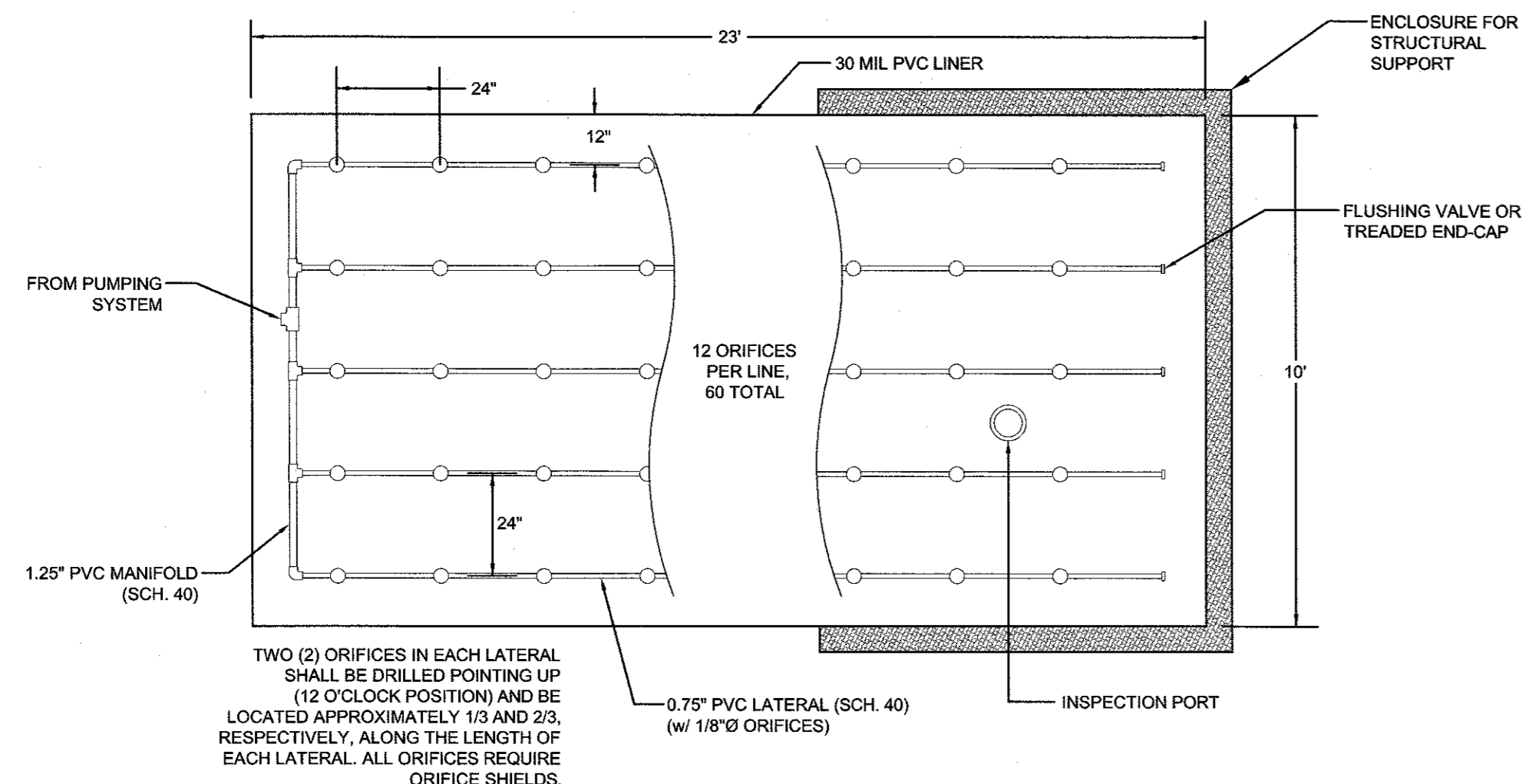




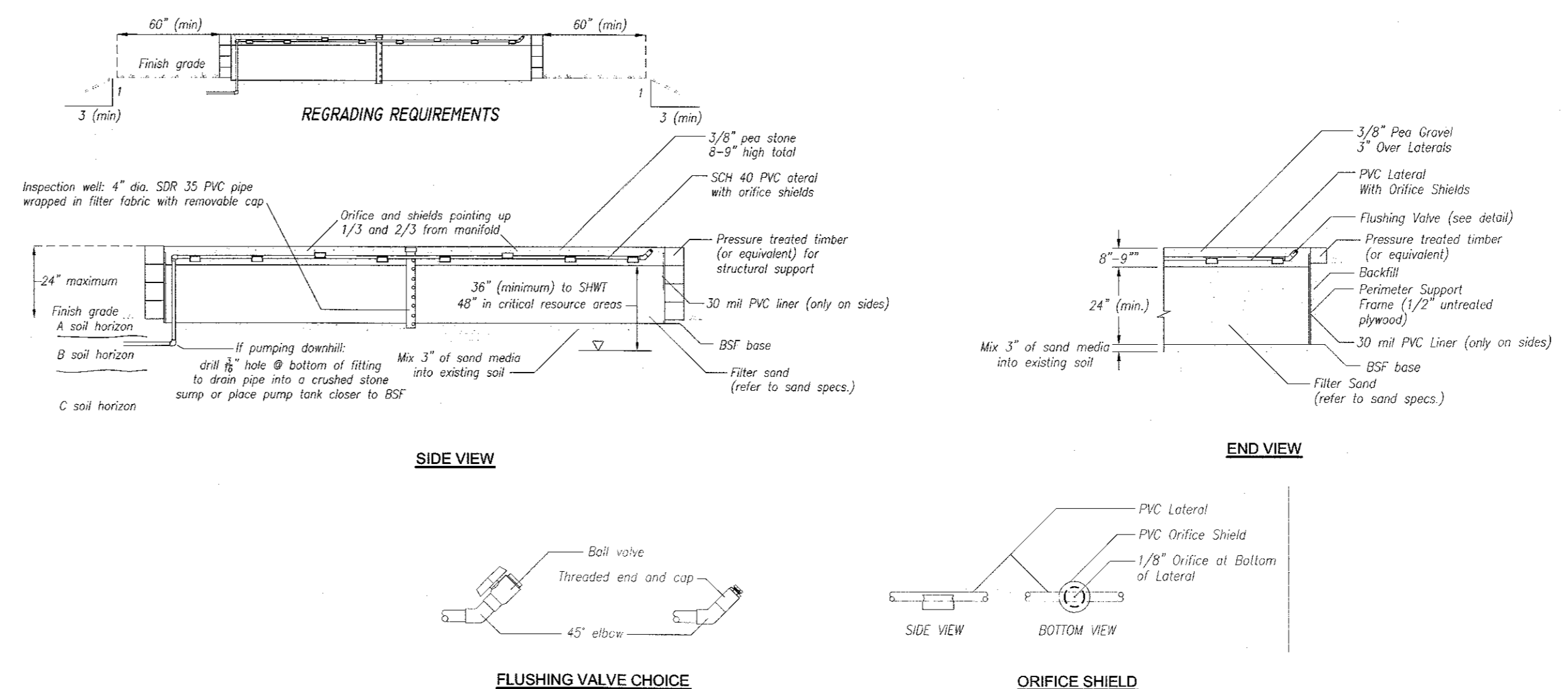
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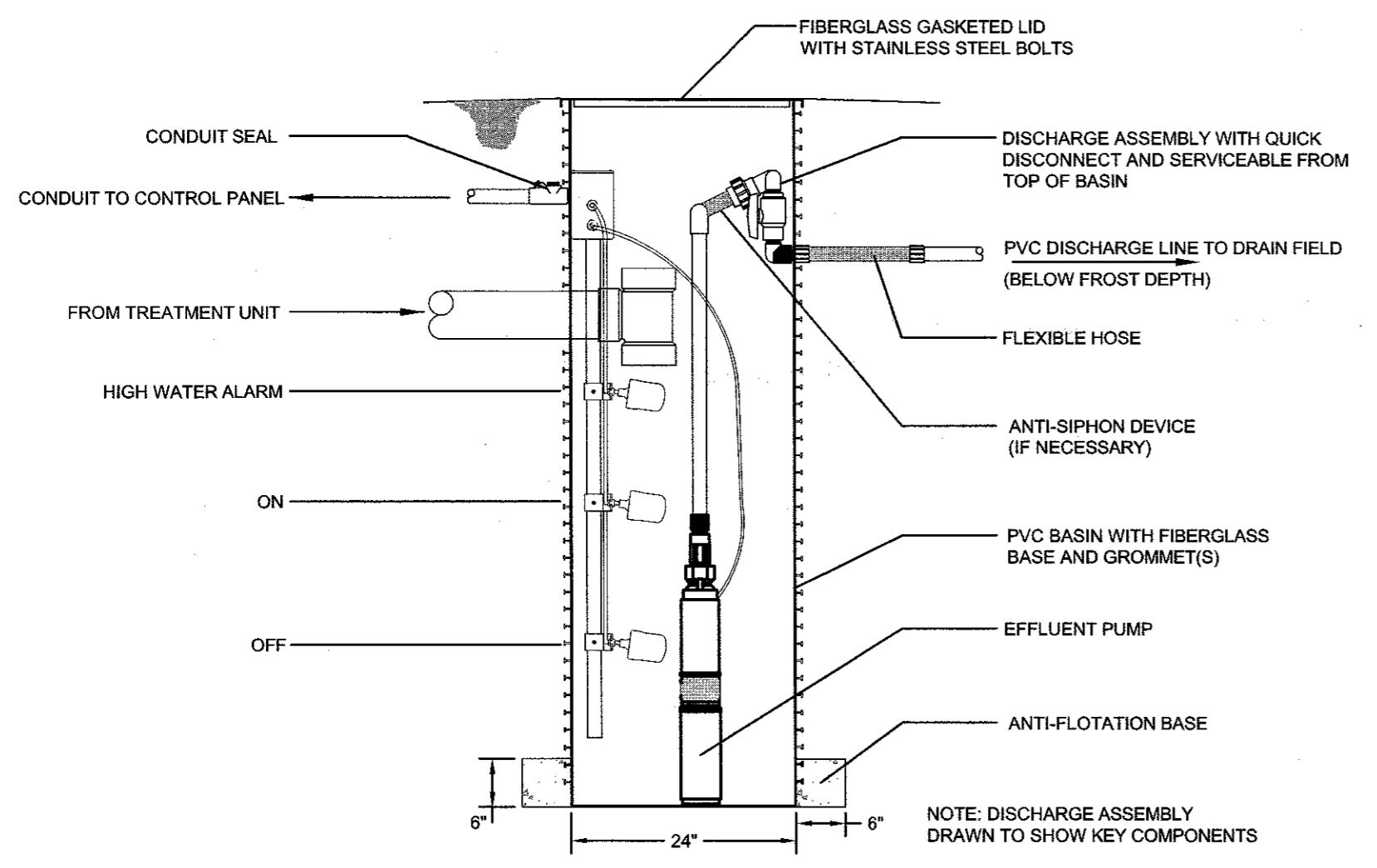
SITE/CIVIL
 LAND PLANNING
 WATERFRONT
 SURVEYING
 GEOTECHNICAL
 ENVIRONMENTAL
 TRANSPORTATION
 STRUCTURAL



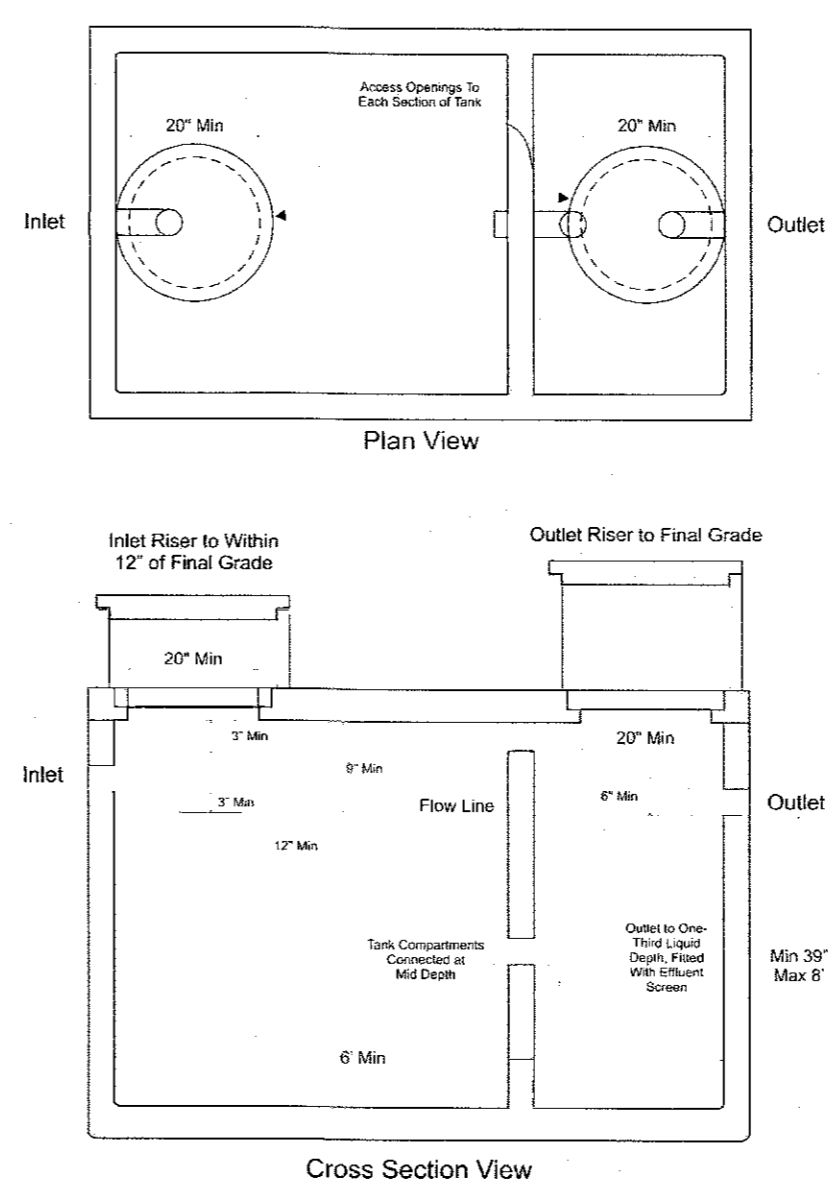
10' x 23' BOTTOMLESS SAND FILTER
 SCALE: NOT TO SCALE



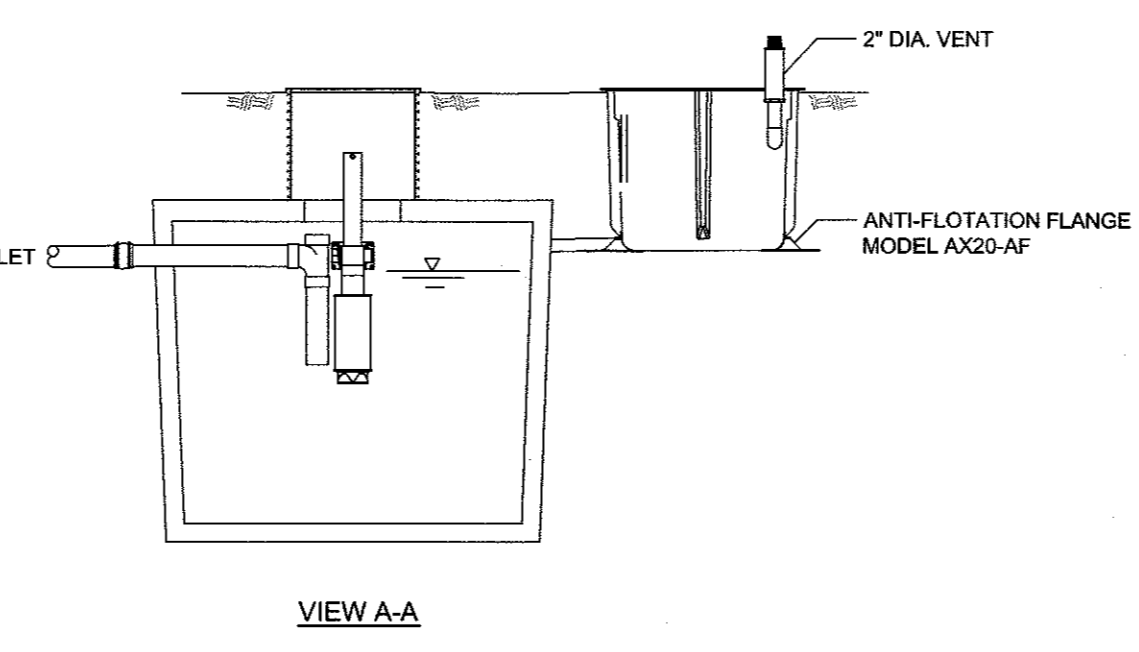
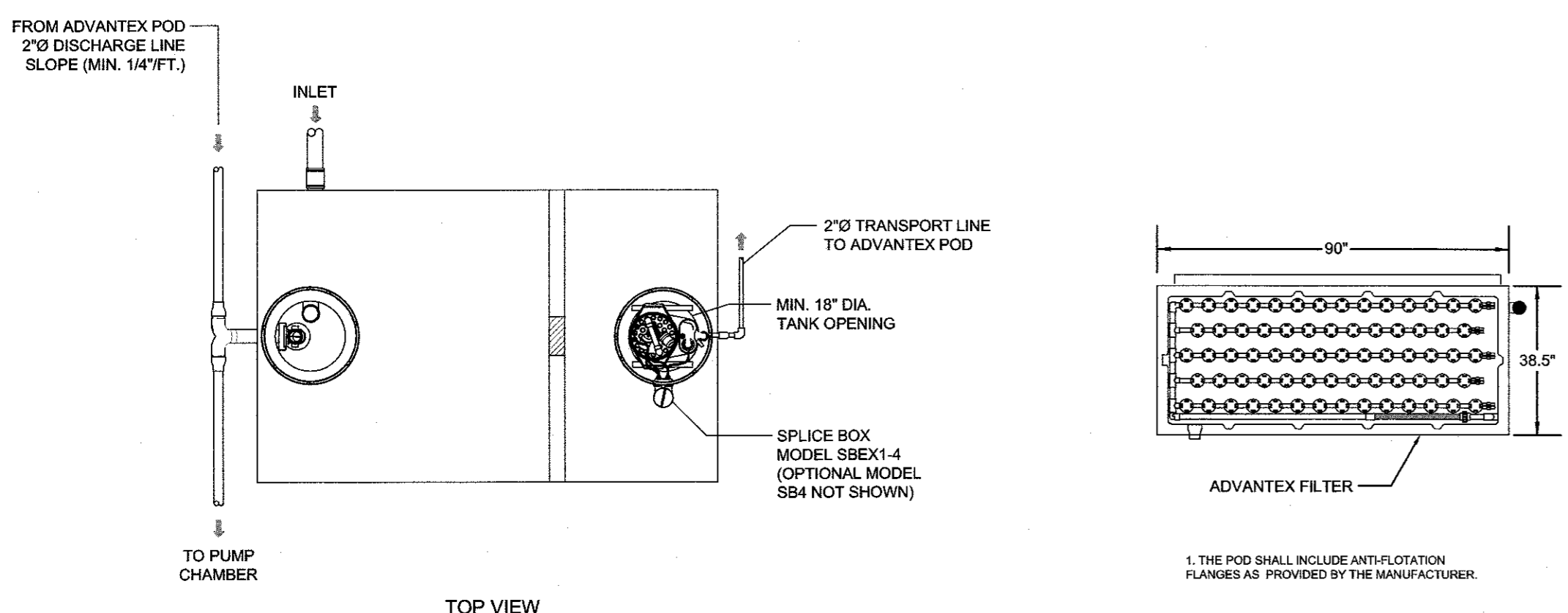
TYPICAL BOTTOMLESS SAND FILTER
 SCALE: NOT TO SCALE



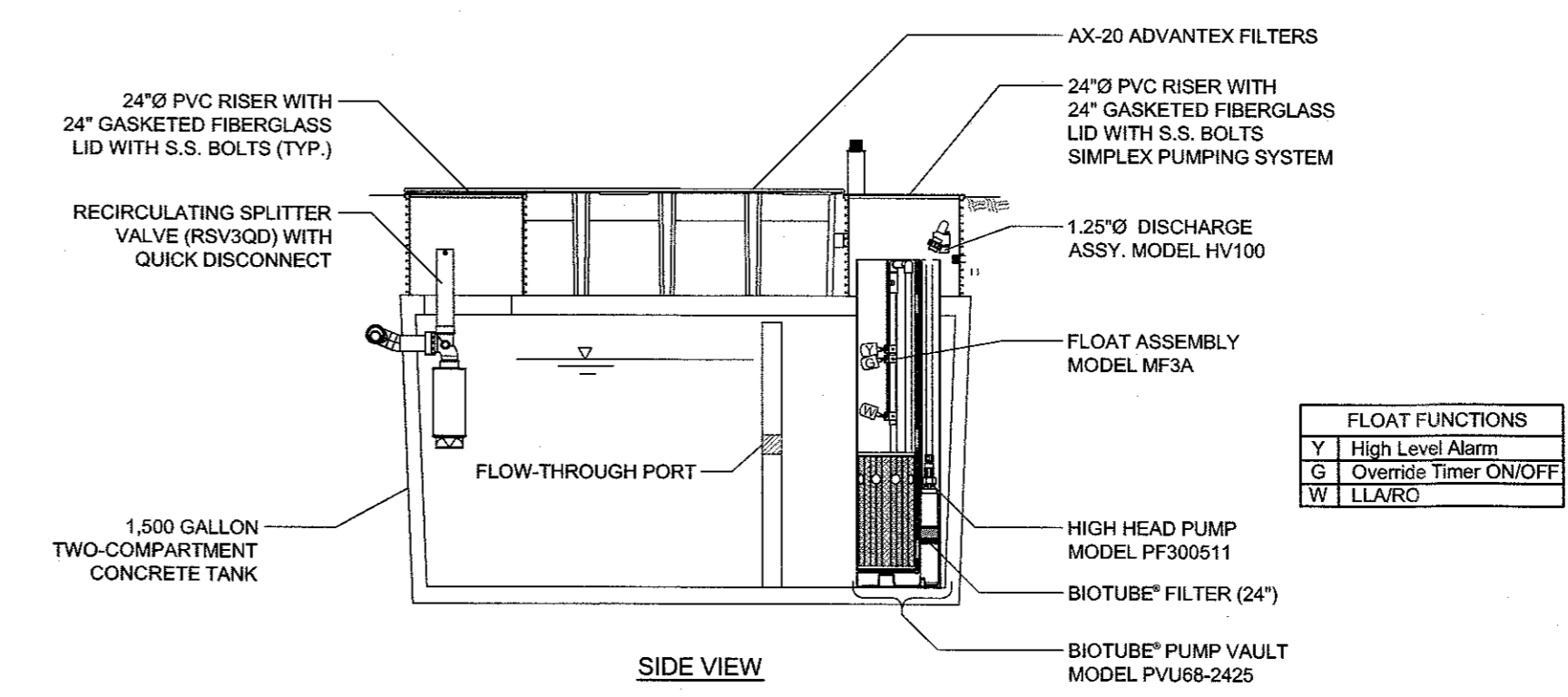
TYPICAL PUMP CHAMBER WITH HIGH HEAD PUMP
 SCALE: NOT TO SCALE



SEPTIC TANK DETAIL (1,500 gal.)
 SCALE: NOT TO SCALE



**SINGLE ADVANTEX TREATMENT SYSTEM
 AX-20 MODE 3B (SHALLOW BURIAL)**
 SCALE: NOT TO SCALE



FLOAT FUNCTIONS	
Y	High Level Alarm
G	Override Timer ON/OFF
W	LLARG

No.	Revision	Date	App.
Designed By:	DJW	Drawn by:	DJW
Scale:	AS SHOWN	Checked by:	GES
Date:	21APR22		
Project Title:			
A.P. 124, LOT 19 (SUBLOT 2) FAYAL LANE MIDDLETOWN, RHODE ISLAND			
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