



**Letter of Transmittal**

TO: Terri Guarino, R.S., C.H.O  
Town of Bourne Health Agent  
24 Perry Avenue  
Buzzards Bay, MA 02532  
\_\_\_\_\_  
\_\_\_\_\_

Date: April 16, 2021
RE: Variance Request for Cape View Way – Revised Plans

WE ARE SENDING YOU: Via: Hard Copies THE FOLLOWING:

- |   |                                 |   |   |
|---|---------------------------------|---|---|
| <input type="checkbox"/> Report         | <input type="checkbox"/> Prints | <input checked="" type="checkbox"/> Plans | <input type="checkbox"/> Shop Drawings      |
| <input type="checkbox"/> Specifications | <input type="checkbox"/> Copies | <input type="checkbox"/> Check            | <input type="checkbox"/> Contract Documents |

1 – Revised Plans: C-3 – Proposed Subdivision Plan; C-11 – Utility Plan (1); C-12 – Utility Plan (2);

C-18 - Wastewater Details

2 – Enviro-Septic Design Calculations

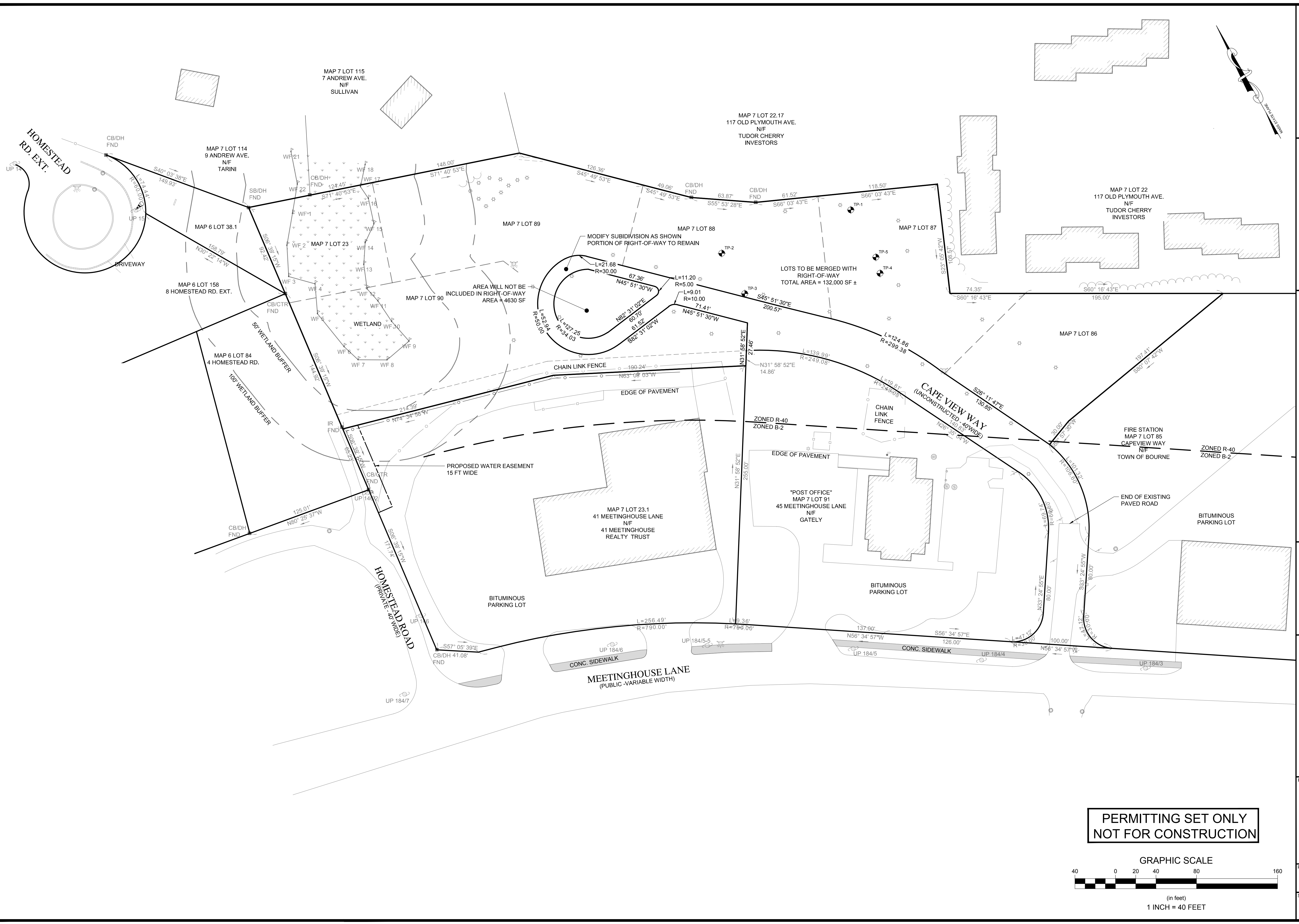
3- Updated abutter Mailing

REMARKS:

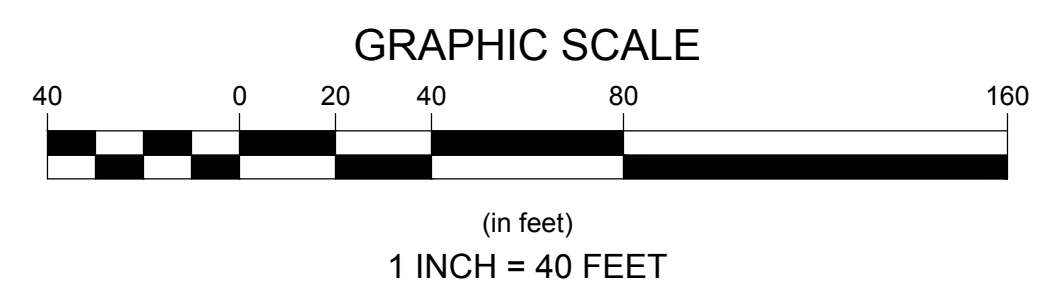
Enclosed, please find the revised wastewater system design submittal for the Cape View Way  
Development. Please let me know if you have any questions or need additional information. Thank you.  
\_\_\_\_\_  
\_\_\_\_\_

COPY TO: Meena Jacob, POAH  
David Quin, HAC  
Bourne Housing Authority  
\_\_\_\_\_

SIGNED: Joe Henderson  
\_\_\_\_\_  
\_\_\_\_\_



PERMITTING SET ONLY  
NOT FOR CONSTRUCTION



Rev.	Date	By	Appr.	Description
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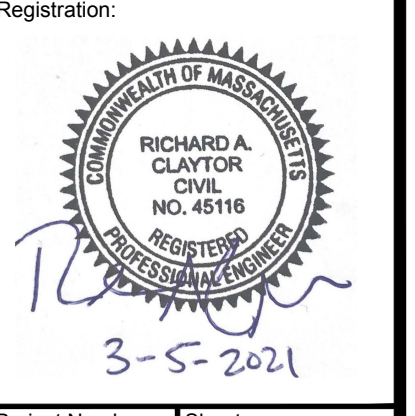
**Horsley Witten Group, Inc.**  
Sustainable Environmental Solutions  
80 Route 6A  
Sandwich, MA 02563  
508-833-6600 voice  
508-833-3150 fax

Checked By: DMK  
Drawn By: EWH  
Designed By:  
Date: DECEMBER 2020

Plan Set:  
**CAPE VIEW WAY  
BOURNE, MASSACHUSETTS**  
PROPOSED SUBDIVISION PLAN

Prepared For:  
**PRESERVATION OF  
AFFORDABLE HOUSING**  
2 OLIVER STREET, SUITE 600  
BOSTON, MA 02109  
Phone: (617) 261-6888  
Fax: ---

Survey Provided By:  
**Horsley Witten Group, Inc.**  
80 Route 6A  
Sandwich, MA 02563  
Phone: (508) 833-6600  
Fax: (508) 833-3150  
Date: JUNE 2019



Registration:  
Project Number: 19038  
Sheet: 3 of 21  
Sheet Number: C-3

**DESIGN FLOW CALCULATION  
(BASED ON 310 CMR 15.203)**

Development Description	BDRM 1	BDRM 2	BDRM 3	Total Bedrooms	Flow Per Bedroom (GPD)	Total Flow (GPD)
1 Bedroom Units	17			17	110	1,870
2 Bedroom Units		29		58	110	6,380
3 Bedroom Units			5	15	110	1,650
						9,900

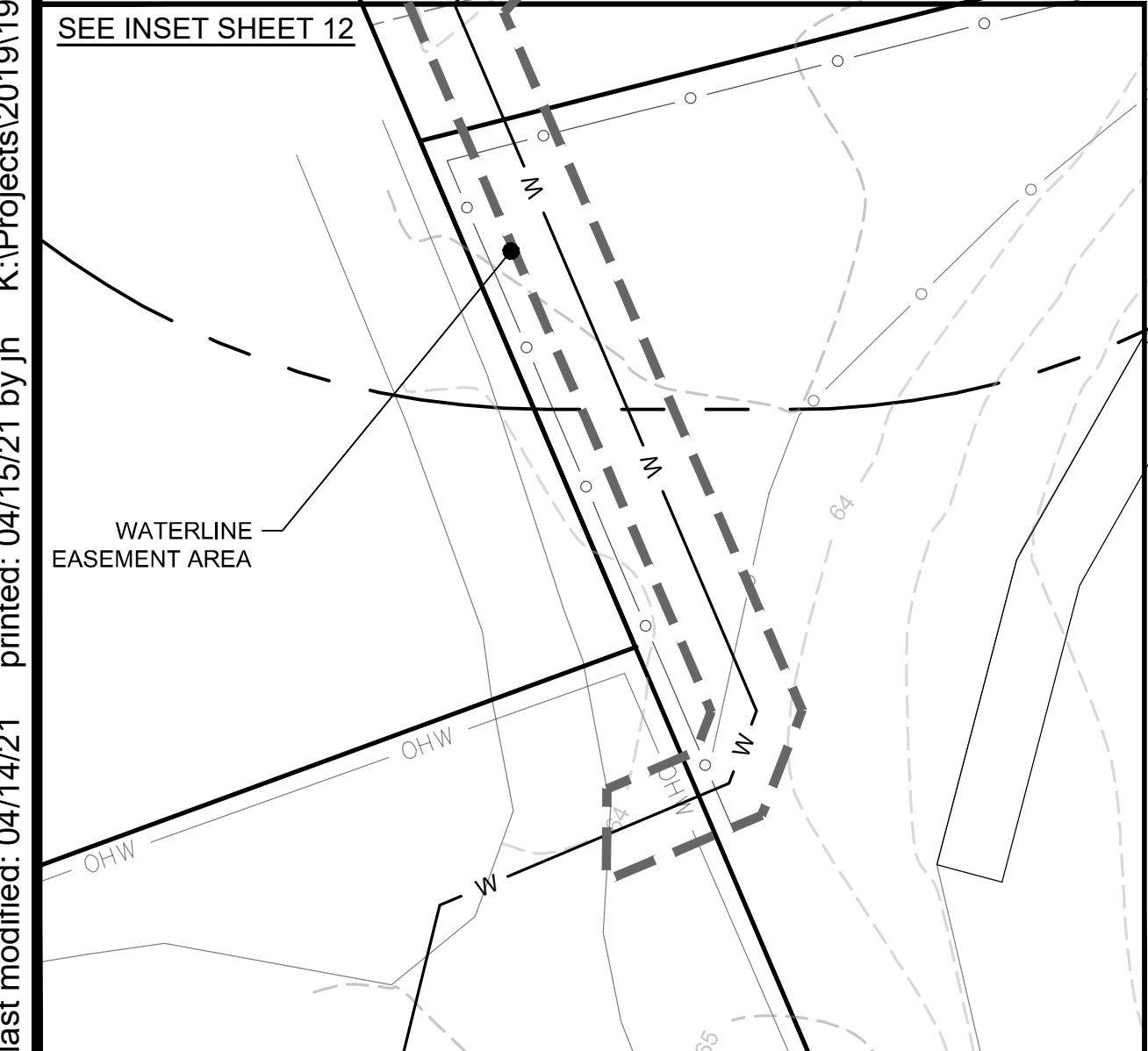
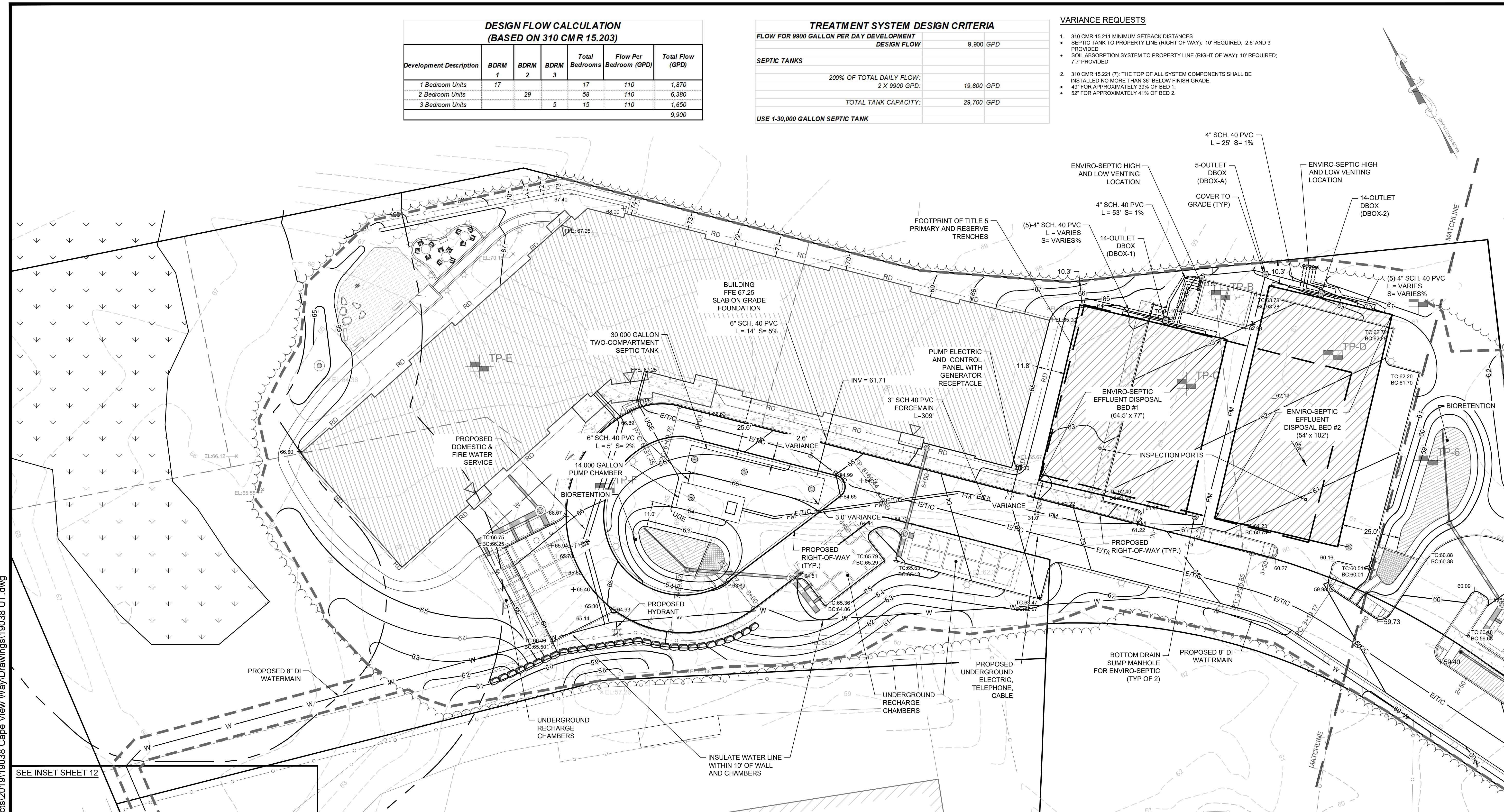
**TREATMENT SYSTEM DESIGN CRITERIA**

Flow For 9900 Gallon Per Day Development	Design Flow
	9,900 GPD
SEPTIC TANKS	
200% OF TOTAL DAILY FLOW: 2 X 9900 GPD:	19,800 GPD
TOTAL TANK CAPACITY:	29,700 GPD

USE 1-30,000 GALLON SEPTIC TANK

**VARIANCE REQUESTS**

- 310 CMR 15.211 MINIMUM SETBACK DISTANCES
  - SEPTIC TANK TO PROPERTY LINE (RIGHT OF WAY): 10' REQUIRED; 2.6' AND 3' PROVIDED
  - SOIL ABSORPTION SYSTEM TO PROPERTY LINE (RIGHT OF WAY): 10' REQUIRED; 7.7' PROVIDED
- 310 CMR 15.221 (7): THE TOP OF ALL SYSTEM COMPONENTS SHALL BE INSTALLED NO MORE THAN 36" BELOW FINISH GRADE.
  - 48" FOR APPROXIMATELY 35% OF BED 1;
  - 52" FOR APPROXIMATELY 41% OF BED 2.



**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 24, 2019

TP-C	Depth	Soil Description	Soil Type
TP-C	0"	10 YR 4/2 SANDY LOAM	62.9
	5"	Bw 10 YR 5/8 SANDY LOAM	62.5
	45"	C1 10 YR 6/4 MEDIUM SAND	59.2
	68"	C2 10 YR 6/4 GRAVELLY FINE SAND	57.2
	80"	C3 10 YR 6/4 FINE SAND	56.2
120"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	52.9

**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 24, 2019

TP-B	Depth	Soil Description	Soil Type
TP-B	0"	10 YR 4/2 SANDY LOAM	63.1
	6"	Bw 10 YR 5/8 SANDY LOAM	62.6
	36"	C1 10 YR 6/4 MEDIUM SAND PERC @ 59" 3 MPI	60.1
	66"	C2 10 YR 6/4 GRAVELLY FINE SAND	57.6
	84"	C3 10 YR 6/4 FINE SAND	56.1
120"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	53.1

**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 24, 2019

TP-D	Depth	Soil Description	Soil Type
TP-D	0"	10 YR 4/2 SANDY LOAM	61.0
	8"	Bw 10 YR 5/8 SANDY LOAM	60.3
	40"	C1 10 YR 6/4 MEDIUM SAND	57.7
	62"	C2 10 YR 6/4 GRAVELLY FINE SAND	55.8
	74"	C3 10 YR 6/4 FINE SAND	54.8
120"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	51.0

**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 24, 2019

TP-6	Depth	Soil Description	Soil Type
TP-6	0"	10 YR 4/2 FINE SANDY LOAM	61.4
	12"	Bw 10 YR 4/6 SANDY LOAM	60.4
	36"	C1 10 YR 6/3 GRAVELLY FINE SAND	58.4
	46"	C2 10 YR 6/3 MEDIUM SAND PERC @ 75" <2MPI	57.4
	51.4"		51.4
120"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	51.4

**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 23, 2019

TP-7	Depth	Soil Description	Soil Type
TP-7	0"	HTM 10 YR 3/4 FINE SANDY LOAM	59.6
	22"	Ab 10 YR 4/6 FINE SANDY LOAM	57.8
	24"	Bw 10 YR 6/6 FINE SANDY LOAM	57.6
	32"	C1 10 YR 6/3 GRAVELLY FINE SAND	56.9
	38"	C2 10 YR 6/3 MEDIUM SAND	56.4
60"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	54.6

**SOIL TEST PIT DATA**

PERFORMED BY: M. LEHMAN  
HORSLEY WITTEN GROUP, INC.  
DATE: OCTOBER 23, 2019

TP-8	Depth	Soil Description	Soil Type
TP-8	0"	10 YR 3/4 FINE SANDY LOAM	58.7
	6"	B 10 YR 4/6 FINE SANDY LOAM	58.2
	21"	C1 10 YR 6/6 GRAVELLY FINE SAND	57.0
	45"	C2 10 YR 6/3 MEDIUM SAND	55.0
	51.7"		51.7
120"		NO GROUNDWATER OR REDOXIMORPHIC FEATURES OBSERVED	51.7

**PERMITTING SET ONLY  
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GRAPHIC SCALE  
20 0 10 20 40 80  
(in feet)  
1 INCH = 20 FEET

**Revisions**

Rev	Date	By	Appr	Description
1	04/14/21	BRK	BRK	ADDED LIMIT OF WORKLINE
2	04/14/21	LEH	LEH	REVISED PER RCH COMMENTS

**Horsley Witten Group, Inc.**  
Sustainable Environmental Solutions  
80 Route 6A  
Sandwich, MA 02563  
Phone: (508) 833-3150  
Fax: (508) 833-3150

**CAPE VIEW WAY  
PERMITTING PLANS  
BOURNE, MASSACHUSETTS**

**UTILITY PLAN (1)**

Prepared For: **PRESERVATION OF AFFORDABLE HOUSING**  
2 OLIVER STREET, SUITE 600  
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Phone: (617) 261-9888  
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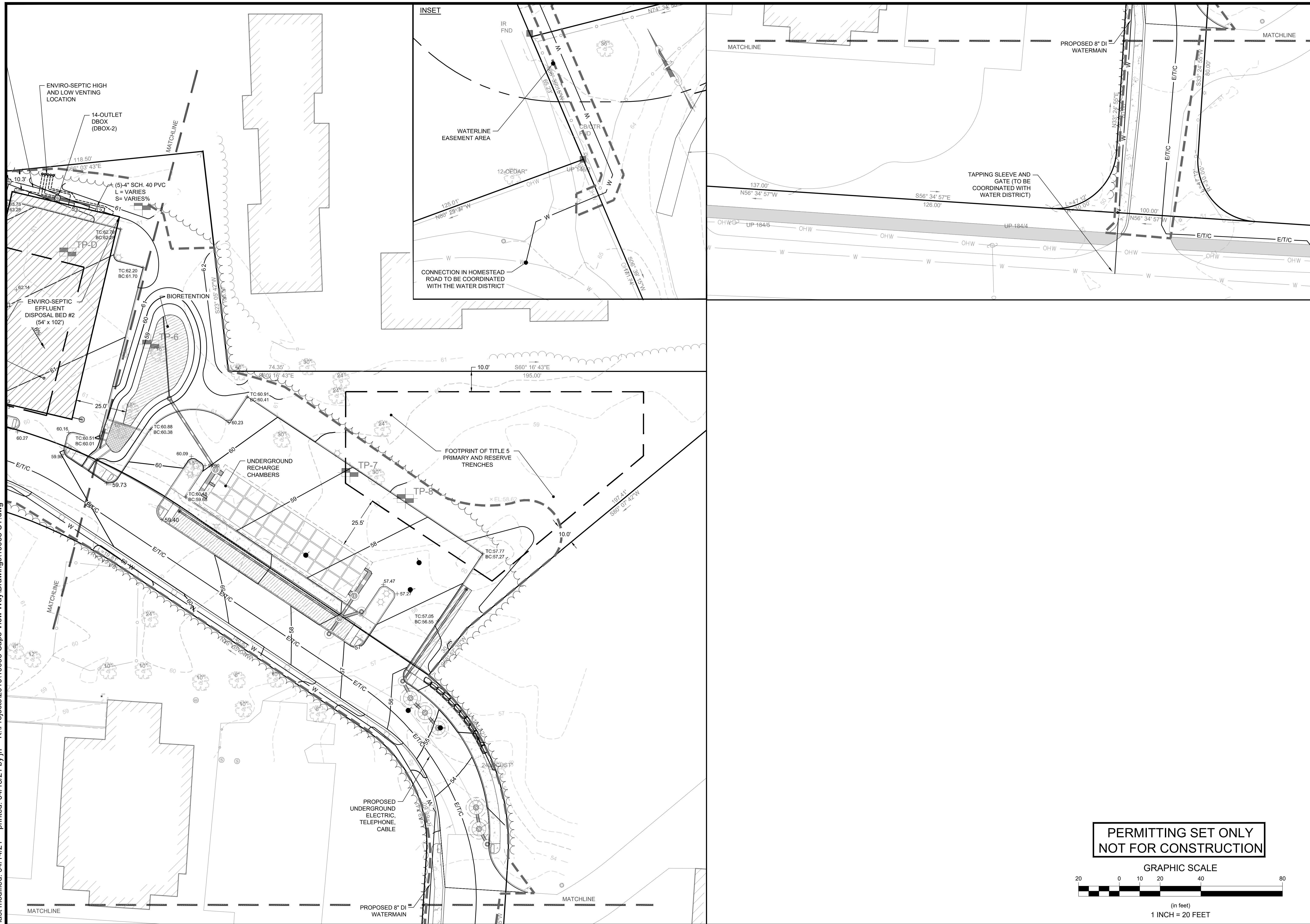
Survey Provided By: **Horsley Witten Group, Inc.**  
80 Route 6A  
Sandwich, MA 02563  
Phone: (508) 833-3150  
Fax: (508) 833-3150  
Date: JUNE 2019

Registration: **JOSEPH E. HENDERSON**  
CIVIL ENGINEER  
No. 4688  
Professional Seal

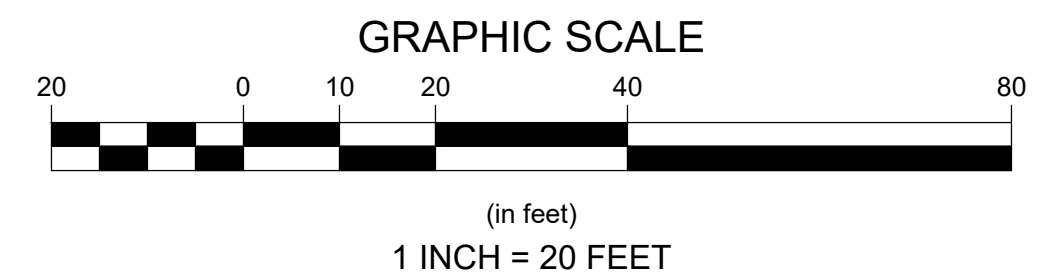
Project Number: **19038** Sheet: **11 of 21**  
Sheet Number: **C-11**

last modified: 04/14/21 printed: 04/15/21 by jh K:\Projects\2019\19038 Cape View Way\Drawings\19038 UT.dwg

last modified: 04/14/21 printed: 04/15/21 by jh K:\Projects\2019\19038 Cape View Way\Drawings\19038 UT.dwg



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Revisions	Date	By	Appr	Description
1	04/14/21	JEH	JEH	REVISION PER BOH COMMENTS
2				
3				
4				
5				

**Horsley Witten Group, Inc.**  
Sustainable Environmental Solutions  
www.horsleywitten.com  
80 Route 6A  
Sandwich, MA 02563  
508-833-6600 voice  
508-833-3150 fax

Checked By: BRK  
Drawn By: EWH  
Designed By: EWH  
Date: MARCH 5, 2021

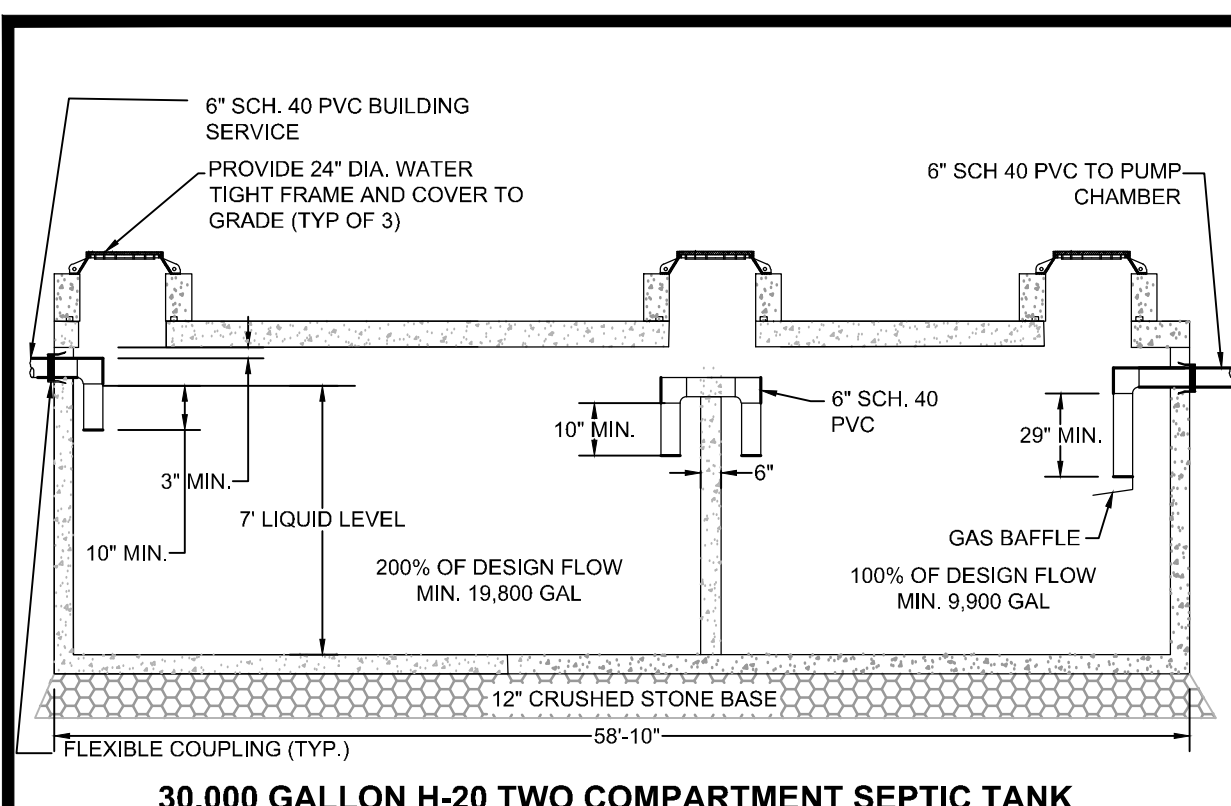
Plan Set:  
**CAPE VIEW WAY  
PERMITTING PLANS  
BOURNE, MASSACHUSETTS**  
UTILITY PLAN (2)

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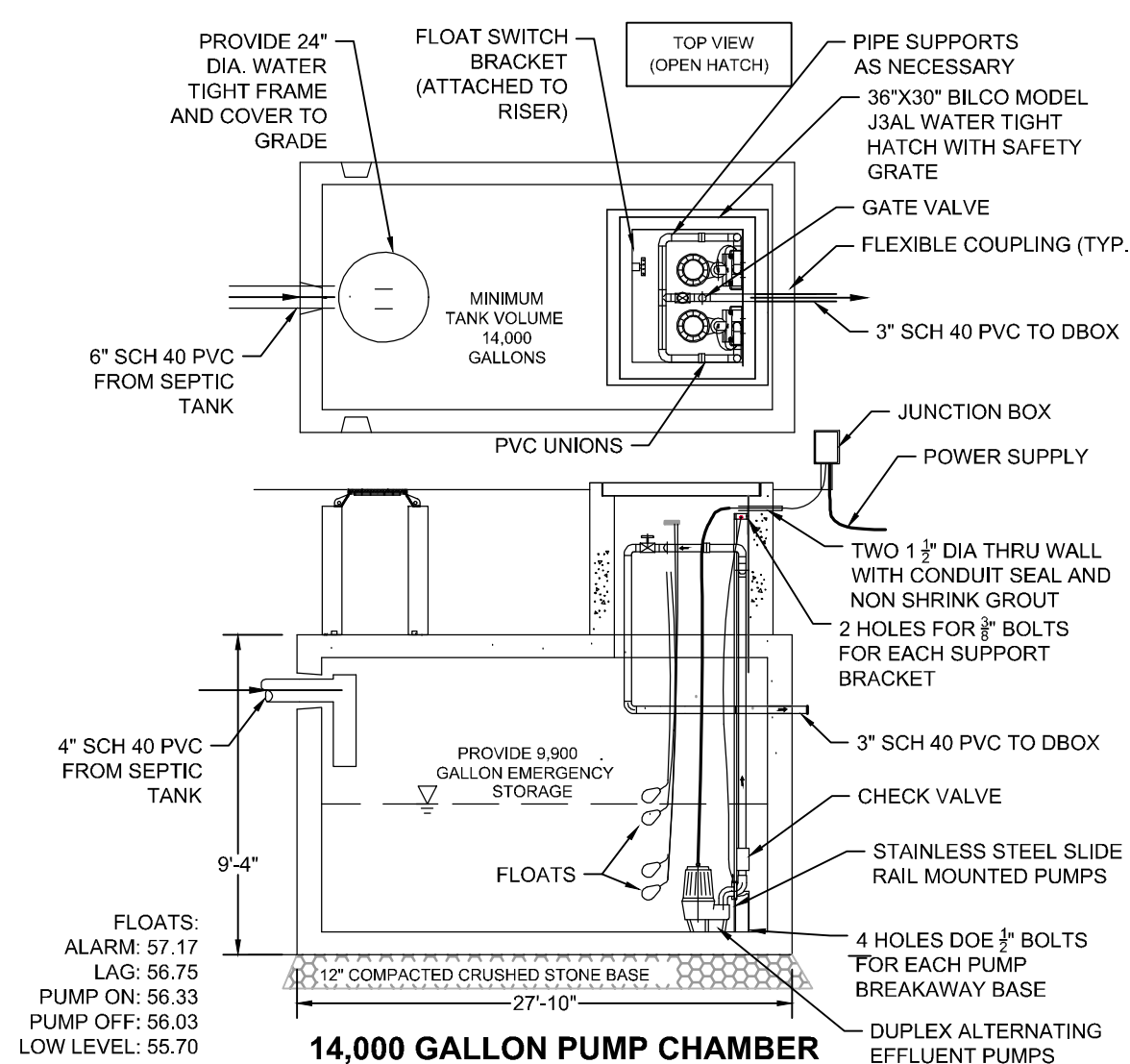
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Date: JUNE 2019



Project Number: 19038  
Sheet: 12 of 21  
Sheet Number: C-12



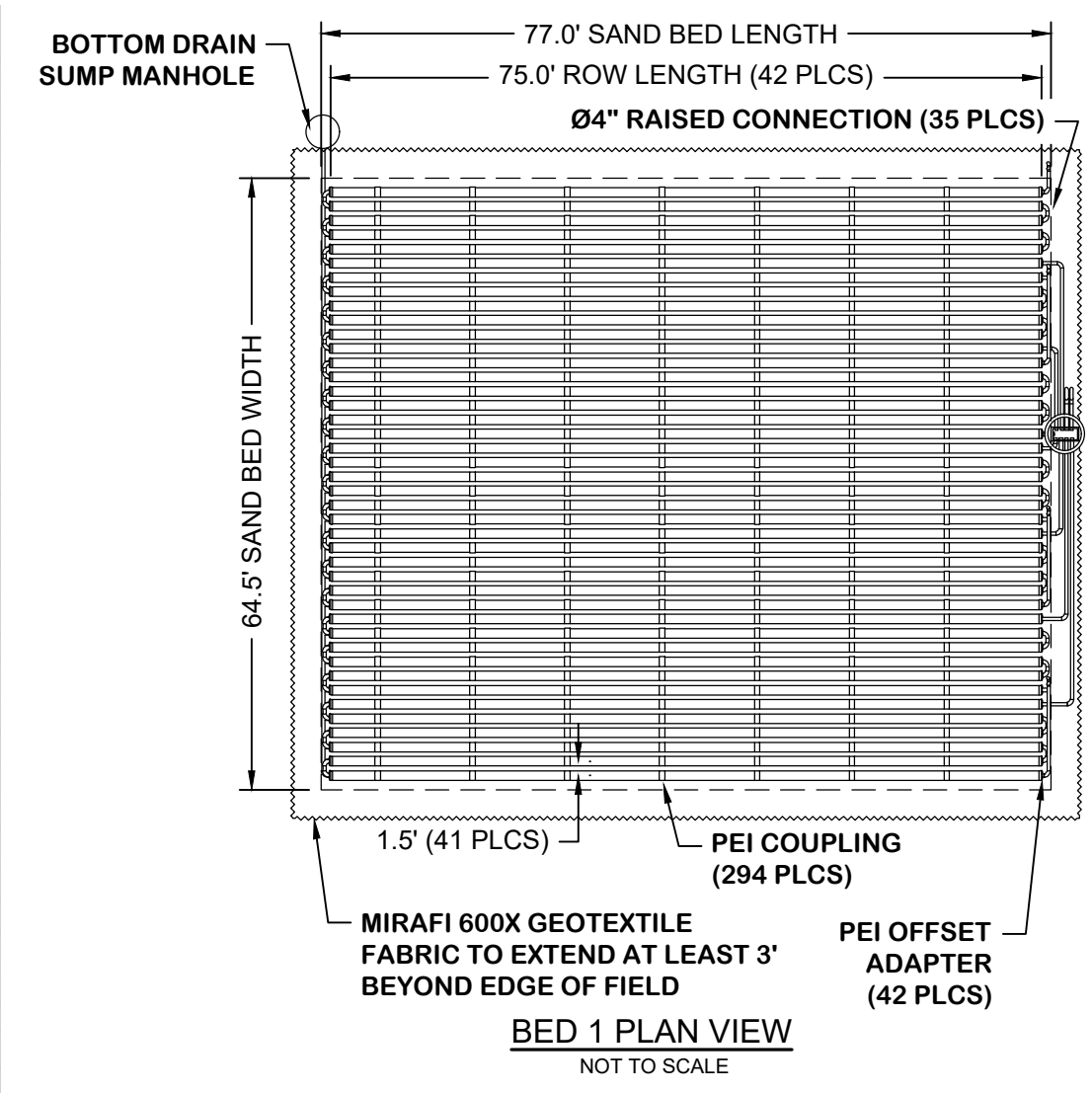
**30,000 GALLON H-20 TWO COMPARTMENT SEPTIC TANK**  
NOT TO SCALE  
30,000 TUNNEL TANK BY SCITUATE COMPANIES OR EQUAL



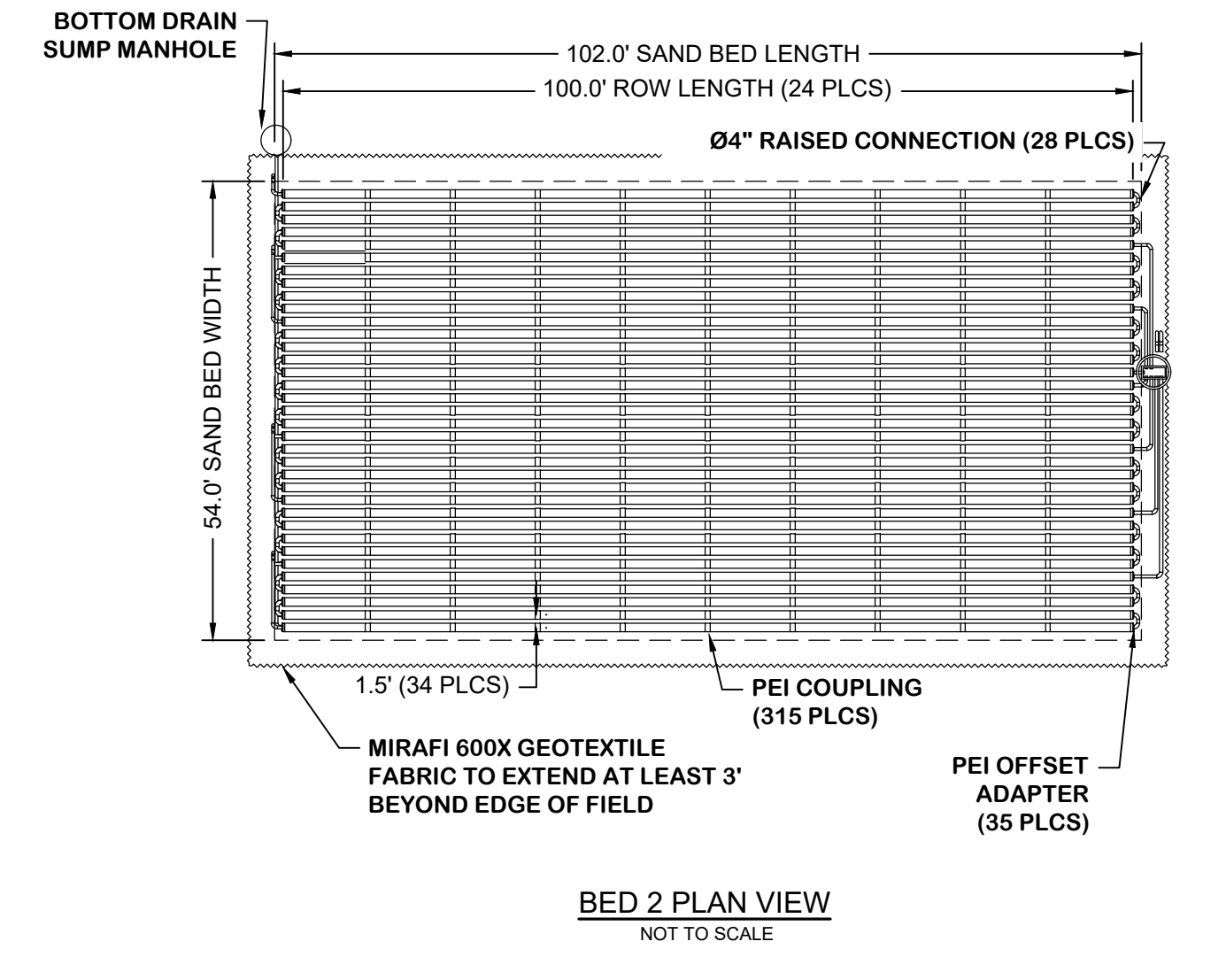
**14,000 GALLON PUMP CHAMBER**  
NOT TO SCALE  
14,000 GALLON SINGLE COMPARTMENT H-20 TANK BY SCITUATE COMPANIES OR EQUAL

**LIFT STATION DESIGN CALCULATIONS**

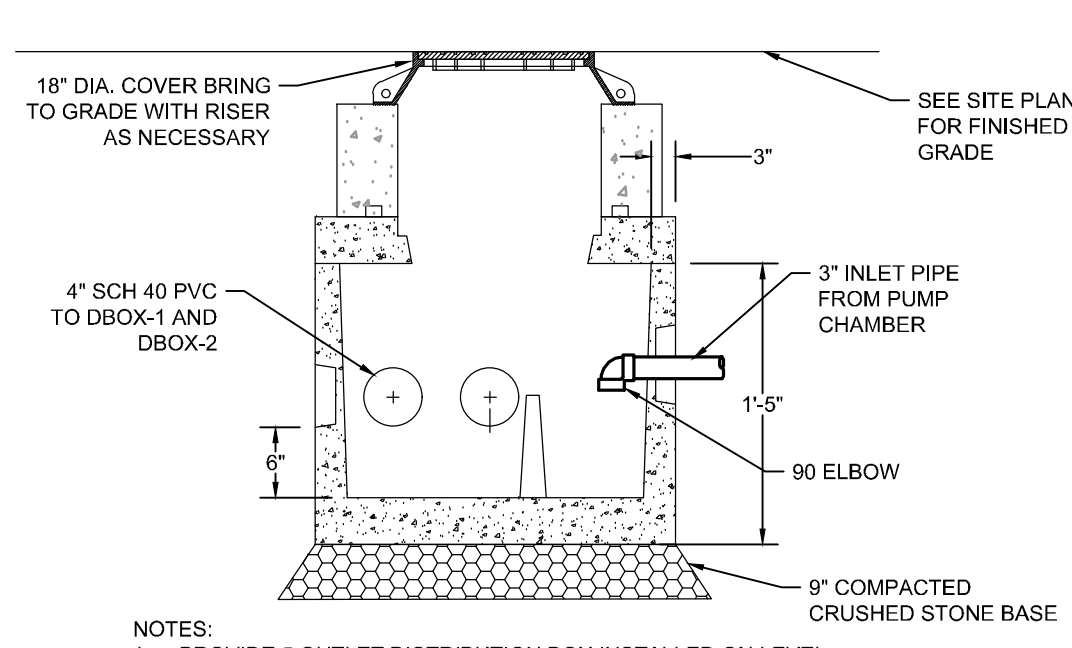
DESIGN FLOW	9,900 GAL/DAY
	412.50 GAL/HR
	6.88 GAL/MIN
<b>WET WELL</b>	
LENGTH (INSIDE)	26.50 FT
WIDTH (INSIDE)	10 FT
VOLUME PER FOOT	1981.95 GAL/FT
DEPTH BELOW INVERT	7.00 FT
<b>PUMP SYSTEM</b>	
PUMP RATE	50 GAL/MIN
FORCEMAIN DIAMETER	3 IN
FORCEMAIN LENGTH	309 FT
SYSTEM DISCHARGE RATE = 0.11 CFS	
CROSS SECTIONAL AREA = 0.05 SF	
VELOCITY = 2.17 FT/SEC	
STATIC HEAD = 4 FT	
FRICTION LOSS IN FITTINGS & VALVES = 1 FT	
FRICTION LOSS IN FORCEMAIN = 2 FT	
HEAD LOSS = 7 FT	
RUN TIME = 25.0 MIN	
DOSE VOLUME = 1250 GAL	
DOSE FILL TIME = 182 MIN	
DOSES PER DAY = 7	
TOTAL RUN TIME = 175 MIN	
EMERGENCY STORAGE = 8,000 GAL	
PUMP RATE = 50 GAL/MIN	
HEAD LOSS = 7 FT	
USE MYERS MODEL SRM4, 0.4 HP, RESIDENTIAL SEWAGE PUMP	
CONFIRM VOLTAGE PRIOR TO ORDERING	



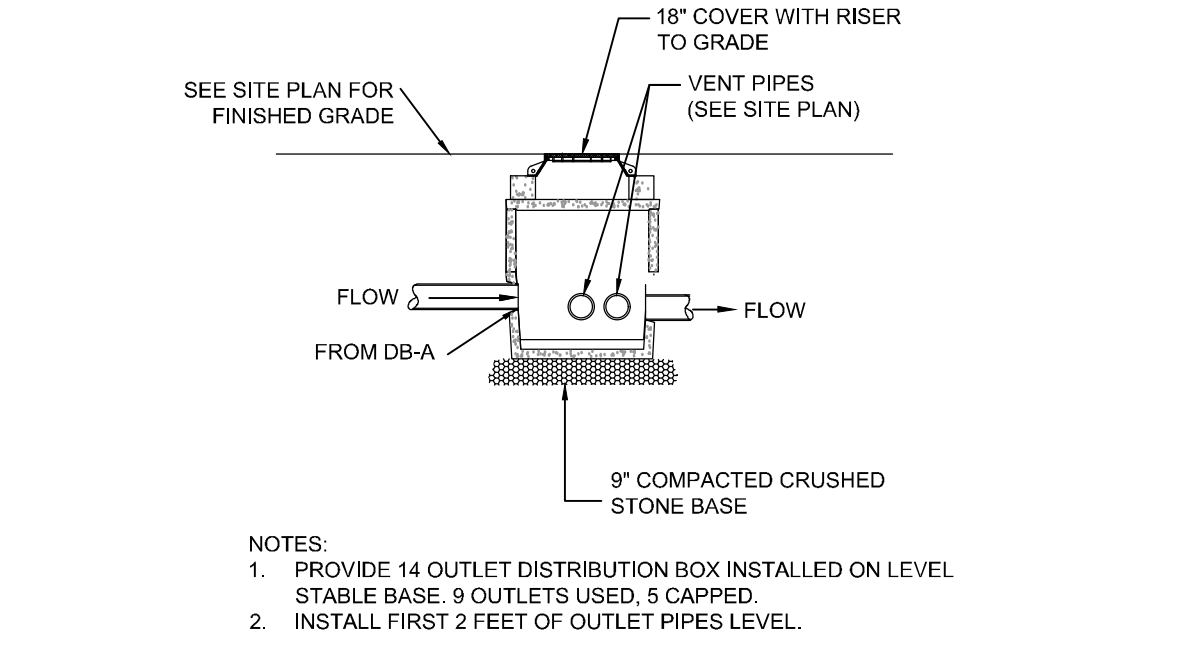
**BED 1 PLAN VIEW**  
NOT TO SCALE



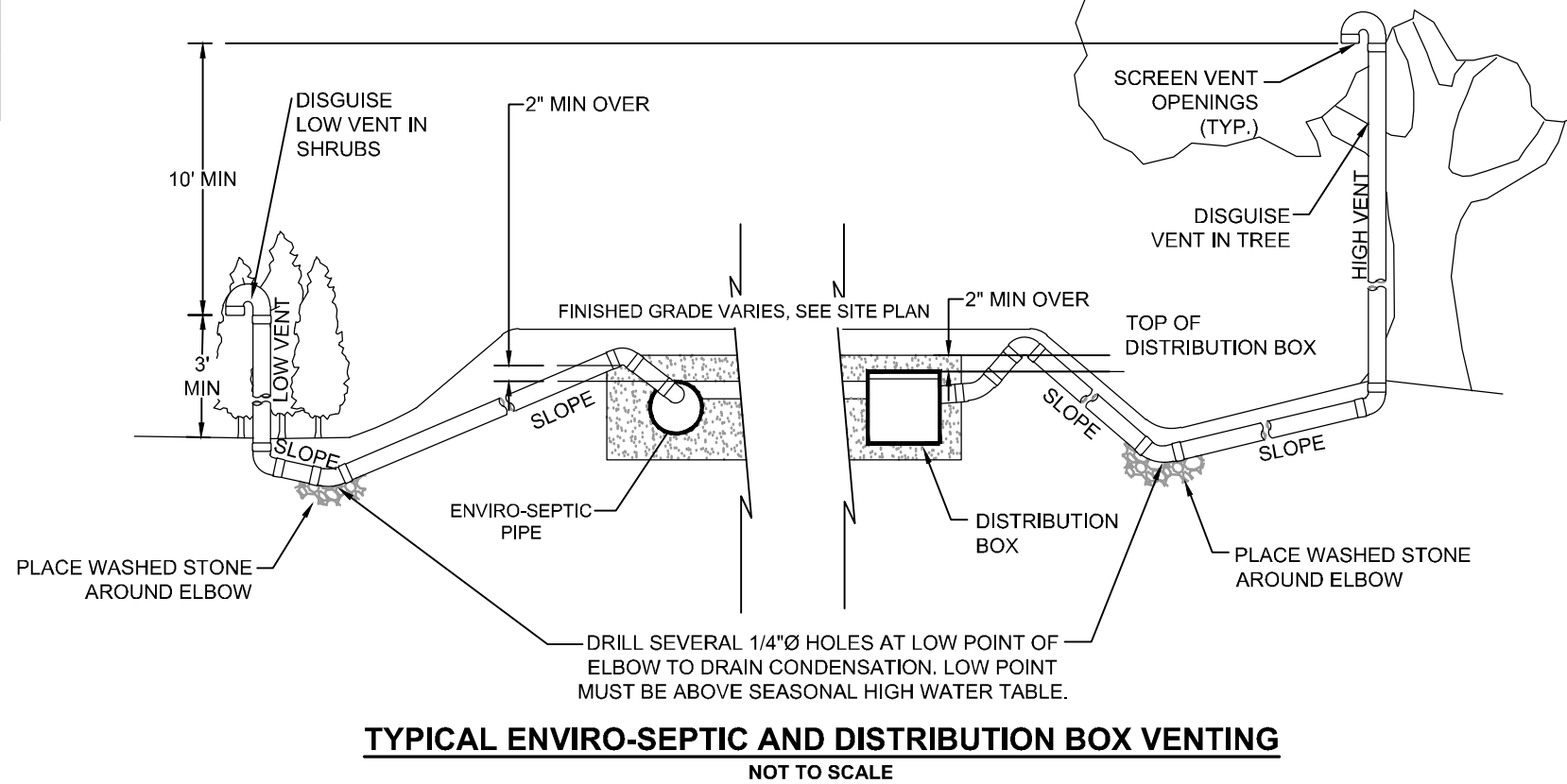
**BED 2 PLAN VIEW**  
NOT TO SCALE



**DISTRIBUTION BOX TO FORCEMAIN CONNECTION (DB-A)**  
NOT TO SCALE



**PROPOSED 14 OUTLET DISTRIBUTION BOX DETAIL (DB-1 & DB-2)**  
NOT TO SCALE



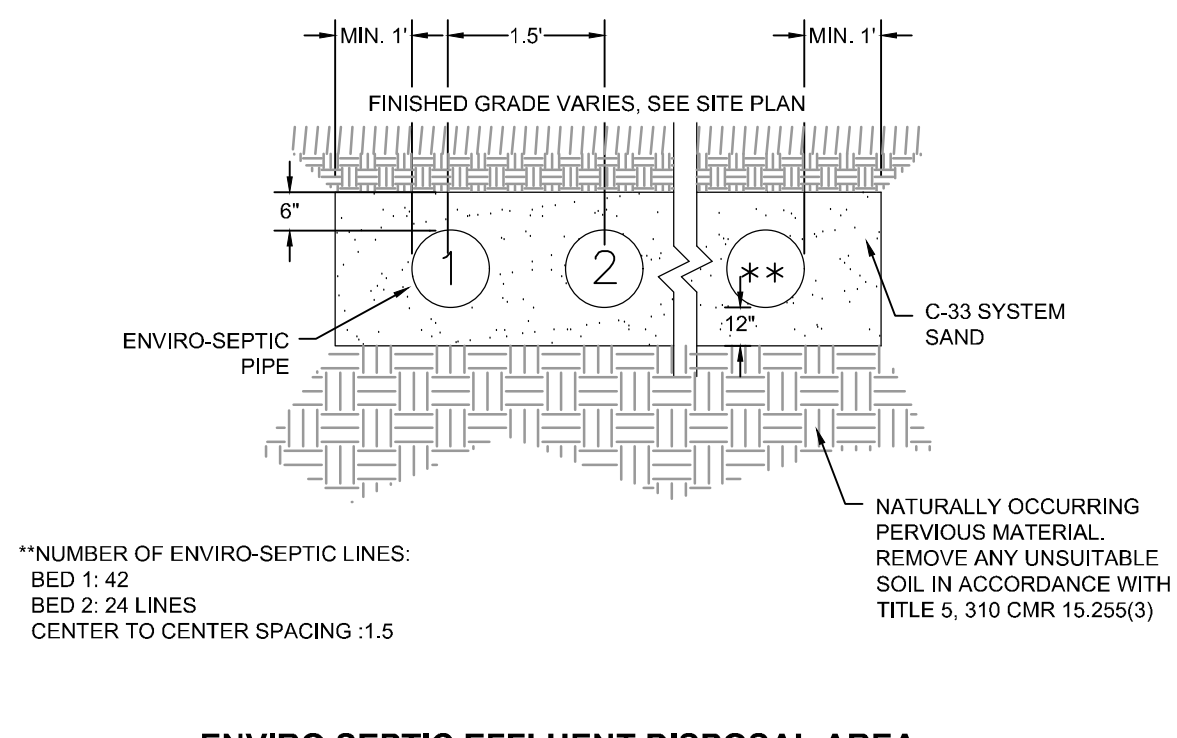
**TYPICAL ENVIRO-SEPTIC AND DISTRIBUTION BOX VENTING**  
NOT TO SCALE

**WASTEWATER SYSTEM SCHEDULE OF ELEVATIONS**

	INV. EL.
BLDG INVERT	61.71
SEPTIC TANK - INLET	61.01
SEPTIC TANK - OUTLET	60.76
PUMP CHAMBER - INLET	60.66
PUMP CHAMBER - OUTLET	60.41
DBOX-A INLET	60.41
DBOX-A OUTLET	60.24
DBOX-1 INLET	59.65
DBOX-1 OUTLET	59.48
DBOX-2 INLET	59.99
DBOX-2 OUTLET	59.82

**ENVIRO-SEPTIC BED SCHEDULE OF ELEVATIONS**

	INV. EL.
<b>BED 1</b>	
TOP ES PIPE	59.45
ES PIPE INVERT	58.45
TOP 6" SYSTEM SAND	59.95
BREAKOUT	59.45
BOTTOM OF SYSTEM	57.45
ESHGW (BASED ON REGIONAL GW ELEVATION)	10.00
MOUNDING (HANTUSH METHOD)	6.52
GW SEPARATION	40.93
<b>BED 2</b>	
TOP ES PIPE	58.45
ES PIPE INVERT	57.45
TOP 6" SYSTEM SAND	58.95
BREAKOUT	58.45
BOTTOM OF SYSTEM	56.45
ESHGW (BASED ON LOWEST TP ELEVATION)	10.00
MOUNDING (HANTUSH METHOD)	6.52
GW SEPARATION	39.93



**ENVIRO SEPTIC EFFLUENT DISPOSAL AREA CROSS SECTION**  
NOT TO SCALE

**PRESBY ENVIRO-SEPTIC SYSTEM NOTES**

- SYSTEM NOTES**
- SYSTEM TO BE INSTALLED IN ACCORDANCE WITH ENVIRO-SEPTIC WASTEWATER TREATMENT SYSTEM MASSACHUSETTS DESIGN AND INSTALLATION MANUAL, STATE AND LOCAL REGULATIONS. FOR PRODUCT INFORMATION OR THE NEAREST DEALER CONTACT PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD, WHITEFIELD, NH 03598, PHONE 1-800-473-5298 - WWW.PRESBYENVIRONMENTAL.COM
  - MINIMUM OF 6" OF MEDIUM TO COARSE SAND WITH LESS THAN 2% PASSING A # 200 SIEVE (ASTM C-33) REQUIRED AROUND CIRCUMFERENCE OF ENVIRO-SEPTIC PIPES. (SEE DESIGN AND INSTALLATION MANUAL FOR COMPLETE SAND AND FILL SPECIFICATIONS.)
  - INSTALLER ADVISED TO CONTACT DIG SAFE PRIOR TO CONSTRUCTION.
  - DO NOT INSTALL SYSTEM ON WET OR FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.
  - NO DRAINS, HOT TUBS, SAUNAS, GARBAGE DISPOSALS ETC. SHALL BE INCORPORATED INTO THIS SYSTEM UNLESS OTHERWISE SPECIFIED.
- MAINTENANCE SCHEDULE**
- THE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S TECHNOLOGY APPROVAL REQUIRES ALL ENVIRO-SEPTIC SYSTEMS TO BE INSPECTED ANNUALLY.
  - PRESBY ENVIRONMENTAL, INC. REQUIRES ITS ANNUAL TECHNOLOGY CHECKLIST TO BE COMPLETED BY AN OPERATOR TRAINED BY PRESBY ENVIRONMENTAL, INC. TO INSPECT ENVIRO-SEPTIC WASTEWATER TREATMENT SYSTEMS.
  - FOR FURTHER INFORMATION SEE APPENDIX B IN THE DESIGN AND INSTALLATION MANUAL.
- WASTEWATER INSTALLATION INSPECTION NOTES**
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS ADVANCE NOTICE TO THE ENGINEER AND LOCAL BOARD OF HEALTH FOR ANY INSPECTION.
  - ALL WASTEWATER SYSTEMS, INCLUDING THE LEACHING SYSTEM, SHALL BE INSPECTED BY THE ENGINEER OR THE LOCAL BOH REPRESENTATIVE PRIOR TO BACKFILLING. AT A MINIMUM THE FOLLOWING ITEMS SHALL BE INSPECTED:
    - EXCAVATION OF PRESBY FIELD PRIOR TO PLACING SYSTEM STONE/COMPONENTS
    - PRESBY FIELD COMPLETE INSTALLATION PRIOR TO BACKFILL
    - ALL SYSTEM COMPONENTS BASE AND INSTALLATION PRIOR TO BACKFILL
    - LEAKAGE TEST ON SEPTIC TANK (MIN. 24 HR)
    - START UP TEST OF SYSTEM WITH ALL COMPONENTS INSTALLED AND FUNCTIONING AS DESIGNED
    - FINAL INSPECTION OF BACKFILLED SYSTEM
  - THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UP-TO-DATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED. THESE AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS.

**ZONING & RESOURCE PROTECTION NOTES**

- OWNER OF RECORD: BOURNE HOUSING AUTHORITY
- ADDRESS: CAPE VIEW WAY, BOURNE MA
- THE LOCUS IS IN LOCATED IN FLOOD ZONE X (AS SHOWN ON F.I.R.M. MAP 2500/C0316J DATED JULY 16, 2014).
- THE SITE IS NOT LOCATED IN A WELLHEAD PROTECTION DISTRICT.

**WASTEWATER NOTES**

- UNLESS OTHERWISE NOTED, ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STATE ENVIRONMENTAL CODE AND THE RULES AND REGULATIONS OF THE LOCAL BOARD OF HEALTH.
- THIS PLAN IS INTENDED TO ADEQUATELY PROVIDE THE INFORMATION NECESSARY TO LAYOUT AND CONSTRUCT THE PROPOSED SEWAGE DISPOSAL SYSTEM REPRESENTED ON IT AND SHOULD NOT BE USED FOR ANY OTHER PURPOSES.
- ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER AND/OR THE LOCAL BOARD OF HEALTH (BOH) STAFF.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER AND ENGINEER ON THE CONSTRUCTION SITE ACCESS AND MATERIAL STOCK PILE AREAS.
- TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCH WORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY. THE CONTRACTOR SHALL PLAN ACCORDINGLY.
- THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN SITE CONDITIONS FROM THOSE SHOWN ON THE PLAN TO THE DESIGN ENGINEER.
- FAILING TO PROPERLY INSPECT OR PUMP THE SEPTIC TANKS AND TREATMENT SYSTEM OR CHANGES TO EFFLUENT FLOW, GRADING, OR LANDSCAPING, EITHER ON-SITE OR ADJACENT TO THE SITE, MAY RESULT IN IMPROPER FUNCTIONING OF THE SEPTIC AND LEACHING SYSTEM(S).
- CALL "DIGSAFE" AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION AT 1-888-DIG-SAFE AND ANY OTHER APPLICABLE AGENCIES TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES.
- THIS ON-SITE WASTEWATER TREATMENT SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- THE OWNER SHALL INSPECT AND PUMP THE SEPTIC TANK ONCE EVERY 2 YEARS.
- PROVIDE WATERTIGHT SEALS BY USE OF NON-SHRINK GROUT AT ALL POINTS WHERE PIPES ENTER OR LEAVE ANY CONCRETE STRUCTURES.
- USE SCH. 40 PVC PIPING WITH WATERTIGHT JOINTS UNLESS OTHERWISE NOTED ON PLAN. ALL PIPE SHALL BE PLACED ON A COMPACTED FIRM BASE.
- ALL STONE TO BE DOUBLE-WASHED AND FREE OF DIRT, DUST, AND FINES.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING OPERATIONS AND MAINTENANCE INFORMATION FOR THE SEPTIC SYSTEM TO THE ENGINEER, IF NECESSARY.
- UNSATURATED SOIL MUST BE REPLACED WITH TITLE 5 SAND AS SPECIFIED IN 310 CMR 15.255(3). ANY AREAS THAT ARE FOUND TO HAVE UNSUITABLE MATERIAL SHALL BE REPORTED TO THE ENGINEER.
- ALL SEPTIC COMPONENTS SHALL BE INSTALLED WITH MAGNETIC WARNING TAPE.
- ALL PRECAST TANKS SHALL BE APPLIED WITH 2 COATS OF DAMP PROOFING OR BITUMINOUS MATERIAL.
- THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
- ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4 INCHES OF LOAM INSTALLED AND BE SEEDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDED AREAS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.

**Water Table Mounding Estimate calculated based on Hantush 1967, WRR**

Enter data in green cells as per their yellow labels, other values will be computed from those entries.  
Results are highlighted in pink.

**Water Table Mounding Estimate Beneath Center of Entire Drain Field (L\*W)**

Meters and Days	Length of Drain Field Subunit	Width of Drain Field Subunit	Separation between Drain Field Subunits	Fraction of Drain Field Subunit that is Trench Area	Horizontal Hydraulic Conductivity	Specific Yield	time use 10 years to approximate steady state
	$L_s$	$w_s$	$S_p$	$f$	$K_h$	$S_y$	$t$
	ft	ft	ft		ft/days	none	days
	89.5	59.25	0	1	9	0.001	3650
	$L$	$W$	$q$ effective in subunits $L \times w$	$q'$ effective on $L \times W$	$Q$	$Z_{max}$ 12 iterations (Estimated Mound)	Initial Saturated Thickness
Number of subunits, n	ft	ft	ft/day	ft/day	gallons/day	ft	ft
	89.5	59.25	0.2496	0.2496	9900	6.515	20

NOTE: Saturated thickness of Aquifer estimated based on available water table contour and bedrock maps. Horizontal Hydraulic Conductivity is based on conversion of observed percolation rate.

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Revisions: 04/14/21 JEH:JEH:REVISION PER BOH COMMENTS

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Sustainable Environmental Solutions  
80 Route 6A  
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508-833-3150 fax

Project Number: 19038  
Sheet: 18 of 21  
Sheet Number: C-18

Survey Provided By: **Horsley Witten Group, Inc.**  
80 Route 6A  
Sandwich, MA 02563  
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Date: JUNE 2019

Registration: JOSEPH E. HENDERSON  
CIVIL ENGINEER  
No. 48988  
Professional Seal

Plan Title: CAPE VIEW WAY PERMITTING PLANS BOURNE, MASSACHUSETTS  
WASTEWATER DETAILS

Plan Set: PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD, WHITEFIELD, NH 03598, PHONE 1-800-473-5298 - WWW.PRESBYENVIRONMENTAL.COM

Plan Title: PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD, WHITEFIELD, NH 03598, PHONE 1-800-473-5298 - WWW.PRESBYENVIRONMENTAL.COM

last modified: 04/14/21 printed: 04/15/21 by jh K:\Projects\2019\19038 Cape View Way\Drawings\19038 UT.dwg



# Presby Environmental, Inc.

Bed #1

The Next Generation of Wastewater Treatment Technology

143 Airport Rd., Whitefield, NH 03598  
 Tel: 800-473-5298 Fax: 603-837-9864  
[www.PresbyEnvironmental.com](http://www.PresbyEnvironmental.com)

Project: Cape View Way Bed #1 Date: 4/16/2021

1) Daily Design Flow = 45 bedrooms  $45 \times 110 = 4,950$  GPD Bedrooms or GPD, Perc Rate = <5 MPI, Soil Class = 1

A) Presby Pipe Required from Table (below) = 3,150 ft (45x70)

Enviro-Septic® Table A – Pipe Required

Perc rate Min/Inch	Number of Bedrooms						Commercial Per 100 GPD
	2	3	4	5	6	Add'l Room	
1-9	140	210	280	350	420	70	50
10-13	140	210	280	350	420	70	55
14-19	140	210	280	350	420	70	60
20-30	140	210	280	350	420	70	65
31-40	140	210	280	350	420	70	70
41-50	150	225	300	375	450	75	75
51-60	160	240	320	400	480	80	80

Consult design manual for systems 61 – 90 MPI

B) Daily Design Flow (if over 500) 4,950 GPD  $\div 500 = 10$  Sections (round up to whole number). Note: multiple beds required when flow is greater than 500 GPD for 61-90 MPI

C) Pipe Required (from 1A) 3,150 ft  $\div 10$  #of Sections (1B) = 315 ft / section min.

D) Row spacing required (Table B) = 1.5 ft Row spacing provided: 1.5 ft

Enviro-Septic® Table B

Percentage of System Slope	Percolation Rate Min/Inch					
	1-10	11-20	21-30	31-40	41-50	51-60
0-10%	1.5'	1.5'	1.75'	2.0'	2.5'	3.0'
11-15%	1.5'	1.75'	2.0'	2.25'	2.75'	3.25'
16-20%	1.75'	2.0'	2.25'	2.5'	3.0'	3.5'
21-25%	2.0'	2.25'	2.5'	2.75'	3.25'	3.75'

2) System Sand Bed Area (SSBA) required:

A) System Sand Bed Area required Table D (1 – 60 MPI) = 4,005 sq. ft. (45x89)

B) System Sand Bed Area required (61 – 90 MPI) @ 0.25 GPD/sq. ft. = n/a sq. ft.



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**Table D – Minimum Sand bed Area Size (sq. ft.)**

PERC RATE* Min/Inch	2 BEDROOM 220 GPD				3 BEDROOM 330 GPD				4 BEDROOM 440 GPD				5 BEDROOM 550 GPD			
	SOIL CLASS				SOIL CLASS				SOIL CLASS				SOIL CLASS			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	400	400			400	400			400	440			446	550		
6	400	400			400	400			400	440			471	550		
7	400	400			400	400			400	440			485	550		
8	400	400			400	400			400	440			500	550		
10		400				400				440				550		
15		400	400			400	535			471	714			589	892	
20		400	400			400	582			498	776			623	971	
25		400	400			495	600			660	800			825	1000	
30		400	455			600	683			800	910			1000	1138	
40			528				792				1056				1320	
50			660	660			990	990			1320	1320			1650	1650
60			880	880			1320	1320			1760	1760			2200	2200

PERC RATE* Min/Inch	6 BEDROOM 660 GPD				ADD'L. BEDROOM 110 GPD				COMMERICAL PER 100 GPD			
	SOIL CLASS				SOIL CLASS				SOIL CLASS			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	535	660			89	110			81	100		
6	566	660			94	110			86	100		
7	582	660			97	110			88	100		
8	600	660			100	110			91	100		
10		660				110				100		
15		707	1070			117	178			107	162	
20		747	1165			124	194			113	176	
25		990	1200			165	200			150	182	
30		1200	1366			200	227			182	207	
40			1584				264				240	
50			1980	1980			330	330			300	300
60			2640	2640			440	440			400	400

\*When percolation rate is between those listed in Table D, the next slower rate shall be used for design purposes.

3) System Slope = 4 % (1-60 MPI = 25% max., 61-90 MPI systems see tables in manual)

**Table E: Allowable System Slope (61-90 MPI)**

Perc. Rate Range (MPI)	System Slope Max. (%)
61-70	15
71-80	10
81-90	5

4) Presby Pipe

A) Presby Pipe Row Length to be used = 75 ft (1-60 MPI 100 ft max., 61-90 MPI per Table G)

B) Pipe Used (≥ 1A) 3200 ft ÷ Row Length 75 ft = 42.7 Rows  
 (Note: number of rows must be whole number when divided by number of serial sections required from 1C)

C) Row Length 75 ft + 2 ft = 77 ft System Sand Bed Length (SSBL)

D) (<10% 1-60 MPI) SSBA = 4005 sq. ft. ÷ SSBL (4C) 77 ft - 2 ft = 52 Pipe Layout Width min.



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(>10% 1-60 MPI) SSBA = n/a sq. ft. ÷ SSBL (4C) n/a ft - 5 ft = n/a Pipe Layout Width min.

E) Pipe Layout Width from Table C = 63.5 ft when using 1.5 ft Row Spacing

**Table C: Length and Width  
Linear Feet of Enviro-Septic®**

Line Length/Ft	40	60	80	100	120	140	160	180	200	220	240	260	280	300
20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
25	50	75	100	125	150	175	200	225	250	275	300	325	350	375
30	60	90	120	150	180	210	240	270	300	330	360	390	420	450
35	70	105	140	175	210	245	280	315	350	385	420	455	490	525
40	80	120	160	200	240	280	320	360	400	440	480	520	560	600
45	90	135	180	225	270	315	360	405	450	495	540	585	630	675
50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
55	110	165	220	275	330	385	440	495	550	605	660	715	770	825
60	120	180	240	300	360	420	480	540	600	660	720	780	840	900
65	130	190	260	325	390	455	520	585	650	715	780	845	910	975
70	140	210	280	350	420	490	560	630	700	770	840	910	980	1050
75	150	225	300	375	450	525	600	675	750	825	900	975	1050	1125
80	160	240	320	400	480	560	640	720	800	880	960	1040	1120	1200
85	170	255	340	425	510	595	680	765	850	935	1020	1105	1190	1275
90	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350
95	190	285	380	475	570	665	760	855	950	1045	1140	1235	1330	1425
100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
# of Lines	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ctr to Ctr Spacing														
1.50	2.50	4.00	5.50	7.00	8.50	10.00	11.50	13.00	14.50	16.00	17.50	19.00	20.50	22.00
1.75	2.75	4.50	6.25	8.00	9.75	11.50	13.25	15.00	16.75	18.50	20.25	22.00	23.75	25.50
2.00	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00	25.00	27.00	29.00
2.25	3.25	5.50	7.75	10.00	12.25	14.50	16.75	19.00	21.25	23.50	25.75	28.00	30.25	32.50
2.50	3.50	6.00	8.50	11.00	13.50	16.00	18.50	21.00	23.50	26.00	28.50	31.00	33.50	36.00
2.75	3.75	6.50	9.25	12.00	14.75	17.50	20.25	23.00	25.75	28.50	31.25	34.00	36.76	39.50
3.00	4.00	7.00	10.00	13.00	16.00	19.00	22.00	25.00	28.00	31.00	34.00	37.00	40.00	43.00
3.25	4.25	7.50	10.75	14.00	17.25	20.50	23.75	27.00	30.25	33.50	36.75	40.00	43.25	46.50
3.50	4.50	8.00	11.50	15.00	18.50	22.00	25.50	29.00	32.50	36.00	39.50	43.00	46.50	50.00
3.75	4.75	8.50	12.25	16.00	19.75	23.50	27.25	31.00	34.75	38.50	42.25	46.00	49.75	53.50
4.00	5.00	9.00	13.00	17.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	53.00	57.00
4.25	5.25	9.50	13.75	18.00	22.25	26.50	30.75	35.00	39.25	43.50	47.75	52.00	56.25	60.50
4.50	5.50	10.00	14.50	19.00	23.50	28.00	32.50	37.00	41.50	46.00	50.50	55.00	59.50	64.00
4.75	5.75	10.50	15.25	20.00	24.75	29.50	34.25	39.00	43.75	48.50	53.25	58.00	62.75	67.50
5.00	6.00	11.00	16.00	21.00	26.00	31.00	36.00	41.00	46.00	51.00	56.00	61.00	66.00	71.00

Layout Width/Ft.

**5) System Sand Bed Dimensions**

**A) Calculate System Sand Bed Length (SSBL):**

Row Length 75 ft + 2 ft = 77 ft System Sand Bed Length (SSBL)

**B) Calculate System Sand Bed Width (SSBW):**

1) SSBA (from 2) 4005 sq ft ÷ 77 ft SSBL = 52 ft SSBW min.





# Presby Environmental, Inc.

Bed #1

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- 2) Pipe Layout Width = 63.5 ft + 2 ft = 65.5 ft SSBW needed to cover all Presby Pipes
- 3) Beds >10% Slope: PLW = n/a ft + 5 = n/a ft SSBW with System Sand Extension
- 4) System Sand Bed Width used = 65.5 ft (B1, B2 or B3 above - whichever is larger)

**C) System Sand Bed Area Provided (SSBA):**

SSBL (from A) = 77 ft x 65.5 ft SSBW (from B4) = 5043 sq ft SSBA provided

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**6) System Illustration (optional):**



# Presby Environmental, Inc.

Bed #2

The Next Generation of Wastewater Treatment Technology

143 Airport Rd., Whitefield, NH 03598  
 Tel: 800-473-5298 Fax: 603-837-9864  
[www.PresbyEnvironmental.com](http://www.PresbyEnvironmental.com)

Project: Cape View Way Bed #2 Date: 4/16/2021

1) Daily Design Flow = 45 bedrooms  $45 \times 110 = 4,950$  GPD Bedrooms or GPD, Perc Rate = <5 MPI, Soil Class = 1

A) Presby Pipe Required from Table (below) = 3,150 ft (45x70)

Enviro-Septic® Table A – Pipe Required

Perc rate Min/Inch	Number of Bedrooms						Commercial Per 100 GPD
	2	3	4	5	6	Add'l Room	
1-9	140	210	280	350	420	70	50
10-13	140	210	280	350	420	70	55
14-19	140	210	280	350	420	70	60
20-30	140	210	280	350	420	70	65
31-40	140	210	280	350	420	70	70
41-50	150	225	300	375	450	75	75
51-60	160	240	320	400	480	80	80

Consult design manual for systems 61 – 90 MPI

B) Daily Design Flow (if over 500) 4,950 GPD  $\div 500 = 10$  Sections (round up to whole number). Note: multiple beds required when flow is greater than 500 GPD for 61-90 MPI

C) Pipe Required (from 1A) 3,150 ft  $\div 10$  #of Sections (1B) = 315 ft / section min.

D) Row spacing required (Table B) = 1.5 ft Row spacing provided: 1.5 ft

Enviro-Septic® Table B

Percentage of System Slope	Percolation Rate Min/Inch					
	1-10	11-20	21-30	31-40	41-50	51-60
0-10%	1.5'	1.5'	1.75'	2.0'	2.5'	3.0'
11-15%	1.5'	1.75'	2.0'	2.25'	2.75'	3.25'
16-20%	1.75'	2.0'	2.25'	2.5'	3.0'	3.5'
21-25%	2.0'	2.25'	2.5'	2.75'	3.25'	3.75'

2) System Sand Bed Area (SSBA) required:

A) System Sand Bed Area required Table D (1 – 60 MPI) = 4,005 sq. ft. (45x89)

B) System Sand Bed Area required (61 – 90 MPI) @ 0.25 GPD/sq. ft. = n/a sq. ft.



# Presby Environmental, Inc.

Bed #2

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**Table D – Minimum Sand bed Area Size (sq. ft.)**

PERC RATE* Min/Inch	2 BEDROOM 220 GPD				3 BEDROOM 330 GPD				4 BEDROOM 440 GPD				5 BEDROOM 550 GPD			
	SOIL CLASS				SOIL CLASS				SOIL CLASS				SOIL CLASS			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	400	400			400	400			400	440			446	550		
6	400	400			400	400			400	440			471	550		
7	400	400			400	400			400	440			485	550		
8	400	400			400	400			400	440			500	550		
10		400				400				440				550		
15		400	400			400	535			471	714			589	892	
20		400	400			400	582			498	776			623	971	
25		400	400			495	600			660	800			825	1000	
30		400	455			600	683			800	910			1000	1138	
40			528				792				1056				1320	
50			660	660			990	990			1320	1320			1650	1650
60			880	880			1320	1320			1760	1760			2200	2200

PERC RATE* Min/Inch	6 BEDROOM 660 GPD				ADD'L. BEDROOM 110 GPD				COMMERICAL PER 100 GPD			
	SOIL CLASS				SOIL CLASS				SOIL CLASS			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	535	660			89	110			81	100		
6	566	660			94	110			86	100		
7	582	660			97	110			88	100		
8	600	660			100	110			91	100		
10		660				110				100		
15		707	1070			117	178			107	162	
20		747	1165			124	194			113	176	
25		990	1200			165	200			150	182	
30		1200	1366			200	227			182	207	
40			1584				264				240	
50			1980	1980			330	330			300	300
60			2640	2640			440	440			400	400

\*When percolation rate is between those listed in Table D, the next slower rate shall be used for design purposes.

3) System Slope =  $\frac{4}{100}$  % (1-60 MPI = 25% max., 61-90 MPI systems see tables in manual)

**Table E: Allowable System Slope (61-90 MPI)**

Perc. Rate Range (MPI)	System Slope Max. (%)
61-70	15
71-80	10
81-90	5

4) Presby Pipe

A) Presby Pipe Row Length to be used = 100 ft (1-60 MPI 100 ft max., 61-90 MPI per Table G)

B) Pipe Used ( $\geq 1A$ ) 3200 ft ÷ Row Length 100 ft = 32 Rows  
 (Note: number of rows must be whole number when divided by number of serial sections required from 1C)

C) Row Length 100 ft + 2 ft = 102 ft System Sand Bed Length (SSBL)

D) (<10% 1-60 MPI) SSBA = 4005 sq. ft. ÷ SSBL (4C) 102 ft - 2 ft = 39.3 Pipe Layout Width min.



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Bed #2

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(>10% 1-60 MPI) SSBA =  $\frac{n/a}{\text{sq. ft.}} \div \text{SSBL (4C)} \frac{n/a}{\text{ft}} - 5 \text{ ft} = \frac{n/a}{\text{Pipe Layout Width min.}}$

E) Pipe Layout Width from Table C =  $\frac{47.5}{\text{ft}}$  when using  $\frac{1.5}{\text{ft}}$  Row Spacing

**Table C: Length and Width  
Linear Feet of Enviro-Septic®**

Line Length/Ft	40	60	80	100	120	140	160	180	200	220	240	260	280	300
20	40	60	80	100	120	140	160	180	200	220	240	260	280	300
25	50	75	100	125	150	175	200	225	250	275	300	325	350	375
30	60	90	120	150	180	210	240	270	300	330	360	390	420	450
35	70	105	140	175	210	245	280	315	350	385	420	455	490	525
40	80	120	160	200	240	280	320	360	400	440	480	520	560	600
45	90	135	180	225	270	315	360	405	450	495	540	585	630	675
50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
55	110	165	220	275	330	385	440	495	550	605	660	715	770	825
60	120	180	240	300	360	420	480	540	600	660	720	780	840	900
65	130	190	260	325	390	455	520	585	650	715	780	845	910	975
70	140	210	280	350	420	490	560	630	700	770	840	910	980	1050
75	150	225	300	375	450	525	600	675	750	825	900	975	1050	1125
80	160	240	320	400	480	560	640	720	800	880	960	1040	1120	1200
85	170	255	340	425	510	595	680	765	850	935	1020	1105	1190	1275
90	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350
95	190	285	380	475	570	665	760	855	950	1045	1140	1235	1330	1425
100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
# of Lines	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ctr to Ctr Spacing														
1.50	2.50	4.00	5.50	7.00	8.50	10.00	11.50	13.00	14.50	16.00	17.50	19.00	20.50	22.00
1.75	2.75	4.50	6.25	8.00	9.75	11.50	13.25	15.00	16.75	18.50	20.25	22.00	23.75	25.50
2.00	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00	25.00	27.00	29.00
2.25	3.25	5.50	7.75	10.00	12.25	14.50	16.75	19.00	21.25	23.50	25.75	28.00	30.25	32.50
2.50	3.50	6.00	8.50	11.00	13.50	16.00	18.50	21.00	23.50	26.00	28.50	31.00	33.50	36.00
2.75	3.75	6.50	9.25	12.00	14.75	17.50	20.25	23.00	25.75	28.50	31.25	34.00	36.76	39.50
3.00	4.00	7.00	10.00	13.00	16.00	19.00	22.00	25.00	28.00	31.00	34.00	37.00	40.00	43.00
3.25	4.25	7.50	10.75	14.00	17.25	20.50	23.75	27.00	30.25	33.50	36.75	40.00	43.25	46.50
3.50	4.50	8.00	11.50	15.00	18.50	22.00	25.50	29.00	32.50	36.00	39.50	43.00	46.50	50.00
3.75	4.75	8.50	12.25	16.00	19.75	23.50	27.25	31.00	34.75	38.50	42.25	46.00	49.75	53.50
4.00	5.00	9.00	13.00	17.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	53.00	57.00
4.25	5.25	9.50	13.75	18.00	22.25	26.50	30.75	35.00	39.25	43.50	47.75	52.00	56.25	60.50
4.50	5.50	10.00	14.50	19.00	23.50	28.00	32.50	37.00	41.50	46.00	50.50	55.00	59.50	64.00
4.75	5.75	10.50	15.25	20.00	24.75	29.50	34.25	39.00	43.75	48.50	53.25	58.00	62.75	67.50
5.00	6.00	11.00	16.00	21.00	26.00	31.00	36.00	41.00	46.00	51.00	56.00	61.00	66.00	71.00

Layout Width/Ft.

**5) System Sand Bed Dimensions**

**A) Calculate System Sand Bed Length (SSBL):**

Row Length  $\frac{47.5}{\text{ft}} + 2 \text{ ft} = \frac{49.5}{\text{ft}}$  System Sand Bed Length (SSBL)

**B) Calculate System Sand Bed Width (SSBW):**

1) SSBA (from 2)  $\frac{4005}{\text{sq ft}} \div \frac{102}{\text{ft}} \text{ SSBL} = \frac{39.3}{\text{ft}}$  SSBW min.



# Presby Environmental, Inc.

Bed #2

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- 2) Pipe Layout Width = 47.5 ft + 2 ft = 49.5 ft SSBW needed to cover all Presby Pipes
- 3) Beds >10% Slope: PLW = n/a ft + 5 = n/a ft SSBW with System Sand Extension
- 4) System Sand Bed Width used = 49.5 ft (B1, B2 or B3 above - whichever is larger)

**C) System Sand Bed Area Provided (SSBA):**

SSBL (from A) = 102 ft x 49.5 ft SSBW (from B4) = 5049 sq ft SSBA provided

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**6) System Illustration (optional):**



TO: The Abutters of Cape View Way (Map 6, Parcel 38.01 and Map 7, Parcels 23, 86, 87, 88, 89, and 90)

SUBJECT: Notice of Public Hearing

To Whom it May Concern:

In accordance with the State Environmental Code, Title 5: 310 CMR 15.411, you are hereby notified that Preservation of Affordable Housing, Inc. and Housing Assistance Corporation have requested a hearing from the Bourne Board of Health for relief from Title 5 and/or the Bourne Board of Health regulations for the installation of a septic system. The location for the property is Cape View Way, where you are listed as an abutter. At said hearing, the Board will discuss and possibly vote on:

1. Variance to 310 CMR 15.211 Minimum Setback Distances
  - Septic tank to Property Line: 10' required; 2.6' and 3' provided
  - Soil Absorption System to Property Line: 10' required; 7.7' provided
2. Variance to 310 CMR 15.221 (7): The top of all system components shall be installed no more than 36" below finish grade. 49" for approximately 39% of Bed 1; 52" for approximately 41% percent of Bed 2 provided.

This hearing is tentatively scheduled for April 28, 2021 at 5:00 pm Virtual. Information regarding the hearing may be available for your review one week prior to the meeting by contacting the Bourne Health Department at 508-759-0600 ext. 1513, Monday through Friday from 8:30am until 4:30pm.

Meeting agendas are posted on the Town of Bourne website, [www.townofbourne.com/health](http://www.townofbourne.com/health) no less than 48 hours in advance of the hearing. Please confirm the date, time, and virtual location of the meeting with the Town, in case of any changes. Should you have any questions or concerns, please do not hesitate to contact me or the Town of Bourne Health Department at 508-759-0600 ext. 1513.

Sincerely,

Joe Henderson  
Senior Engineer, Horsley Witten Group, Inc.  
508-833-6600  
jhenderson@horsleywitten.com

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 GATELY TR CAP REALTY TRUST  
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 LLC  
 Street 160 SPEEN STREET, SUITE 303  
 City, State, ZIP+4® FRAMINGHAM, MA 01701-2003

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