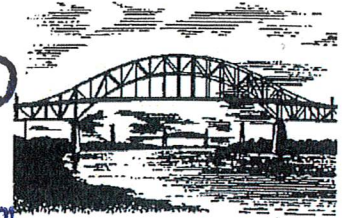


Bourne Board of Health
Application for Septic
Variance Requests

RECEIVED

APR 07 2021

Bourne Health Department
24 Perry Avenue
Buzzards Bay, MA 02532



In accordance with the established procedures of the Bourne Board of Health, this application for septic variances and waivers is relevant to requests for relief which have not been approved administratively and require approval at a public meeting. Please use the following application form for guidance on how to apply for variances and waivers which serve new construction, changes in use, or increases in flow to on-site sewage disposal systems with design flows of less than 10,000 gallons/ day.

1. Facility Name and Address:

Owner's Name	Antonio Ruscito
Facility's Street Address	189A Captains Row (Map 33.2, Parcel 37)
Owner's Telephone Number	617-212-3041
Owner's E-mail Address	Anthony@corvoproperties.com
Owner's Mailing Address	4 Porter Street, Stoughton, MA 02076

2. Applicant or Preparer's Name and Address (if different from above):

Preparer's Name	Zachary L. Basinski, PE, CFM
Company	Bracken Engineering, Inc.
Telephone Number	508-833-0070
E-mail Address	zac@brackeneng.com
Mailing Address	49 Herring Pond Road, Buzzards Bay
State/ Zip Code	MA / 02532

3. Type of Facility (check all that apply):

- Residential Commercial Institutional School Industrial

4. Describe Facility (i.e. single-family dwelling, 45 seat restaurant):
Single family dwelling

5. Type of System Proposed (check all that apply): Conventional Title 5 I/A System
- Pumped System Gravity System Pressure Dosed Other

6. Describe the proposed septic system components: MicroFast 0.5 Fast Unit septic tank and blower unit. Presby Enviro-Septic soil absorption system with effective field size of 423 SF.

7. Design Flow per 310 CMR 15.203 (in gallons/ day):

Design flow of proposed system: 110 GPD x 3 Bedrooms = 330 GPD

Total design flow of facility: 353 GPD

8. Enclose a letter of request for variances which makes reference to the specific provisions of Title 5 and the Board Bourne of Health Regulations for which a variance is sought. Please use this opportunity to demonstrate compliance with 310 CMR 15.410, and to justify the relevant facts and circumstances of the individual case. Note that with regard to variances for new construction, enforcement of the provision from which a variance is sought must be shown to deprive the applicant of substantially all beneficial use of the subject property in order to be manifestly unjust. Be sure to explain why full compliance with the applicable regulations is not feasible, and how a level of environmental protection that is at least equivalent to that provided under Title 5 and the Board of Health Regulations can be achieved without strict application of the regulations.

9. In order for this Application to be deemed complete, it must be accompanied by all of the following:

- Application Fees paid to the Town of Bourne.
- Letter of request (see samples)
- Six sets of complete plans and specifications. One with original stamp of design engineer.
- Nitrogen Loading Calculation Sheet(s)
- If abutter notification is required, one of each of the following must be submitted:
 - A copy of the certified list of abutters from the Assessor's Department
 - Sample letter for abutter notification postmarked 10 days prior to meeting date
 - Proof of certified mailing (receipts) meeting requirements of 310 CMR 15.405(2)
- Proposals for installation of Innovative/ Alternative systems must be accompanied by:
 - A copy of the Certification for Use including technology specific conditions
 - Draft disclosure notice for the I/A technology to be recorded in the deed
- Hydrogeologic data for all leaching facilities proposed within 100ft of a wetland/ watercourse
- Percentage of Increase Worksheet is required for waivers or increases in flow

10. Certification:

"I certify under penalty of law that this document and all attachments, to the best of my knowledge and belief, are true, accurate, and complete. I am aware that there may be significant consequences for submitting false information, including, but not limited to, penalties or fine and/or imprisonment for deliberate violations."

Facility Owner's Signature _____ Date _____

Print Name Zachary L. Basinski, PE, CFM (Agent)
Bracken Engineering, Inc.

Signature of Preparer _____ Date _____

Print Name Zachary L. Basinski, PE, CFM
Bracken Engineering, Inc.

Completed Application Received: _____

Reviewed By: _____

Hearing Date: _____

Permit #: _____

Circle all that apply:

Approved

Continued

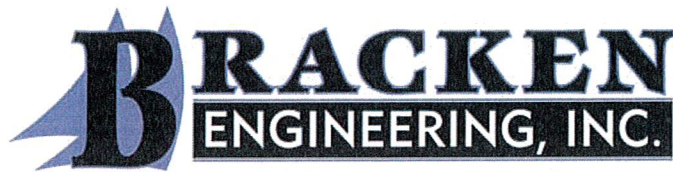
Disapproved

Other

Notes: _____

MAIN OFFICE:

49 Herring Pond Road
Buzzards Bay, MA 02532
TEL: (508) 833-0070
FAX: (508) 833-2282



NANTUCKET OFFICE:

19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
www.brackeneng.com

April 6, 2021

Bourne Board of Health
Terri Guarino, RS, CHO
24 Perry Avenue
Bourne, MA 02532

**RE: Bourne Board of Health Variance Request – Proposed Septic Upgrade
189A Captains Row (Map 33.2, Parcel 37)**

Dear Members of the Board:

On behalf of the homeowners/applicant, Antonio Ruscito, please accept this letter as a request for the following variance and Local Upgrade Approval to the Town of Bourne Health Regulations for a proposed septic upgrade at 189A Captains Row:

1. A proposed variance of 89± feet for a setback of 61± feet from a Soil Absorption System to a non-eroding Coastal Bank.
2. Per MA 310 Section 15.405(1)(h) – A 2' divergence from full compliance is requested for a 3' separation from the soil absorption system bottom to groundwater – (in accordance with Presby Enviro-Septic Leaching System Remedial Approval).

The above variance and Local Upgrade Approval requests are being made as a result of the size and existing topography of the parcel located at 189A Captains Row and would upgrade the existing septic to comply with Title 5 to the maximum extent possible. The existing lot is approximately 19,372 S.F. The parcel is surrounded by Buzzards Bay to the south, single family residences to the east and west and Captains Row to the north. Resource areas on or adjacent to the parcel include Buzzards Bay, Land Subject to Coastal Storm Flowage (LSCSF), and Coastal Bank. The parcel falls within FEMA Flood Hazard Zone "VE" (El. 22).

The location of the proposed Soil Absorption System was chosen to maximize setback distances from proposed structures and resource areas while being contained within existing disturbed areas and the extents of the parcel. The proposed system has been sited to have the least effect on public health, safety and the environment. To aid in effluent treatment, additional nitrogen removal shall occur via the proposed MicroFAST 0.5 unit. Bracken Engineering, Inc. is requesting that the Bourne Board of Health diverge from the goal of full compliance by allowing the variances requested above. The design allows for the best feasible upgrade within the borders of the lot and confines of the existing resource areas.

Thank you for your time and consideration on this matter. We look forward to reviewing this project with the Board of Health at the next scheduled Public Hearing. Should you have any questions regarding this project or require any further information please contact the undersigned at either 508-833-0070 or zac@brackeneng.com or robert@brackeneng.com.

Sincerely,

BRACKEN ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', written over a horizontal line.

Zachary L. Basinski, P.E., C.F.M.
Project Manager

A handwritten signature in black ink, appearing to read 'Robert E. Dewar', written over a horizontal line.

Robert E. Dewar, E.I.T.
Project Engineer

Town of Bourne

Conservation Commission

Nitrogen Loading Calculation Sheet for Residential Housing

The following calculation sheet is based upon Technical Bulletin 91-001 issued by the Cape Cod Commission and deals with nitrate nitrogen (NO₃-N) Use the information from your PLAN OF RECORD to provide the following:

189A Captains Row (Existing Conditions)

Number of Bedrooms (Title 5 Definition)	=	3	Bedrooms
Lot Size (in square feet of upland areas)	=	19,372	sq.ft. Upland
Impervious Surfaces; **roof area=	2,395	sq.ft.	**Paved Area = 1,057 sq.ft.
Natural Area = lot area minus all impervious surfaces	=	15,920	sq.ft.
Lawn Area in sq. ft.	=	10,912	sq.ft.

TITLE 5 FLOW = 110 GAL./ DAY PER BEDROOM

WASTEWATER FLOWS (NITROGEN LOAD & WATER LOAD)

Nitrogen from Title 5 design = 14,572 mg NO₃-N / day / bedroom: or 7911 mg NO₃-N / day/ bedroom with IA Treatment

Water from Title 5 design = 416.3 H₂O / day / bedroom

1a) Number of bedrooms = 3 x 14572 = 43716.00 mg. NO₃-N / day

1b) Number of bedrooms = 3 x 416 = 1248.00 L H₂O / day

Actual Nitrogen load = 6071.5 mg NO₃-N / day/ bedroom: 3296 mg NO₃-N / day/ bedroom with IA Treatment

Actual Water load = 173.5 L H₂O / day / bedroom

*Note: This assumes 2.5 people / unit average occupancy within the Town

2a) Number of bedrooms = 3 x 6071.5 = 18214.50 mg. NO₃-N / day

2b) Number of bedrooms = 3 x 173.5 = 520.50 L H₂O / day

IMPERVIOUS SURFACES (NITROGEN LOAD & WATER LOAD)

NO₃-N load number sq. ft. of roof surface X 0.19395 mg NO₃-N / sq. ft.

H₂O load number sq. ft. of roof surface X 0.2586 L / sq. ft.

3a) Roof surface = 2395 sq. ft. X 0.19395 = 464.51 mg NO₃-N

3b) Roof surface = 2395 sq. ft. X 0.2586 = 619.35 L H₂O / day

NO₃-N load number sq. ft. of paved surface X 0.388 mg / sq. ft.

H₂O load number sq. ft. of paved surface X 0.2586 L / sq. ft.

4a) NO₃-N = 1057 sq. ft. paved surface X 0.388 mg / sq. ft. 410.12 mg NO₃-N

4b) H₂O = 1057 sq. ft. paved surface X 0.2586 L / sq. ft. 273.34 L H₂O

LAWN NITROGEN LOADING = 0.933 mg / sq. ft. lawn surface

$$5) \text{ sq. ft. of lawn} = 10912 \times 0.933 = 10180.90 \text{ mg}$$

NATURAL AREA WATER LOADING

$$\text{Natural area} = \text{lot size} - \text{impervious surfaces} = 15920 \text{ sq. ft.}$$

$$6) \text{ Natural area} = 15920 \times \text{water recharge factor} = 2161.94 \text{ L}$$

(0.1358 L / sq. ft. for Bourne)

SUMMARY OF NITROGEN LOADING

Estimated Title 5 Nitrogen & Water Loading

7a) ADD the above NO₃N load

1a	(+)	3a	(+)	4a	(+)	5	
43716		464.51		410.12		10180.90	54771.52 mg NO ₃ -N / day

7b)

1b	(+)	3b	(+)	4b	(+)	6	
1248		619.35		273.34		2161.94	4302.62 L H ₂ O / day

$$7c) \text{ DIVIDE 7a by 7b} = \underline{12.7} \text{ ppm NO}_3\text{-N}^{*****}$$

Actual Nitrogen & Water Loading

8a) ADD the above NO₃N load:

2a	(+)	3a	(+)	4a	(+)	5	
18214.5		464.51		410.12		10180.90	<u>29270.02</u> mg NO ₃ -N / day

8b) ADD the above water (H₂O) load:

2b	(+)	3b	(+)	4b	(+)	6	
520.5		619.35		273.34		2161.94	<u>3575.12</u> L H ₂ O / day

$$8c) \text{ DIVIDE 8a by 8b} = \underline{8.2} \text{ ppm NO}_3\text{-N}^{*****}$$

$$\text{FINAL CALCULATION ADD 7c \& 8c (ppm)} = \underline{20.9} \text{ divide by 2} = \underline{10.5} \text{ ppm NO}_3\text{-N}$$

This is the actual nitrate nitrogen load for the project as designed. The target for coastal areas is 5 ppm nitrate nitrogen. Certain critical embayments may require a LOWER figure to prevent degradation.

*****If your nitrate nitrogen load exceeds the target limit **USE A SECOND CALCULATION SHEET TO SHOW ALTERNATIVES IN TRYING TO ACHIEVE THE 5 PPM NITRATE NITROGEN LEVEL*****

Town of Bourne

Conservation Commission

Nitrogen Loading Calculation Sheet for Residential Housing

The following calculation sheet is based upon Technical Bulletin 91-001 issued by the Cape Cod Commission and deals with nitrate nitrogen (NO₃-N) Use the information from your PLAN OF RECORD to provide the following:

189 Captains Row (Proposed Conditions)

Number of Bedrooms (Title 5 Definition)	=	3	Bedrooms
Lot Size (in square feet of upland areas)	=	19,372	sq.ft.
Impervious Surfaces;**roof area=	2,395	sq.ft.	**Paved Area = 1,014 sq.ft.
Natural Area = lot area minus all impervious surfaces	=	15,963	sq.ft.
Lawn Area in sq. ft.	=	10,830	sq.ft.
I/A System?	=	Yes	

TITLE 5 FLOW = 110 GAL./ DAY PER BEDROOM

WASTEWATER FLOWS (NITROGEN LOAD & WATER LOAD)

Nitrogen from Title 5 design = 14,572 mg NO₃-N / day / bedroom

Water from Title 5 design = 416.3 H₂O / day / bedroom

1a) Number of bedrooms = 3 x 14572 = 21858.00 mg. NO₃-N / day

1b) Number of bedrooms = 3 x 416 = 1248.00 L H₂O / day

Actual Nitrogen load = 6071.5 mg NO₃-N / day/ bedroom: 3296 mg NO₃-N / day/ bedroom with IA Treatment

Actual Water load = 173.5 L H₂O / day / bedroom

*Note: This assumes 2.5 people / unit average occupancy within the Town

2a) Number of bedrooms = 3 x 6071.5 = 9107.25 mg. NO₃-N / day

2b) Number of bedrooms = 3 x 173.5 = 520.50 L H₂O / day

IMPERVIOUS SURFACES (NITROGEN LOAD & WATER LOAD)

NO₃-N load number sq. ft. of roof surface X 0.19395 mg NO₃-N / sq. ft.

H₂O load number sq. ft. of roof surface X 0.2586 L / sq. ft.

3a) Roof surface = 2395 sq. ft. X 0.19395 = 464.51 mg NO₃-N

3b) Roof surface = 2395 sq. ft. X 0.2586 = 619.35 L H₂O / day

NO₃-N load number sq. ft. of paved surface X 0.388 mg / sq. ft.

H₂O load number sq. ft. of paved surface X 0.2586 L / sq. ft.

4a) NO₃-N = 1014 sq. ft. paved surface X 0.388 mg / sq. ft. = 393.43 mg NO₃-N

4b) H₂O = 1014 sq. ft. paved surface X 0.2586 L / sq. ft. = 262.22 L H₂O

LAWN NITROGEN LOADING = 0.933 mg / sq. ft. lawn surface

$$5) \text{ sq. ft. of lawn} = 10830 \times 0.933 = 10104.39 \text{ mg}$$

NATURAL AREA WATER LOADING

$$\text{Natural area} = \text{lot size} - \text{impervious surfaces} = 15963 \text{ sq. ft.}$$

$$6) \text{ Natural area} = 15963 \times \text{water recharge factor} = 2167.78 \text{ L}$$

(0.1358 L / sq. ft. for Bourne)

SUMMARY OF NITROGEN LOADING

Estimated Title 5 Nitrogen & Water Loading

7a) ADD the above NO₃N load

1a	(+)	3a	(+)	4a	(+)	5	
21858		464.51		393.43		10104.39	32820.33 mg NO ₃ -N / day

7b)

1b	(+)	3b	(+)	4b	(+)	6	
1248		619.35		262.22		2167.78	4297.34 L H ₂ O / day

7c) DIVIDE 7a by 7b = 7.6 ppm NO₃-N*****

Actual Nitrogen & Water Loading

8a) ADD the above NO₃N load:

2a	(+)	3a	(+)	4a	(+)	5	
9107.25		464.51		393.43		10104.39	<u>20069.58</u> mg NO ₃ -N / day

8b) ADD the above water (H₂O) load:

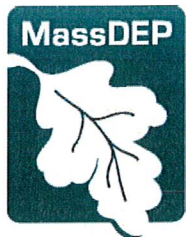
2b	(+)	3b	(+)	4b	(+)	6	
520.5		619.35		262.22		2167.78	<u>3569.84</u> L H ₂ O / day

8c) DIVIDE 8a by 8b = 5.6 ppm NO₃-N*****

FINAL CALCULATION ADD 7c & 8c (ppm) = 13.3 divide by 2 = 6.6 ppm NO₃-N

This is the actual nitrate nitrogen load for the project as designed. The target for coastal areas is 5 ppm nitrate nitrogen. Certain critical embayments may require a LOWER figure to prevent degradation.

*****If your nitrate nitrogen load exceeds the target limit **USE A SECOND CALCULATION SHEET TO SHOW ALTERNATIVES IN TRYING TO ACHIEVE THE 5 PPM NITRATE NITROGEN LEVEL*****



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

REVISION OF APPROVAL FOR REMEDIAL USE

Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Bio-Microbics, Inc.
8450 Cole Parkway
Shawnee, KS 66227

Trade name of technology and models: MicroFAST® Treatment System Models *MicroFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0*; HighStrengthFAST® Treatment System Models *HighStrength FAST® 1.0, 1.5, 3.0, 4.5 and 9.0* and NitriFAST® Treatment System Models *NitriFAST® 0.5, 0.75, 1.0, 1.5, 3.0, 4.5 and 9.0* (hereinafter called the "System"). Schematic Drawings illustrating each System, a design and installation manual, an owner's manual, an operation and maintenance manual, and an inspection checklist are part of this Approval.

Transmittal Number: W 072367
Date of Issuance: June 16, 2006 (modified January 23, 2008)
Revision date: November 05, 2012

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this Approval for Remedial Use to: Bio-Microbics, Inc., 8450 Cole Parkway, Shawnee, KS 66227, (hereinafter "the Company"), approving the System described herein for Remedial Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer, the Service Contractor, and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Approval constitutes a violation of 310 CMR 15.000.

David Ferris, Director
Wastewater Management Program,
Bureau of Resource Protection

November 05, 2012

Date

Technology Description

The System is a Secondary Treatment Unit (STU). The Systems, MicroFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0, and HighStrengthFAST® 1.0, 1.5, 3.0, 4.5 and 9.0, and, NitriFAST® 0.5, 0.75, 0.9, 1.5, 3.0, 4.5 and 9.0 units are installed in a tank or tanks having a primary settling zone and an aerobic biological zone. Solids settle in the primary settling zone that is quiescent. In the aerobic zone, the sewage is continually agitated and aerated. Bacteria in the sewage attach to the surface of a submerged plastic media; they reproduce by consuming the organic material in the sewage.

Conditions of Approval

The term “System” refers to the STU in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

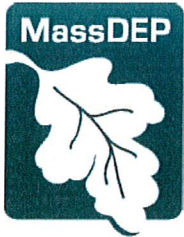
The term “Approval” refers to the technology-specific Special Conditions, the conditions applicable to all STU’s with Remedial Use Approval, the General Conditions of 310 CMR 15.287, and any Attachments.

For Secondary Treatment Units that have been issued Remedial Use Approval for the upgrade or replacement of an existing failed or nonconforming system., the Department authorizes reductions in the effective leaching area (310 CMR 15.242), the depth to groundwater (310 CMR 15.212), and/or the depth of naturally occurring pervious material (310 CMR 15.240(1)) subject to the conditions that apply to all Secondary Treatment Units Approved for Remedial Use and subject to the Special Conditions applicable to the Technology.

Special Conditions

1. The System is Secondary Treatment Unit Approved for Remedial Use. In addition to the Special Conditions contained in this Approval, the System shall comply with all the “Standard Conditions for Secondary Treatment Units Approved for Remedial Use”, except where stated otherwise in these Special Conditions.
2. The System is approved for facilities where the local approving authority finds that:
 - a) there is no increase in the actual or proposed design flow;
 - b) the System is for the upgrade of a failed, failing or nonconforming system; and
 - c) a conventional system with a reserve area, designed in accordance with the standards of 310 CMR 15.100 through 15.255, cannot feasibly be built on-site.

3. The MicroFAST® 0.5, 0.75 and 0.9, HighStrengthFAST® 1.0 and NitriFAST® 0.5, 0.75 and 0.9 are installed in the second compartment of a two-compartment tank with a total liquid capacity of at least 1,500 gallons constructed in accordance with 310 CMR 15.226.
4. The MicroFAST®, HighStrengthFAST® and NitriFAST® 1.5 are installed in the second compartment of a two compartment 3,000-gallon tank constructed in accordance with 310 CMR 15.226.
5. The MicroFAST®, HighStrengthFAST® and NitriFAST® 3.0, 4.5, and 9.0 units are installed in a separate tank constructed in accordance with 310 CMR 15.226. The units are located between a standard Title 5 septic tank, designed in accordance with 310 CMR 15.223 and 15.224, and the soil adsorption system (SAS).
6. Access shall be provided to all tanks in the primary settling and aerobic biological zones in accordance with 310 CMR 15.228 (2). The primary settling tank shall have at least three manholes with readily removable impermeable covers of durable material provided at grade. Two manholes, over the inlet and outlet of the primary settling tank, shall have a minimum opening of 20 inches. All access ports and manhole covers shall be installed and maintained at grade to allow for maintenance of the System.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

REMEDIAL USE APPROVAL Pursuant to Title 5, 310 CMR 15.00

Name and Address of Applicant:

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598

Trade name of technology and models: **Presby Enviro-Septic® Wastewater Treatment System** (hereinafter called the "System"). The *Massachusetts Enviro-Septic® Wastewater Treatment System Quick Reference Guide* including schematic drawings of typical Systems, an inspection checklist, and a System Installation Form are part of this Approval.

Transmittal Number: X233395
Date of Issuance: Revised September 26, 2014

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental, Protection hereby issues this Approval for Remedial Use to: Presby Environmental, Inc., 143 Airport Road, Whitefield, NH 03598 (hereinafter "the Company"), certifying the System described herein for Remedial Use in the Commonwealth of Massachusetts. The sale, design, installation, and use of the System are conditioned on compliance by the Company, the Designer, the Installer and the System Owner with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Approval constitutes a violation of 310 CMR 15.000.

David Ferris, Director
Wastewater Management Program
Bureau of Resource Protection

September 26, 2014
Date

Technology Description

The System is an alternative subsurface Soil Absorption System (SAS) that replaces a conventional SAS designed in accordance with 310 CMR 15.000. The System consists of an 11 5/8-inch diameter corrugated, high-density plastic pipe with a 9.5-inch interior diameter and a standard length per unit of 10 feet. The pipe is perforated with eight holes equally distributed around its inner circumference at each corrugation. Each hole has a plastic skimmer extending inwards. The exterior of the pipe has ridges on the peak of each corrugation and is wrapped with two layers of fabric material. The inner layer is a thick layer of coarse, randomly oriented polypropylene fibers. The outer fabric layer is a non-woven geo-textile polypropylene. The System includes required connectors designed to connect pipe units together. The System also includes six inches of sand, specified as concrete sand meeting ASTM C-33 (also called ‘System sand’), surrounding the pipe on all sides.

Conditions of Approval

The term “System” refers to the Alternative Soil Absorption System in combination with the other components of an on-site treatment and disposal system that may be required to serve a facility in accordance with 310 CMR 15.000.

The term “Approval” refers to the technology-specific Special Conditions, the Standard Conditions for General and Remedial Use Approval of Alternative Soil Absorption Systems (the ‘Standard Conditions’), the General Conditions of 310 CMR 15.287, and any Attachments.

For Alternative Soil Absorption Systems that have been issued Remedial Use Approval for the installation of Systems to serve facilities where the site meets the requirements for new construction, the Department authorizes reductions in the effective leaching area (310 CMR 15.242), subject to the applicable portions of the Standard Conditions, and subject to the below Special Conditions applicable to this Technology.

Special Conditions

1. The System is an approved Patented Sand Filter System for use as an Alternative Soil Absorption System. In addition to the Special Conditions contained in this Approval, the System shall comply with all Standard Conditions for Alternative Soil Absorption Systems, except where stated otherwise in these Special Conditions.
2. This Approval applies to the installation of a System for the upgrade or replacement of an existing failed or nonconforming system, provided that the facility meets the siting requirements for upgrades, as provided in II(7) and II(9) of the Standard Conditions. For the upgrade or replacement of an existing failed or nonconforming system, all installed Systems shall also comply with the Notice requirement of paragraph II(23) and the transferee notification requirements of paragraph IV(1) of the Standard Conditions. The proposed use of the System shall also comply with any other Standard Conditions which pertain wholly or in part to upgrades of existing systems.
3. SAS Design - For the upgrade or replacement of an existing failed or nonconforming system, Systems sited in soils with a percolation rate of 60 minutes or less per inch, the size of the

SAS shall be sized with 40 percent less effective leaching area than required when using the loading rates for gravity systems of 310 CMR 15.242(1)(a). For soils with a recorded percolation rate of between 60 and 90 minutes per inch, the size of the SAS shall be sized with 40 percent less effective leaching area than required when using the loading rate of 0.15 gpd/square foot as specified by 310 CMR 15.245(4).

No reduction greater than 40% in the required effective leaching area is allowed, including any reductions under a LUA or a variance.

The required effective leaching area of the SAS shall be reduced in accordance with the above requirements, except a minimum of 400 square feet of effective leaching area shall be provided if any proposed reduction in the leaching area would result in less than 400 square feet of effective leaching area. Where 400 square feet of effective leaching is not feasible, the greatest effective leaching area shall be installed provided that no more than a 40 percent reduction is taken.

4. Alternative Design Standards - Provided that the Designer demonstrates that the impact of the proposed Alternative System has been considered and the design requirements of 310 CMR 15.000 have been varied to the least degree necessary so as to allow for both the best feasible upgrade within the borders of the lot and the least effect on public health, safety, welfare and the environment, the local approving authority may allow any combination of the following alternative design standards without the need for granting a variance under 310 CMR 15.400 or obtaining Department approval:
 - a) If a reduction in the depth to groundwater required by 310 CMR 15.212 is necessary, the depth to groundwater may be reduced by up to 2 feet, resulting in a minimum separation distance of two feet in soils with a recorded percolation rate of more than two minutes per inch and three feet in soils with a recorded percolation rate of two minutes or less per inch, measured from the bottom of the soil absorption system to the high groundwater elevation, only if;
 - i. An approved Soil Evaluator who is a member or agent of the local Approving Authority determines the high groundwater elevation;
 - ii. No reduction is granted under LUA for setbacks from public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries, is allowed; and
 - iii. In accordance with 310 CMR 15.212(2), for systems with a design flow of 2,000 gpd or greater, the separation to high groundwater as required by 310 CMR 15.212(1) shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).
 - b) If a reduction in the depth of the naturally occurring pervious material layer is necessary, a proposed reduction of up to 2 feet may be allowed in the four feet of naturally occurring pervious material layer required by 310 CMR 15.240(1) provided that it has been demonstrated that no greater depth in naturally occurring pervious material can be met anywhere on the site.

5. In no case, shall the reductions in the effective leaching area, depth to groundwater, and depth of naturally occurring pervious material allowed under this Approval be made less stringent. Any reductions in the effective leaching area, depth to groundwater, and depth of naturally occurring pervious material allowed under this Approval shall not be combined with any reduction that may allowed under the procedures of Local Upgrade Approval or the variance procedures of 310 CMR 15.401-413. The local Approving Authority may vary other design requirements under the LUA provisions of 310 CMR 15.405 or under the variance procedures of 310 CMR 15.411.
6. The System shall only be installed in bed or field configuration, as described in 310 CMR 15.252. The System shall not be installed in trench configuration and no sidewall area shall be considered in the total effective leaching area provided. The effective leaching area shall be the bottom area only (length times width) of the sand bed.
7. Systems shall be installed with differential venting for aeration and inspection access at end of each run of pipe, section or serial bed and whenever the System is installed under impervious surfaces.
8. Serial distribution laterals shall be limited to no more than 500 gpd with each lateral a maximum of 100 feet, and must be laid level. Multi-level systems shall not be allowed.
9. System component material specifications for the pipe, plastic components, fabric and sand shall comply with the specifications identified in the initial I/A technology approval. Prior approval from the Department for any change from these specifications shall be requested in writing.
10. Any changes to the approved plans must receive Local Approving Authority (LAA) approval prior to any changes. Before a Certificate of Compliance can be issued by the LAA the System Designer must include any changes to the approved plan into the as-built plans.

COMMONWEALTH OF MASSACHUSETTS

Board of Health, BOURNE, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct () Repair () Upgrade () Abandon () - Complete System Individual Components

Location <u>189A CAPTAINS ROW</u>	Owner's Name <u>ANTONIO RUSCITO</u>
Map/Parcel# <u>MAP 33.2 / PARCEL 37</u>	Address <u>4 PORTER ST. STOUGHTON, MA 02076</u>
Lot#	Telephone# <u>617-212-3041</u>
Installer's Name	Designer's Name <u>ZACHARY L. BASINSKI, PE, CFM</u> ^{BRACKETED} <u>ENG. INC.</u>
Address	Address <u>49 HERRING POND RD. BUZZARDS BAY, MA 02532</u>
Telephone#	Telephone# <u>508-833-0070</u>

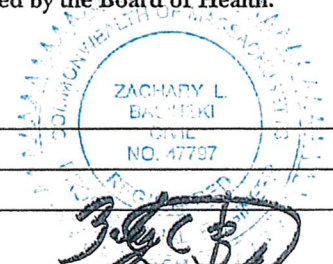
Type of Building SINGLE-FAMILY DWELLING Lot Size 19,372 sq. ft.
 Dwelling - No. of Bedrooms 3 BEDROOMS Garbage grinder ()
 Other - Type of Building _____ No. of persons _____ Showers (), Cafeteria ()
 Other Fixtures _____
 Design Flow (min. required) 110 GPD/BDRM gpd Calculated design flow 330 Design flow provided 353 gpd
 Plan: Date APRIL 7, 2021 Number of sheets 1 Revision Date _____
 Title PROPOSED SUBSURFACE SEWAGE DISPOSAL PLAN
 Description of Soil(s) SEE PLAN
 Soil Evaluator Form No. _____ Name of Soil Evaluator ROBERT E. DEWAR Date of Evaluation MARCH 17, 2021

DESCRIPTION OF REPAIRS OR ALTERATIONS INSTALLATION OF A NEW 1,500 GAL MICROFAST SEPTIC TANK, BLOWER & PRESBY ENVIRO-SEPTIC WASTE WATER LEACHING SYSTEM WITH AN EFFECTIVE FIELD SIZE OF 423 S.F.

The undersigned agrees to install the above described Individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees to not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed _____ Date _____

Inspections _____



DRAFT

NOTICE OF ALTERNATIVE SEWAGE DISPOSAL SYSTEM
M.G.L. c. 21A, § 13 and 310 CMR 15.0287(10)

ADDRESS OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:

189A Captains Row, Bourne, MA

TITLE REFERENCE FOR PROPERTY SERVED BY ALTERNATIVE SYSTEM

Deed recorded with the Barnstable Registry of Deeds in Book 33688, Page 343

NAME(S) OF OWNER OF PROPERTY SERVED BY ALTERNATIVE SYSTEM:

Antonio Ruscito

OWNER(S) MAILING ADDRESS: 4 Porter Street Stoughton, MA 02702

WHEREAS, Section 15.280 of Title 5 of the State Environmental Code (“Approval of Alternative Systems”), provides for the Massachusetts Department of Environmental Protection (the “Department”) to approve or certify, as appropriate, all proposals to construct, upgrade or replace on-site sewage disposal systems using alternative systems;

WHEREAS, owners and/or operators of approved or certified alternative systems are subject to general conditions, as specified in Section 15.287 of Title 5 of the State Environmental Code, 310 CMR 15.287, and may be subject to special conditions, as specified in the Department’s approvals or certifications; such general and special conditions potentially including, without limitation, requirements relating to the use of trained operators, periodic inspections, maintenance, sampling, reporting and/or recordkeeping;

WHEREAS, the owners and/or operators this alternative system acknowledges and agrees to comply with the provisions of all of the Bourne Board of Health Alternative Septic System Regulations and any other conditions for the existence of the system;

WHEREAS, Section 15.287(10) of Title 5 of the State Environmental Code, 310 CMR 15.287(10), requires that “prior to obtaining a Certificate of Compliance for installation of a new or upgraded system, the system owner shall record in the chain of title for the property served by the alternative system in the Registry of Deeds and/or Land Registration Office, as applicable, a Notice disclosing both the existence of the alternative on-site system and the Department’s approval of the system. The system owner shall also provide evidence of such recording to the Bourne Board of Health; and

WHEREAS, the Property is served by an alternative sewage disposal system.

NOW, THEREFORE, Notice of an alternative sewage disposal system is hereby given for the above- referenced Property, as follows:

1. Existence System #1. An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

Trade name of technology:	<i>MicroFAST®</i>
Manufacturer Name:	Bio-Microbics, Inc.
Model number(s):	MicroFAST 0.5 Unit

2. Approval/Certification. On 6/16/2006, modified 1/23/2008, revised 11/5/2012, the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number W072367.

- Approved for remedial use under 310 CMR 15.284

3. Existence System #2. An alternative system has been installed as a new or upgraded alternative sewage disposal system, on or adjacent to the Property, and serves the Property. The trade name and model number(s) of the alternative system are as follows:

Trade name of technology: Presby Enviro-Septic® Wastewater Treatment
Manufacturer Name: Presby-Environmental, Inc.

4. Approval/Certification. On 9/26/2014 the Department, pursuant to its authority under the section of Title 5 as specified below, approved or certified the technology used in the above referenced alternative system, under MassDEP Transmittal Number X233395.

- Approved for remedial use under 310 CMR 15.284

A copy of the Department of Environmental Protection’s Approval/Certification is available online at the Department’s website:

<https://www.mass.gov/guides/approved-title-5-innovativealternative-technologies>

This Notice of Alternative Sewage Disposal System must be submitted to the Bourne Board of Health

WITNESS the execution hereof under seal this ____ day of _____, 20__, made by the above-named Alternative System Owner(s).

Antonio Ruscito

COMMONWEALTH OF MASSACHUSETTS

_____, ss

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(official signature and seal of notary)

DRAFT

WITNESS the execution hereof under seal this ____ day of _____, 20____, made by the above-named Alternative System Owner(s).

Antonio Ruscito

COMMONWEALTH OF MASSACHUSETTS

_____, ss

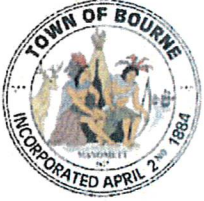
On this ____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(official signature and seal of notary)

DRAFT

Approved and Accepted By:

Terri A. Guarino, R.S., C.H.O.
Health Agent
Town of Bourne



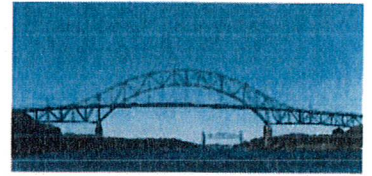
TOWN OF BOURNE

Board of Assessors

24 Perry Avenue

Buzzards Bay, MA 02532

(508) 759-0600 Ext. 1510 ♦ Fax (508) 759-8026



Michael Leitzel, Chairperson
Ellen Doyle Sullivan, Clerk
Donna Barakauskas, Member

Rui Pereira, MAA
Director of Assessing

April 2, 2021

Antonio Ruscito
c/o Bracken Engineering, Inc.
49 Herring Pond Rd
Buzzards Bay, MA 02532

Re: Abutters List for Map 33.2 Parcel 37
Subject property: 189A Captains Row

As required by the Bourne Board of Health, pursuant with section 310 CMR 15.411(1), this is to certify that the attached list of names and addresses constitutes all of the parties in interest as shown on the most recent tax list of the Town of Bourne.

Abutting properties are: Map 33.2 Parcels 30, 36 & 38.

Your payment of \$10.00 has been received by the Bourne Assessor's Office.

Please be advised that this abutters list is only good for 30 days from the date on this letter. Expired abutters list can be recertified for an additional filing fee.

See enclosed for abutters mailing addresses.

Board of Assessors

*Ellen Doyle Sullivan -
Donna Barakauskas
Michael Leitzel*

Report #24: Owner Listing Report
 Fiscal Year 2022

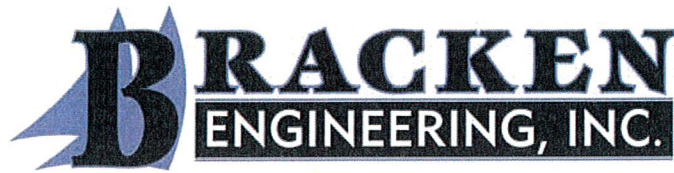
Bourne MA

1 Abutters List
 LIVE
 Key IN 7068,7071,7073

Key	Parcel ID	Owner	Location	LCVCI	Ek-Faj(Cert)/Dt	Mailing Street	Mailing City	ST	Zip Cd/Counity
7068	33.2-30-0	NOONAN THOMAS JR TRS THOMAS V NOONAN JR REVOCABLE TRUST	210 CLIPPER RD	N	3163/06 10/30/2018	1009 SW BALMORAL TRAIL	STUART	FL	34957
7071	33.2-36-0	SANTOS HONORATO M	188 CAPTAINS ROW	N	3066/324 7/26/2017	13 RANDALL ST	TAUNTON	MA	02789
7073	33.2-38-0	JONES ROBERT C & PATRICIA TRS R & P CAPTAINS ROW REALTY TR	189-B CAPTAINS ROW	N	1816/22 1/27/2004	P O BOX 3173	BOURNE	MA	02532

Total Records 3

MAIN OFFICE:
49 Herring Pond Road
Buzzards Bay, MA 02532
TEL: (508) 833-0070
FAX: (508) 833-2282



NANTUCKET OFFICE:
19 Old South Road
Nantucket, MA 02554
TEL: (508) 325-0044
www.brackeneng.com

April 7, 2021

RE : Notice of Public Hearing

Dear Abutter:

In accordance with the State Environmental Code, Title 5: 310 CMR 15.00, you are hereby notified that **Antonio Ruscito** has requested a hearing before the Bourne Board of Health for the installation of an upgraded Septic System. The location of the property for which approval is sought is **189A Captains Row, Map 32.2 – Parcel 37, Bourne, MA.**

This hearing is scheduled for April 14, 2020 at 7:00 p.m. Information regarding the hearing may be available for your review one week prior to the meeting by contacting the Bourne Health Department at 508-790-0600, Ext. 1513, Monday through Friday from 8:30 a.m. until 4:30 p.m.

Per the office of the Governor's Order suspending certain provisions of the Open Meeting Law due to the COVID-19 outbreak, public comment will be limited to remote access during the meeting. Meeting agendas are posted on the Town of Bourne website, www.townofbourne.com/health no less than 48 hours in advance of the hearing. Please confirm the date, time, and 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 the undersigned at zac@brackeneng.com or the Bourne Health Department at 508-790-0600, Ext. 1513.

Sincerely,

BRACKEN ENGINEERING INC.

A handwritten signature in black ink, appearing to read 'Zachary L. Basinski', is written over a horizontal line.

Zachary L. Basinski, PE, C.F.M
Project Manager
Agent for the Applicant

7020 3160 0000 2203 4149

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Postage:	\$.51	
Certified Fee:	\$ 3.60	
Return Receipt Fee:	\$ 2.85	
Total Postage & Fees:	\$ 6.96	

Postmark Here: APR 2021

Total Post: Thomas Noonan Jr., TRS
 Sent To: Thomas V. Noonan Jr., Rev. TR
 Street and: 1009 SW Balmoral Trail
 City, State: Stuart, FL 34997189A Captains Row, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 3160 0000 2203 4125

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Postage:	\$.51	
Certified Fee:	\$ 3.60	
Return Receipt Fee:	\$ 2.85	
Total Postage & Fees:	\$ 6.96	

Postmark Here: APR 2021

Total Post: Robert C. & Patricia Jones, TRS
 Sent To: R & P Captains Row Realty Trust
 Street and: P.O. Box 3173
 City, State: Bourne, MA 02532 189A Captains Row, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 3160 0000 2203 4132

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Postage:	\$.51	
Certified Fee:	\$ 3.60	
Return Receipt Fee:	\$ 2.85	
Total Postage & Fees:	\$ 6.96	

Postmark Here: APR 2021

Total Post: Honorato M. Santos
 Sent To: 13 Randall Street
 Street and: Taunton, MA 02780
 City, State: 189A Captains Row, Bourne - BOH

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions