



AMENDED

Truro Board of Health

Tuesday December 5, 2023

Hybrid Meeting start at 4:30 PM
Truro Town Hall, 24 Town Hall Rd

Office of Town Clerk

1:42pm
DEC 01 2023

Received TOWN OF TRURO
By: [Signature]

Truro Board of Health Regular Meeting

Hybrid Meeting start time is 4:30 PM

Meeting Access Instructions This will be a hybrid (in-person and remote) meeting. Citizens in Truro can view the meeting on Channel 8 and on the homepage of the Town of Truro website on the "Truro TV Channel 8" button found under "Helpful Links". Once the meeting has started, click on the green "Watch" button in the upper right of the page. **To join the meeting by phone or to provide comment during the meeting, please call-in toll free at 1-305-224-1968 and enter the following Meeting ID when prompted: Meeting ID: 884 7580 5887** You may join the meeting from your computer, tablet or smartphone by entering the following URL into your web browser:

<https://us02web.zoom.us/j/88475805887> Please note that there may be a slight delay between the meeting and the live-stream (and television broadcast). If you are watching the meeting and calling in, please lower the volume on your computer or television during public comment so that you may be heard clearly. We ask that you identify yourself when calling in. Citizens may also provide public comment for this meeting by emailing the Health Agent at ebeebe@truro-ma.gov with your comments.

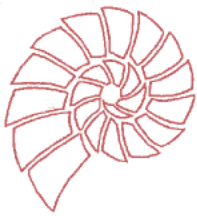
I. PUBLIC COMMENT Please note that the Commonwealth's Open Meeting Law limits any discussion by members of the Board of an issue raised to whether that issue should be placed on a future agenda

II. AGENDA ITEMS

1. **Title 5/Local Variance Request:** 22 Shore Road, Marion O. Joseph
2. **Waiver of Time:** 18 Sandpiper Road
3. **Waiver of Time Extension:** 45 Corn Hill Road
4. **Review of preliminary subdivision plans:** 9B Benson Road
5. **ACO request:** 12 Secor Lane, Peter Swanson
6. **Discussion of process for ACO list**
7. **Discussion on off-site manager requirements** -RKM Property Management

III. REPORTS

1. Report of the Chair
2. Health Agent's Report



J.M. O'REILLY & ASSOCIATES, INC.

PROFESSIONAL ENGINEERING, LAND SURVEYING & ENVIRONMENTAL SERVICES

Site Development • Property Line • Subdivision • Sanitary • Land Court • Environmental Permitting

November 9, 2023

JMO # 9293

Truro Board of Health
24 Town Hall Road
Truro, MA 02666

RE: **Board of Health Variance Request**
22 Shore Road, Truro, MA

Map: 39 / Parcel: 139

Dear Board Members,

On behalf of our client, Marion Joseph, c/o Doug Cox, J.M. O'REILLY & ASSOCIATES, INC. is filing a request for Variance from Truro Board of Health Regulations for the proposed sewage system upgrade at the above referenced property. The property is currently served by a series of cesspools.

The project proposes to replace the cesspools which currently serve the existing four cottages and a single family dwelling. The cesspools will be replaced with a Title 5 sewage disposal system which includes an I/A treatment unit. The existing parcel contains a total of 9 bedrooms and does not provide the required 1 bedroom per 10,000 sf of land area. As such the sewage system provides the I/A treatment unit STAAR 1.0 as manufactured by the Bio-Microbics Company.

As required due to existing site location & onsite conditions we are seeking one variance from 310 CMR 15.211 (Min Setback Distances) & Truro Board of Health Regulations: Variance Request is as follows:

1. SAS not 25 feet from catch basin (leaching)
20' provided

5' Variance Requested

No additions, changes in habitable space or additional bedrooms are proposed. A representative from our office will be present at the ~~November 21, 2023~~ public hearing so as to further review the proposal and answer any questions the Board may have. *12/5*

Very truly yours,
J.M. O'REILLY & ASSOCIATES, INC.


John M. O'Reilly, P.E., P.L.S.
Principal



Cc: Client

Encl: Variance Application Package

Fee: \$75.00



**TRURO HEALTH &
CONSERVATION DEPARTMENT**
24 Town Hall Road, Truro 02666

APPLICATION FOR BOARD OF HEALTH VARIANCES

Date: 11/9/23

Property Owner's Name: Marion O. Joseph

Mailing Address: P.O. Box 836, Truro, MA 02666

Address of Property: 22 Shore Road

Map and Parcel Number: Map # 39 Parcel # 139

Design Engineer/Sanitarian John M. O'Reilly, P.E., P.L.S.


Firm/Company Name: J.M. O'Reilly & Assoc., Inc. Phone #: 508-896-6601

Address: 1573 Main St., P.O. Box 1773, Brewster, MA 02631

Please check type of variance requested:

☒ **Title 5 Variance Request: Section** 310 CMR 15.211 (Setbacks): SAS to catch basin; 20' provided; 5 foot variance

☐ **Board of Health Variance Request: Section/Article** _____


Signature (Representative)

11-9-2023
Date

Signature (Property Owner)

RESIDENTIAL NITROGEN LOADING CALCS. - PROPOSED (9BR, WITH I/A - COX)

Home: 990 GPD
 Impervious Surfaces: Roof Area: 3,340 ft² Paving Area: 7,340 ft²
 Lot Size: 32,365 ft²
 Natural Area: 21,685 ft² Lawn Area: 1,500 ft²
 Title V Flow: 990 gpd

Job - #9293

WASTEWATER

Title V

$$\underline{9} \text{ bedrooms} \times \frac{110}{\text{bedroom}} \times \frac{3.785}{\text{gal}} = \underline{3,747.2} \text{ L/d} \times \underline{19} \frac{\text{mg}}{\text{L}} = \underline{71,195.9} \text{ mg/d}$$

Actual (assume 2.5 people/unit average occupancy within the town)

$$\underline{9} \text{ bedrooms} \times \frac{110}{\text{bedroom}} \times \frac{3.785}{\text{gal}} \times \frac{2.5}{18} = \underline{520.4} \text{ L/d} \times 19 \frac{\text{mg}}{\text{L}} = \underline{9,888.3} \text{ mg/d}$$

IMPERVIOUS SURFACES

$$\text{Roof} \quad \underline{3,340} \times \frac{40 \text{ in}}{\text{yr}} \times \frac{\text{ft}}{12 \text{ in}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{863.8} \text{ L/d} \times 0.75 \frac{\text{mg}}{\text{L}} = \underline{647.9} \text{ mg/d}$$

$$\text{Paving} \quad \underline{7,340} \times \frac{40 \text{ in}}{\text{yr}} \times \frac{\text{ft}}{12 \text{ in}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{1898.3} \text{ L/d} \times 1.5 \frac{\text{mg}}{\text{L}} = \underline{2,847.5} \text{ mg/d}$$

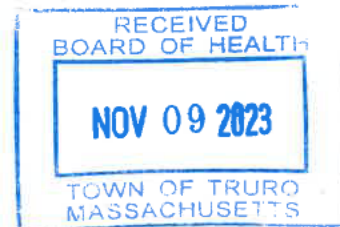
LAWN

$$\underline{1,500} \times \frac{3 \text{ lbs}}{1,000 \text{ ft}^2/\text{yr}} \times \frac{1 \text{ yr}}{365 \text{ d}} \times \frac{454,000}{\text{lb}} \times 0.25 = \underline{1,399.3} \text{ mg/d}$$

NATURAL

$$\underline{32,365} - \underline{10,680} = \underline{21,685} \text{ ft}^2$$

$$\underline{21,685} \times \frac{1.3}{\text{yr}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{2,187.3} \text{ L/d}$$



SUMMARY

Title V Flow	$\frac{71,195.9}{3,747.2}$	+	$\frac{647.9}{863.8}$	+	$\frac{2,847.5}{1,898.3}$	+	$\frac{1,399.3}{2,187.3} \frac{\text{mg}}{\text{L}}$	=	$\frac{76,090.6}{8,696.6} \frac{\text{mg}}{\text{L}} = 8.75 \text{ ppm}$
Actual	$\frac{9,888.3}{520.4}$	+	$\frac{647.9}{863.8}$	+	$\frac{2,847.5}{1,898.3}$	+	$\frac{1,399.3}{2,187.3} \frac{\text{mg}}{\text{L}}$	=	$\frac{14,783.0}{5,469.9} \frac{\text{mg}}{\text{L}} = 2.70 \text{ ppm}$

Final Calculation = 5.73 ppm

RESIDENTIAL NITROGEN LOADING CALCULATIONS - EXISTING (9 BR) - Cox

Home: 990 GPD

Job - #9293

Impervious Surfaces: Roof Area: 3,340 ft² Paving Area: 7,340 ft²
 Lot Size: 32,365 ft²
 Natural Area: 21,685 ft² Lawn Area: 1,500 ft²
 Title V Flow: 990 gpd

WASTEWATER

Title V

$$\underline{9} \text{ bedrooms} \times \frac{110}{\text{bedroom}} \times \frac{3.785}{\text{gal}} = \underline{3,747.2} \text{ L/d} \times \frac{35 \text{ mg}}{\text{L}} = \underline{131,150.3} \text{ mg/d}$$

Actual (assume 2.5 people/unit average occupancy within the town)

$$\underline{9} \text{ bedrooms} \times \frac{110}{\text{bedroom}} \times \frac{3.785}{\text{gal}} \times \frac{2.5}{18} = \underline{520.4} \text{ L/d} \times \frac{35 \text{ mg}}{\text{L}} = \underline{18,215.3} \text{ mg/d}$$

IMPERVIOUS SURFACES

Roof

$$\underline{3,340} \times \frac{40 \text{ in}}{\text{yr}} \times \frac{\text{ft}}{12 \text{ in}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{863.8} \text{ L/d} \times \frac{0.75 \text{ mg}}{\text{L}} = \underline{647.9} \text{ mg/d}$$

Paving

$$\underline{7,340} \times \frac{40 \text{ in}}{\text{yr}} \times \frac{\text{ft}}{12 \text{ in}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{1898.3} \text{ L/d} \times \frac{1.5 \text{ mg}}{\text{L}} = \underline{2,847.5} \text{ mg/d}$$

LAWN

$$\underline{1,500} \times \frac{3 \text{ lbs}}{1,000 \text{ ft}^2/\text{yr}} \times \frac{1 \text{ yr}}{365 \text{ d}} \times \frac{454,000}{\text{lb}} \times 0.25 = \underline{1,399.3} \text{ mg/d}$$

NATURAL

$$32,365 - 10,680 = 21,685 \text{ ft}^2$$

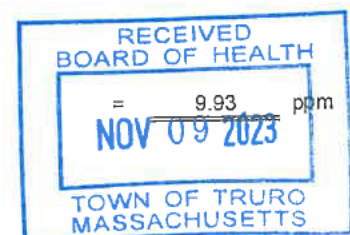
$$\underline{21,685} \times \frac{1.3}{\text{yr}} \times \frac{28.32 \text{ L}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} = \underline{2,187.3} \text{ L/d}$$

SUMMARY

$$\text{Title V Flow} \quad \frac{131,150.3}{3,747.2} + \frac{647.9}{863.8} + \frac{2,847.5}{1,898.3} + \frac{1,399.3}{2,187.3} \frac{\text{mg}}{\text{L}} = \frac{136,045.0}{8,696.6} \frac{\text{mg}}{\text{L}} = 15.64 \text{ ppm}$$

$$\text{Actual} \quad \frac{18,215.3}{520.4} + \frac{647.9}{863.8} + \frac{2,847.5}{1,898.3} + \frac{1,399.3}{2,187.3} \frac{\text{mg}}{\text{L}} = \frac{23,110.0}{5,469.9} \frac{\text{mg}}{\text{L}} = 4.22 \text{ ppm}$$

Final Calculation





J.M. O'REILLY & ASSOCIATES, INC.

PROFESSIONAL ENGINEERING, LAND SURVEYING & ENVIRONMENTAL SERVICES

Site Development • Property Line • Subdivision • Sanitary • Land Court • Environmental Permitting

TO: Abutters

FROM: J. M. O'REILLY & ASSOCIATES, INC.
1573 MAIN STREET
BREWSTER, MA 02631

RE: 22 Shore Road, Truro, MA
Board of Health Variance Request

DATE: November 9, 2023

*This was revised
to address correct
meeting date.*

On behalf of our client, Marion Joseph, c/o Doug Cox J. M. O'REILLY & ASSOCIATES, INC. is requesting the Truro Board of Health to review and grant the following Variances from the Truro Board of Health regulations for the proposed sewage system upgrade at the above referenced property.

The project involves the replacement of an old cesspools with a new sewage system with I/A Treatment to serve the existing dwelling. The project does not include any improvements to the dwelling or cottages other than the replacement of the cesspool systems.

As required due to existing site location & onsite conditions we are seeking a variance from 310 CMR 15.211 (Min Setback Distances) & Truro Board of Health Regulations: Variance Requests are as follows:

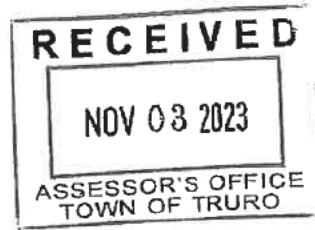
1. SAS not 25 feet from catch basin (leaching)
20' provided 5' Variance Requested

A meeting has been scheduled with the Board of Health at Truro Town Hall on November 21, 2023 at 4:30 pm to discuss the proposal in greater detail. If you plan to attend, please contact the Town or visit the Truro Health Department webpage for further details.



TOWN OF TRURO

Assessors Office Certified Abutters List Request Form



DATE: 11/3/23

NAME OF APPLICANT: Doug Cox

NAME OF AGENT (if any): John O'Reilly, P.E., P.L.S (Alyson Wright)

MAILING ADDRESS: PO Box 1773, Brewster, MA 02631

CONTACT: HOME/CELL 508-896-6601 EMAIL awright@jmoreillyassoc.com

PROPERTY LOCATION: 22 Shore Road
(street address)

PROPERTY IDENTIFICATION NUMBER: MAP 39 PARCEL 139 EXT. (if condominium)

ABUTTERS LIST NEEDED FOR:
(please check all applicable)

FEE: \$15.00 per checked item

(Fee must accompany the application unless other arrangements are made)

<input checked="" type="checkbox"/> Board of Health ⁵	<input type="checkbox"/> Planning Board (PB)	<input type="checkbox"/> Zoning Board of Appeals (ZBA)
<input type="checkbox"/> Cape Cod Commission	<input type="checkbox"/> Special Permit ¹	<input type="checkbox"/> Special Permit ¹
<input type="checkbox"/> Conservation Commission ⁴	<input type="checkbox"/> Site Plan ²	<input type="checkbox"/> Variance ¹
<input type="checkbox"/> Licensing	<input type="checkbox"/> Preliminary Subdivision ³	
Type: _____	<input type="checkbox"/> Definitive Subdivision ³	
	<input type="checkbox"/> Accessory Dwelling Unit (ADU) ²	
<input type="checkbox"/> Other _____	(Fee: Inquire with Assessors)	

(Please Specify)

Note: Per M.G.L., processing may take up to 10 calendar days. Please plan accordingly.

THIS SECTION FOR ASSESSORS OFFICE USE ONLY

Date request received by Assessors: 11/3/2023

Date completed: 11/5/2023

List completed by: J. Frank

Date paid: 11/3/2023 Cash/Check online CC

¹ Abutters, owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line.

² Abutters to the subject property, abutters to the abutters, and owners of properties across the street from the subject property.

³ Landowners immediately bordering the proposed subdivision, landowners immediately bordering the immediate abutters, and landowners located across the streets and ways bordering the proposed subdivision. **Note:** For Definitive Subdivision only, responsibility of applicant to notify abutters and produce evidence as required.

⁴ All abutters within 300 feet of parcel, except Beach Point between Knowles Heights Road and Provincetown border, in which case it is all abutters within 100 feet. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.

⁵ Abutters sharing any boundary or corner in any direction – including land across a street, river or stream. **Note:** Responsibility of applicant to notify abutters and produce evidence as required.



TRURO ASSESSORS OFFICE
PO Box 2012 Truro, MA 02666
Telephone: (508) 214-0921
Fax: (508) 349-5506

Date: November 3, 2023

To: Alyson Wright of J.M. O'Reilly Associates, Agent for Doug Cox

From: Assessors Department

Certified Abutters List: 22 Shore Road (Map 39, Parcel 139)

Board of Health

Attached is a combined list of abutters for 22 Shore Road.

The current owner is Marion O. Joseph.

The names and addresses of the abutters are as of October 27, 2023 according to the most recent documents received from the Barnstable County Registry of Deeds.

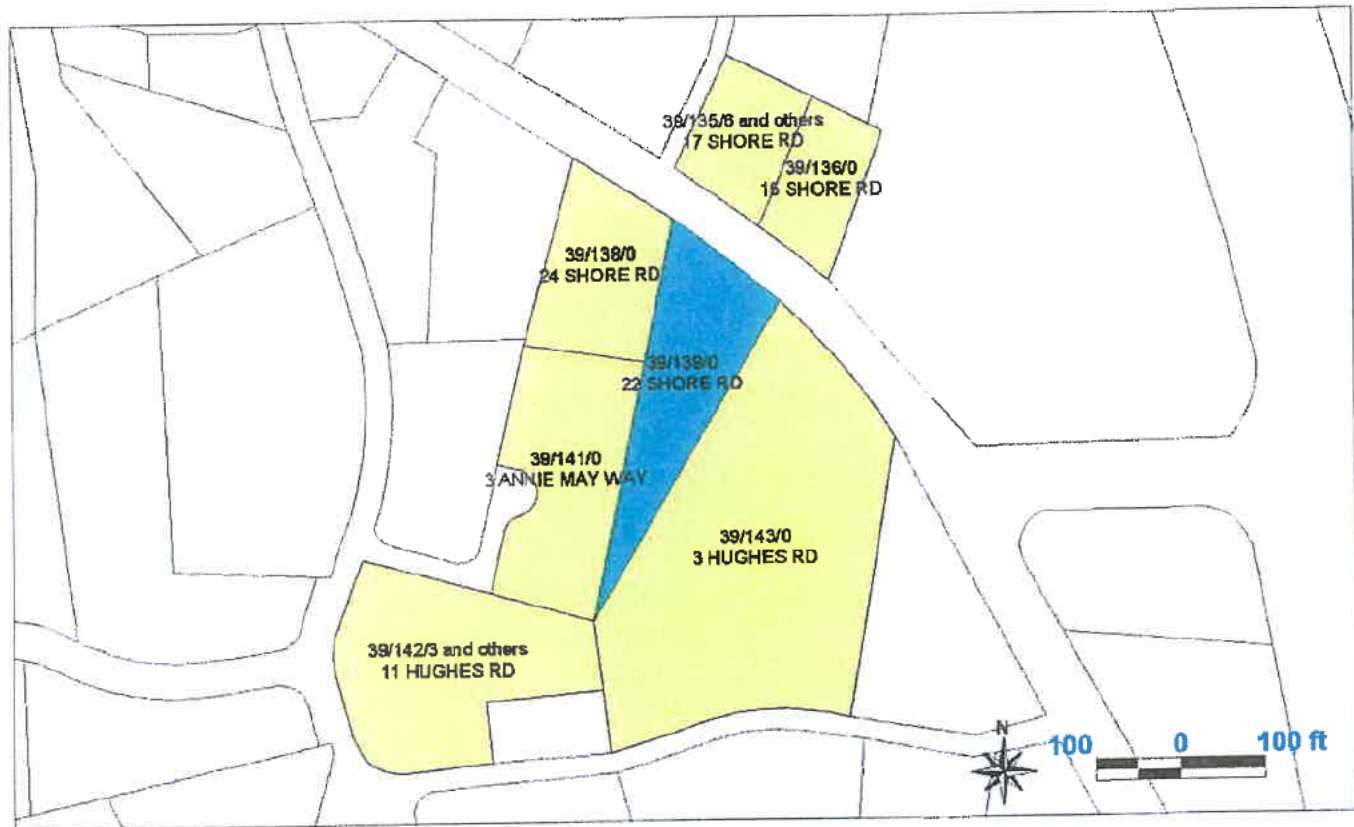
Certified by:

Olga Farrell
Assessing Clerk

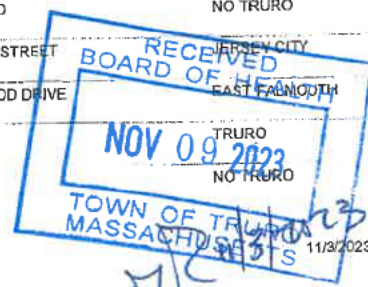
22 Shore Road
Map 39, Parcel 139
Board of Health

TOWN OF TRURO, MA
BOARD OF ASSESSORS
P.O. BOX 2012, TRURO MA 02666


Custom Abutters List



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
6145	39-135-1-R	TIMOTHY P. DONOVAN REVOC. TRUST TRS: TIMOTHY P. DONOVAN	17 SHORE RD	7 PROSPECT HEIGHTS	PETERBOROUGH	NH	03458
6146	39-135-2-R	LAWTON MARY BETH	17 SHORE RD	54 ELLERY ST, APT 3	CAMBRIDGE	MA	02138
6147	39-135-3-R	DERAY MICHAEL R	17 SHORE RD	37688 BREEZE WAY	PALM DESERT	CA	92211
6148	39-135-4-R	HILER SCOTT H	17 SHORE RD	37 OAK PLACE	BERGENFIELD	NJ	07621
6151	39-135-5-R	VANDERBECK MATTHEW H & ANNE	17 SHORE RD	1215 STATE ROUTE 92	STUYVESANT	NY	12173-2108
6152	39-135-6-R	GROSS ELYSE	17 SHORE RD	132 ALLYNDALE DRIVE	STRATFORD	CT	06514
6153	39-135-7-R	ORTIZ-TEISSONNIERE JULIO	17 SHORE RD	CALLE DEL SOL 105, APT 103	OLD SAN JUAN	PR	00901
6154	39-135-8-R	MOORE MAXWELL MARK & THERESA	17 SHORE RD	105 EVAN COURT	CRANBERRY TOWNSHIP	PA	16066
6155	39-135-9-R	LEVINE MARY LOFTUS & PAUL H	17 SHORE RD	10 SHIPYARD DR, UNIT 409	HINGHAM	MA	02043
6156	39-135-10-R	LOWRIE WALTER R & HOLLYWOOD AMY M	17 SHORE RD	28 HURLBUT ST, APT 5	CAMBRIDGE	MA	02138
6965	39-135-11-E	SHORE ROAD CONDO TRUST	17 SHORE RD	17 SHORE RD	NO TRURO	MA	02652
1261	39-136-0-R	GARVER GLENN C & MCCARTHY MELISSA F	15 SHORE RD	102 MORRIS STREET	JERSEY CITY	NJ	07302
1263	39-138-0-R	S24, LLC	24 SHORE RD	84 DEEPWOOD DRIVE	EAST FAIRMOUTH	MA	02536
1264	39-139-0-R	JOSEPH MARION O	22 SHORE RD	PO BOX 836	TRURO	MA	02666
1265	39-141-0-R	MICHAEL ROBERT SILVA REV TRUST TRS: SILVA MICHAEL ROBERT	3 ANNIE MAY WAY	PO BOX 534	NO TRURO	MA	02652

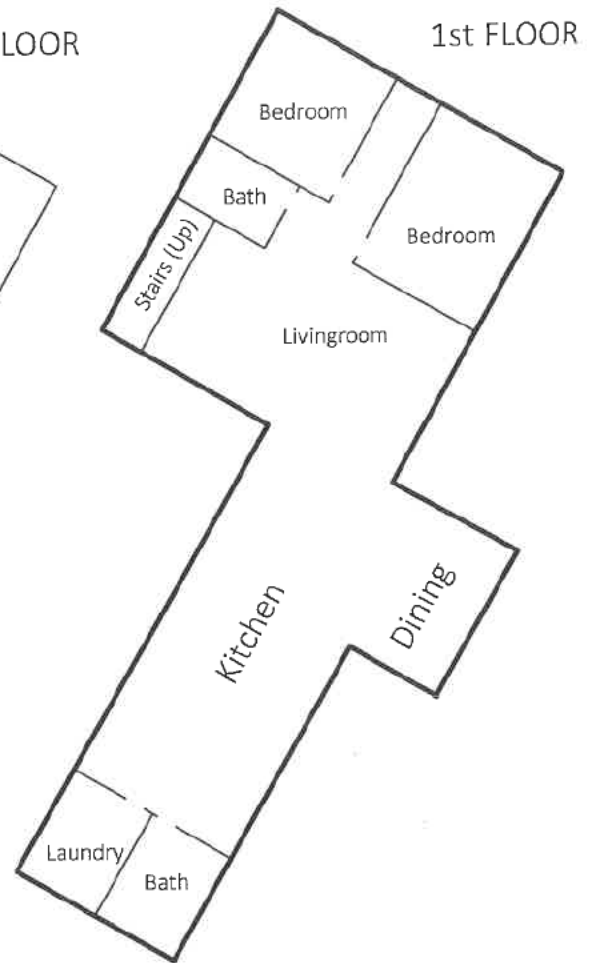


Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
6159	39-142-1-R	HAYDON KATHERINE CANNING & SEID MARY JEAN	11 HUGHES RD	5 LYN DRIVE	GRANBY	MA	01033
6160	39-142-2-R	LITTLE ROBERT & MCCURDY-LITTLE LORRAINE	11 HUGHES RD	61 RAMPART RD	NORWALK	CT	06854
6161	39-142-3-R	LMG TRUST TRS:SANDRA MANLEY,JOSH GILLIS	11 HUGHES RD	1 FAIRFIELD STREET	SALEM	MA	01970
6162	39-142-4-R	EVAUL REALTY TRUST TRS: EVAUL WM H JR &SHERWOOD P	11 HUGHES RD	PO BOX 958	TRURO	MA	02665-0958
6956	39-142-5-E	MOORLANDS CONDO TRUST	11 HUGHES RD	11 HUGHES RD	TRURO	MA	02666
1268	39-143-0-R	ORR STEPHEN & JACOBS JAMES C	3 HUGHES RD	8510 34TH AVE, UNIT 622	JACKSON HEIGHTS	NY	11372

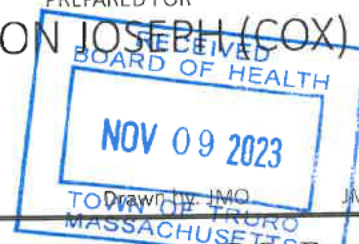
11/3/2023 

39-135-1-R	39-135-2-R	39-135-3-R
TIMOTHY P DONOVAN REVOC. TRUST TRS: TIMOTHY P DONOVAN 7 PROSPECT HEIGHTS PETERBOROUGH, NH 03458	LAWTON MARY BETH 54 ELLERY ST, APT 3 CAMBRIDGE, MA 02138	DERAY MICHAEL R 37688 BREEZE WAY PALM DESERT, CA 92211
39-135-4-R	39-135-5-R	39-135-6-R
HILER SCOTT H 37 OAK PLACE BERGENFIELD, NJ 07621	VANDERBECK MATTHEW H & ANNE 1215 STATE ROUTE 92 STUYVESANT, NY 12173-2106	GROSS ELYSE 132 ALLYNDALE DRIVE STRATFORD, CT 06614
39-135-7-R	39-135-8-R	39-135-9-R
ORTIZ-TEISSONNIERE JULIO CALLE DEL SOL 105, APT 103 OLD SAN JUAN, PR 00901	MOORE MAXWELL MARK & THERESA 105 EVAN COURT CRANBERRY TOWNSHIP, PA 16066	LEVINE MARY LOFTUS & PAUL H 10 SHIPYARD DR, UNIT 409 HINGHAM, MA 02043
39-135-10-R	39-135-11-E	39-136-0-R
LOWRIE WALTER R & HOLLYWOOD AMY M 28 HURLBUT ST, APT 5 CAMBRIDGE, MA 02138	SHORE ROAD CONDO TRUST 17 SHORE RD NO TRURO, MA 02652	GARVER GLENN C & MCCARTHY MELISSA F 102 MORRIS STREET JERSEY CITY, NJ 07302
39-138-0-R	39-139-0-R	39-141-0-R
S24, LLC 34 DEEPWOOD DRIVE EAST FALMOUTH, MA 02536	JOSEPH MARION O PO BOX 836 TRURO, MA 02666	MICHAEL ROBERT SILVA REV TRUST TRS: SILVA MICHAEL ROBERT PO BOX 534 NO TRURO, MA 02652
39-142-1-R	39-142-2-R	39-142-3-R
HAYDON KATHERINE CANNING & SEID MARY JEAN 5 LYN DRIVE GRANBY, MA 01033	LITTLE ROBERT & MCCURDY-LITTLE LORRAINE 61 RAMPART RD NORWALK, CT 06854	LMG TRUST TRS: SANDRA MANLEY, JOSH GILLIS 1 FAIRFIELD STREET SALEM, MA 01970
39-142-4-R	39-142-5-E	39-143-0-R
EVAUL REALTY TRUST TRS: EVAUL WM H JR & SHERWOOD P PO BOX 958 TRURO, MA 02666-0958	MOORLANDS CONDO TRUST 11 HUGHES RD TRURO, MA 02666	ORR STEPHEN & JACOBS JAMES C 8510 34TH AVE, UNIT 622 JACKSON HEIGHTS, NY 11372





FLOOR PLANS
FOR
22 SHORE ROAD, TRURO
PREPARED FOR
MARION JOSEPH (COX)



JMO-9293

GENERAL NOTES:

- A.) NEITHER DRIVEWAYS NOR PARKING AREAS ARE ALLOWED OVER SEPTIC SYSTEM UNLESS H-20 COMPONENTS ARE USED.
- B.) THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE SYSTEM AS DESIGNED UNLESS CONSTRUCTED AS SHOWN. ANY CHANGES SHALL BE APPROVED IN WRITING.
- C.) CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF WORK.

CONSTRUCTION NOTES:

- 1.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE ENVIRONMENTAL CODE, TITLE 5, AND THE REQUIREMENTS OF THE LOCAL BOARD OF HEALTH.
- 2.) SEPTIC TANK(S), GREASE TRAP(S), DOSING CHAMBER(S) AND DISTRIBUTION BOX(ES) SHALL BE SET ON A LEVEL STABLE BASE WHICH HAS BEEN MECHANICALLY COMPACTED, OR ON A 6 INCH CRUSHED STONE BASE.
- 3.) SEPTIC TANK(S) SHALL MEET ASTM STANDARD C1127-93 AND SHALL HAVE AT LEAST THREE 20" DIAMETER MANHOLES. THE MINIMUM DEPTH FROM THE BOTTOM OF THE SEPTIC TANK TO THE FLOW LINE SHALL BE 48".
- 4.) SCHEDULE 40 PVC INLET AND OUTLET TEES SHALL EXTEND A MINIMUM OF 6" ABOVE THE FLOW LINE OF THE SEPTIC TANK AND SHALL BE INSTALLED ON THE CENTERLINE OF THE TANK DIRECTLY UNDER THE CLEANOUT MANHOLE.
- 5.) RAISE COVERS OF THE SEPTIC TANK AND DISTRIBUTION BOX WITH PRECAST CONCRETE WATER TIGHT RISERS OVER INLET AND OUTLET TEES TO WITHIN 6" OF FINISH GRADE, OR AS APPROVED BY THE LOCAL BOARD OF HEALTH AGENT.
- 6.) PIPING SHALL CONSIST OF 4" SCHEDULE 40 PVC OR EQUIVALENT. PIPE SHALL BE LAID ON A MINIMUM CONTINUOUS GRADE OF NOT LESS THAN 1%.
- 7.) DISTRIBUTION LINES FOR SOIL ABSORPTION SYSTEM (AS REQUIRED) SHALL BE 4" DIAMETER SCHEDULE 40 PVC LAID AT 0.005 FT/FT. LINE SHALL BE CAPPED AT END OR AS NOTED.
- 8.) OUTLET PIPES FROM DISTRIBUTION BOX SHALL REMAIN LEVEL FOR AT LEAST 2' BEFORE PITCHING TO SOIL ABSORPTION SYSTEM. WATER TEST DISTRIBUTION BOX TO ENSURE EVEN DISTRIBUTION.
- 9.) DISTRIBUTION BOX SHALL HAVE A MINIMUM SUMP OF 6" MEASURED BELOW THE OUTLET INVERT.
- 10.) BASE AGGREGATE FOR THE LEACHING FACILITY SHALL CONSIST OF 3/4" TO 1-1/2" DOUBLE WASHED NATIVE STONE FREE OF IRON, FINES AND DUST AND SHALL BE INSTALLED BELOW THE CROWN OF THE DISTRIBUTION LINE TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM. BASE AGGREGATE SHALL BE COVERED WITH A LAYER OF FILTER FABRIC OR APPROVED EQUIVALENT.
- 11.) VENT SOIL ABSORPTION SYSTEM WHEN DISTRIBUTION LINES EXCEED 50 FEET; WHEN LOCATED EITHER IN WHOLE OR IN PART UNDER DRIVEWAYS, PARKING AREAS, TURNING AREAS OR OTHER IMPERVIOUS MATERIAL; OR WHEN PRESSURE DOSED.
- 12.) SOIL ABSORPTION SYSTEM SHALL BE COVERED WITH A MINIMUM OF 9" OF CLEAN MEDIUM SAND (EXCLUDING TOPSOIL).
- 13.) FINISH GRADE SHALL BE A MAXIMUM OF 36" OVER THE TOP OF ALL SYSTEM COMPONENTS, INCLUDING THE SEPTIC TANK, DISTRIBUTION BOX, DOSING CHAMBER AND SOIL ABSORPTION SYSTEM. SEPTIC TANKS SHALL HAVE A MINIMUM COVER OF 9".
- 14.) FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLIANCE, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE SYSTEM.

SYSTEM DESIGN CALCULATIONS:

SEWAGE DESIGN FLOW:
9 BEDROOM DWELLING @ 110 GPD = 990 GPD

LEACHING CAPACITY REQUIRED:
9 BEDROOMS (MAX.) @ 110 GPD = 990 GPD REQUIRED

SEPTIC TANK CAPACITY REQUIRED:
FIRST TANK = 990 GPD @ 200% = 1,980 GAL. REQUIRED
SECOND TANK = 990 GPD @ 100% = 990 GAL. REQUIRED

SEPTIC TANK CAPACITY PROVIDED:
TWO COMPARTMENT TANK WITH TREATMENT UNIT- SEE BELOW

LEACHING CAPACITY PROVIDED:
A CONTACTOR FIELD DRAIN C-4 PROVIDES 6.7 SF/LF OF LEACHING;
AT 8 FEET LONG, EACH UNIT PROVIDES 53.6 SF/UNIT OF LEACHING AREA
 $Vt = [25 \text{ UNITS AT } 53.6 \text{ SF/UNIT}] \times 0.74 \text{ GPD/SF} = 991.6 \text{ GPD}$
 $Vt = 991 \text{ GPD} > 990 \text{ REQUIRED}$

INSTALL:
ONE (1)- 3000 GALLON SEPTIC TANK - 2 COMPARTMENT TANK (USE STPC730C BY SHOREY)
ONE (1)- 1,500 GALLON S.T.A.A.R. TREATMENT UNIT 1.0- MFG BIO-MICROBICS- PROVISIONAL PERMIT
ONE (1)- 5 OUTLET DISTRIBUTION BOX (H-20 RATED)
TWENTY-FIVE (25)- CONTACTOR FIELD DRAIN UNITS IN FIELD CONFIGURATION

NOTE: A GARBAGE DISPOSAL IS NOT PERMITTED WITH THIS DESIGN.

- 15.) SUBSURFACE COMPONENTS OF A SYSTEM SHALL NOT BE BACKFILLED OR OTHERWISE CONCEALED FROM VIEW UNTIL A FINAL INSPECTION HAS BEEN CONDUCTED BY THE APPROVING AUTHORITY AND PERMISSION HAS BEEN GRANTED BY THE APPROVING AUTHORITY TO BACKFILL THE SYSTEM. THE DESIGNER SHALL INSPECT THE CONSTRUCTION AFTER THE INITIAL EXCAVATION, PRIOR TO BACKFILLING, AND DURING BACKFILLING. IN ADDITION, THE FINAL INSPECTION OF THE SYSTEM SHALL BE CONDUCTED BY THE APPROVING AUTHORITY, THE SYSTEM INSTALLER AND DESIGNER PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE PURSUANT TO 310 CMR 15.021(3). ANY COMPONENT OF THE SYSTEM WHICH HAS BEEN COVERED WITHOUT SUCH PERMISSION SHALL BE UNCOVERED UPON REQUEST OF THE APPROVING AUTHORITY OR THE DEPARTMENT.
- 16.) SOIL REMOVAL: ALL TOPSOIL (A HORIZON) AND SUBSOIL (B HORIZON) SHALL BE REMOVED FOR A DISTANCE OF 5' FROM THE SOIL ABSORPTION SYSTEM DOWN TO THE CLEAN SAND LAYER. AREA TO BE BACKFILLED WITH CLEAN SAND AND COMPACTED TO MINIMIZE SETTLING.
- 17.) INSTALLER SHALL CONFIRM AND VERIFY ALL INVERT ELEVATIONS PRIOR TO INSTALLATION OF ANY SEPTIC SYSTEM COMPONENTS.
- 18.) ENGINEER SHALL VERIFY SOILS CONDITIONS FOR THE S.A.S., PRIOR TO THE INSTALLATION OF THE FIELD DRAIN UNITS.
- 19.) INSTALL A 45-FOOT LONG 40 ML HOPE LINER FROM EL 10.8 TO EL 6.8 AS SHOWN ON PLAN.
- 20.) EXISTING CESSPOOLS TO BE PUMPED DRY, FILLED WITH CLEAN SAND, AND ABANDONED IN PLACE OR REMOVED.
- 21.) INSTALLER TO CONFIRM LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO START OF CONSTRUCTION.
- 22.) WATER/SEWER CROSSING: THE WASTE LINES SHALL EITHER BE A 20' SECTION OF 4" DIA. PVC PIPE CENTERED OVER THE WATER LINE OR SLEEVED IN A 6" PVC PIPE TO PROVIDE THE 10 FOOT MINIMUM SEPARATION TO WATER LINE.
- 23.) ALL 4" PVC CLEANOUTS SHALL BE BROUGHT TO FINISH GRADE. CLEANOUTS SHALL BE MARKED WITH A PIECE OF #5 REBAR FOR FUTURE LOCATION.

SOIL TEST LOGS:

TEST HOLE 1: EL=11.1±					
DEPTH FROM SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0-8"	A	FINE LOAMY SAND	10YR 4/1	NONE	
8-21"	B	MEDIUM LOAMY SAND	10YR 5/8	NONE	PERC AT 46" (<2 MIN/INCH)
21-93"	C	MEDIUM SAND	10YR 5/6	NONE	WATER FOUND AT 93" (EL=3.3)

TEST HOLE 2: EL=11.5±					
DEPTH FROM SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER
0-9"	A	FINE LOAMY SAND	10YR 4/1	NONE	
9-22"	B	MEDIUM LOAMY SAND	10YR 5/8	NONE	
22-98"	C	MEDIUM SAND	10YR 5/6	NONE	WATER FOUND AT 98" (EL=3.3)

DATE OF TESTING: 10-5-22
PERCOLATION RATE: LESS THAN 2 MIN/INCH IN "C" LAYERS.
WITNESSED BY: JOHN O'REILLY, P.E., J.M. O'REILLY & ASSOCIATES, INC.
A. DAVIS, HEALTH AGENT, TRURO HEALTH DEPARTMENT
WATER ENCOUNTERED AS NOTED
USE A LOADING RATE OF 0.74 GPD/SF FOR SIZING OF SOIL ABSORPTION SYSTEM.

GROUNDWATER ADJUSTMENT NOTE:

GROUNDWATER FOUND AT EL=3.3±
INDEX WELL: TSW-89, ZONE A
ADJUSTMENT FOR SEPTEMBER 2022 = 1.7 FEET
ESTIMATED HIGH GROUNDWATER:
 $3.3 + 1.7 = 5.0±$

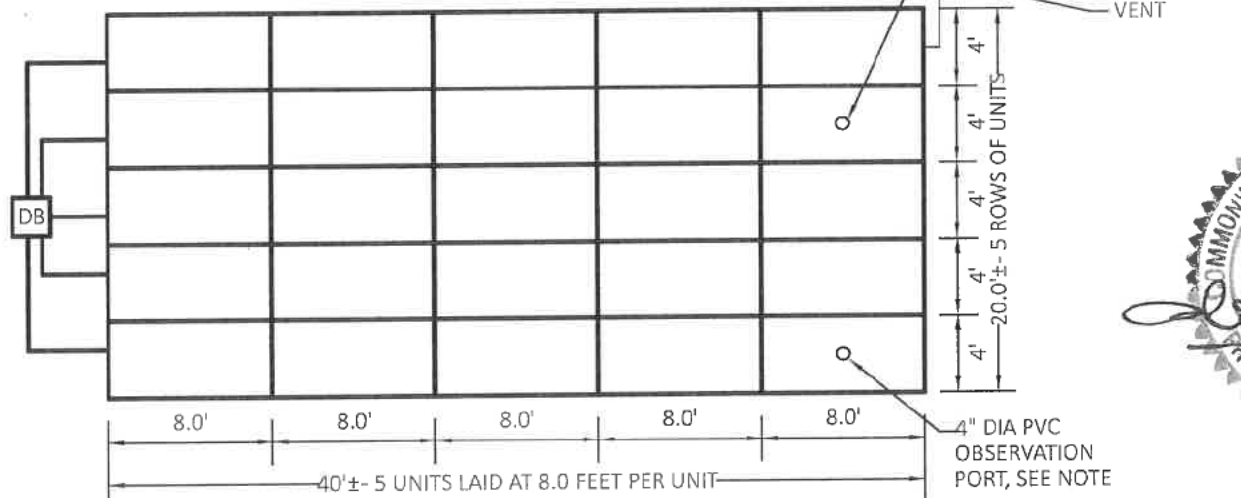
BUOYANCY CALCULATIONS:

SEPTIC TANK:
3,000 GALLON SEPTIC TANK HAS UPLIFT FORCE OF:
 $F = (2.5'D) \times 7' \times 17' \times 62.4 \text{ LBS/CF} = 18,564 \text{ LBS (UP)}$
3,000 GALLON SEPTIC TANK WEIGHS = 40,500 LBS (DOWN) OK
USE SHOREY PRECAST TANK STPC730C OR APPROVED EQUAL

TREATMENT UNIT:
STAAR 1.0 TREATMENT UNIT HAS UPLIFT FORCE OF:
 $F = (2.4 \times 6.08' \times 10.17') \times 62.4 \text{ LBS/CF} = 9,265 \text{ LBS (UP)}$
STAAR 1.0 TANK WEIGHS = 13,600 LBS (DOWN) OK
USE SHOREY PRECAST TANK Staar15M OR APPROVED EQUAL

SAS DETAIL:

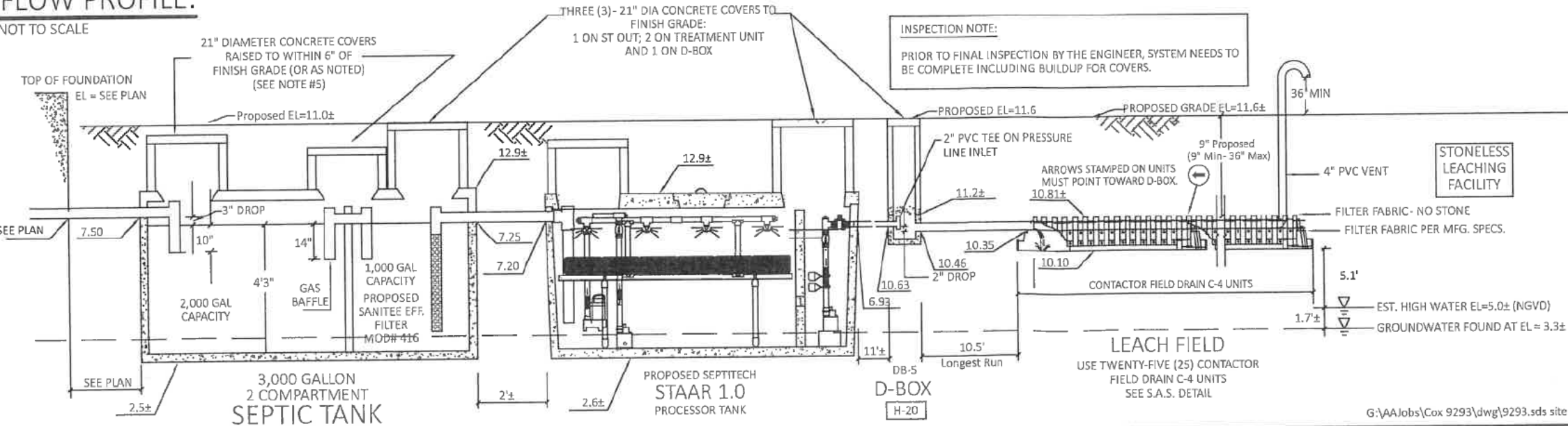
SCALE: 1" = 10'



SHEET 2 OF 2

FLOW PROFILE:

NOT TO SCALE



MARION O. JOSEPH
NORTH TRURO, BARNSTABLE COUNTY, MA

SEWAGE DISPOSAL SYSTEM DESIGN & NOTES
22 SHORE ROAD, NORTH TRURO, MA

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services

1673 Main Street - Route 8A
P.O. Box 1773
Brewster, MA 02831 (508)898-6601 Office (508)898-6602 Fax
DATE: 11-1-2023 SCALE: As Noted BY: jmo CHECK: JMO JOB NUMBER: JMO-9293

Fee: \$75.00

**TRURO HEALTH &
CONSERVATION DEPARTMENT**
24 Town Hall Road, Truro 02666

APPLICATION FOR BOARD OF HEALTH WAIVER OF TIME

BOH Reg. Section VI, Article 3(1)a. Required Upgrade Upon Property Transfer

Date: 09/27/2023 **Board of Health Hearing Date:** 12/05/2023

Address of Property: 18 Sandpiper Road

Map & Parcel: 58-36-0

Anticipated Date of Property Transfer: January 12, 2024

Length of Time Requested to Complete Upgrade: 6 months

Design Engineer/Sanitarian: ** Jason Ellis **Phone #:** _____

****system has been designed and installed. waiver is needed for buyers to have the Title V connected to the house after closing.**

SELLER'S INFORMATION:

Seller/Property Owner's Name: Hila Feil

Mailing Address: PO BOX 1214 TRURO, MA 02666

Phone #: _____ **Fax:** _____ **Email:** _____

Seller's R.E. Broker: Rose Kennedy **Phone #:** 508-560-0866

Email: rose.kennedy@compass.com

BUYER'S INFORMATION:

Buyer's Name: Karen & Peter Parker

Mailing Address: 174 Walden Street, Concord, MA 01742

Phone #: _____ **Fax:** _____ **Email:** _____

Buyer's R.E. Broker: Amanda Robinson **Phone #:** 508-208-4386

Email: mrobinson@bhhscareshores.com

Please attach the following to this form: (1) a narrative explaining why you can't comply with Section VI, Article 3(1)a, Required Upgrade Upon Property Transfer, and (2) a statement from your engineer/designer, stating that they have been retained by the seller/buyer to complete the Title 5 upgrade.

DocuSigned by:

Hila Feil

Signature (Property Owner)

11/27/2023

Date

DocuSigned by:

E. Peter Parker

Signature (Buyer)

11/27/2023

Date

DocuSigned by:

Kanth

473F#2E0D4FF4F#...

11/27/2023

11/1/2023 A-Davis inspected new system,
only thing not done was the big sewer.

Arozana Davis

From: Rose Kennedy <rose.kennedy@compass.com>
Sent: Tuesday, November 28, 2023 11:27 AM
To: Arozana Davis
Subject: Re: signed waiver attached and completed

See below the email from the seller. Let me know if it is sufficient or if I need to add to it. For reference, the quote we received for plumbing was for \$38k.

To the Truro Board Of Health

I have installed a new Title 5 septic system at my house on 18 Sandpiper Road, which is being sold in January 2024. I do not have the funds to hook up the new system, which will require considerable replumbing. I respectfully request a waiver for the buyers to hook up the system.

Thanking you in advance for your consideration,

Yours,

Hila Feil

917-836-5000

On Tue, Nov 28, 2023 at 10:07 AM Arozana Davis <ADavis@truro-ma.gov> wrote:

Rose, can you give me a little narrative as to why the current homeowner can't finish the project? I know it has to do with cost of plumbing, etc., but I need the story in writing so I can make it a part of the application.

Thank you!

Arozana

PHONE: 508-214-0202

EMAIL: adavis@truro-ma.gov

WEB: www.truro-ma.gov

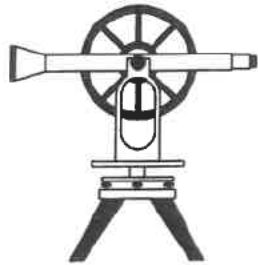
NOT TO SCALE



SANDPIPER ROAD

PCL. 35
VACANT

J.C. ELLIS DESIGN



P.O. BOX 81
NORTH EASTHAM, MA 02651
(508)240-2220
Email: jason@jcellisdesign.com



SON C. ELLIS, R.S.

SURVEY PLAN REFERENCE: 13
L.C.P. 26481 B SHEET 3
L.C.P. 26481 C SHEET 5
THIS PLAN IS FOR SEPTIC SYSTEM
DESIGN PURPOSES ONLY.
THIS PLAN IS NOT FOR BOUNDARY
DETERMINATION.
PROPERTY OWNER AND
CONTRACTORS TO VERIFY
ALL WATER LINES AND GAS
UTILITIES ON PROPERTY.

HEALTH DEPARTMENT
TOWN OF TRURO

JUN 20 2023

RECEIVED BY

LOT 22

55,748 S.F.±

S.A.S. DETAIL

SEPTIC SYSTEM UPGRADE PLAN

SUBJECT:

18 SANDPIPER ROAD
TRURO, MA

PREPARED FOR:

HILA FEIL
P.O. BOX 1214
TRURO, MA 02666

ASSESSOR'S
MAP 58 PARCEL 36

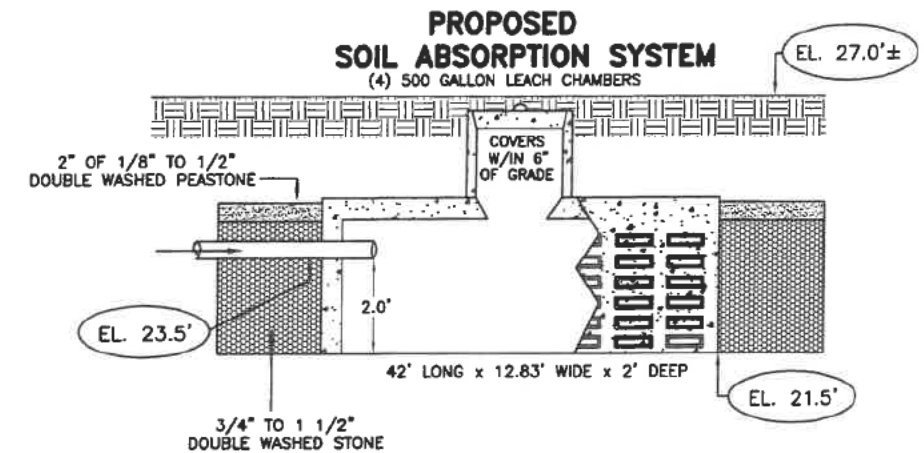
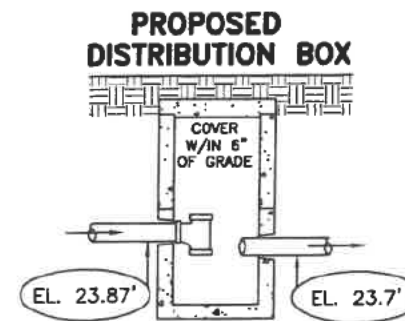
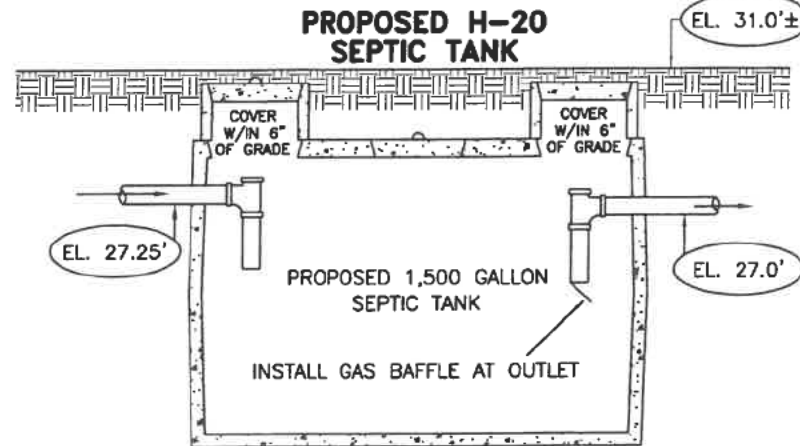
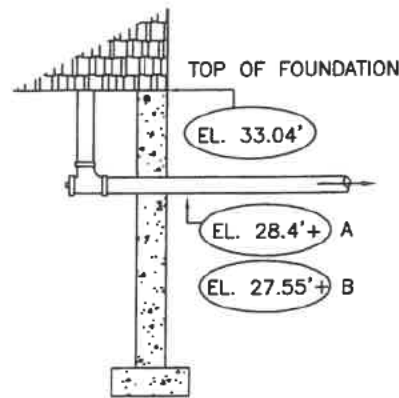
SCALE: 1"=30'

DATE: NOVEMEBER 1, 2022
REV: MAY 23, 2023

SHEET 1 OF 2

SECTION DETAIL – COMPONENTS

NOT TO SCALE



DESIGN CALCULATIONS

FLOW RATE:

5 BEDROOM DWELLING = 550 G/P/D REQUIRED
(110 G/P/D PER BEDROOM x 5 BEDROOMS)
NO GARBAGE GRINDER ALLOWED

PROPOSED SEPTIC TANK:

550 G/P/D x 2 = 1100 G/P/D REQUIRED
USE 1500 GALLON SEPTIC TANK

PROPOSED SOIL ABSORPTION SYSTEM:

PERC RATE = <2 MIN/IN - CLASS I SOIL
SIDEWALL = (42 + 12.83)(2)(2) = 219.32 S.F.
BOTTOM: (42)(12.83) = 538.86 S.F.
(219.32 + 538.86)(0.74) = 561.05 G/P/D PROVIDED
USE: (4) 500 GALLON LEACH CHAMBERS W/ STONE
AS SHOWN IN DETAIL.

NOTES

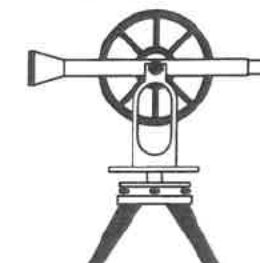
1. PRECAST SEPTIC TANK TO BE H-20 RATED. ANY OTHER COMPONENTS WITH ANY ANTICIPATED VEHICULAR TRAFFIC TO BE H-20 RATED.
2. ELEVATION DATUM IS FROM GIS.
3. MUNICIPAL WATER IS NOT AVAILABLE.
4. ALL CONSTRUCTION TO CONFORM WITH 310 CMR 15.000 AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.
5. INSTALLER/CONTRACTOR TO REVIEW & VERIFY ALL ELEVATIONS AND DETAILS AND REPORT ANY DISCREPANCIES TO DESIGNER PRIOR TO CONSTRUCTION OR ASSUME ALL RESPONSIBILITY.
6. INSTALLER/CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFE WORK AREA, VERIFYING ALL UTILITIES AND NOTIFYING DIG SAFE PRIOR TO CONSTRUCTION.
7. ANY CHANGES TO OR DEVIATIONS FROM THIS PLAN MUST BE APPROVED IN WRITING BY J.C. ELLIS DESIGN CO. AND BOARD OF HEALTH.
8. FINISH COVER OVER COMPONENTS IS NOT TO EXCEED 3' PER 310 CMR 15.000.
9. ALL ABANDONED SEPTIC SYSTEM COMPONENTS TO BE PUMPED DRY AND FILLED WITH CLEAN SAND OR REMOVED AND REPLACED WITH CLEAN SAND.
10. ALL COMPONENTS TO BE PROVIDED WITH WATERTIGHT ACCESS PORTS WITHIN 6" OF FINISH GRADE.
11. ALL SEPTIC TANKS, DISTRIBUTION BOXES AND PIPING TO BE INSTALLED WATERTIGHT.
12. NO KNOWN WELLS EXIST WITHIN 100' OF PROPOSED LEACH AREA.
13. THIS IS NOT A CERTIFIED PLOT PLAN AND UNDER NO CIRCUMSTANCES IS THIS PLAN TO BE USED FOR BUILDING OR ZONING PURPOSES.
14. LEACH AREA TO BE PROVIDED WITH AT LEAST ONE INSPECTION PORT CONSISTING OF A PERFORATED FOUR INCH PIPE PLACED VERTICALLY DOWN INTO THE STONE TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE STONE. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP AND ACCESSIBLE WITHIN 3" OF GRADE.
15. EXCAVATE ALL UNSUITABLE SOIL, ONLY AS NECESSARY, 5' AROUND AND UNDER S.A.S. DOWN TO C LAYER AND REPLACE WITH CLEAN MEDIUM SAND.
16. CONTRACTOR TO TAKE ALL MEANS NECESSARY (FLUSH TESTS ETC.) TO LOCATE AND VERIFY ALL EXISTING BUILDING SEWER LINES PRIOR TO CONSTRUCTION. ALL BUILDING SEWERS TO BE CHANGED, ONLY IF NECESSARY, TO LOCATIONS AND ELEVATIONS SPECIFIED.
17. CONTRACTOR TO INSTALL CLEANOUTS ALONG SEWER LINES BETWEEN SEPTIC TANK AND BUILDING AT ALL BENDS, JUNCTIONS AND 50' INCREMENTS.
18. CONTRACTOR TO TAKE ALL MEANS NECESSARY (FLUSH TESTS ETC.) TO LOCATE AND DECOMMISSION ALL EXISTING CESSPOOLS.

DEEP HOLE DATA

PERFORMED BY: JASON C. ELLIS, R.S., S.E.
WITNESSED BY: AROZANA DAVIS, TRURO BOH
TEST DATE: OCTOBER 24, 2022

#1		#2	
DEPTH	ELEV.	DEPTH	ELEV.
0.00'	26.51'	0.00'	27.19'
2.0'	24.51'	1.33'	25.86'
2.66'	23.85'	1.66'	25.53'
3.0'	23.51'	3.33'	23.86'
10.0'	16.51'	10.16'	17.03'
NO WATER ENCOUNTERED		NO WATER ENCOUNTERED	

J.C. ELLIS DESIGN



P.O. BOX 81
NORTH EASTHAM, MA 02651
(508)240-2220
Email: jason@jcellisdesign.com

SEPTIC SYSTEM UPGRADE PLAN

SUBJECT:

18 SANDPIPER ROAD
TRURO, MA

PREPARED FOR:

HILA FEIL
P.O. BOX 1214
TRURO, MA 02666

ASSESSOR'S
MAP 58 PARCEL 36

DATE: NOVEMBER 1, 2022
REV: MAY 23, 2023

SHEET 2 OF 2



SON C. ELLIS, R.S.

HEALTH DEPARTMENT
TOWN OF TRURO

JUN 20 2023

RECEIVED BY:

Arozana Davis

From: Contact form at truroma <cmsmailer@civicplus.com>
Sent: Tuesday, November 14, 2023 2:14 PM
To: Arozana Davis
Subject: [truroma] 45 Corn Hill septic waiver (Sent by Richard Newburg, [REDACTED])

Hello adavis,

Richard Newburg ([REDACTED]) has sent you a message via your contact form (<https://www.truro-ma.gov/users/adavis/contact>) at truroma.

If you don't want to receive such e-mails, you can change your settings at <https://www.truro-ma.gov/user/61/edit>.

Message:

Hello,

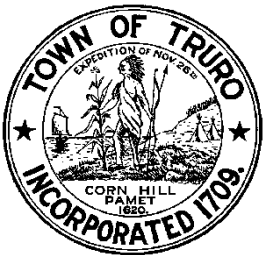
My name is Richard Newburg and I will be the new owner of 45 Corn Hill Road as of November 22. I've been in contact with the Board of Health to discuss the installation of the new septic system. I understand the seller was granted a waiver which is set to expire. I believe the waiver was designed to allow three months for installation based on a closing that was supposed to occur in August of this year. Since the closing did not occur with the previous buyer, and the new closing is set for November 22, I was hoping to also be able to receive the same 90-day waiver/permission to install the new system.

I have been in contact with the designer JC Ellis and the installer Brundage and hope to get started on the install as soon as practical, hopefully beginning of January. I will attend via zoom the December 5 meeting where this matter will be discussed possibly to answer any additional questions. I appreciate your help and attention.

Thank you,

Rich Newburg
[REDACTED]

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



TOWN OF TRURO

HEALTH DEPARTMENT

P.O. Box 2030, Truro MA 02666

Tel: 508-349-7004 x119 or x132 Fax: 508-349-5508

August 8, 2023

**JC Ellis Design Co. Inc.
PO Box 81
North Eastham, MA 02651**

RE: 45 Corn Hill Rd (45-116); Waiver of Time

Dear Mr. Ellis:

Please be advised that the Truro Board of Health at their regularly scheduled meeting on August 1, 2023 made a motion regarding the above-referenced variance requests.

FOR YOUR INFORMATION THE MOTION STATED:

Mr. Koll moved to approve the waiver of time, giving the buyer 90 days from transfer of property (set for 8/15/2023) to install the septic system with the condition that the house remains unoccupied until the system has been installed and certified.

Seconded by Ms. Grimm.

Vote: 3-0-2, motion carries with Ms. Rose and Mr. Rose abstaining.

Should you have any questions, please feel free to contact me at 508-214-0202 or at adavis@truro-ma.gov.

Sincerely,

Arozana Davis, RS
Assistant Health Agent

Emily Beebe

From: Elizabeth Sturdy
Sent: Tuesday, November 14, 2023 4:08 PM
To: Emily Beebe
Subject: RE: 9B Benson Road- prelim subdivision plans

Emily,

My apologies for not saying thank you earlier. I put this up in the packet online and sent to the PB Members.

Thank you,

Elizabeth A. Sturdy (Liz)

Planning Department Assistant
Truro Town Hall
24 Town Hall Road, P.O. Box 2030
Truro, MA 02666
Direct: (508) 214-0935
Fax: (508) 349-5505
esturdy@truro-ma.gov

From: Emily Beebe <EBeeBe@truro-ma.gov>
Sent: Tuesday, November 14, 2023 8:54 AM
To: Elizabeth Sturdy <ESturdy@truro-ma.gov>; Barbara Carboni <bcarboni@truro-ma.gov>; Robin Reid <robin@RobinBReidEsq.com>
Subject: 9B Benson Road- prelim subdivision plans

Good Morning,

I have reviewed this preliminary subdivision plan, and on behalf of the Board of Health make the following comments:

- The 2-lot subdivision has been developed with respect for the Truro Board of Health regulations that remove the area within wetland resources

from upland area, which is the local basis for calculating Nitrogen Loading.

- It appears that future development would be restricted to lot 1, and the upland area of 45,849 sf is suitable to support a 4-bedroom dwelling.
- The shape of the lot appears conducive for the proper siting of a private well and an on-site septic system.

At this time, I make these comments on behalf of the board, although they have not yet formally reviewed the preliminary proposal. They will meet next on December 5, and the preliminary will appear on that agenda as an advisory to the Board of Health, however, we did want to make comment for the benefit of the Planning Board about the preliminary plans.

Once definitive plans have been filed, the Board of Health will review the plans in a timely fashion at a public hearing to make final comments for the Planning Board.

Thank you for your acceptance of our review comments.

Sincerely,

Emily

Emily Beebe

From: Peter Swanson <[REDACTED]>
Sent: Wednesday, November 8, 2023 12:42 PM
To: Emily Beebe
Subject: Re: FW: Secor Lane

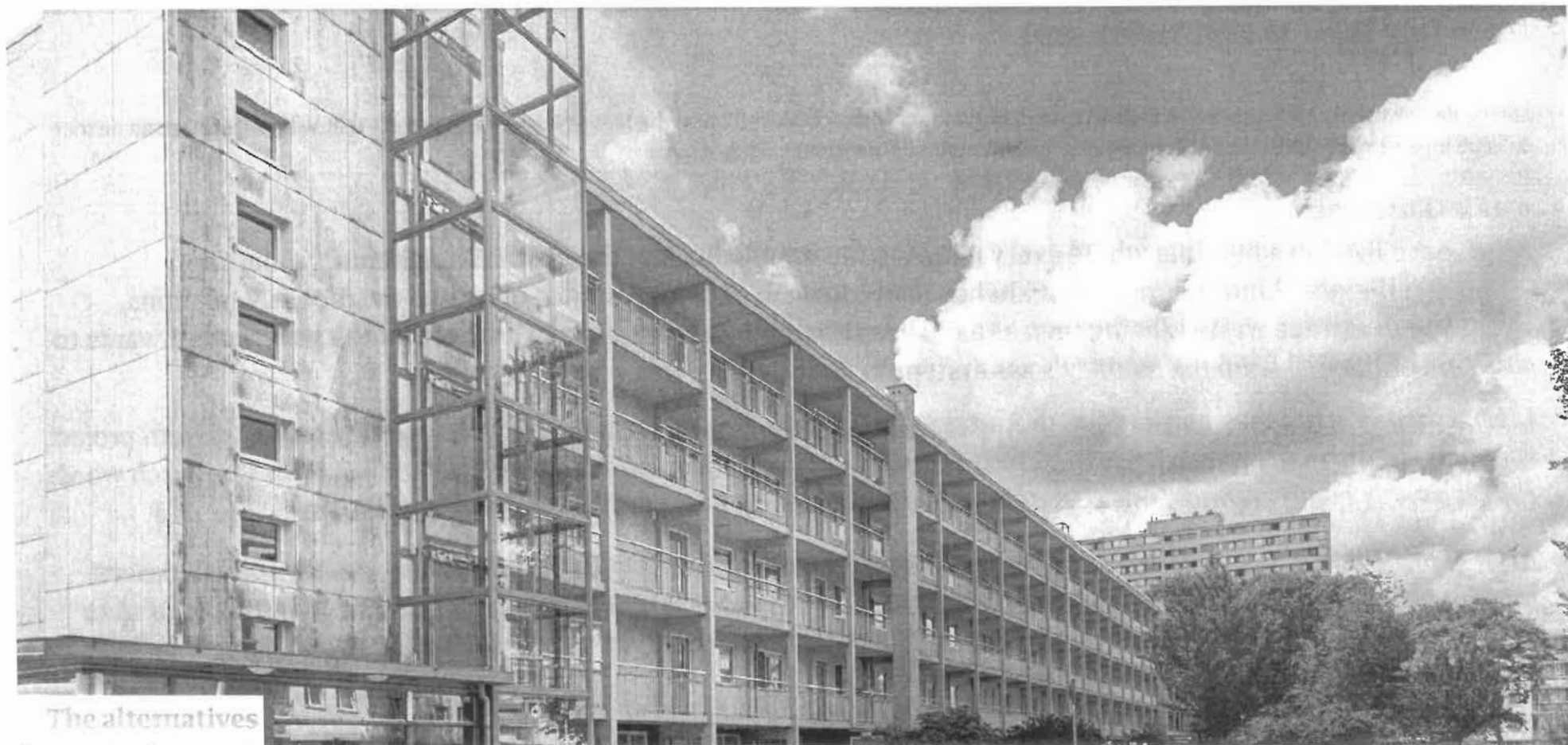
Hello again, Emily -

I am in receipt of the Final Compliance letter "Re: final notice-and ORDER TO CORRECT - SEPTIC SYSTEM UPGRADE" in reference to 12 Secor Lane, my yellow cottage at the edge of the Pamet. I have not been able to follow up on this and lost track of the septage deadline.

The cottage has not been occupied at all in more than 3 1/2 years. I can produce documentation to that effect ((It is on well water and I have Eversource records showing that there has been zero electricity use at that location in that time period)). I would like to discuss with you what my options may be as I have no plans to use the cottage and hope to put it on the market next spring "as is." It needs a new pump, and electrical work in addition to the Title V, before it would be ready for occupancy. It's been entirely off my radar due to personal matters.

I never heard back from Dan and will make another try at reaching him. Thank you in advance for your patience and for responding to this note.

Sincerely,
Peter O. Swanson
[REDACTED]



'A treasure beneath our feet': How the Dutch went down the toilet looking for heat

Sewage waste is now being seen as a reliable heat

source for millions of homes in the Netherlands by Senay Boztas in Amsterdam

Lieven de Key, a housing corporation in Amsterdam, is planning what is believed to be the first sewer warmth project that will tap into a main district sewage pipe to warm 1,600 existing social and student homes. Photograph: Joke Schut

Wed 8 Nov 2023 08.00 EST

I once lived in a building where every morning the double flush of the upstairs neighbour's toilet trip reverberated loudly through our kitchen. Now, instead of being a source of heated neighbourly relations, Dutch sewage waste is being seen as a reliable heat source for millions of homes that the government wants to be unhooked from the country's gas system by 2050.

Lieven de Key, a housing corporation in Amsterdam, is planning what is believed to be the first sewer warmth project that will tap into a main district sewage pipe to warm 1,600 existing social and student homes. After the Dutch words for sewer, *riool*, and warmth, this sustainable, 24/7, year round heat source is dubbed *riothermie*.

After some initial scepticism, the company was slowly won round to the idea of urban heating, says development manager Rienk Postuma. They talked to a company called Liander, which builds underground connections, and to the water board, "and then the idea was born to put water-fuelled heat pumps in the buildings, winning back heat from the collective sewer for this part of Amsterdam".

"We have a photo of the street covered with snow, and the manhole covers all without snow," says Jeroen Rademaker, the project leader. "Even when there's snow in the winter, the sewer is warm. Warm sewage water flows 24 hours a day and we should capture it. This can happen wherever there is a big sewage pipe."

"The warmth comes from showers, the toilet, wastewater from washing, from the dishwasher, from the washing machine," says Postuma. "Together it all gives, throughout the year, a temperature between 15 and 18 degrees. And we are going to make a bypass around the main sewer, put a heat exchanger around it and bring it to the houses in insulated pipes. We place it in an electric heat pump, and the water is heated up to 60 or 70C - medium temperature."

The heat exchanger transfers that source heat from the drain to a working fluid that can be transported to the buildings without needing to circulate the actual sewage waste. Then the blocks' heat pumps, fired by solar energy, can amplify that heat in the opposite way to the workings of a refrigerator. For individual homes, each one would have to have their own heat pump connected to this "source net".

The company is also upgrading the double glazing and has already put in new roof insulation and solar panels, which means they can ditch the existing gas-fired heating system altogether. The project is intended to warm a four-storey 1970s social housing complex and a multi-storey block of student rooms opposite: residents have agreed, and a student vote is planned within weeks. Sitting in one of the typical 90 sq metre flats, which has been kitted out to show residents the €14m (£12.2m) project (which will get a €1.3m government subsidy), longtime resident Ad Jongen, 85, explains why he cannot wait to get started. "Maybe Amsterdam will go entirely gas-free in six or seven years," he says. "You have to be prepared."



'Warm sewage water flows 24 hours a day and we should capture it.' Photograph: Harri Tahvanainen / Gorilla Photo Agency Ltd/Alamy

Experts believe sewage warmth could play a major role in the transition away from fossil fuels. Swiss company Rabtherm is believed to have pioneered the idea, while German company Uhrig, which calls wastewater “a treasure beneath our feet” constructs 10 projects a year and expects soon - says the firm’s head of global business, Stephan von Bothmer - to scale to hundreds. In the Netherlands there are other projects - typically using sewage plants rather than raw sewage pipes - for a swimming pool in Urk and pilot projects in Rotterdam and Eindhoven.

“This is one of the pieces of the jigsaw in the energy transition,” says Harry de Brauw, energy transition adviser at Waternet. “We have calculated that you could heat 8% of Amsterdam with waste water systems: 10,000 homes.”

That said, you don’t want to take too much heat from sewage pipes. “You can’t reduce the temperature there too much because purification works with bacteria,” he adds. “It’s a biological process and if the bacteria get cold, they won’t work as hard and our water will be less well purified. But at the back end, where we release the purified water into surface water, we are happy for it to be colder. The most warmth potential is at the end of the sewage system.”

The critical challenge will lie in retrofitting existing infrastructure, which requires “a mindset” of can-do, access to sewer networks and probably some level of subsidy, says Von Bothmer.

Optimising houses is essential for this kind of domestic heating. Lisanne Havinga, assistant professor in building performance at Eindhoven University of Technology, says: “It’s probably the same in the UK that existing housing stock has a lot of draughts, which causes winter comfort problems and also makes people turn the heating a lot higher.”

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She is working on the “Renovation Explorer”, an open source project where homeowners will be able to get tailored recommendations. A sewer-based project – such as one that will soon heat her own home in another project fed by a sewage treatment plant – has advantages over air-based heat pumps, she says, because it won’t need as much boosting from an overloaded electricity net. The work is all part of the Dutch drive to leave fossil fuels behind – “*van het gas af*” as they put it – which will both make energy sources more sustainable and reduce carbon emissions. In

2019 the Dutch supreme court ruled that the Dutch government was doing too little to prevent climate change, and ordered it urgently to reduce greenhouse gas emissions.

A final challenge with the sewer, points out another expert, is that it's not just warm water down there. Paige Peters, founder of a sewage system to stop overflows during storms who spoke this week at the Aquatech Innovation Forum in Amsterdam, says: "With this idea of heat recovery, a big part of it is understanding how it could affect sewage infrastructure, the water flow in there, the temperature or the crazy things people put down sewers. We get rags, chicken bones ... and a lot of carrots. Dealing with that infrastructure can be unpredictable."

How much does this cost? €14m to go off the gas for 1,600 homes in north Amsterdam

Can other places do it too? Yes. Dutch sewers are pumped, because it is flat; the technique can be cheaper in gravity-driven systems and it's easier with new-build.

Some helpful reading Lieven de Key Riothermie; Generating energy from waste water; Rotterdam Circulair

This article was amended on 10 November 2023 to correct the Dutch phrase "*van het gas af*".