Horsley Witten Group
*Sustainable Environmental Solutions*
90 Route 6A • Unit 1 • Sandwich, MA 02563
508-833-6600 • horsleywitten.com

March 24, 2021

Jane Crowley, Health Agent
Eastham Board of Health
2500 State Highway
Eastham, MA 02642

Re: Proposed Harbormaster Building – Rock Harbor, 631 Dyer Prince Road, Eastham, MA
Wastewater System Design Submittal

Dear Ms. Crowley:

On behalf of the Applicant, the Town of Eastham, please find enclosed the wastewater design plans and calculations for the location referenced above. The proposed Harbormaster Building includes 695 square feet of office area with a Title 5 design flow of 200 gallons per day. The system is not designed for use by the public.

The proposed project consists of a new harbormaster building on a wood pile foundation with associated parking, stormwater management, on-site wastewater management, pedestrian pathways, landscaping, invasive species removal, and habitat restoration.

The proposed redevelopment project will involve work within coastal resource areas including barrier beach (coastal dune), Riverfront Area, and Land Subject to Coastal Storm Flowage (LSCSF), as well as within the 100-foot buffer zone to salt marsh, jurisdiction areas under the Massachusetts *Wetlands Protection Act* (M.G.L. Ch. 131 § 40), its implementing Regulations (310 CMR 10.00), and the Eastham Wetlands Protection Bylaw and associated Regulations of the Eastham Conservation Commission. Portions of the proposed project will also occur within Priority Habitat (PH 945) and Estimated Habitat (EH 756). Invasive species removal, specifically the population of Japanese knotweed (*Fallopia japonica*) in the northern portion of the site where the wastewater leaching field is located, will be managed through a combination of mechanical and chemical methods. Efforts to address invasive species may commence prior to project construction, pending approval from the Conservation Commission.

Additional project details will be provided during Conservation permitting. A Notice of Intent (NOI) was submitted to the Conservation Commision in September 2020. The project scope and design have since been updated, and a revised plan with new project description will be submitted to the Conservation Commission for a future hearing next month.

Due to the sensitive nature of the site, a NitROE 2KS wastewater treatment system permitted under the Massachusetts Department of Environmental Protection (MassDEP) Provisional Use Approval is proposed. The approval letter for Provinisional Use is attached. The system is currently being evaluated by MassDEP for meeting a total nitrogen (TN) of less than 11 milligrams per liter (mg/L). This is a signifantly lower TN level than any other I/A treatment system has been shown to produce; typical commerical I/A systems are required to meet 25 mg/L total nitrogen.

The system is comprised of a gravity sewer, enhanced settling tank (septic tank), NitROE 2KS Wastewater Treatment System, pump chamber, and gravity feed leaching bed. Treatment is provided in the multi-compartment NitROE tank through aeration and denitrification zones. Aeration is provided by a small fan which will be located in the elevated Harbormaster building along with the system control panel. Groundwater at the site is estimated based on the observed weeping in test pit #6; no redoxymorphic features or groundwater were observed during soil testing. The estimated seasonal high groundwater level is based on guidance from the Cape Cod Commission Technical Bulletin 92-001 applied to the weeping elevation.

Thank you in advance for your review of this I/A system proposed for this project. Please let me know if you have any questions or comments.

Sincerely,

**Horsley Witten Group, Inc.**

Joe Henderson, P.E.
Senior Engineer

Enclosure

cc: Rob Marcalow, Kuth Ranieri Architects

Commonwealth of Massachusetts

City/Town of Eastham

# Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

## C. On-Site Review

**Deep Observation Hole Number:** 5 (Hole #) | 9/15/20 (Date) | 1115 (Time) | 70 Partly Sunny (Weather) | 41°48'06"N (Latitude) | 70°00'24"W (Longitude)

1. Land Use: Parking lot (e.g. woodland, agricultural field, vacant lot, etc.) | Knotweed, Poison ivy (Vegetation) | Few cobbles (Surface Stones (e.g. cobbles, stones, boulders, etc.)) | 0-3% (Slope (%))

Description of Location: North of paved parking

2. Soil Parent Material: Udipsamments | Landform | Summit (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances From: Open Water Body 100± feet | Property Line 25± feet | Drainage Way 125± feet | Drinking Water Well 250± feet | Wetlands 100± feet | Other ____ feet

4. Unsuitable Materials Present: ☐ Yes ☑ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☑ Yes ☐ No If Yes: 102" Depth weeping from pit | 102" Depth standing water in hole

**Soil Log**

| Depth (in) | Soil Horizon/ Layer | Soil Texture (USDA) | Soil Matrix: Color-Moist (Munsell) | Redoximorphic Features | | | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Depth | Color | Percent | Gravel | Cobbles/Stones | | | |
| 0-10 | Ae | LS | 10YR 7/2 | | | | | | SG | | |
| 10-24 | B | LS | 10YR 6/3 | | | | 15 | 5 | SG | | Aeolian |
| 24-42 | 1C | MS | 10YR 5/4 | | | | 5 | | SG | FIP | Aeolian |
| 42-64 | Ab | MS | 10YR 3/4 | | | | | | SG | | Roots & Grass |
| 64-102 | 2C | CS | 10YR 3/6 | | | | 5 | | SG | | Moist |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes: Buried A layer contained abundant organic matter, but was much less dense and decomposed than peaty layers in other locations on site

Perc test #1 performed here

Commonwealth of Massachusetts

City/Town of Eastham

# Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

## C. On-Site Review

**Deep Observation Hole Number:** 6 (Hole #) | 9/15/20 (Date) | 100 (Time) | 75 Sunny (Weather) | 41°48'06"N (Latitude) | 70°00'24"W (Longitude)

1. Land Use: Parking lot (e.g. woodland, agricultural field, vacant lot, etc.) | Knotweed, Poison ivy (Vegetation) | Few cobbles (Surface Stones (e.g. cobbles, stones, boulders, etc.)) | 0-3% (Slope (%))

Description of Location: North of paved parking

2. Soil Parent Material: Udipsamments | Landform | Summit (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances From: Open Water Body 100± feet | Drainage Way 125± feet | Wetlands 100± feet | Property Line 25± feet | Drinking Water Well 250± feet | Other ____ feet

4. Unsuitable Materials Present: ☐ Yes ☑ No If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☑ Yes ☐ No If Yes: 102" Depth weeping from pit | 102" Depth standing water in hole

**Soil Log**

| Depth (in) | Soil Horizon/ Layer | Soil Texture (USDA) | Soil Matrix: Color-Moist (Munsell) | Redoximorphic Features | | | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Depth | Color | Percent | Gravel | Cobbles/Stones | | | |
| 0-10 | Ae | LS | 10YR 3/3 | | | | | | SG | | |
| 10-24 | B | LS | 10YR 6/3 | | | | 15 | 5 | SG | | Aeolian |
| 24-48 | 1C | MS | 10YR 5/6 | | | | 5 | | SG | FIP | Aeolian |
| 48-64 | Ab | MS | 10YR 3/4 | | | | | | SG | | Roots & Grass |
| 64-102 | 2C | CS | 10YR 3/6 | | | | 5 | | SG | | Moist |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

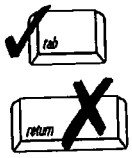
Additional Notes: Buried A layer contained abundant organic matter, but was much less dense and decomposed than peaty layers in other locations on site

Perc test #2 performed here

# Commonwealth of Massachusetts
# City/Town of Eastham
# Percolation Test
## Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.




## A. Site Information

Town of Eastham
Owner Name

631 Dyer Prince Road
Street Address or Lot #

Eastham | MA | 02654
City/Town | State | Zip Code

Joe Henderson | 508 873 9954
Contact Person (if different from Owner) | Telephone Number

## B. Test Results

| | 9/15/20 (Date) | 11:50A (Time) | 9/15/20 (Date) | 2:00P (Time) |
|---|---|---|---|---|
| Observation Hole # | 5 | | 6 | |
| Depth of Perc | 18" | | 18" | |
| Start Pre-Soak | 11:50A | | 1:58P | |
| End Pre-Soak | 11:57A | | 2:00P | |
| Time at 12" | 11:57A | | 2:00P | |
| Time at 9" | 12:10P | | 2:03P | |
| Time at 6" | 12:23P | | 2:06P | |
| Time (9"-6") | 13m | | 3m | |
| Rate (Min./Inch) | <5 min/in | | <5 min/in | |
| | Test Passed: ☒ Test Failed: ☐ | | Test Passed: ☒ Test Failed: ☐ | |

Matthew Lehman EIT
Test Performed By:

Susan Barker
Board of Health Witness

Comments:

Test Hole #: 6 Elev: 9 Job #: 20077
Site Location Rock Harobr Date:
Prepared by:

Soil Evaluato Matt L
Contractor: RBO
Notes:

STEP 1 Measure depth to water table to nearest 1/10 ft. (depth is in feet below ground surface)

| Date | Depth (feet) |
|---|---|
| 9/15/2020 | 8.5 |

STEP 2 Using Water-Level Range Zone and Index Well Map

A) Appropriate index well: TWW-89

B) Water-level range zone: 0-2

STEP 3 Using monthly "Current Water Resources Conditions" determine current depth to water level for index well.

| mm/yy | |
|---|---|
| Sep-20 | 12.01 |

STEP 4 Using the Table of Potential Water Level Rise for Index Well (STEP 2A), current depth to water level for index well (STEP 3), and water-

1.8

STEP 5 Estimate depth to high water by subtracting the water-level adjustment (STEP 4) from measured depth to water

6.7

Elev: 2.3

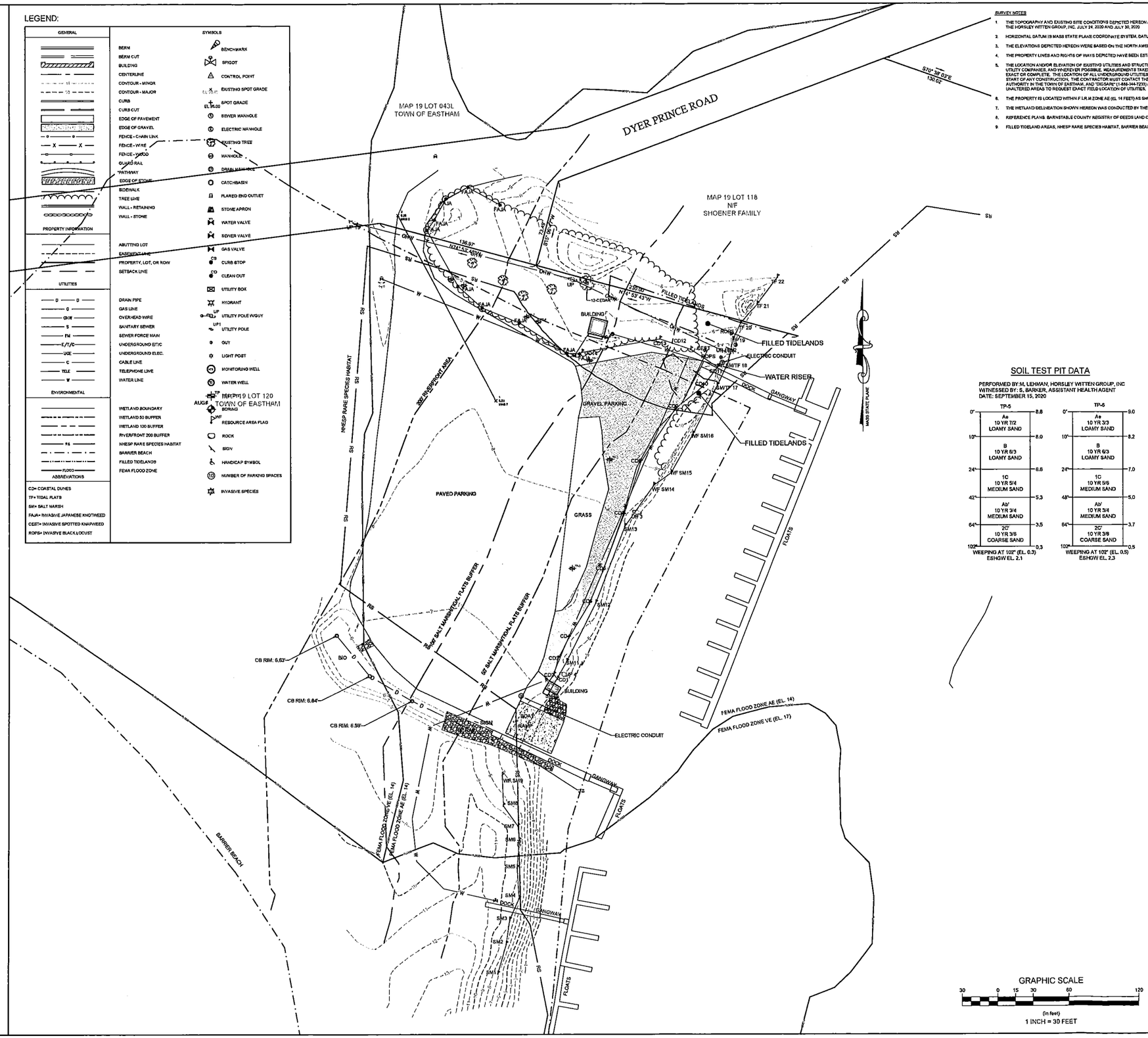
Notes:
See handbook for "Potential Water-Level Rise"
Monthly index well data: www.capecodcommission.org/wells.html

LEGEND:

| GENERAL | SYMBOLS |
|---|---|
| BERM | BENCHMARK |
| BERM CUT | SPIGOT |
| BUILDING | CONTROL POINT |
| CENTERLINE | EXISTING SPOT GRADE |
| CONTOUR - MINOR | SPOT GRADE |
| CONTOUR - MAJOR | SEWER MANHOLE |
| CURB | ELECTRIC MANHOLE |
| CURB CUT | EXISTING TREE |
| EDGE OF PAVEMENT | MANHOLE |
| EDGE OF GRAVEL | DRAIN MANHOLE |
| FENCE - CHAIN LINK | CATCHBASIN |
| FENCE - WIRE | FLARED END OUTLET |
| FENCE - WOOD | STONE APRON |
| GUARD RAIL | WATER VALVE |
| PATHWAY | SEWER VALVE |
| EDGE OF STONE | GAS VALVE |
| SIDEWALK | CURB STOP |
| TREE LINE | CLEAN OUT |
| WALL - RETAINING | UTILITY BOX |
| WALL - STONE | HYDRANT |
| **PROPERTY INFORMATION** | UTILITY POLE W/GUY |
| ABUTTING LOT | UTILITY POLE |
| EASEMENT LINE | GUY |
| PROPERTY, LOT, OR ROW | LIGHT POST |
| SETBACK LINE | MONITORING WELL |
| **UTILITIES** | WATER WELL |
| DRAIN PIPE | TP 1 AUGER BORING |
| GAS LINE | RESOURCE AREA FLAG |
| OVERHEAD WIRE | ROCK |
| SANITARY SEWER | SIGN |
| SEWER FORCE MAIN | HANDICAP SYMBOL |
| UNDERGROUND ET/C | NUMBER OF PARKING SPACES |
| UNDERGROUND ELEC. | INVASIVE SPECIES |
| CABLE LINE | |
| TELEPHONE LINE | |
| WATER LINE | |
| **ENVIRONMENTAL** | |
| WETLAND BOUNDARY | |
| WETLAND 50 BUFFER | |
| WETLAND 100 BUFFER | |
| RIVERFRONT 200 BUFFER | |
| NHESP RARE SPECIES HABITAT | |
| BARRIER BEACH | |
| FILLED TIDELANDS | |
| FEMA FLOOD ZONE | |

**ABBREVIATIONS**

CD= COASTAL DUNES
TF= TIDAL FLATS
SM= SALT MARSH
FAJA= INVASIVE JAPANESE KNOTWEED
CEST= INVASIVE SPOTTED KNAPWEED
ROPS= INVASIVE BLACK LOCUST




**SURVEY NOTES**

1. THE TOPOGRAPHY AND EXISTING SITE CONDITIONS DEPICTED HEREON ARE THE RESULT OF AN ON THE GROUND FIELD SURVEY CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. JULY 24, 2020 AND JULY 30, 2020
2. HORIZONTAL DATUM IS MASS STATE PLANE COORDINATE SYSTEM, DATUM ESTABLISHED BY GPS-RTK.
3. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
4. THE PROPERTY LINES AND RIGHTS OF WAYS DEPICTED HAVE BEEN ESTABLISHED BY FIELD SURVEY AND DEEDS AND PLANS OF RECORD.
5. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHENEVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN OF EASTHAM, AND "DIG SAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
6. THE PROPERTY IS LOCATED WITHIN F.I.R.M ZONE AE (EL 14 FEET) AS SHOWN ON COMMUNITY PANEL NO. 25001C0417J DATED JULY 16TH, 2014.
7. THE WETLAND DELINEATION SHOWN HEREON WAS CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON JULY 24, 2020
8. REFERENCE PLANS: BARNSTABLE COUNTY REGISTRY OF DEEDS LAND COURT PLAN #28843A.
9. FILLED TIDELAND AREAS, NHESP RARE SPECIES HABITAT, BARRIER BEACH, AND FLOODZONE LINES SCALED FROM MASS GIS.

## SOIL TEST PIT DATA

PERFORMED BY: M. LEHMAN, HORSLEY WITTEN GROUP, INC
WITNESSED BY: S. BARKER, ASSISTANT HEALTH AGENT
DATE: SEPTEMBER 15, 2020




GRAPHIC SCALE
30 0 15 30 60 120
(in feet)
1 INCH = 30 FEET

NOTE: If this drawing is not on 24in x 36 in, it has been revised from its original size. Scales as noted on drawings/details are no longer applicable.
3/19/2021 3:15 PM


KUTHranieri architects
725 GREENWICH ST STE 300
SAN FRANCISCO CA 94133
32A MAIN ST STE 2
FRANKLIN, MA 02038
TEL : 415 . 544 . 9880
WWW.KUTHRANIERI.COM

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


# Rock Harbor Harbormaster Building and Site Revitalization

631 Dyer Prince Road
Eastham, MA 02642

PROJECT NUMBER

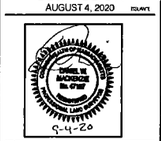
Town of Eastham — OWNER

19-120-0 — JOB

NOT FOR CONSTRUCTION

STAMP

CONSERVATION PERMITTING SUBMISSION
AUGUST 4, 2020 — ISSUANCE



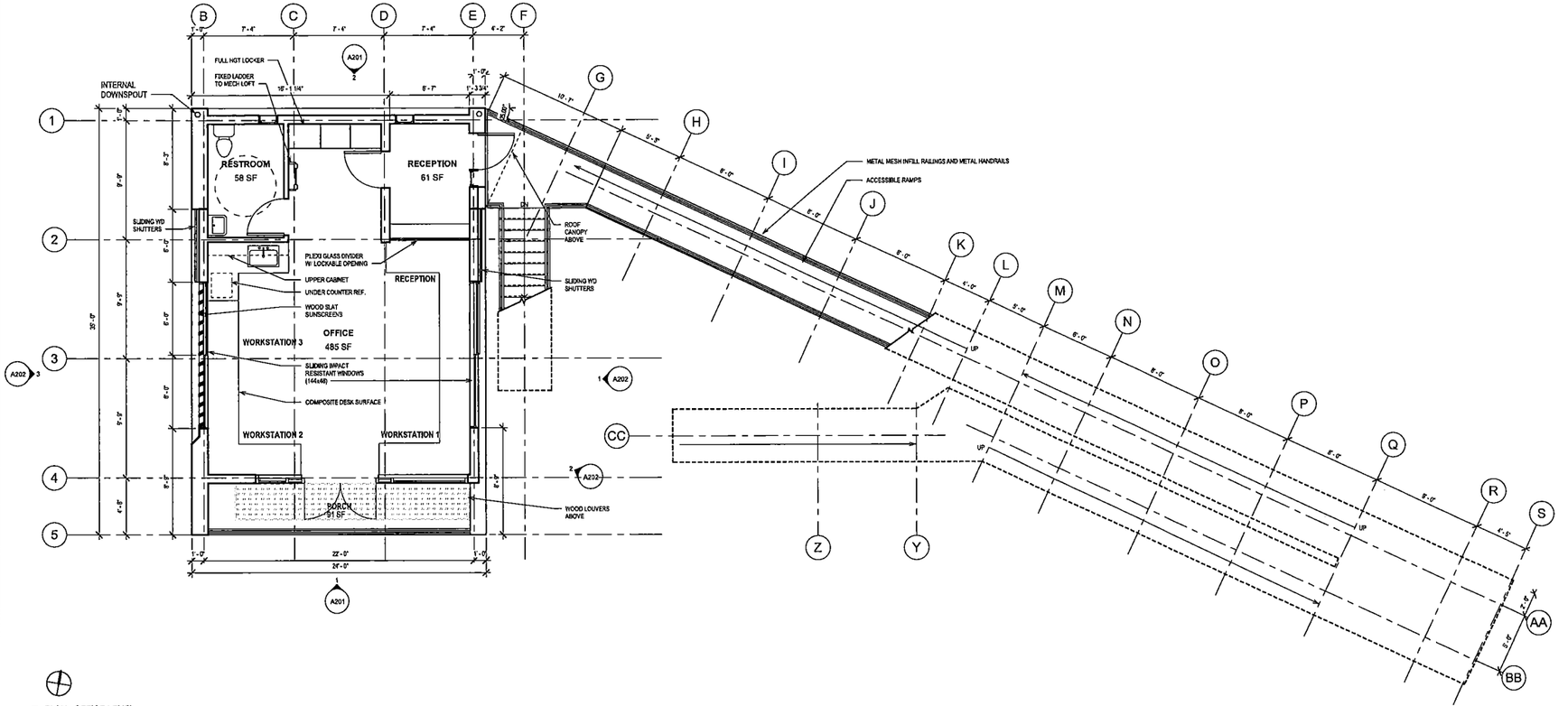

DRAWN BY: LE CHECKED BY: RM PROJECT #: 2003

EXISTING CONDITIONS

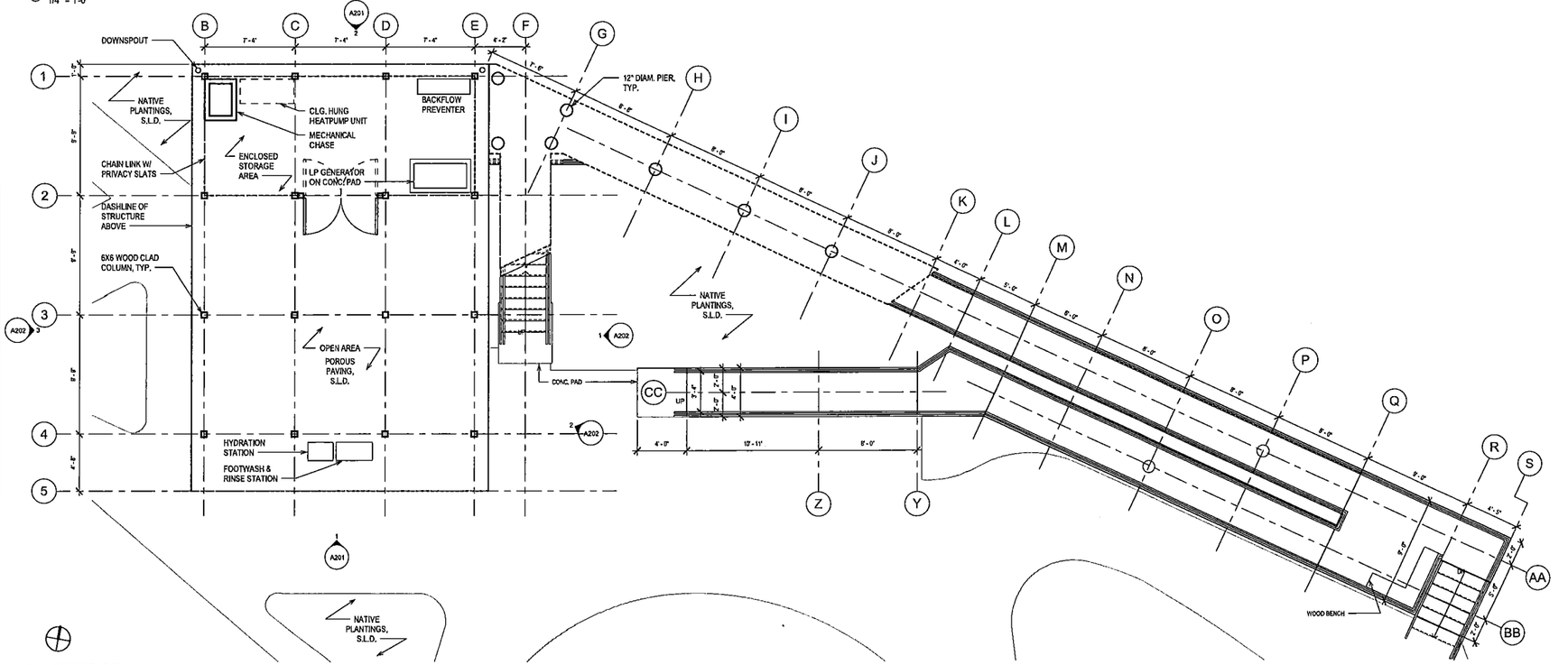
SHEET TITLE

**C001**

SHEET




1 PLAN - OFFICE LEVEL
1/4" = 1'-0"




2 PLAN - STORAGE LEVEL
1/4" = 1'-0"

NOTE: If this drawing is not on 30in x 42 in, it has been revised from its original size. Scales as noted on drawings/details are no longer applicable.
3/16/2021 7:29:57 AM

KUTHranieri architects
725 GREENWICH ST STE 400
SAN FRANCISCO CA 94133
TEL : 415 . 544 . 9880
WWW.KUTHRANIERI.COM

CONSULTANTS

**Rock Harbor Harbormaster Building and Site Revitalization**

631 Dyer Prince Road
Eastham, MA 02642

PROJECT INFORMATION

Town of Eastham

CHECK

APR

REGISTERED ARCHITECT ELIZABETH RANIERI NO. 30999 COMMONWEALTH OF MASSACHUSETTS

SCALE

Planning Submission

3/16/21
ISSUANCE

| | | |
|---|---|---|
| 3 | 3/16/21 | Planning Submission |
| 2 | 9/9/21 | 100% Schematic Design - Revision 1 |
| 1 | 8/1/21 | 100% Schematic Design |

ISSUE DATE DESCRIPTION

DRAWN BY: CHECKED BY: PROJECT #: 2003

FLOOR PLANS

TITLE

# A101

SHEET

LEGEND:

GENERAL
- BERM
- BERM CUT
- BUILDING
- CENTERLINE
- CONTOUR - MINOR
- CONTOUR - MAJOR
- CURB
- CURB CUT
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- FENCE - CHAIN LINK
- FENCE - WIRE
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- SIDEWALK
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- NHESP RARE SPECIES HABITAT
- BARRIER BEACH
- FILLED TIDELANDS
- FEMA FLOOD ZONE

SYMBOLS
- BENCHMARK
- SPIGOT
- CONTROL POINT
- EXISTING SPOT GRADE
- SPOT GRADE
- SEWER MANHOLE
- ELECTRIC MANHOLE
- EXISTING TREE
- MANHOLE
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- CATCHBASIN
- FLARED END OUTLET
- STONE APRON
- WATER VALVE
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- GAS VALVE
- CURB STOP
- CLEAN OUT
- UTILITY BOX
- HYDRANT
- UTILITY POLE W/GUY
- UTILITY POLE
- GUY
- LIGHT POST
- MONITORING WELL
- WATER WELL
- TEST PIT
- BORING
- RESOURCE AREA FLAG
- ROCK
- SIGN
- HANDICAP SYMBOL
- NUMBER OF PARKING SPACES
- INVASIVE SPECIES

ABBREVIATIONS
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- ROPS= INVASIVE BLACK LOCUST

MAP 19 LOT 043L
TOWN OF EASTHAM

DYER PRINCE ROAD

MAP 19 LOT 118
N/F
SHOENER FAMILY

MAP 19 LOT 120
TOWN OF EASTHAM

S70° 38' 03"E
130.02'

SURVEY NOTES

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SOIL TEST PIT DATA

PERFORMED BY: M. LEHMAN, HORSLEY WITTEN GROUP, INC
WITNESSED BY: S. BARKER, ASSISTANT HEALTH AGENT
DATE: SEPTEMBER 15, 2020

TP-5
- 0" – 8.8: A= 10 YR 7/2 LOAMY SAND
- 10" – 8.0: B 10 YR 6/3 LOAMY SAND
- 24" – 6.8: 1C 10 YR 5/4 MEDIUM SAND
- 42" – 5.3: A\' 10 YR 3/4 MEDIUM SAND
- 64" – 3.5: 2C\' 10 YR 3/6 COARSE SAND
- 102" – 0.3: WEEPING AT 102" (EL. 0.3)
- ESHGW EL. 2.1

TP-6
- 0" – 9.0: A= 10 YR 3/3 LOAMY SAND
- 10" – 8.2: B 10 YR 6/3 LOAMY SAND
- 24" – 7.0: 1C 10 YR 5/6 MEDIUM SAND
- 48" – 5.0: A\' 10 YR 3/4 MEDIUM SAND
- 64" – 3.7: 2C\' 10 YR 3/6 COARSE SAND
- 102" – 0.5: WEEPING AT 102" (EL. 0.5)
- ESHGW EL. 2.3

GRAPHIC SCALE
30 0 15 30 60 120
(in feet)
1 INCH = 30 FEET

NOTE: If this drawing is not on 24in x 36 in, it has been revised from its original size. Scales as noted on drawings/details are no longer applicable.
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508-833-6600 voice
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Town of Eastham
19-120-0

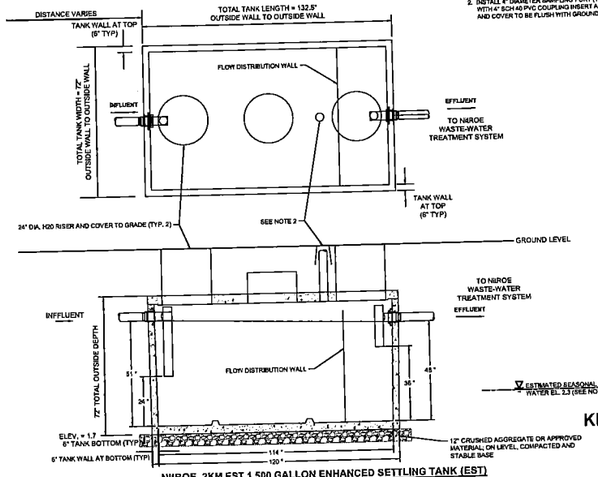
NOT FOR CONSTRUCTION

CONSERVATION PERMITTING SUBMISSION
AUGUST 4, 2020

9-4-20

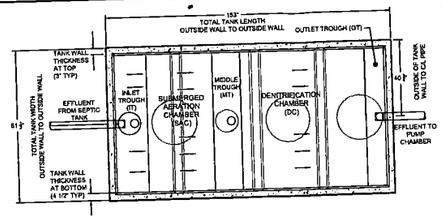
EXISTING CONDITIONS

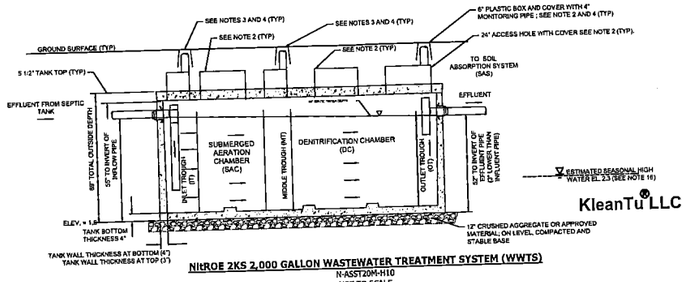
C001




## NIIROE 2KM EST 1,500 GALLON ENHANCED SETTLING TANK (EST)

ACME-SHOREY ST152M OR APPROVED EQUAL
NOT TO SCALE

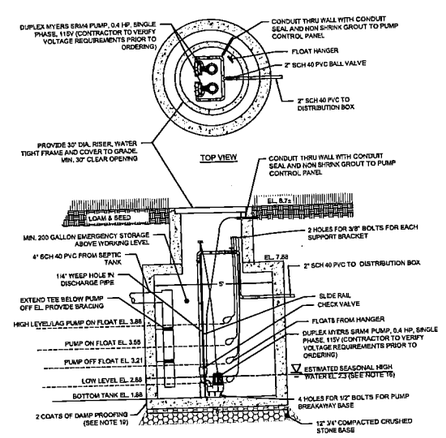



## NITROE 2KS 2,000 GALLON WASTEWATER TREATMENT SYSTEM (WWTS)

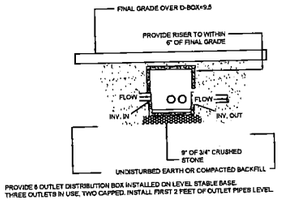
N-ASST20M-H10
NOT TO SCALE

KleanTu® LLC



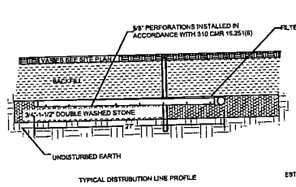

## 5' ID DIA. 500 GALLON H20 PUMP CHAMBER DETAIL

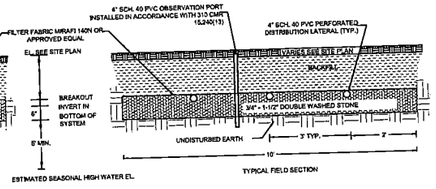
SHOREY PRECAST OR APPROVED EQUAL




## PROPOSED H-20 5 OUTLET DISTRIBUTION BOX DETAIL

ACME PRECAST OR EQUIVALENT
NOT TO SCALE




## LEACHING FIELD DETAILS

NOT TO SCALE

### DESIGN CRITERIA

| | | |
|---|---|---|
| OFFICE AREA (SF) | 595 | |
| FLOW PER ROOM | 75 | GPD/1,000 SF |
| DESIGN FLOW | 200 | GPD, MIN FLOW |
| SEPTIC TANK | | |
| SEPTIC TANK (DESIGN FLOW): | 400 | GAL |
| USE 1,500 GALLON NITROE EST TANK | | |

### LEACHING SYSTEM DESIGN CRITERIA

| | | |
|---|---|---|
| SOIL ABSORPTION SYSTEM | | |
| LEACHING SYSTEM USED: | BED | |
| DESIGN PERCOLATION RATE: | 5 | MIN/IN. |
| SOIL CLASS: | 1 | |
| LONG TERM ACCEPTANCE RATE (LTAR): | 0.74 | GPD/S.F. |
| TOTAL AREA REQUIRED: | 271 | S.F. |
| TOTAL AREA PROPOSED: | | |
| AREA: 10L x 27W: | 270 | S.F. |
| DESIGN FLOW PROVIDED | 200 | GPD |
| USE 1 - 10'L x 27'W LEACHING FIELD | | |

### WASTEWATER SYSTEM SCHEDULE OF ELEVATIONS

| | INV. EL. |
|---|---|
| BLDG INVERT | 6.50 |
| NITROE ENHANCED SETTLING TANK - INLET | 6.47 |
| NITROE ENHANCED SETTLING TANK - OUTLET | 6.22 |
| NITROE TREATMENT SYSTEM - INLET | 6.16 |
| NITROE TREATMENT SYSTEM - OUTLET | 5.91 |
| PUMP CHAMBER - INLET | 5.88 |
| PUMP CHAMBER - OUTLET | 5.83 |
| DBOX INLET | 8.07 |
| DBOX OUTLET | 7.90 |
| BED INVERT IN | 7.89 |
| BREAKOUT | 8.22 |
| LATERAL DISTAL INVERT | 7.80 |
| BOTTOM OF SYSTEM | 7.30 |
| ESHGW | 2.30 |
| SEPARATION TO ESHGW | 5.00 |

### PUMP CHAMBER DESIGN CALCULATIONS

| | | |
|---|---|---|
| TITLE 5 FLOW | 200 | GAL/DAY |
| MAX DAY FLOW | 8 | GAL/HR |
| MAX DAY FLOW | 0.14 | GAL/MIN |
| 500 GALLON PUMP CHAMBER | | |
| DIAMETER (INSIDE) | 5 | FT |
| VOLUME PER FOOT | 147 | GAL/FT |
| DEPTH TO INVERT | 3.50 | FT |
| TOTAL STATION DEPTH | 6.00 | FT |
| PUMP SYSTEM | | |
| PUMP RATE | 25 | GAL/MIN |
| FORCEMAIN DIAMETER | 2 | IN |
| FORCEMAIN LENGTH | 77 | FT |
| SYSTEM DISCHARGE RATE | 0.06 | CFS |
| CROSS SECTIONAL AREA | 0.02 | SF |
| VELOCITY | 2.44 | FT/SEC |
| PIPE VOLUME | 1.16 | CF |
| PIPE VOLUME | 13 | GAL |
| ESTIMATED VOLUME PUMPED PER DAY | 199 | GAL |
| STATIC HEAD | 6 | FT |
| FRICTION LOSS IN FITTINGS & VALVES | 1 | FT |
| FRICTION LOSS IN FORCEMAIN | 1 | FT |
| HEAD LOSS | 8 | FT |
| RUN TIME | 2.0 | MIN |
| DOSE VOLUME | 50 | GAL |
| DOSE FILL TIME | 360 | MIN |
| | 6.00 | HR |
| TOTAL DOSES PER DAY | 4 | |
| TOTAL RUN TIME | 8 | MIN |
| | 0.13 | HR |
| EMERGENCY STORAGE | 24.00 | HR |
| | 200 | GAL |
| PUMP RATE | 25 | GAL/MIN |
| HEAD LOSS | 8 | FT |

### ZONING & RESOURCE PROTECTION NOTES

1. PARCEL ID: 19-120
2. OWNER OF RECORD: TOWN OF EASTHAM
3. ADDRESS: 631 DYER PRINCE ROAD, EASTHAM, MA
4. THE LOCUS IS IN LOCATED IN FLOOD ZONE AE, EL. 14.0 (AS SHOWN ON F.I.R.M. MAP 25001C0417 I DATED JULY 16, 2014).
5. THE SITE IS NOT LOCATED IN A WELLHEAD PROTECTION DISTRICT.
6. THE SITE IS LOCATED IN AN ENVIRONMENTALLY SENSITIVE AREA AS DEFINED BY THE EASTHAM BOARD OF HEALTH REGULATIONS.

### WASTEWATER NOTES

1. ELEVATION, PROPERTY LINE AND EXISTING CONDITIONS ON THIS PLAN ARE BASED ON A SURVEY CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON JULY 24, 2020 AND JULY 30, 2020.
2. UNLESS OTHERWISE NOTED, ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STATE ENVIRONMENTAL CODE AND THE RULES AND REGULATIONS OF THE LOCAL BOARD OF HEALTH.
3. THIS PLAN IS INTENDED TO ADEQUATELY PROVIDE THE INFORMATION NECESSARY TO LAYOUT AND CONSTRUCT THE PROPOSED SEWAGE DISPOSAL SYSTEM REPRESENTED ON IT AND SHOULD NOT BE USED FOR ANY OTHER PURPOSES.
4. ANY CHANGES TO THIS PLAN MUST BE APPROVED BY THE ENGINEER AND/OR THE LOCAL BOARD OF HEALTH (BOH) STAFF.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER AND ENGINEER ON THE CONSTRUCTION SITE ACCESS AND MATERIAL STOCK PILE AREAS.
6. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCH WORK. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY. THE CONTRACTOR SHALL PLAN ACCORDINGLY.
7. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND IN SITE CONDITIONS FROM THOSE SHOWN ON THE PLAN TO THE DESIGN ENGINEER.
8. FAILING TO PROPERLY INSPECT OR PUMP THE SEPTIC TANKS AND TREATMENT SYSTEM OR CHANGES TO EFFLUENT FLOW, GRADING, OR LANDSCAPING, EITHER ON-SITE OR ADJACENT TO THE SITE, MAY RESULT IN IMPROPER FUNCTIONING OF THE SEPTIC AND LEACHING SYSTEM(S).
9. CALL "DIGSAFE" AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION AT 1-888-DIG-SAFE AND ANY OTHER APPLICABLE AGENCIES TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES.
10. THIS ON-SITE WASTEWATER TREATMENT SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
11. THE OWNER SHALL INSPECT AND PUMP THE SEPTIC TANK ONCE EVERY 2 YEARS.
12. PROVIDE WATERTIGHT SEALS BY USE OF NON-SHRINK GROUT AT ALL POINTS WHERE PIPES ENTER OR LEAVE ANY CONCRETE STRUCTURES.
13. USE SCH. 40 PVC PIPING WITH WATERTIGHT JOINTS UNLESS OTHERWISE NOTED ON PLAN. ALL PIPE SHALL BE PLACED ON A COMPACTED FIRM BASE.
14. ALL STONE TO BE DOUBLE-WASHED AND FREE OF DIRT, DUST, AND FINES.
15. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING OPERATIONS AND MAINTENANCE INFORMATION FOR THE SEPTIC SYSTEM TO THE ENGINEER, IF NECESSARY.
16. THE CONTRACTOR SHALL PROVIDE A DEWATERING PROTOCOL PRIOR TO CONSTRUCTION IN ACCORDANCE WITH CONSERVATION COMMISSION ORDER OF CONDITIONS.
17. UNSUITABLE SOIL MUST BE REPLACED WITH TITLE 5 SAND AS SPECIFIED IN 310 CMR 15.255(3). ANY ADDITIONAL AREAS THAT ARE FOUND TO HAVE UNSUITABLE MATERIAL SHALL BE REPORTED TO THE ENGINEER.
18. ALL SEPTIC COMPONENTS SHALL BE INSTALLED WITH MAGNETIC WARNING TAPE.
19. ALL SEPTIC TANKS SHALL BE APPLIED WITH 2 COATS OF DAMP PROOFING OR BITUMINOUS MATERIAL.
20. THE CONTRACTOR SHALL RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES, WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
21. ALL UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 6 INCHES OF LOAM INSTALLED AND BE SEEDED WITH GRASS SEED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAM AND SEEDED AREAS UNTIL LAWN GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.

### WASTEWATER INSTALLATION INSPECTION NOTES

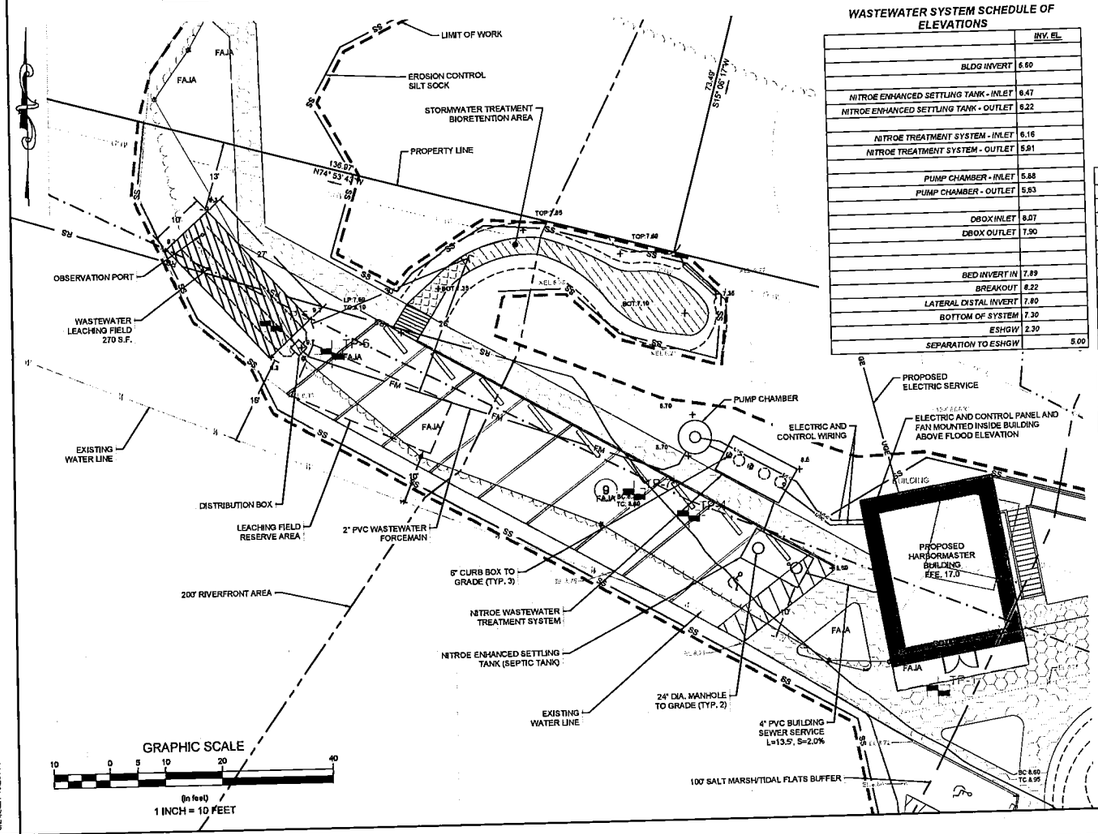
1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS ADVANCE NOTICE TO THE ENGINEER AND LOCAL BOARD OF HEALTH FOR ANY INSPECTION.
2. ALL WASTEWATER SYSTEMS, INCLUDING THE LEACHING SYSTEM, SHALL BE INSPECTED BY THE ENGINEER OR THE LOCAL BOH REPRESENTATIVE PRIOR TO BACKFILLING. AT A MINIMUM THE FOLLOWING ITEMS SHALL BE INSPECTED:
   - 2.1. EXCAVATION OF LEACHING FIELD PRIOR TO PLACING SYSTEM STONE/COMPONENTS
   - 2.2. LEACHING FIELD COMPLETE INSTALLATION PRIOR TO BACKFILL
   - 2.3. ALL SYSTEM COMPONENTS BASE AND INSTALLATION PRIOR TO BACKFILL
   - 2.4. LEAKAGE TEST ON SEPTIC TANK (NOV. 24 HR)
   - 2.5. START UP TEST OF SYSTEM WITH ALL COMPONENTS INSTALLED AND FUNCTIONING AS DESIGNED
   - 2.6. FINAL INSPECTION OF BACKFILLED SYSTEM
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UP-TO-DATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED. THESE AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS.

### BUOYANCY CALCULATIONS

| 1,500 GALLON EST TANK | |
|---|---|
| TANK VOLUME (CU. FT.) | 327 |
| PORTION OF TANK IN WATER AT SEASONAL HIGH GW (EL.=16.9') | 11% |
| EQUIVALENT WEIGHT OF WATER DISPLACED (LB.) | 2,272 |
| SOIL COVER VOLUME (CU. FT.) | 49 |
| WEIGHT OF SOIL COVER, (LB.) | 7,350 |
| TANK WEIGHT (LB.) | 23,000 |
| TOTAL BALLAST (TANK + SOIL) (LB.) | 30,350 |
| BALLAST REQUIRED (BUOYANCY FORCE - TOTAL BALLAST) (LB.) | -28,078 |
| CONCRETE BALLAST REQUIRED (CU. FT.) | NONE |
| BALLAST NOT REQUIRED | |

| 2,000 GALLON NITROE TANK | |
|---|---|
| TANK VOLUME (CU. FT.) | 327 |
| PORTION OF TANK IN WATER AT SEASONAL HIGH GW (EL.=16.9') | 14% |
| EQUIVALENT WEIGHT OF WATER DISPLACED (LB.) | 2,828 |
| SOIL COVER VOLUME (CU. FT.) | 73 |
| WEIGHT OF SOIL COVER, (LB.) | 10,950 |
| TANK WEIGHT (LB.) | 20,300 |
| TOTAL BALLAST (TANK + SOIL) (LB.) | 31,250 |
| BALLAST REQUIRED (BUOYANCY FORCE - TOTAL BALLAST) (LB.) | -28,422 |
| CONCRETE BALLAST REQUIRED (CU. FT.) | NONE |
| BALLAST NOT REQUIRED | |

| 500 GALLON PUMP CHAMBER | |
|---|---|
| TANK VOLUME (CU. FT.) | 170 |
| PORTION OF TANK IN WATER AT SEASONAL HIGH GW (EL. =16.9') | 7% |
| EQUIVALENT WEIGHT OF WATER DISPLACED (LB.) | 750 |
| SOIL COVER VOLUME (CU. FT.) | 23 |
| WEIGHT OF SOIL COVER, (LB.) | 3,499 |
| TANK WEIGHT (LB.) | 12,000 |
| TOTAL BALLAST (TANK + SOIL) (LB.) | 15,499 |
| BALLAST REQUIRED (BUOYANCY FORCE - TOTAL BALLAST) (LB.) | -14,749 |
| CONCRETE BALLAST REQUIRED (CU. FT.) | NONE |
| BALLAST NOT REQUIRED | |




NOTE: If this drawing is not on 30in x 42 in, it has been revised from its original size. Scales as noted on drawings/details are no longer applicable.
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KUTRANIERI architects
725 GREENWICH ST STE 400
SAN FRANCISCO CA 94133
TEL : 415 . 544 . 9880
WWW.KUTHRANIERI.COM

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

# Rock Harbor Harbormaster Building and Site Revitalization

631 Dyer Prince Road
Eastham, MA 02642

PROJECT INFORMATION
Town of Eastham
OWNER
APN

NOT FOR CONSTRUCTION

STAMP

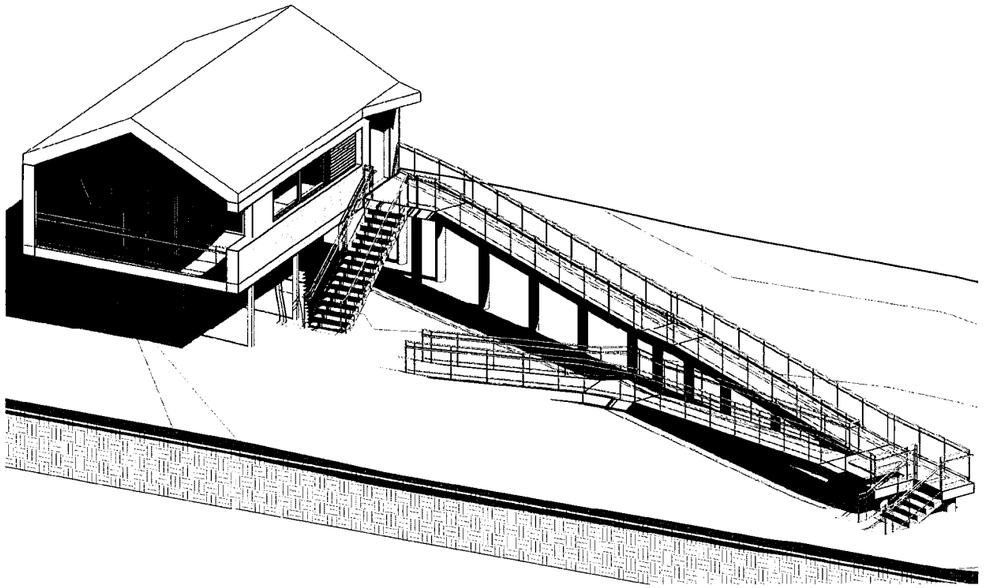
BOH SUBMISSION
3/25/21
ISSUANCE

DRAWN BY: ML CHECKED BY: RAC PROJECT #: 2003

WASTEWATER PLAN

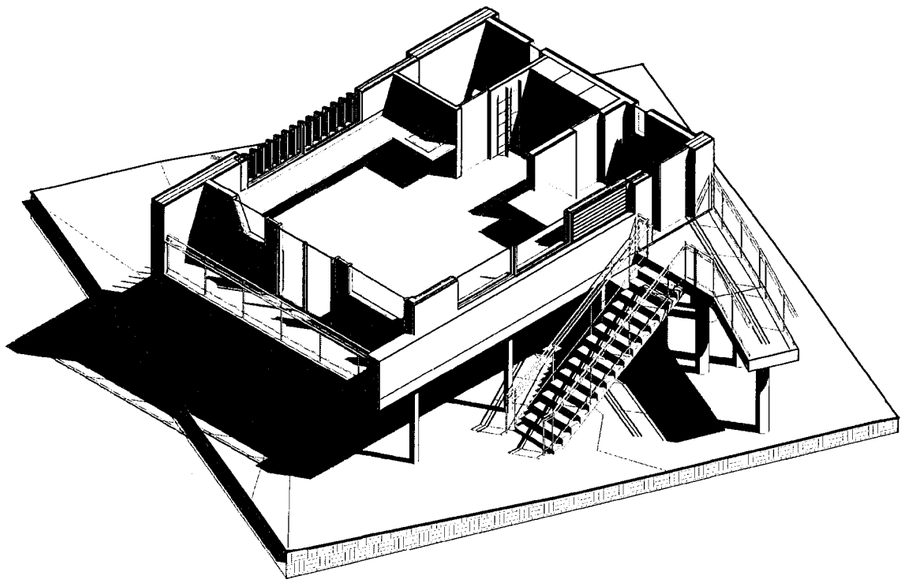
SHEET

WW001

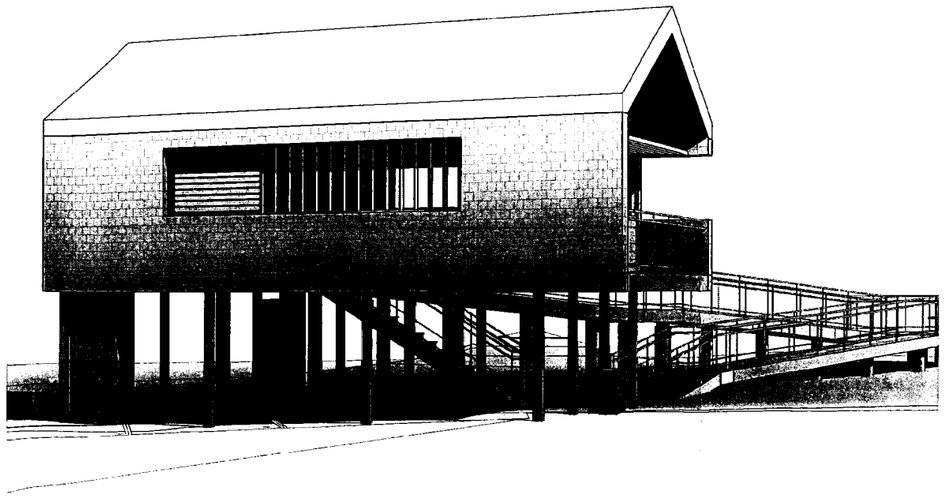


④ ORTHOGRAPHIC VIEW 3

② ORTHOGRAPHIC VIEW 1



③ ORTHOGRAPHIC VIEW 2



① PERSPECTIVE VIEW 1

NOTE: If this drawing is not on 30in x 42 in, it has been revised from its original size. Scales as noted on drawings/details are no longer applicable.
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KUTHranieri architects
725 GREENWICH ST STE 400
SAN FRANCISCO CA 94133
TEL : 415 . 544 . 9880
WWW.KUTHRANIERI.COM

CONSULTANTS

**Rock Harbor Harbormaster Building and Site Revitalization**

631 Dyer Prince Road
Eastham, MA 02642

PROJECT INFORMATION

Town of Eastham

OWNER

APN

REGISTERED ARCHITECT
ELIZABETH RANIERI
NO. 30909
COMMONWEALTH OF MASSACHUSETTS

STAMP

Planning Submission

3/16/21

ISSUANCE

| ISSUE | DATE | DESCRIPTION |
|---|---|---|
| 3 | 3/16/21 | Planning Submission |
| 2 | 1/1/21 | 100% Schematic Design - Revision 1 |
| 1 | 1/1/21 | 100% Schematic Design |

DRAWN BY | CHECKED BY | PROJECT # 2003

3D VIEWS

TITLE

**A900**

SHEET

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

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

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

**PROVISIONAL USE APPROVAL RENEWAL**
Pursuant to Title 5, 310 CMR 15.000

**Name and Address of Applicant:**
KleanTu LLC.
300 Old Pond Road, Ste# 206
Bridgeville, PA 15017

**Trade name of technology and models:**

NitROE® Waste-Water Treatment System (NitROE® WWTS) with unit sizing for design flows up to 2000 gpd (NitROE® 2KS WWTS and NitROE® 2KM WWTS) (hereinafter the 'System' or the 'Technology'). Owner and Operator manuals, installation manual, schematic drawings illustrating the System models and the technology inspection checklist are part of this Certification.

| | |
|---|---|
| DEP Transmittal No.: | X285590 |
| Date of Issuance: | May 12, 2020, |
| Expiration date: | May 12, 2025 |

**Authority for Issuance**

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection (hereinafter "the Department") hereby issues this Provisional Approval to: KleanTu LLC, located at 300 Old Pond Rd., Ste 206 in Bridgeville, PA (hereinafter "the Company"), NitROE® 2KS WWTS and NitROE® 2KM WWTS (hereinafter "the Technology" or "System") for use in the Commonwealth of Massachusetts subject to the conditions herein. Sale and use of the Technology is subject to compliance by the Company, the Designer, the System Installer, the Operator, and the System Owner with the terms and conditions herein. Any noncompliance with the terms or conditions of this Certification constitutes a violation of 310 CMR 15.000.

Marybeth Chubb, Section Chief
Wastewater Management Program
Bureau of Resource Protection

May 12, 2020
Date

## I. PURPOSE

Subject to the conditions of this Approval and any other local requirements, the purpose of this Approval is to allow installation and operation of at least 50 on-site sewage disposal systems utilizing the technology in Massachusetts in order to conduct a performance evaluation of the capabilities of the Technology during the first 3 years of operation of each system, in accordance with Title 5 – 310 CMR 15.286 (7), *Provisional Approval of Alternative System.*

The specific goal of the Performance Evaluation is to determine if the Technology is capable of consistently meeting the concentration limits for total nitrogen (TN) of less than 11 milligrams per liter (mg/L) for installations with design flows less than 2,000 GPD in the effluent discharged to the soil absorption system. In areas subject to nitrogen loading limitations, increases in the discharge rate per acre may be allowed when the nitrogen concentration discharged to the soil is reduced.

The Company is responsible for oversight and sampling of the systems during the Performance Evaluation. The System Owner has responsibility for continued oversight and sampling of the system if the property served was allowed to increase the discharge rate per acre above 440 gallons per day per acre (gpda) in an area subject to Nitrogen Loading Limitations. The System Owner will be required to repair, replace, modify or take any other action as required by the Department or the local approving authority, if the Department or the local approving authority determines that the System is not capable of meeting the required reduction in nitrogen in the effluent.

With the other applicable permits or approvals that may be required by Title 5, this Approval authorizes the installation and use of the Alternative System in Massachusetts. All the provisions of Title 5, including the General Conditions for all Alternative Systems (310 CMR 15.287), apply to the sale, design, installation, and use of the System, except those provisions that specifically have been varied by this Approval.

## II. GENERAL DESCRIPTION OF THE TECHNOLOGY

The NitROE ® 2KS or 2KM WWTS (the 'System') is installed in series between a Title-5 system septic tank and a soil absorption system constructed in accordance with 310 CMR 15.100 – 15.279, subject to the provisions of this Approval to accommodate design flows of less than 2,000 GPD.

The System is comprised of two-unit processes which are sequentially performed in two different chambers. The first chamber is aerated, via an external air pump and airline header/hose arrangement, to achieve both organic carbon reduction along with the biological conversion of ammonia-N to nitrate-N. From the Aeration Chamber, the wastewater then gravity flows into a Denitrification Chamber where, in the presence of natural organics from wood chips, bacteria mediate the conversion of nitrate-N to inert N gas that exits to the atmosphere via the Title 5 system vent piping. Depending on design flow and availability of local tank structures, the sequential Aeration and Denitrification process steps can be performed in the same single tank, which is NitROE® 2KS WWTS, or each process could be performed in its own separate tank with the overall NitROE® WWTS comprised of multiple tank combinations, which is NitROE® 2KM WWTS.

The use of the Technology under this Approval requires:

- Disclosure Notice in the Deed to the property;
- Certifications by the Company, the Designer, and the Installer;
- System Owner Acknowledgement of Responsibilities;

- A certified operator under contract for periodic inspection and maintenance;
- Periodic sampling;
- Recordkeeping and reporting; and
- An external power supply

## III. CONDITIONS OF APPROVAL

### A. Basis for Conditions

1. The term "System" refers to the Technology in combination with any 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.

2. The term "Approval" includes the Special Conditions, Standard Conditions, General Conditions of 310 CMR 15.287, and the approved Attachments.

3. Items required by this Approval include:

   a) Performance Evaluation Plan (PEP) with sampling and analysis requirements and approved by the Department. The PEP must be submitted to the Department for review and approval within 60 days of issuance of this Approval and meet the requirements of the Department's *Guidance for the Preparation of Performance Evaluation Plans <2,000 GPD*;
   b) Minimum System installation requirements;
   c) Company schematic drawings and specifications;
   d) Owner's Manual, including information on substances that should not be discharged to the System;
   e) Operation and Maintenance manual, including but not limited to, operator qualification requirements, inspection requirements, sampling and analysis requirements, recordkeeping requirements, and/or reporting requirements; and
   f) MassDEP Operation and Maintenance (O&M) checklist and I/A technology inspection checklist.

### B. Special Conditions

1. Department review and approval of the System design and installation is not required unless the Department determines on a case-by-case basis pursuant to its authority at 310 CMR 15.003(2)(e) that the proposed System requires Department review and approval.

2. System installations must meet the specific siting conditions for Provisional Use provided in 310 CMR 15.286(4) and the facility must meet the siting requirements of this Approval.

3. Any System for which a complete Disposal System Construction Permit Application is submitted while this Approval is in effect, may be permitted, installed, and used in accordance with this Approval unless the Department, the local approval authority, or a court requires the System to be modified or removed or requires discharges to the System to cease.

4. The System Owner shall provide access to the site for purposes of sampling the System in accordance with the Company's technology Performance Evaluation Plan approved by the

Department, in addition to providing access for performing inspections, maintenance, repairs, and responding to alarm events.

5. The System Owner shall ensure that no permanent buildings or structures, other than the System, are constructed in the area for the installation of all the components of a fully conforming Title 5 system with a reserve area. The area for a fully conforming Title 5 system with a reserve area shall not otherwise be disturbed by the System Owner in any manner that will render it unusable for future installation of a fully conforming Title 5 system.

6. The Department has not determined that the performance of the System will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sanitary sewer system.

   If it is feasible to connect a new or existing facility to the sewer, the Designer shall not propose an Alternative System to serve the facility and the facility Owner shall not install or use an Alternative System.

   When a sanitary sewer connection becomes feasible after an Alternative System has been installed, the System Owner shall connect the facility served by the System to the sewer within 60 days of such feasibility and the System shall be abandoned in compliance with 310 CMR 15.354, unless a later time is allowed in writing by the Department or the Local Approving Authority.

7. The control panel including alarms shall be mounted in a location accessible to the System Operator.

8. For any System that does not flow by gravity to the SAS, the System shall be equipped with sensors and high-level alarms to protect against high water due to pump failure, pump control failure, loss of power, or system freeze up. The control panel including alarms and controls shall be mounted in a location always accessible to the operator (or service contractor). Emergency storage capacity for wastewater above the high level alarm shall be provided equal to the daily design flow of the System and the storage capacity shall include an additional allowance for the volume of all drainage which may flow back into the System when pumping has ceased.

   Instead of providing emergency 24-hour storage, an independent standby power source may be provided for operation during an interruption in power. With any interruption of the power supply the source must be capable of automatically activating in addition to manual start up capability. The standby power must be sufficient to handle peak flows for at least 24 hours and sufficient to meet all power needs of the System including, but not limited to, pumping, ventilation, and controls. Standby power installations must be inspected and exercised at least annually and all automatic and manual start up controls must be tested. Standby power installations must comply with all applicable state and local code requirements. Provided that a standby power installation complies with these requirements, no variance is required to the provisions of 310 CMR 15.231(2).

9. System unit malfunction and high water alarms shall be connected to circuits separate from the circuits to the operating equipment and pumps.

10. All System control units, valve boxes, conveyance lines and other System appurtenances shall be designed and installed to prevent freezing per the Company's recommendations.

11. Any System structures with exterior piping connections located within 12 inches or below the Estimated Seasonal High Groundwater elevation shall have the connections made watertight with neoprene seals or equivalent.

12. In compliance with 310 CMR 15.240(13), a minimum of one (1) inspection port shall be provided within the SAS 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 to within three inches of finish grade.

Operation and Maintenance

13. Inspection, operation and maintenance (O & M), sampling, and field testing of the System required by this Approval shall be performed by a System Operator with the following qualifications:
    a) is an approved System Inspector in accordance with 310 CMR 15.340;
    b) has been trained by the Company and whose name appears on the Company's current list of qualified operators; and
    c) has been certified at a minimum of Grade Level IV (four) by the Board of Registration of Operators of Wastewater Treatment Facilities, in accordance with Massachusetts regulations 257 CMR 2.00. The name of the Operator shall be included in the O&M agreement required by paragraph B (14).

14. Prior to the use of the System, the System Owner shall enter into an O&M Agreement with a qualified contractor and submit the Agreement to the Approving Authority and the Company. The Agreement shall be at least for one year and include the following provisions:

    a) The name of the qualified Operator that appears on the Company's current list of Service Contractors;
    b) The System Operator must have the qualifications specified in paragraph B (13);
    c) The System Operator must inspect the System in accordance with the Approval and anytime there is an equipment failure, System failure, or other alarm event;
    d) In the case of a System failure, an equipment failure, alarm event, components not functioning as designed or in accordance with the Company specifications, or violations of the Approval, procedures and responsibilities of the Operator and System Owner shall be clearly defined for corrective measures to be taken immediately. The System Operator shall agree to provide written notification within five days describing corrective measures taken to the System Owner, the Company, and the local board of health;
    e) The System Operator shall determine the cause of total nitrogen effluent limit violations if they occur and take corrective actions in accordance with the approved O & M Manual; and
    f) Procedures and responsibilities for recording quarterly or monthly wastewater flows must be defined, see paragraph B (32) "*Flow Metering*".

15. At all times, the System Owner shall maintain an O&M Agreement that meets the requirements of paragraph B (20).

16. The System Owner and the System Operator shall properly operate and maintain the system in accordance with this Approval, the Designer's operation and maintenance requirements, and the requirements of the local approving authority.

17. Upon determining that the System has failed, as defined in 310 CMR 15.303, the System Operator shall notify the System Owner immediately.

18. Upon determining that the System has failed, as defined in 310 CMR 15.303, the System Owner and the System Operator shall be responsible for the notification of the local approving authority within 24 hours of such determination.

19. In the case of a System failure, an equipment failure, alarm event, components not functioning as designed or in accordance with the Company specifications, or any violations of the Approval, the System Owner and the System Operator shall be responsible for the written notification of the local approving authority and the Company within five days describing corrective measures taken.

20. Within 60 days of any site visit, the System Operator shall submit an O&M report and inspection checklist to the System Owner and the Company. The O&M report and inspection checklist shall include, at a minimum:
    a) for a System failing, any corrective actions taken;
    b) wastewater analyses, wastewater flow data, and field testing results;
    c) any violations of the Approval;
    d) any determinations that the System or its components are not functioning as designed or in accordance with the Company specifications; and
    e) any other corrective actions taken or recommended.

21. By September 30th of each year, the System Owner and the Service Contractor shall be responsible for submitting to the local approving authority all monitoring results with all O&M reports and inspection checklists completed by the System Operator during the previous 12 months.

22. By September 30th of each year, the Service Contractor shall be responsible for submitting to the Company copies of all O&M reports including alarm event responses, all monitoring results, violations of the Approval, inspection checklists completed by the Service Contractor, notifications of system failures, and reports of equipment replacements with reasons during the previous 12 months.

23. A copy of the wastewater analyses, wastewater flow data, field testing results, and System Operator O&M reports and inspection checklists shall be maintained by the Company. It is recommended the System Owner also maintain copies of these items.

24. The System Owner shall notify the Approving Authority in writing within seven days of any cancellation, expiration or other change in the terms and/or conditions of the O&M Agreement required by Paragraph B(14).

25. The System Owner and the Service Contractor shall maintain copies of the Service Contractor's O&M reports, inspection checklists, and all reports and notifications to the LAA for a minimum of five years.

26. The System may only be installed to serve facilities where a fully conforming Title 5 system with a reserve area exists on-site or could be built on-site in compliance with the design standards for new construction of 310 CMR 15.000, and for which a site evaluation in

compliance with 310 CMR 15.000 has been approved by the Approving Authority. A fully conforming Title 5 system may include other approved alternative technologies in accordance with the conditions imposed on the alternative technologies.

27. Subject to the provisions of this Approval, the Technology shall be installed in a manner which neither intrudes on, replaces a component of, or adversely affects the operation of all other components of the System designed and constructed in accordance with the standards for new construction of 310 CMR 15.200 - 15.279.

Effluent Limit and Monitoring Requirements.

28. For the new construction, unless the facility meets a TN effluent limit of 11 mg/l or less, the system shall not be designed to receive more than 440 gallons of design flow per day per acre (gpda) in an area that is subject to the Nitrogen Loading Limitations of 310 CMR 15.214. If the facility does not meet with the Nitrogen Loading Limitations pursuant to the aggregation provisions of 310 CMR 15.216, the System Owner shall repair, replace, modify or take any other action as required by the Department or the local approving authority to meet the total nitrogen concentration limits in the effluent.

    Violation of the TN concentration in the System effluent shall not require notifications as required in paragraphs B (18) and (19).

29. Prior to Department approval of the Company's Performance Evaluation Plan, the Company shall be responsible for the following monitoring requirements for all System installations that are subject to a total nitrogen concentration limit in accordance with paragraph B (28). Sampling shall include pH, BOD5, TSS and Total Nitrogen, unless otherwise stated. Flow shall be recorded at each inspection, see "Flow Metering" section below.

    a) Year-round facilities shall be inspected and effluent sampled quarterly;
    b) Seasonal properties shall be inspected and effluent sampled a minimum of twice per year, with at least one annual sample taken 30 to 60 days after seasonal occupancy and a second sample taken no less than 2 months after the first sample; and
    c) After 12 rounds of monitoring, sampling may be reduced to TN only quarterly. Reduced sampling shall also include Field Testing of System wastewater when determined necessary by the operator, see *DEP Field Testing Protocol* at *http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/testsamp.pdf*.

    Properties occupied at least 6 months per year are considered year-round properties.
    Properties occupied less than 6 months per year are considered seasonal properties.

30. During the Performance Evaluation period, the Company shall follow the monitoring requirements specified in the Performance Evaluation Plan for installed Systems.

31. After the three (3) year Performance Evaluation period by the Company and approval by the Department, and until this Approval is modified, terminated, or superseded by a General Use Certification, the System Owner shall comply with the following monitoring requirements if the System is subject to a total nitrogen concentration limit in accordance with paragraph B? (28).

a) Year-round properties shall be inspected and sampled for at least the TN parameter a minimum of twice/year, at least 5 months apart and with at least one sample taken between December 1 and March 1 of each year. Field testing shall be completed as determined necessary by the System operator, see *DEP Field Testing Protocol* at *http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/testsamp.pdf*.
Water meter readings shall be recorded at each inspection, see "Flow Metering" below.
b) Seasonal properties shall be sampled for at least the TN parameter a minimum of twice/year. At least one annual sample must be taken 30 to 60 days after each seasonal occupancy. A second sample must be taken no less than 2 months after the first sample. Field testing of the System shall be completed as determined necessary by the operator. Water meter readings shall be recorded at each inspection, see "Flow Metering" below.

32. Flow Metering - At a minimum, for all systems installed prior to this Approval, water meter flow data shall be recorded each time the system is inspected and sampled by the System Operator. For systems installed after the effective date of this Approval, wastewater flow data shall be recorded each time the system is inspected and sampled by the System Operator and may be based on:
    a) actual metering data of wastewater flow to the system; or
    b) water meter data for the total facility with metered non-wastewater flows, if available, subtracted from the total facility water usage.

33. Field Testing: Turbidity, pH and Apparent Color - Turbidity, pH, DO and apparent color shall be measured and/or recorded in the field when when determined necessary by the operator. See applicable sections of the Department's *Field Testing Protocol* at *http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/testsamp.pdf*.

34. At a minimum, the System Operator shall inspect the System:
    a) two times per year;
    b) in accordance with the approved O&M manual, the Designer's operation and maintenance requirements, and the requirements of the local approving authority; and
    c) any time there is an alarm event, equipment failure, or system failure

35. The System Operator shall collect samples and obtain analysis results from an approved lab, perform field testing required by the Approval and submit results within 60 days of the site visit to the System Owner.

36. If the Company successfully demonstrates the effectiveness of the System to reduce nitrogen loadings during the Performance Evaluation period, a minimum of three years, the System Owner shall operate the System subject to the requirements of the General Use Certification, if issued, for this technology.

## C. Special Conditions Specific to the Company

1. The Approval shall only apply to model units with the same model designations specified in this approval and meet the same specifications, operating requirements, and plans, as provided by the manufacturer at the time of the application. Any proposed modifications of the units shall be subject to the review of the Department for coverage under the Approval.

2. Prior to submission of an application for a DSCP, the Company shall provide to the Designer and the System Owner:

   a) All design and installation specifications and requirements;
   b) An operation and maintenance manual, including:
   i) an inspection checklist;
   ii) recommended inspection and maintenance schedule;
   iii) monitoring (i.e. water use and power consumption) and sampling procedures, if any;
   iv) alarm response procedures, if any, and troubleshooting procedures;
   c) An owner's manual, including proper system use and alarm response procedures, if any;
   d) Estimates of the Owner's costs associated with System operation including, when applicable: power consumption, maintenance, sampling, recordkeeping, reporting, and equipment replacement;
   e) A copy of the Company's warranty; and
   f) Lists of Designers, Installers, and Service Contractors.

3. The Company shall implement the Performance Evaluation Plan, as submitted and approved by the Department, and shall be responsible for all data collection and submissions to the Department until a final determination on the Performance Evaluation has been made by the Department.

4. Until a final determination has been made by the Department on a completed Performance Evaluation, the Company shall submit to the Department an annual report by February 15th of each year that includes the following:

   a) a table of all sample data collected for all systems installed to date and all information required by the Department as part of the approved Performance Evaluation Plan;
   b) status of preparation of a Performance Evaluation Plan if not yet provided to MassDEP, or any recommended changes to the approved Performance Evaluation Plan;
   c) a list of pending applications for system installations which have been submitted to local approving authorities;
   d) identification of any System after start-up in violation of the Approval or not in compliance with any performance criteria at the time of the annual report, the reasons for the noncompliance and the status of any corrective actions that are needed; and
   e) any recommendations and requests for changes to the system monitoring and reporting plan or the performance criteria of the Approval.

   The report shall be signed by a corporate officer, general partner or the Company owner.

   (Service Contractor records submitted to the Company should not be included with the annual report to the Department, but shall be made available to the Department within 30 days of a request by the Department.)

5. The Company shall institute and maintain a program of Installer training and continuing education that is at least offered annually. The Company shall maintain and annually update, and make available the list of qualified Installers by February 15th of each year. The Company shall certify that the Installers on the list have taken the training and passed the Company's training qualifications.

6. The Company shall institute and maintain a program of Designer training and continuing education, as approved by the Department. The Company shall maintain and annually update, and make available the list of qualified Designers by February 15th of each year. The Company shall certify that the Designers on the list have taken the training and passed the Company's training qualifications.

7. The Company shall institute and maintain a program of Operator training and continuing education, as approved by the Department. The Company shall maintain and annually update, and make available the list of qualified Operators by February 15th of each year. The Company shall certify that the Operators on the list have taken the training and passed the Company's training qualifications.

8. The Company shall not sell the Technology to an Installer unless the Installer is trained to install the System by the Company.

9. Prior to its sale of any System that may be used in Massachusetts, the Company shall provide the purchaser with a copy of the Approval with the System design, installation, O&M, and Owner's manuals. In any contract for distribution or sale of the System, the Company shall require the distributor or seller to provide the purchaser of a System for use in Massachusetts with copies of these documents, prior to any sale of the System.

10. Within 60 days of issuance by the Department of a revised Approval, the Company shall provide written notification of changes to the Approval to all Service Contractors servicing existing installations of the Technology and all distributors and resellers of the Technology.

11. The Company shall provide written notification to the Department's Director of the Wastewater Management Program at least 30 days in advance of the proposed transfer of ownership of the Technology for which the Approval is issued. Said notification shall include the name and address of the proposed owner containing a specific date of transfer of ownership, responsibility, coverage and liability between them.

12. The Approval shall be binding on the Company and its officers, employees, agents, contractors, successors, and assigns, including but not limited to dealers, distributors, and resellers. Violation of the terms and conditions of the Approval by any of the foregoing persons or entities, respectively, shall constitute violation of the Approval by the Company unless the Department determines otherwise.

## IV. CERTIFICATION AND NOTIFICATION REQUIREMENTS

1. Thirty (30) days prior to submitting an application for a DSCP, the Company or its representative shall provide to the Approving Authority a certification, signed by the owner of record for the property to be served by the unit, stating that the property owner:

   a) has been provided a copy of the Provisional Use Approval and all attachments and agrees to comply with all terms and conditions;
   b) has been informed of all the owner's costs associated with the operation including power consumption, maintenance, sampling, recordkeeping, reporting, and equipment replacement;

c) understands the requirement for a contract with a company approved operator and has been provided a current list of all approved operators;
d) agrees to fulfill his responsibilities to provide a Deed Notice as required by 310 CMR 15.287(10) and the Approval; and
e) agrees to fulfill his responsibilities to provide written notification of the Approval conditions to any new owner, as required by 310 CMR 15.287(5).

2. Upon submission of an application for a DSCP to the Approving Authority, the Company shall submit to the Approving Authority, with a copy to the Designer and the System Owner, a certification by the Company or its authorized agent that the design conforms to this Approval and that the proposed use of the System is consistent with the unit's capabilities and all Company requirements. The review shall include evaluation of the need for installation of water meter(s) at each facility. An authorized agent of the Company responsible for the design review shall have received technical training in the Company's products.

3. The System Designer shall be a Massachusetts Registered Professional Engineer, or a Massachusetts Registered Sanitarian provided that such Sanitarian shall not design a system with a discharge greater than 2,000 gallons per day.

4. Thirty (30) days prior to delivery of the treatment unit to the site for installation, the Company shall provide to the Approving Authority a copy of a signed contract for a minimum period of one year with a Company approved Operator and the initial Owner/Occupant of the property.

5. Prior to the commencement of construction, the System Installer must certify in writing to the Designer and the System Owner that (s)he has taken the Company's training, passed the Company's training qualifications, and is listed on the Company's list of Installers.

6. Prior to the issuance of a Certificate of Compliance by the Approving Authority:

a) In accordance with 310 CMR 15.021(3), the System Installer and Designer must certify in writing that the System has been constructed in compliance with 310 CMR 15.000, the approved design plans, and all local requirements, including any local approving authority site-specific requirements;
b) In accordance with 310 CMR 15.021(3), the Designer must certify in writing that any changes to the design plans have been reflected on as-built plans which have been submitted to the Approving Authority by the Designer;
c) As a condition of this Approval, the System Installer and Designer must certify to the Approving Authority in writing that the System has been constructed in compliance with the terms of this Approval;
d) An authorized agent of the Company must certify to the Approving Authority in writing that the installation was done by a qualified Installer approved by the Company and the installation conforms to this Approval. The authorized agent of the Company responsible for the inspection of the installation shall have received technical training in the Company's products; and
e) Prior to signing any agreement to transfer any or all interest in the property served by the system, or any portion of the property, including any possessory interest, the System Owner shall provide written notice, as required by 310 CMR 15.287(5) of all conditions contained in the Approval to the transferee(s). Any and all instruments of transfer and any leases or rental agreements shall be included as an exhibit attached thereto and made

a part thereof of a copy of the Approval for the System. The System Owner shall send a copy of such written notification(s) to the Local Approving Authority within 10 days of such notice to the transferee(s).

## V. STANDARD CONDITIONS

1. The provisions of 310 CMR 15.000 are applicable to the design, installation, use and operation of a System utilizing an approved or certified alternative technology, except those provisions that specifically have been varied by the conditions of this Approval.

2. The design, installation, and use of the System must conform to the terms and conditions of the Approval and the Department approved attachments.

3. The facility served by the System and the System itself shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times. Standard Conditions Applicable to the System Owner.

4. This Approval shall be binding on the System Owner and on its agents, contractors, successors, and assigns. Violation of the terms and conditions of this Approval by any of the foregoing persons or entities, respectively, shall constitute violation of this Approval by the System Owner unless the Department determines otherwise.

5. The System Owner shall obtain all necessary permits and approvals required by 310 CMR 15.000 prior to the installation and use of the System in Massachusetts.

6. The System is approved for the treatment and disposal of sanitary sewage only. The System Owner shall not introduce any wastes that are not sanitary sewage into the System. The System Owner shall dispose of wastes generated or used at the facility that are not sanitary sewage by other lawful means.

7. Prior to issuance of the Certificate of Compliance and after recording and/or registering the Deed Notice required by 310 CMR15.287(10), the System Owner shall submit the following to the Local Approving Authority: (i) a certified Registry copy of the Notice bearing the book and page/or document number; and (ii) if the property is unregistered land, a Registry copy of the System Owner's deed to the property, bearing a marginal reference on the System Owner's deed to the property. The Notice to be recorded shall be in the form of the Notice provided by the Department.

8. The System Owner shall at all times have the installed System properly operated and maintained in accordance with the most recent O&M provisions of this Approval for the alternative technology and in accordance with any additional requirements of the Approving Authority. The most recent O&M provisions of this Approval for the alternative technology are available from the Department.

9. The System Owner shall furnish the Department any information that the Department requests regarding the System, within 21 days of the date of receipt of that request.

<u>Standard Conditions Applicable to the Designer</u>

10. The Designer shall be a Massachusetts Registered Professional Engineer or a Massachusetts Registered Sanitarian, including when designing systems for repair, provided that such Sanitarian shall not design a system to discharge more than 2,000 gallons per day.

11. Prior to the application for a DSCP, the Designer shall provide the System Owner with a copy of this Approval.

Standard Conditions Applicable to the Company

12. This Approval shall be binding on the Company and its officers, employees, agents, contractors, successors, and assigns. Violation of the terms and conditions of this Approval by any of the foregoing persons or entities, respectively, shall constitute violation of this Approval by the Company unless the Department determines otherwise.

13. The Company shall include copies of the Approval with each System that is sold. In any contract executed by the Company for distribution or re-sale of the System, the Company shall require all vendors, distributors, and resellers to provide each purchaser of the System with copies of the Approval.

14. The Company shall make available, in printed and electronic format, the approved Attachments and any approved updates associated with the Approval, to the System Owners, Operators, Designers, Installers, vendors, resellers, and distributors of the System.

15. The Company shall submit to the Department for approval any proposed updates or changes to the Attachments to the Approval.

16. The Company shall notify all System Owners, resellers, and distributors of changes to the Approval within 60 days of issuance by the Department.

17. The Company shall notify the Department's Director of the Wastewater Management Program at least 30 days in advance of the proposed transfer of ownership of the Technology for which the Approval is issued. Said notification shall include the name and address of the proposed owner containing a specific date of transfer of ownership, responsibility, coverage and liability between them. All provisions of the Approval applicable to the Company shall be applicable to successors and assigns of the Company, unless the Department determines otherwise.

18. The Company shall furnish the Department any information that the Department requests regarding the Technology within 21 days of the date of receipt of that request.

19. If the Company wishes to continue the Approval after its expiration date, the Company shall apply for and obtain a renewal of the Approval. The Company shall submit a renewal application at least 180 days before the expiration date of the Approval, unless written permission for a later date has been granted in writing by the Department. Upon receipt of a timely and complete renewal application, the Approval shall continue in force until the Department has acted on the renewal application.

Reporting

20. All notices and documents required to be submitted to the Department by the Approvalshall be submitted to:

    Director
    Wastewater Management Program
    Department of Environmental Protection
    One Winter Street - 5th floor
    Boston, Massachusetts 02108

Rights of the Department

21. The Department may suspend, modify or revoke the Approval for cause, including, but not limited to, noncompliance with the terms of the Approval, non-payment of any annual compliance assurance fee, for obtaining the Approval by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Approval, or as necessary for the protection of public health, safety, welfare, or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to the Approval and/or a System utilizing the Technology against the Company, the Designer, the System Owner, the Installer, and/or the Operator of the System.

## VI. GENERAL CONDITIONS

Title 5 Regulations 310 CMR 15.287: "General Conditions for Use of Alternative Systems Pursuant to 310 CMR 15.284 through 15.286"

"The following conditions shall apply to all uses of alternative systems pursuant to 310 CMR 15.284 through 15.286:

1. All plans and specifications shall be designed in accordance with 310 CMR 15.220.

2. Any required operation and maintenance, monitoring and testing plans shall be submitted to the Department and approved prior to initiation of the use. Monitoring and sampling shall be performed in accordance with a Department approved plan. Sample analysis shall be conducted by an independent U.S. EPA or Commonwealth of Massachusetts approved testing laboratory, or an approved independent university laboratory, unless otherwise provided in the Department's written approval. It shall be a violation of 310 CMR 15.000 to omit from a report or falsify any data collected pursuant to an approved testing plan.

3. The facility served by the alternative system and the system itself shall be open to inspection and sampling by the Department and the Local Approving Authority at all reasonable times.

4. The Department and/or the Local Approving Authority may require the owner or operator of the system to cease operation of the system and/or to take any other action necessary to protect public health, safety, welfare and the environment.

5. The owner or operator shall provide written notice to any new owner or operator that the system is an alternative system. Such notice shall include notice of the general conditions and any special conditions applicable to the system and its owner.

6. The owner or operator, or the proponent of the alternative system, shall obtain and provide the Department with a determination from the board of certification of operators of wastewater treatment facilities established pursuant to M.G.L. c. 21, § 34A as to whether a certified operator is required for operation of the alternative system. The Department shall waive this requirement if it has on file a determination for the alternative system, and shall notify the owner, operator, or proponent of the determination.

7. It is a violation of 310 CMR 15.000 to install, construct, or operate an alternative system except in full compliance with the written approval and 310 CMR 15.287.

8. The Department may require the issuance of a groundwater discharge permit pursuant to 314 CMR 5.00 (groundwater discharge program) for any alternative system.

9. The system owner shall maintain an operation and maintenance contract with a Massachusetts certified operator where one is required by 257 CMR 2.00, or otherwise with a person qualified to operate and maintain the system in accordance with the Department's written approval.

10. 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 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 Local Approving Authority.

Horsley Witten Group
*Sustainable Environmental Solutions*
90 Route 6A • Unit 1 • Sandwich, MA 02563
508-833-6600 • horsleywitten.com

TO: The Abutters of 631 Dyer Prince Road, Eastham MA. Parcel ID: 19-120

SUBJECT: Rock Harbor Harbormaster Building and Site Revitalization Wastewater System.

TO WHOM IT MAY CONCERN,

In accordance with the Town of Eastham Board of Health, you are hereby notified that an application has been filed with the Eastham Board of Health by the owners described below, regarding the installation of a new wastewater treatment system at the above mentioned property. Additional details follow:

APPLICANT/OWNER: Town of Eastham

ADDRESS: 2500 State Highway, Eastham MA 02642

PROJECT LOCATION: a. 631 Dyer Prince Road, Eastham MA

b. Parcel ID: 19-120

PROJECT DESCRIPTION: The project includes the installation of a nitrogen reducing NitROE 2KS wastewater treatment system, to serve the new Harbormaster Building office area. The wastewater treatment system is being permitted under the Massachusetts Department of Environmental Protection (MassDEP) Provisional Use Approval.

APPLICANTS' AGENT: Horsley Witten Group, Inc.

PUBLIC HEARING: Thursday April 29, 2021 at 3:00 PM, Virtual

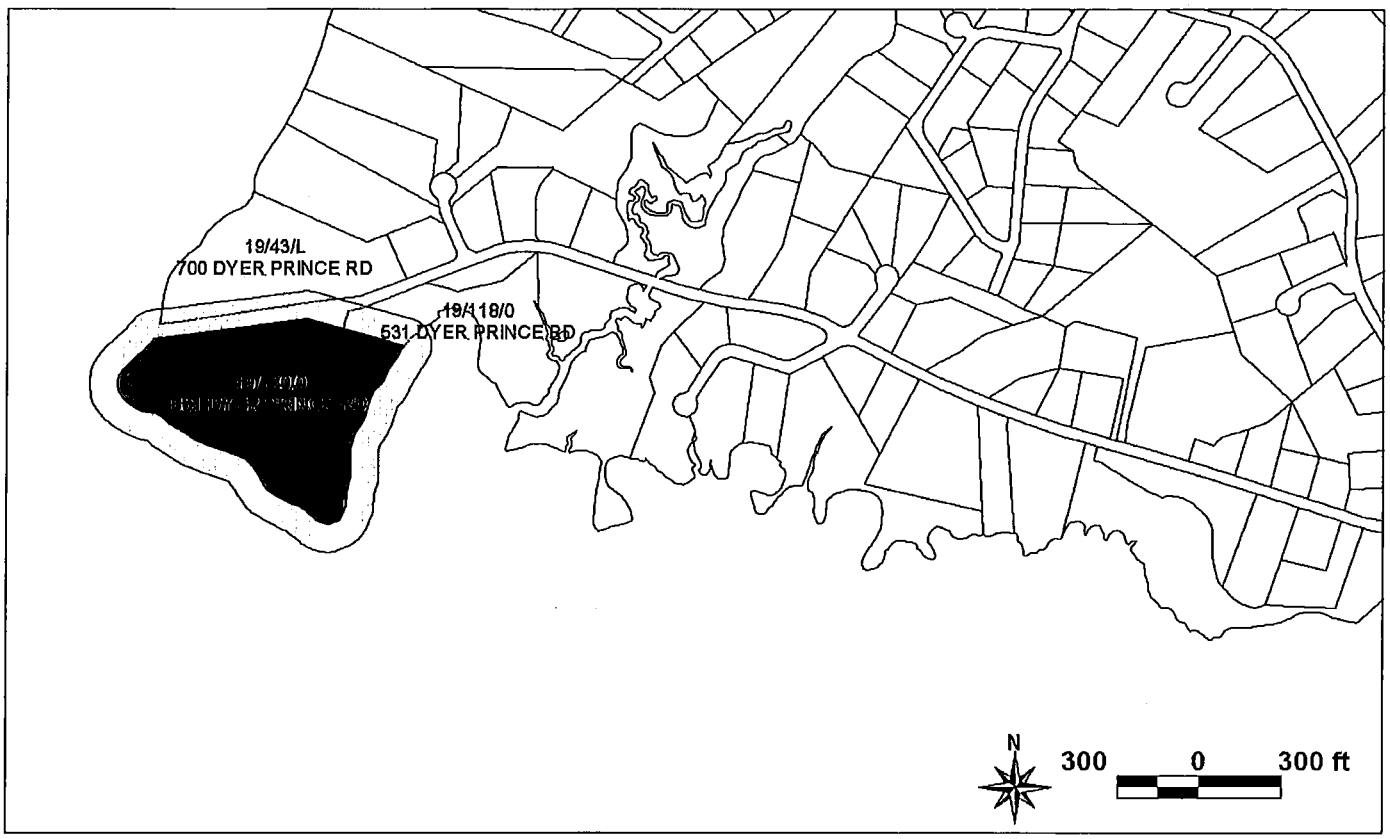
Plans for this project describing the proposed activity are on file with the Eastham Board of Health.

Sincerely,

Joe Henderson
Senior Engineer

TOWN OF EASTHAM, MA
BOARD OF ASSESSORS
2500 State Highway

Abutters List Within 100 feet of Parcel 19/120/0




| Key | Parcel ID | Owner | Location | Mailing Street | Mailing City | ST | ZipCd/Country |
|---|---|---|---|---|---|---|---|
| 11618 | 19-43-L-E | EASTHAM TOWN OF | 700 DYER PRINCE RD | 2500 STATE HWY | EASTHAM | MA | 02642 |
| 6003 | 19-118-0-R | SCHOENER FAMILY IRREV TRUST<br>KATHLEEN/KAREN SCHOENER TTEES | 531 DYER PRINCE RD | 28 CONSTITUTION DR | SOUTHBOROUGH | MA | 01772 |
| 6005 | 19-120-0-E | EASTHAM TOWN OF<br>ROCK HARBOR BEACH | 631 DYER PRINCE RD | 2500 STATE HIGHWAY | EASTHAM | MA | 02642 |

19-43-L-E

EASTHAM TOWN OF
2500 STATE HWY
EASTHAM, MA 02642

19-118-0-R

SCHOENER FAMILY IRREV TRUST
KATHLEEN/KAREN SCHOENER TTEES
28 CONSTITUTION DR
SOUTHBOROUGH, MA 01772

19-120-0-E

EASTHAM TOWN OF
ROCK HARBOR BEACH
2500 STATE HIGHWAY
EASTHAM, MA 02642