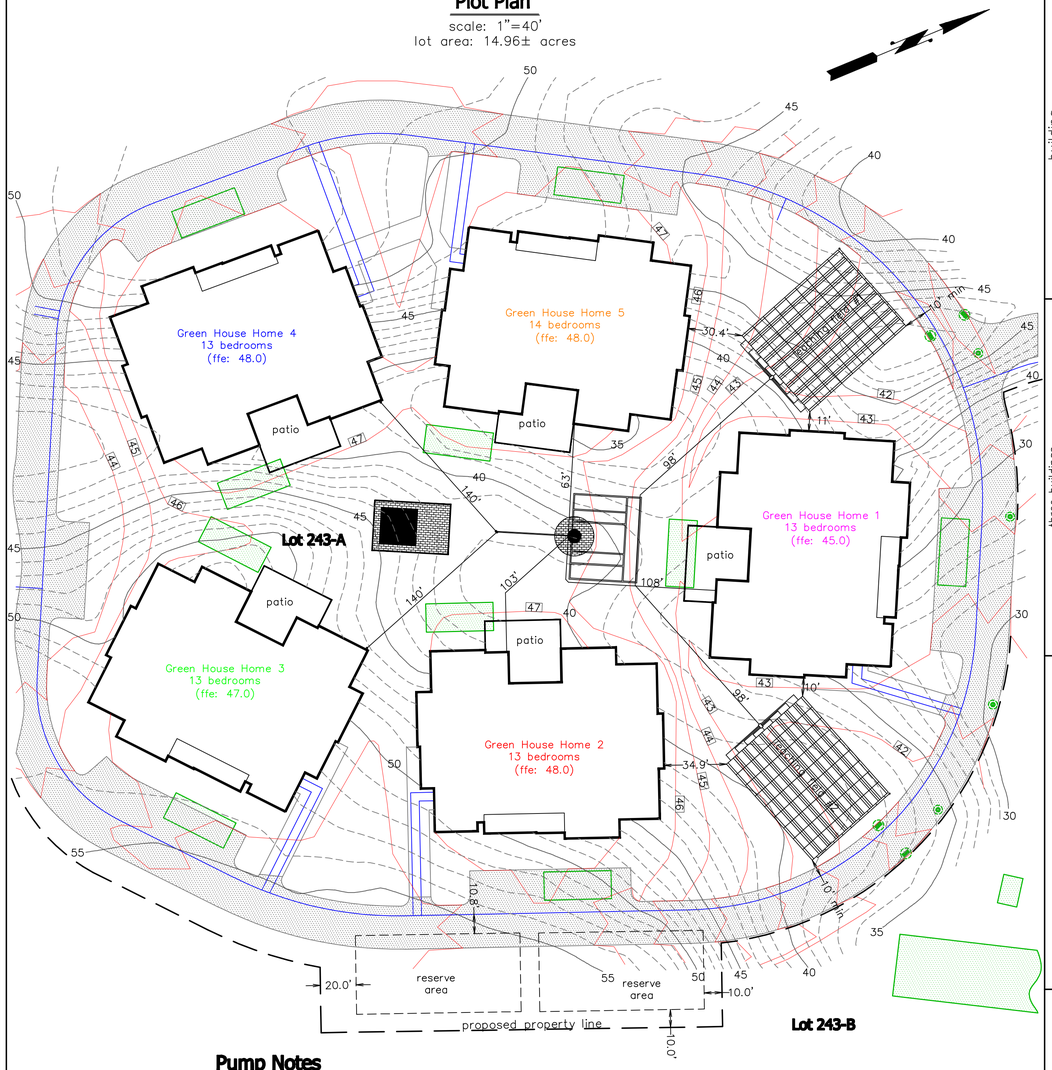
Plot Plan

scale: 1"=40'
lot area: 14.96± acres



Pump Notes

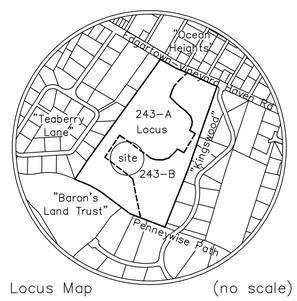
1. Pumps to be Myers Model WHR5, 1/2 hp, three phase. 208 volt (oae)
2. Controls to be for duplex pumping system
3. Force main to be 2" sch 40 PVC with 48" cover or insulated for frost protection
4. A high water alarm shall be installed on a circuit other than the pump control circuit
5. Control elevations: lag pump & alarm on: 35.20, lead pump off: 35.00, lead pump on: 34.00

General Notes

1. Elevations refer to an Mean Sea Level Datum (NAVD88).
   See bench mark on plot plan located on traverse spike (elevation: 31.91)
2. Finished grading to be done in accordance with plot plan.
3. All construction to conform to Title V and Edgartown Board of Health requirements.
4. No permanent structure may be constructed over the 100% expansion area.
5. Schofield, Barbini, & Hoehn Inc. will not be responsible for the performance of the system unless constructed as shown. Any alterations must be approved in writing by Schofield, Barbini & Hoehn Inc.
6. For proper performance, the septic tank should be inspected at least once a year and pumped when the total depth of scum and solids exceed 1/3 the liquid depth of the tank.
7. Distribution box covers to be brought to finish grade.

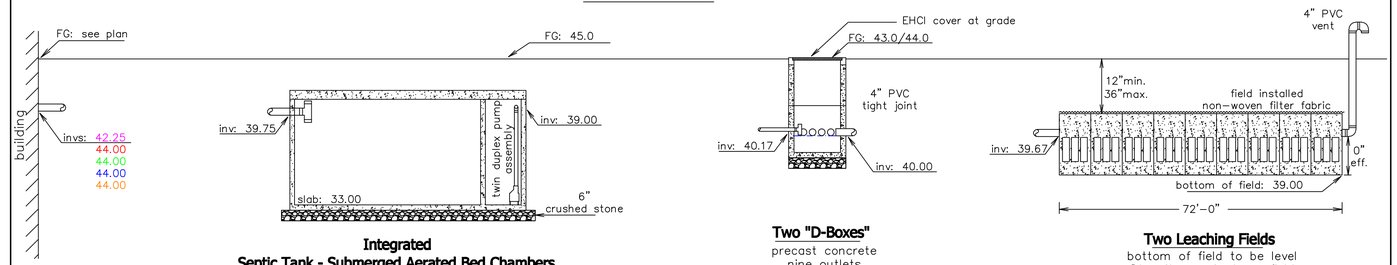
Project Notes

1. Design engineer to inspect excavation of leaching facility at time of construction
2. An Operation and Maintenance contract for the Klean Tu system shall be signed and a copy shall be filed with the Edgartown Board of Health
3. Distribution Box to be designed and constructed to handle H-20 loading
4. All lines run below roadway to be Schedule 80 PVC
5. Locus lies "North and East of the Edgartown Groundwater Divide"
   A variance from Section 2.32 of the Edgartown Board of Health Regulations is required:
   67 bedrooms allowed on 14.96 acres
   90 equivalent bedrooms proposed
   (90-67)/67 = 34.3% overage
6. See shop drawings by Klean Tu Wastewater Treatment Technologies for Integrated Tank details



Locus Map (no scale)

Profile of System

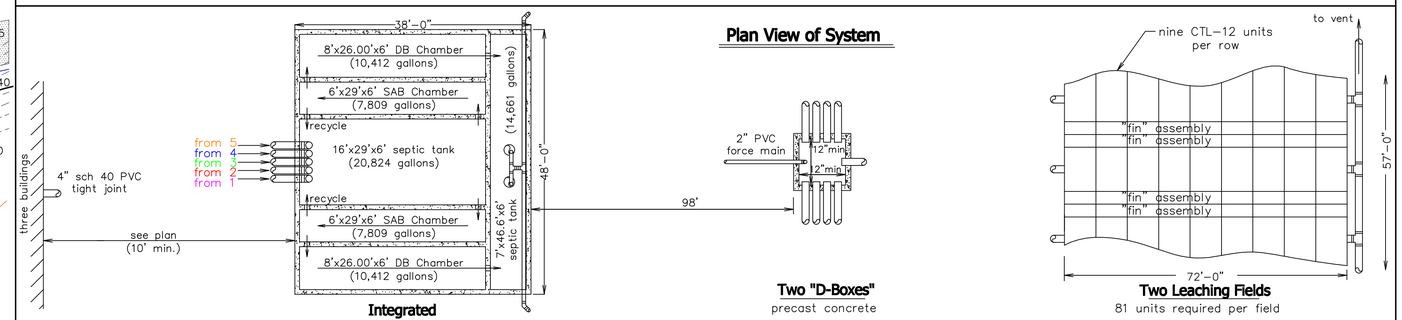


Integrated
Septic Tank - Submerged Aerated Bed Chambers
Denitrification Bed Chambers - Pump Chamber

Two "D-Boxes"
precast concrete
nine outlets

Two Leaching Fields
bottom of field to be level
81 units required per field

Plan View of System

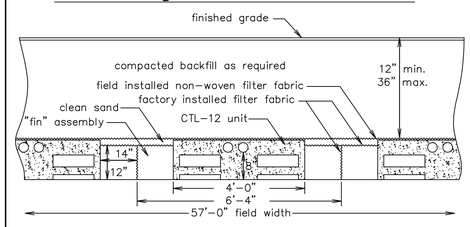


Integrated
Septic Tank - Submerged Aerated Bed Chambers
Denitrification Bed Chambers - Pump Chamber

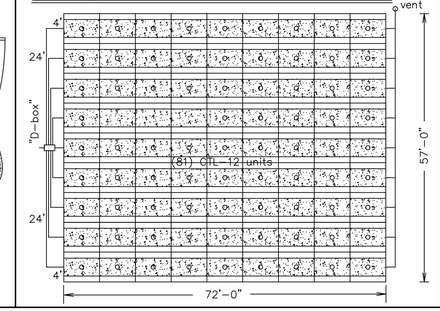
Two "D-Boxes"
precast concrete

Two Leaching Fields
81 units required per field

Partial Leaching Field Cross-Section (no scale)



Leaching Field Detail – two fields required (no scale)



Design Data

1. Estimated Hydraulic Loading:
   Sixty-six bedrooms @ 150 GPD/bedroom = 9,900 GPD
   Garbage disposals are NOT allowed with this design
2. Septic Tank Size:
   Required septic tank capacities: 9,900 GPD x 200% = 19,800 gallons (min)
   Septic tank provided: 20,824 gallons
3. Design percolation rate: 5 MPI
   Soil textural class: I
   Loading rate: 0.74 GPD/SF(effective)
4. Leaching Area:
   Leaching area (eff): 162 units x 8 LF/unit x 10.57 SF(eff)/LF = 13,698 SF(eff)
5. Maximum Allowable Loading:
   13,698 SF(eff) x 0.74 GPD/SF(eff) = 10,136 GPD (5,068 GPD per field)
   Actual hydraulic loading: 9,900 GPD (4,950 per field)

Legend

---XX---	Denotes proposed contour
FG: XX.X	Denotes proposed finished grade
XX	Denotes existing contour
	Denotes test hole location
PVC	Denotes polyvinyl chloride pipe, Sch. 40, unless noted
	Denotes catch basin
EHCI	Denotes extra heavy cast iron
	Denotes 4" PVC "cleanout" to grade

Schedule of Elevations

	1	2	3	4	5
First floor elevation:	45.00	48.00	47.00	48.00	48.00
Basement floor:	n/a	n/a	n/a	n/a	n/a
Inverts at foundation:	42.25	44.00	44.00	44.00	44.00

finished grade

Invert at septic tank inlet: 39.75
Invert at septic tank outlet: 39.50

Invert at SAB chamber inlet: 39.50
Invert at SAB chamber outlet: 39.25

Invert at DB chamber inlet: 39.25
Invert at DB chamber outlet: 39.00

Invert at primary pump chamber inlet: 39.00
Invert at primary pump chamber outlet: 39.00 — 45.0

Invert at secondary distribution box inlet: 40.17
Invert at secondary distribution box outlet: 40.00 — #1: 43.0, #2: 44.0

Invert at Cur-Tech CTL-12 inlet: 39.67
Elevation of field bottom: 39.00

Test Pit PE-TP-3 (Surface Elevation: 39.4)
Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"-14"	A	Organics and Sandy Loam
14"-35"	B	Loamy SAND
35"-44"	C1	Medium Sand with trace Silt and Gravel
44"-142"	C2	Medium SAND

Groundwater was not encountered at a depth of 142" (elevation: 27.5)

Test Pit PE-TP-4 (Surface Elevation: 46.6)
Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"-14"	A	Organics and Sandy Loam
14"-36"	B	Loamy SAND
36"-46"	C1	Medium Sand with trace Silt
46"-130"	C2	Medium SAND

Groundwater was not encountered at a depth of 130" (elevation: 35.7)

Percolation Test Data

test pit #	date	top of 12" of water: depth from top of pit	top of 12" of water: elevation	rate: (mpi)
PE-TP-3	6/8/22	36"	36.4	<5
PE-TP-4	6/8/22	36"	43.3	<5

PRELIMINARY

Proposed Sewage Disposal System

To Serve a Sixty-Six Bedroom Skilled Nursing Facility
part of 490 Edgartown-Vineyard Haven Road
Assessor's Parcel 11B-243 (Lot 243-A)
Edgartown, Massachusetts

Applicant: Navigator Homes of M V, Inc. Ph: (508) 693-2781
c/o Schofield, Barbini, & Hoehn, Inc.
PO Box 339
Vineyard Haven, MA 02568

Date: May 4, 2022
designed by: CPA | drawn by: CPA | checked by: CHD

Schofield, Barbini & Hoehn, Inc.
Land Surveying Civil Engineering
SBH
12 Surveyor's Lane, Box 339
Vineyard Haven, Mass. 02568
508-693-2781
www.sbhinc.net

MV 11579-G

Plot Plan

scale: 1"=40'
lot area: 12.57± acres

Pump Notes

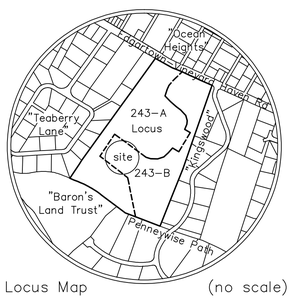
1. Pumps to be Myers Model WHR5, 1/2 hp, three phase. 208 volt (oae)
2. Controls to be for a duplex pumping system
3. Force main to be 2" sch 40 PVC with 48" cover or insulated for frost protection
4. A high water alarm shall be installed on a circuit other than the pump control circuit
5. Control elevations: lag pump & alarm on: 31.95, lead pump off: 31.75, lead pump on: 30.75

General Notes

1. Elevations refer to an Mean Sea Level Datum (NAVD88).
   See bench mark on plot plan located on traverse spike (elevation: 31.91)
2. Finished grading to be done in accordance with plot plan.
3. All construction to conform to Title V and Edgartown Board of Health requirements.
4. No permanent structure may be constructed over the 100% expansion area.
5. Schofield, Barbini, & Hoehn Inc. will not be responsible for the performance of the system unless constructed as shown. Any alterations must be approved in writing by Schofield, Barbini & Hoehn Inc.
6. For proper performance, the septic tank should be inspected at least once a year and pumped when the total depth of scum and solids exceed 1/3 the liquid depth of the tank.
7. EHCI distribution box covers to be brought to finish grade.
8. 4" PVC line to be sleeved within 20' of continuous 6" PVC centered on water line crossing

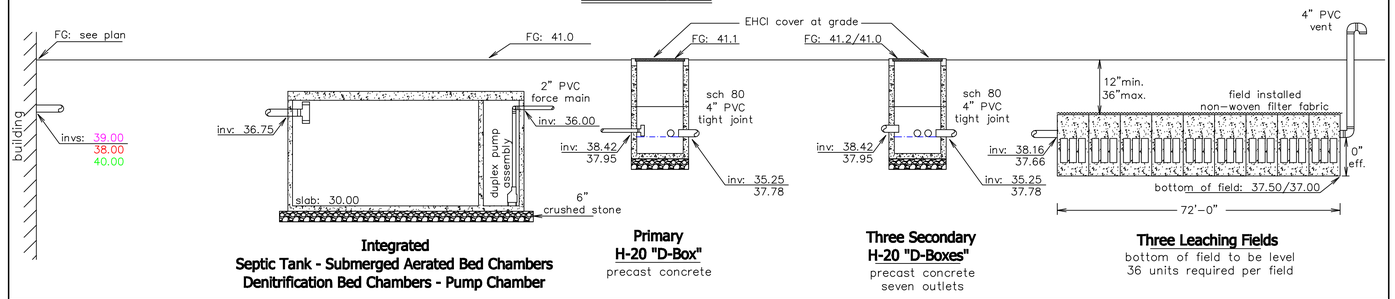
Project Notes

1. Design engineer to inspect excavation of leaching facility at time of construction
2. An Operation and Maintenance contract for the Klean Tu system shall be signed and a copy shall be filed with the Edgartown Board of Health
3. Distribution Box to be designed and constructed to handle H-20 loading
4. All lines run below roadway to be Schedule 80 PVC
5. Locus lies "North and East of the Edgartown Groundwater Divide"
   A variance from Section 2.32 of the Edgartown Board of Health Regulations is required:
   56 bedrooms allowed on 12.57 acres
   76 bedrooms proposed
   (76–56)/56 = 35.7% overage
6. See shop drawings by Klean Tu Wastewater Treatment Technologies for Integrated Tank details



Locus Map (no scale)

Profile of System



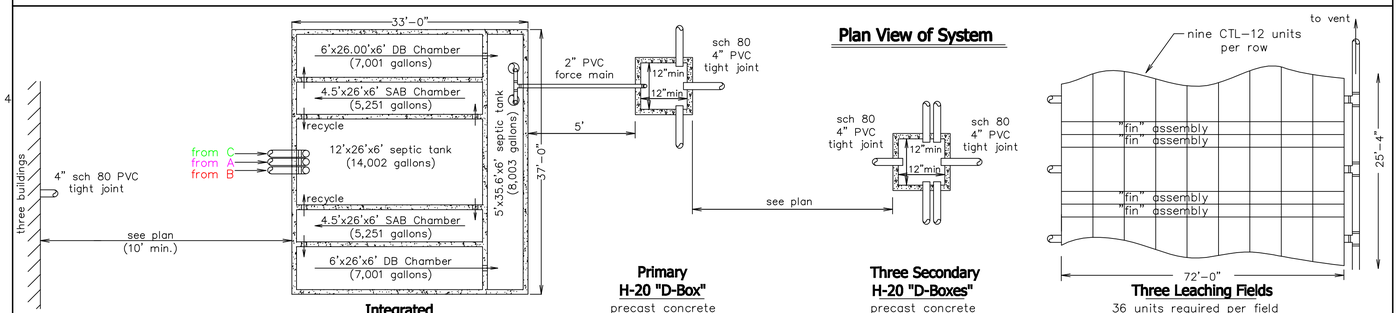
Integrated
Septic Tank - Submerged Aerated Bed Chambers
Denitrification Bed Chambers - Pump Chamber

Primary
H-20 "D-Box"
precast concrete

Three Secondary
H-20 "D-Boxes"
precast concrete
seven outlets

Three Leaching Fields
bottom of field to be level
36 units required per field

Plan View of System



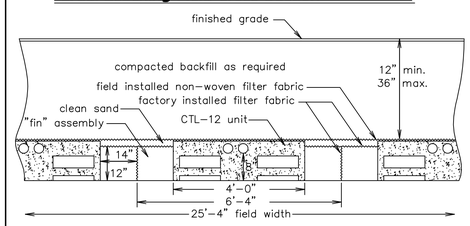
Integrated
Septic Tank - Submerged Aerated Bed Chambers
Denitrification Bed Chambers - Pump Chamber

Primary
H-20 "D-Box"
precast concrete

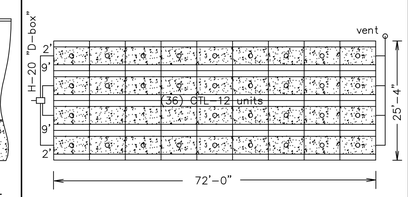
Three Secondary
H-20 "D-Boxes"
precast concrete

Three Leaching Fields
36 units required per field

Partial Leaching Field Cross-Section (no scale)



Leaching Field Detail – three fields required (no scale)



Design Data

1. Estimated Hydraulic Loading:
   Sixty bedrooms @ 110 GPD/bedroom = 6,600 GPD
   Garbage disposals are NOT allowed with this design
2. Septic Tank Size:
   Required septic tank capacities: 6,600 GPD x 200% = 13,200 gallons (min)
   Septic tank provided: 14,002 gallons
3. Design percolation rate: 5 MPI
   Soil textural class: I
   Loading rate: 0.74 GPD/SF(effective)
4. Leaching Area:
   Effective leaching area: 108 units x 8 LF/unit x 10.57 SF(eff)/LF = 9,132 SF(eff)
5. Maximum Allowable Loading:
   9,132 SF(effective) x 0.74 GPD/SF(effective) = 6,757 GPD (2,252 GPD per field)
   Actual hydraulic loading: 6,600 GPD (2,200 per field)

Schedule of Elevations

	A	B	C
First floor elevation:	44.00	43.00	44.00
Basement floor:	n/a	n/a	n/a
Inverts at foundation:	39.00	38.00	40.00

	finished grade A	B	C
	42.5	41.5	42.5

		finished grade
Invert at primary pump chamber inlet:	36.00	
Invert at primary pump chamber outlet:	36.00	41.1
Invert at septic tank inlet:	36.75	
Invert at septic tank outlet:	36.50	
Invert at primary distribution box inlet:	38.82	
Invert at primary distribution box outlet:	38.65	41.0
Invert at SAB chamber inlet:	36.50	
Invert at SAB chamber outlet:	36.25	
Invert at secondary distribution box inlet:	#1 38.42 / #2&#3 37.95	
Invert at secondary distribution box outlet:	#1 38.25 / #2&#3 37.78	#1 41.2 / #2&#3 41.0
Invert at DB chamber inlet:	36.25	
Invert at DB chamber outlet:	36.00	
Invert at Cur-Tech CTL-12 inlet:	38.17 / 37.67	
Elevation of field bottom:	37.50 / 37.00	

Legend

---XX---	Denotes proposed contour
FG: XX.X	Denotes proposed finished grade
XX	Denotes existing contour
	Denotes test hole location
PVC	Denotes polyvinyl chloride pipe, Sch. 40, unless noted
	Denotes catch basin
EHCI	Denotes extra heavy cast iron
	Denotes 4" PVC "cleanout" to grade

PRELIMINARY

Test Pit PE-TP-3 (Surface Elevation: 39.4)

Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"–14"	A	Organics and Sandy Loam
14"–35"	B	Loamy SAND
35"–44"	C1	Medium Sand with trace Silt and Gravel
44"–142"	C2	Medium SAND

Groundwater was not encountered at a depth of 142" (elevation: 27.5)

Test Pit PE-TP-4 (Surface Elevation: 46.6)

Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"–14"	A	Organics and Sandy Loam
14"–36"	B	Loamy SAND
36"–46"	C1	Medium Sand with trace Silt
46"–130"	C2	Medium SAND

Groundwater was not encountered at a depth of 130" (elevation: 35.7)

Percolation Test Data

test pit #	date	top of 12" of water: depth from top of pit	top of 12" of water: elevation	rate: (mpi)
PE-TP-3	6/8/22	36"	36.4	<5
PE-TP-4	6/8/22	36"	43.3	<5

Proposed Sewage Disposal System

To Serve Forty Proposed Workforce Housing Units
Within Three Structures; Sixty Bedrooms Total
(16 Additional Bedrooms Proposed on Locus)
part of 490 Edgartown–Vineyard Haven Road
Assessor's Parcel 11B–243 (Lot 243–B)
Edgartown, Massachusetts

Applicant: The Martha's Vineyard Hospital Phone: (508) 693–2781
c/o Schofield, Barbini, & Hoehn, Inc.
PO Box 339
Vineyard Haven, MA 02568

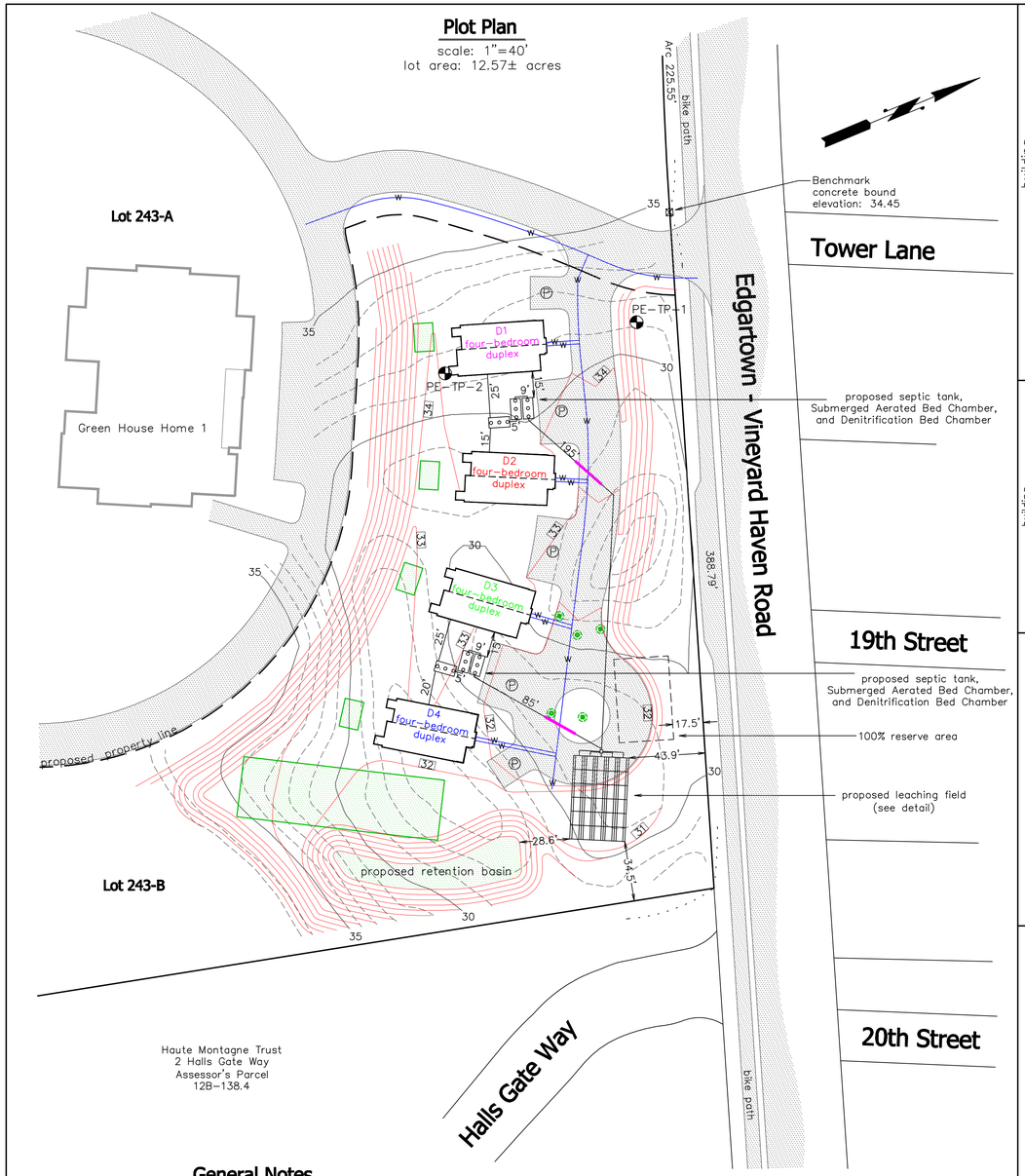
Date: April 29, 2022
designed by: CPA | drawn by: CPA | checked by: CHD

Schofield, Barbini & Hoehn, Inc.
Land Surveying Civil Engineering
12 Surveyor's Lane, Box 339
Vineyard Haven, Mass. 02568
508–693–2781
www.sbhinc.net

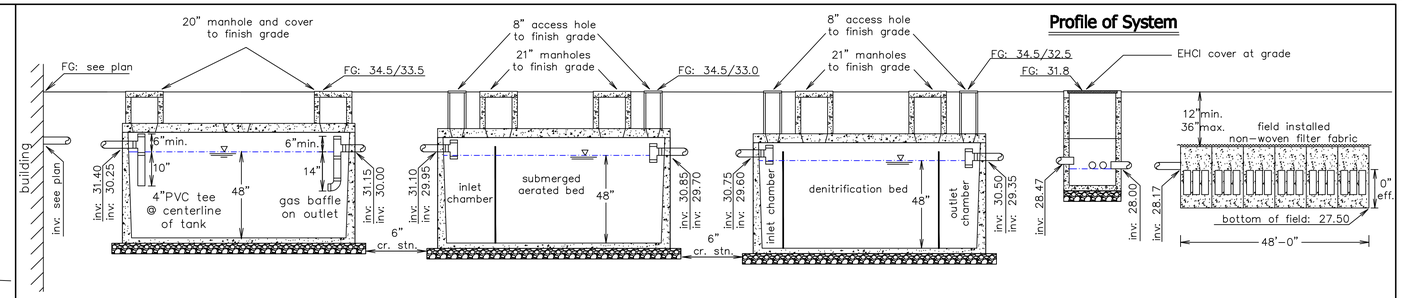
MV 11579–AT

Plot Plan

scale: 1"=40'
lot area: 12.57± acres



Profile of System



Two Septic Tanks
capacity: 2000 gallons each

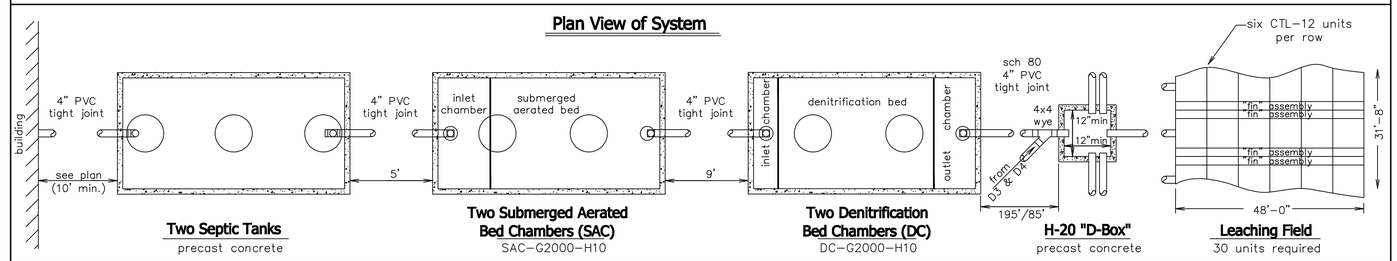
Two Submerged Aerated Bed Chambers (SAC)
SAC-G2000-H10

Two Denitrification Bed Chambers (DC)
DC-G2000-H10

H-20 "D-Box"
five outlets
"speed levelers"
to be provided

Leaching Field
bottom of field
to be level
30 units required

Plan View of System



Two Septic Tanks
precast concrete

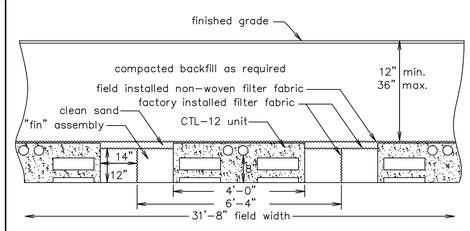
Two Submerged Aerated Bed Chambers (SAC)
SAC-G2000-H10

Two Denitrification Bed Chambers (DC)
DC-G2000-H10

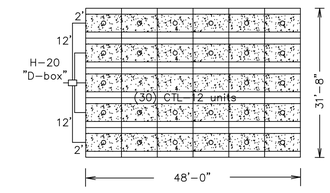
H-20 "D-Box"
precast concrete

Leaching Field
30 units required

Partial Leaching Field Cross-Section (no scale)



Leaching Field Detail (no scale)



Design Data

1. Estimated Hydraulic Loading:
   Sixteen bedrooms @ 110 GPD/bedroom = 1,760 GPD
   Garbage disposals are NOT allowed with this design
2. Septic Tank Size:
   Required septic tank capacities: 880 GPD x 200% = 1720 gallons (min)
   Septic tanks provided: two tanks at 2000 gallons each
3. Design percolation rate: 5 MPI
   Soil textural class: I
   Loading rate: 0.74 GPD/SF(effective)
4. Leaching Area:
   Effective leaching area: 30 units x 8 LF/unit x 10.57 SF(eff)/LF = 2,536 SF(eff)
5. Maximum Allowable Loading:
   2,536 SF(effective) x 0.74 GPD/SF(effective) = 1,876 GPD
   Actual hydraulic loading: 1,760 GPD

Schedule of Elevations

	D1	D2	D3	D4	finished grade above structure	
Top of foundation:	35.50	35.00	34.50	34.00		
Basement floor:	n/a	n/a	n/a	n/a		
Inverts at foundation:	32.00	32.00	30.75	30.75	see plan	
Invert at septic tank inlet:	31.40		30.25			
Invert at septic tank outlet:	31.15		30.00		34.5	33.5
Invert at SAB chamber inlet:	31.10		29.95			
Invert at SAB chamber outlet:	30.85		29.70		34.5	33.0
Invert at DB chamber inlet:	30.75		29.60			
Invert at DB chamber outlet:	30.50		29.35		34.5	32.5

		finished grade above structure	
Invert at distribution box inlet:	28.47		
Invert at distribution box outlet:	28.30	31.8	
Invert at Cur-Tech CTL-12 inlet:	28.17		
Elevation of field bottom:	27.50		

Legend

XX	Denotes proposed contour
FG: XX.X	Denotes proposed finished grade
XX	Denotes existing contour
	Denotes test hole location
PVC	Denotes polyvinyl chloride pipe, Sch. 40, unless noted
	Denotes catch basin
EHCI	Denotes extra heavy cast iron
P	Denotes parking area
	Denotes sub-surface drainage disposal

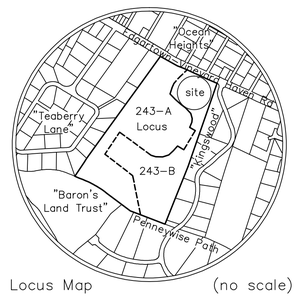
PRELIMINARY

General Notes

1. Elevations refer to an Mean Sea Level Datum (NAVD88).
   See bench mark on plot plan located on traverse spike (elevation: 31.91)
2. Finished grading to be done in accordance with plot plan.
3. All construction to conform to Title V and Edgartown Board of Health requirements.
4. Septic tank, NitROE tanks, and distribution box shall be watertight after construction, including covers.
5. No permanent structure may be constructed over the 100% expansion area.
6. Schofield, Barbini, & Hoehn Inc. will not be responsible for the performance of the system unless constructed as shown. Any alterations must be approved in writing by Schofield, Barbini & Hoehn Inc.
7. For proper performance, the septic tank should be inspected at least once a year and pumped when the total depth of scum and solids exceed 1/3 the liquid depth of the tank.
8. EHCI distribution box cover to be brought to finish grade
9. 4" PVC lines to be sleeved within 20' of continuous 6" PVC pipe centered on water line crossings

Project Notes

1. Design engineer to inspect excavation of leaching facility at time of construction
2. An Operation and Maintenance contract for the NitROE system shall be signed and a copy shall be filed with the Edgartown Board of Health
3. Distribution Box to be designed and constructed to handle H-20 loading
4. All lines run below roadway to be Schedule 80 PVC
5. Locus lies "North and East of the Edgartown Groundwater Divide"
   A variance from Section 2.32 of the Edgartown Board of Health Regulations is required:
   56 bedrooms allowed on 12.57 acres
   76 bedrooms proposed
   (76-56)/56 = 35.7% overage
6. Design engineer to inspect excavation of leaching field at time of construction



Locus Map (no scale)

Test Pit PE-TP-1 (Surface Elevation: 31.1)
Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"-9"	A	Organics and Sandy Loam
9"-33"	B	Loamy SAND
33"-128"	C	Medium Sand with trace Silt

Groundwater was not encountered at a depth of 128" (elevation: 20.4)

Test Pit PE-TP-2 (Surface Elevation: 31.4)
Date of Test: June 8, 2020

Depth	Horiz.	Soil Description
0"-12"	A	Organics and Sandy Loam
12"-28"	B	Loamy SAND
28"-133"	C	Medium Sand

Groundwater was not encountered at a depth of 133" (elevation: 20.3)

Percolation Test Data

test pit #	date	top of 12" of water: depth from top of pit	top of 12" of water: elevation	rate: (mpi)
PE-TP-1	6/8/22	36"	28.1	<5
PE-TP-2	6/8/22	36"	28.4	<5

Proposed Sewage Disposal System

To Serve Eight Proposed Duplex Dwelling Units
at Two Bedrooms per Unit = Sixteen Bedrooms Total
(60 Additional Bedrooms Proposed on Locus)
part of 490 Edgartown-Vineyard Haven Road
Assessor's Parcel 11B-243 (Lot 243-B)
Edgartown, Massachusetts

Applicant: The Martha's Vineyard Hospital Phone: (508) 693-2781
c/o Schofield, Barbini, & Hoehn, Inc.
PO Box 339
Vineyard Haven, MA 02568

Date: April 29, 2022
designed by: CPA | drawn by: CPA | checked by: CHD

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MV 11579-D