

COMMONWEALTH OF MASSACHUSETTS

Board of Health, Chilmark, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

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

Location <u>9 Signal Hill Lane</u>	Owner's Name <u>Santiago Realty Trust, c/o M. Landisman, ML Management LLC</u>
Map/Parcel# <u>Map 34, Parcel 1.3</u>	Address <u>888 Seventh Avenue, 4th Floor, New York, NY 10106</u>
Lot#	Telephone#
Installer's Name	Designer's Name <u>George Sourati, P.E.</u>
Address	Address <u>P.O. Box 4458, Vineyard Haven, MA 02568</u>
Telephone#	Telephone# <u>508-693-9933</u>

Type of Building Existing Single-Family Residence + Proposed Addition + Existing Guesthouse Lot Size 3.63 ± ^{acres} _{sq-ft.}
 Dwelling - No. of Bedrooms 4+2+1 = 7 total Garbage grinder ()
 Other - Type of Building _____ No. of persons _____ Showers (), Cafeteria ()
 Other Fixtures _____
 Design Flow (min. required) 440+220+110 = 770 gpd Calculated design flow 770 Design flow provided 770 gpd
 Plan: Date July 10, 2023 Number of sheets 2 Revision Date _____
 Title New Sewage Disposal System In The Town of Chilmark
 Description of Soil(s) see soils log
 Soil Evaluator Form No. _____ Name of Soil Evaluator George Sourati Date of Evaluation June 28, 2023

DESCRIPTION OF REPAIRS OR ALTERATIONS _____

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

Signed George Sourati Representative Date July 10, 2023

Inspections _____

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, MA.

CERTIFICATE OF COMPLIANCE

Description of Work: Individual Component(s) Complete System

The undersigned hereby certify that the Sewage Disposal System; Constructed (), Repaired (), Upgraded (), Abandoned ()

by: _____

at _____

has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. _____, dated _____. Approved Design Flow _____ (gpd)

Installer: _____

Designer: _____ Inspector: _____ Date: _____

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

COMMONWEALTH OF MASSACHUSETTS

Board of Health, _____, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to; Construct() Repair() Upgrade() Abandon() an individual sewage disposal system at _____ as described in the application for Disposal System Construction Permit No. _____, dated _____.

Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.

SOURATI ENGINEERING INC.
107 BEACH RD., STE. 202 P.O. BOX 4458
VINEYARD HAVEN, MASSACHUSETTS 02568
(508) 693-9933



Martha's Vineyard
SAVINGS BANK
Edgartown, MA
53-7292/2113

1182



7/10/2023

PAY TO THE
ORDER OF

Town of Chilmark

\$ 150.00

one hundred fifty and $\frac{00}{100}$

DOLLARS

Security features. Details on back.

MEMO 5426 Santiago Realty Trust, BOH: Filing Fee



George Sourati

AUTHORIZED SIGNATURE

⑈001182⑈ ⑆211372925⑆ 45 170156⑈



Commonwealth of Massachusetts

City/Town of Chilmark

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

A. Facility Information

Santiago Realty Trust, c/o M. Landesman, ML Management LLC

Owner Name

9 Signal Hill Lane

Street Address

Chilmark

City

MA
State

Map 34, Parcel 1.3

Map/Lot #

02535

Zip Code

B. Site Information

- 1. (Check one) [X] New Construction [] Upgrade [] Repair
2. Soil Survey Available? [X] Yes [] No If yes: Soil Survey of Dukes County, Mass. Source Soil Map Unit
3. Surficial Geological Report Available? [] Yes [X] No If yes: Year Published/Source Publication Scale Map Unit
4. Flood Rate Insurance Map Above the 500-year flood boundary? [X] Yes [] No Within the 100-year flood boundary? [] Yes [X] No
5. Wetland Area: Wetlands Conservancy Program Map Map Unit Name
6. Current Water Resource Conditions (USGS): Month/Year Range: [] Above Normal [X] Normal [] Below Normal
7. Other references reviewed: GROUNDWATER HYDROLOGY OF MASSACHUSETTS MAP



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: 1 Date: 6-28-2023 Time: Weather:

1. Location

Ground Elevation at Surface of Hole: 44.1 Location (identify on plan): SEE PLAN

2. Land Use: RESIDENTIAL (e.g., woodland, agricultural field, vacant lot, etc.) NONE Surface Stones - Slope (%) LAWN Vegetation GLACIAL OUTWASH Landform SEE PLAN Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ feet Drainage Way N/A feet Possible Wet Area 200+ feet Property Line 24± feet Drinking Water Well 200+ feet Other - feet

4. Parent Material: SAND Unsuitable Materials Present: [] Yes [x] No

If Yes: [] Disturbed Soil [] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [] Yes [x] No If yes: Depth Weeping from Pit Depth Standing Water in Hole Estimated Depth to High Groundwater: >198 inches <27.6 elevation



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 1

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-04	A					SANDY LOAM					
04-20	B					SANDY LOAM					
20-156	C1					silt clay/ L. SAND					
156-198	C2					SANDY LOAM					

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 2 Date: 6-28-2023 Time: Weather:

1. Location

Ground Elevation at Surface of Hole: 39.7 Location (identify on plan): SEE PLAN

2. Land Use: RESIDENTIAL (e.g., woodland, agricultural field, vacant lot, etc.) NONE Surface Stones - Slope (%) LAWN Vegetation GLACIAL OUTWASH Landform SEE PLAN Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ feet Drainage Way N/A feet Possible Wet Area 200+ feet Property Line 67± feet Drinking Water Well 200+ feet Other - feet

4. Parent Material: SAND Unsuitable Materials Present: [] Yes [x] No

If Yes: [] Disturbed Soil [] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [] Yes [x] No If yes: Depth Weeping from Pit Depth Standing Water in Hole

Estimated Depth to High Groundwater: >130 inches <28.9 elevation



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

C. On-Site Review (continued)

Deep Observation Hole Number: 2

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-05	A					SANDY LOAM					
05-28	B					SANDY LOAM					
28-130	C					SANDY LOAM					

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: 3 Date: 6-28-2023 Time: Weather:

1. Location

Ground Elevation at Surface of Hole: 41.4 Location (identify on plan): SEE PLAN

2. Land Use: RESIDENTIAL (e.g., woodland, agricultural field, vacant lot, etc.), NONE Surface Stones, - Slope (%), LAWN Vegetation, GLACIAL OUTWASH Landform, SEE PLAN Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ feet, Drainage Way N/A feet, Possible Wet Area 200+ feet, Property Line 55± feet, Drinking Water Well 200+ feet, Other - feet

4. Parent Material: SAND Unsuitable Materials Present: [] Yes [x] No

If Yes: [] Disturbed Soil [] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [] Yes [x] No If yes: Depth Weeping from Pit Depth Standing Water in Hole Estimated Depth to High Groundwater: >130 inches <30.6 elevation



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

C. On-Site Review (continued)

Deep Observation Hole Number: 3

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-05	A					SANDY LOAM					
05-28	B					SANDY LOAM					
28-130	C					SANDY LOAM					

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 4 Date: 5-22-2023 Time: _____ Weather: _____

1. Location

Ground Elevation at Surface of Hole: 44.2 Location (identify on plan): SEE PLAN

2. Land Use RESIDENTIAL NONE -
 (e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones Slope (%)
LAWN GLACIAL OUTWASH SEE PLAN
 Vegetation Landform Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ Drainage Way N/A Possible Wet Area 200+
 feet feet feet
 Property Line 47± Drinking Water Well 200+ Other -
 feet feet feet

4. Parent Material: SAND Unsuitable Materials Present: Yes No

If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: _____
 Depth Weeping from Pit _____ Depth Standing Water in Hole _____

Estimated Depth to High Groundwater: >120 <34.2
 inches elevation



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 4

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-04	A					SANDY LOAM					
04-30	B					SANDY LOAM					SILT
30-120	C					LOAMY SAND					CLAY

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: 5 Date: 5-22-2023 Time: _____ Weather: _____

1. Location
 Ground Elevation at Surface of Hole: 44.8 Location (identify on plan): SEE PLAN

2. Land Use RESIDENTIAL NONE -
 (e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones Slope (%)
LAWN GLACIAL OUTWASH SEE PLAN
 Vegetation Landform Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ Drainage Way N/A Possible Wet Area 200+
 feet feet feet
 Property Line 33± Drinking Water Well 200+ Other -
 feet feet feet

4. Parent Material: SAND Unsuitable Materials Present: Yes No
 If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: _____ 20"
 Depth Weeping from Pit Depth Standing Water in Hole
 Estimated Depth to High Groundwater: =82 =38.0
 inches elevation



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

C. On-Site Review (continued)

Deep Observation Hole Number: 5

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-10	A					SANDY LOAM					
10-30	B					SANDY LOAM					
30-60	C1					SANDY LOAM					CLAY
60-102	C2					SANDY LOAM					

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 6 Date: 5-22-2023 Time: Weather:

1. Location

Ground Elevation at Surface of Hole: 44.5 Location (identify on plan): SEE PLAN

2. Land Use: RESIDENTIAL (e.g., woodland, agricultural field, vacant lot, etc.) NONE Surface Stones - Slope (%) LAWN Vegetation GLACIAL OUTWASH Landform SEE PLAN Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ feet Drainage Way N/A feet Possible Wet Area 200+ feet Property Line 34± feet Drinking Water Well 200+ feet Other - feet

4. Parent Material: SAND Unsuitable Materials Present: [] Yes [x] No

If Yes: [] Disturbed Soil [] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [] Yes [x] No If yes: Depth Weeping from Pit Depth Standing Water in Hole

Estimated Depth to High Groundwater: >120 inches <34.5 elevation



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 6

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-06	A					SANDY LOAM					
06-28	B					SANDY LOAM					
28-50	C1					SANDY LOAM					
50-120	C2					LOAMY SAND			friable		

Additional Notes:



Commonwealth of Massachusetts

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

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: 7 Date: 5-22-2023 Time: Weather:

1. Location

Ground Elevation at Surface of Hole: 44.9 Location (identify on plan): SEE PLAN

2. Land Use: RESIDENTIAL (e.g., woodland, agricultural field, vacant lot, etc.) NONE Surface Stones - Slope (%) LAWN Vegetation GLACIAL OUTWASH Landform SEE PLAN Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ feet Drainage Way N/A feet Possible Wet Area 200+ feet Property Line 22± feet Drinking Water Well 202± feet Other - feet

4. Parent Material: SAND Unsuitable Materials Present: [] Yes [X] No

If Yes: [] Disturbed Soil [] Fill Material [] Impervious Layer(s) [] Weathered/Fractured Rock [] Bedrock

5. Groundwater Observed: [] Yes [X] No If yes: Depth Weeping from Pit Depth Standing Water in Hole

Estimated Depth to High Groundwater: inches elevation



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 7

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
						SANDY LOAM					CLAY

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 8 Date: 5-22-2023 Time: _____ Weather: _____

1. Location
 Ground Elevation at Surface of Hole: 42.5 Location (identify on plan): SEE PLAN

2. Land Use RESIDENTIAL NONE -
 (e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones Slope (%)
LAWN GLACIAL OUTWASH SEE PLAN
 Vegetation Landform Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ Drainage Way N/A Possible Wet Area 204±
 feet feet feet
 Property Line 64± Drinking Water Well 200+ Other -
 feet feet feet

4. Parent Material: SAND Unsuitable Materials Present: Yes No
 If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: _____
 Estimated Depth to High Groundwater: >120 <32.5
 inches elevation
 Depth Weeping from Pit _____ Depth Standing Water in Hole _____



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 8

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-06	A					SANDY LOAM					
06-22	B					SANDY LOAM					
22-120	C					LOAMY SAND		5			pockets of S. LOAM

Additional Notes:



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (minimum of two holes required at every proposed primary and reserved disposal area)

Deep Observation Hole Number: 9 Date: 5-22-2023 Time: _____ Weather: _____

1. Location
Ground Elevation at Surface of Hole: 44.0 Location (identify on plan): SEE PLAN

2. Land Use RESIDENTIAL NONE -
(e.g., woodland, agricultural field, vacant lot, etc.) Surface Stones Slope (%)
LAWN/WOODS GLACIAL OUTWASH SEE PLAN
Vegetation Landform Position on Landscape (attach sheet)

3. Distances from: Open Water Body 200+ Drainage Way N/A Possible Wet Area 200+
feet feet feet
Property Line 36± Drinking Water Well 203± Other -
feet feet feet

4. Parent Material: SAND Unsuitable Materials Present: Yes No
If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: _____
Depth Weeping from Pit Depth Standing Water in Hole
Estimated Depth to High Groundwater: >120 <34.0
inches elevation



Commonwealth of Massachusetts

City/Town of Chilmark

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

C. On-Site Review (continued)

Deep Observation Hole Number: 9

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
00-06	A					LOAMY SAND					
06-24	B					SANDY LOAM					
24-60	C1					SANDY LOAM		5			trace of clay & silt
60-120	C2					SANDY LOAM					

Additional Notes:



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

D. Determination of High Groundwater Elevation

1. Method Used:

Depth observed standing water in observation hole

A. _____
inches

B. _____
inches

Depth weeping from side of observation hole

A. _____
inches

B. _____
inches

Depth to soil redoximorphic features (mottles)

A. N/A *no mottles
encountered to a depth of 198

B. _____
inches

Groundwater adjustment (USGS methodology)

A. _____
inches

B. _____
inches

2.

Index Well Number _____

Reading Date _____

Index Well Level _____

Adjustment Factor _____

Adjusted Groundwater Level _____

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

Yes No

b. If yes, at what depth was it observed?

Upper boundary: _____
inches

Lower boundary: _____
inches



Commonwealth of Massachusetts

City/Town of Chilmark

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

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

GEORGE SOURATI, P.E. SE #2290

Typed or Printed Name of Soil Evaluator / License #

MARINA LENT

Name of Board of Health Witness

JULY 10, 2023

Date

OCTOBER 1997

Date of Soil Evaluator Exam

CHILMARK

Board of Health

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with [Percolation Test Form 12](#).



Commonwealth of Massachusetts

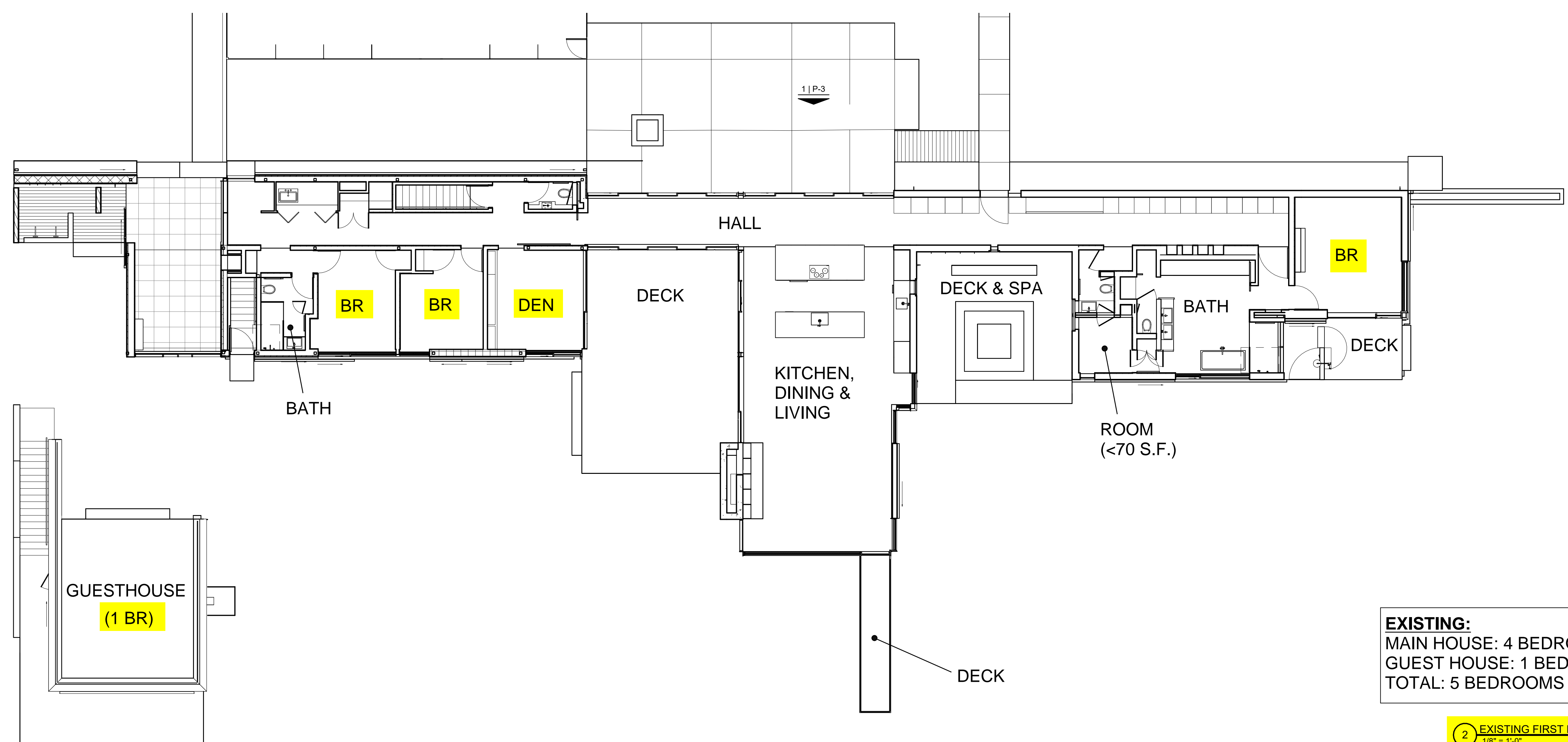
City/Town of Chilmark

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

Field Diagrams

Use this sheet for field diagrams:

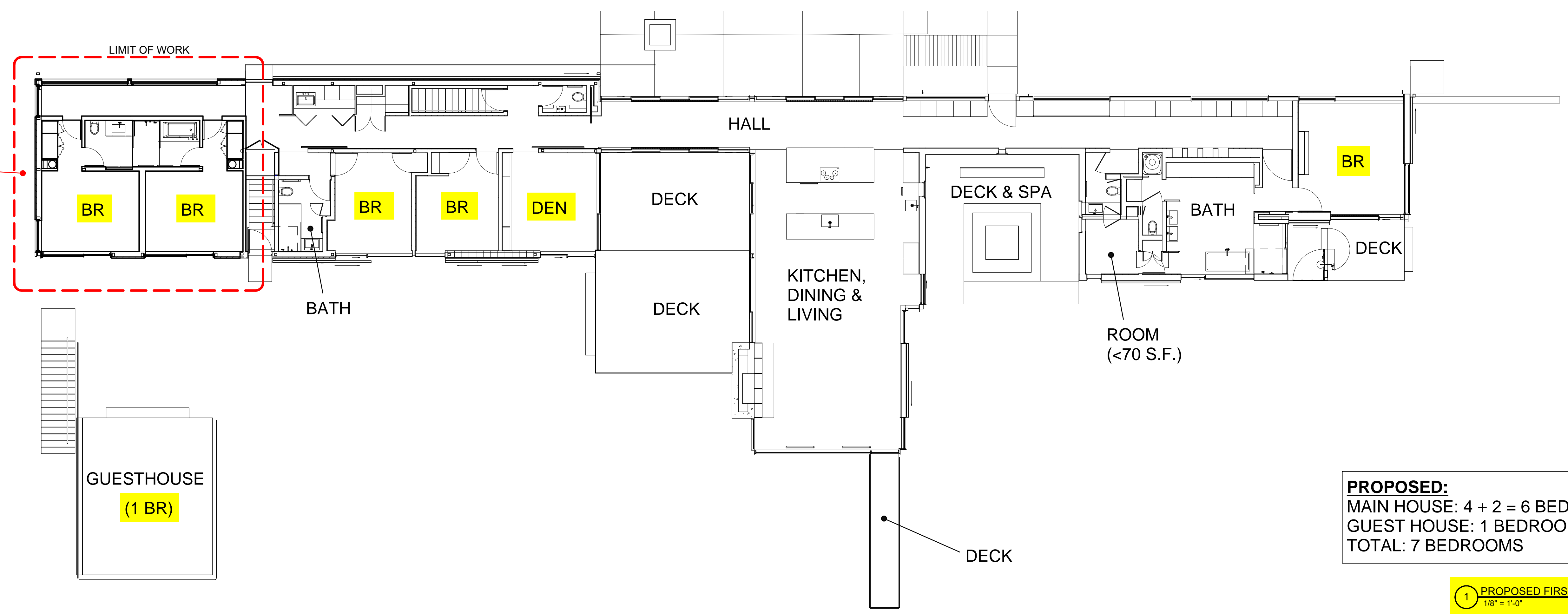
5 | P-3



EXISTING:
MAIN HOUSE: 4 BEDROOMS
GUEST HOUSE: 1 BEDROOM
TOTAL: 5 BEDROOMS

2 EXISTING FIRST FLOOR PLAN
1/8" = 1'-0"

**PROPOSED 2
BEDROOM ADDITION**



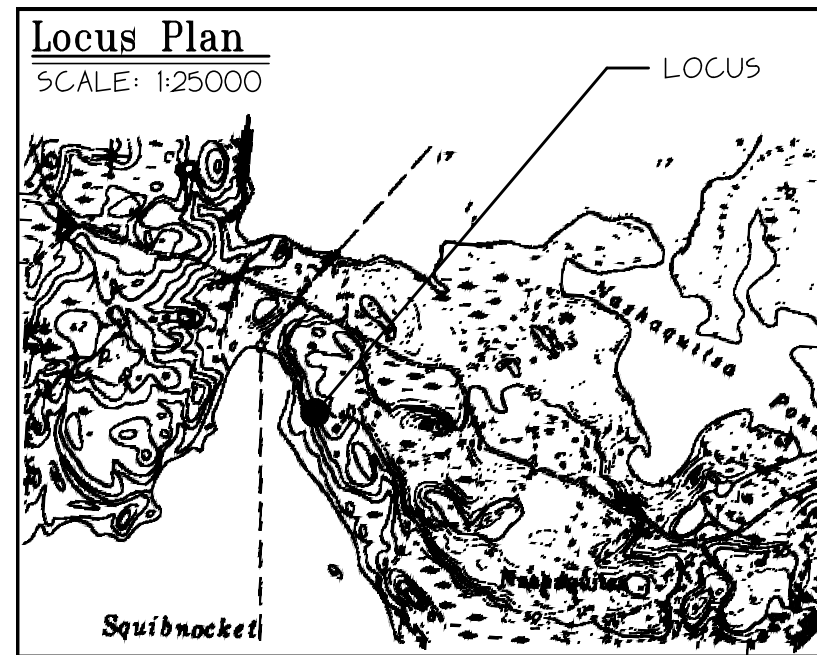
PROPOSED:
MAIN HOUSE: 4 + 2 = 6 BEDROOMS
GUEST HOUSE: 1 BEDROOM
TOTAL: 7 BEDROOMS

1 PROPOSED FIRST FLOOR PLAN
1/8" = 1'-0"



REVISION

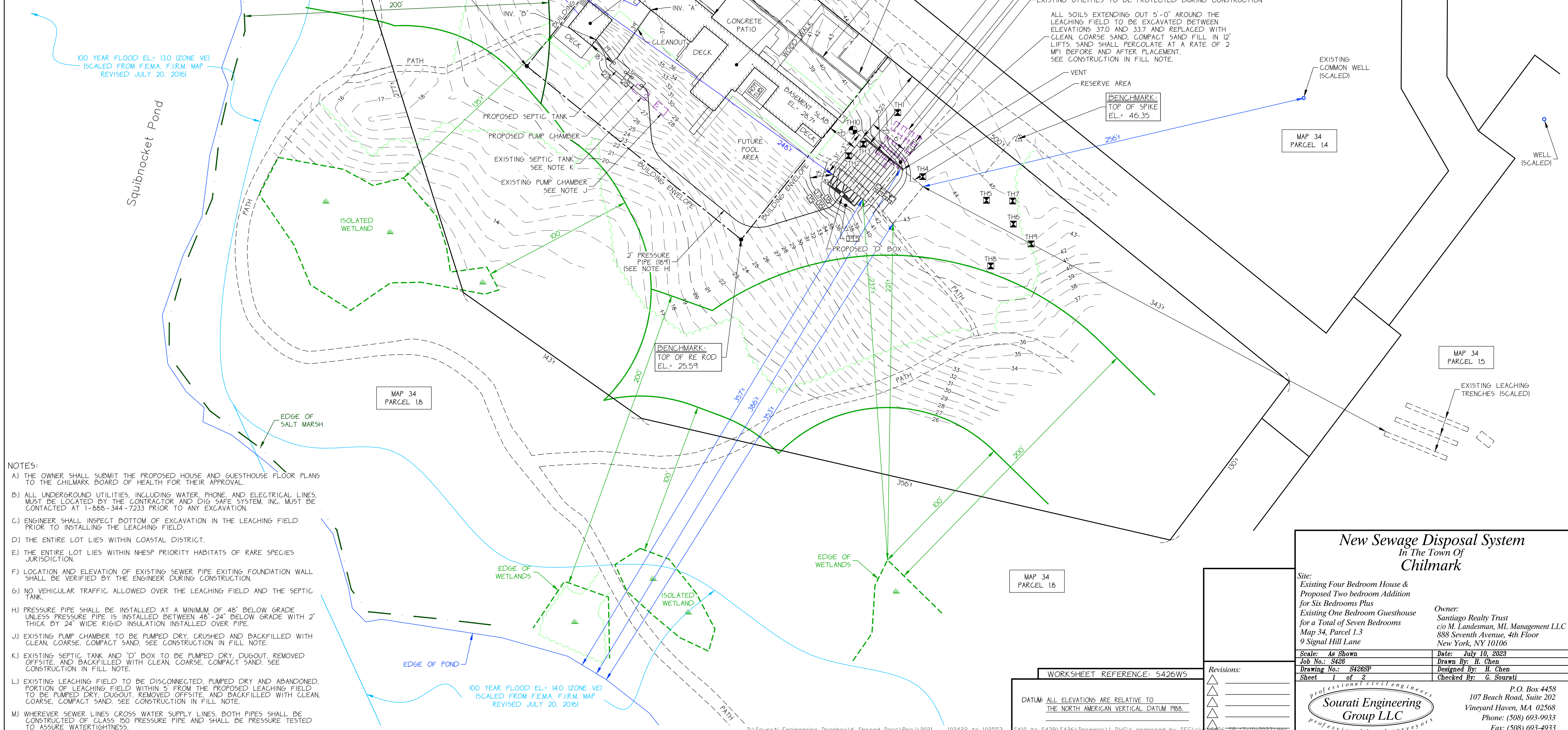
EXISTING AND
PROPOSED
FLOOR PLANS -
WHOLE HOUSE



Plan of Land
 SCALE: 1"=30'
 MAP NO.: 34
 PARCEL NO.: L3
 AREA: 3.63± ACRES

Legend

—100—	EXISTING CONTOUR
100+0	EXISTING SPOT ELEVATION
—100—	PROPOSED CONTOUR
⊠	PERCOLATION TEST
X	SEWAGE LINE
—W—W—	SUSPECTED WATER LINE
—	APPROXIMATE PROPERTY LINE
—O.W.—U.E.—	OVERHEAD WIRE OR UNDERGROUND ELECTRIC



- NOTES:**
- A) THE OWNER SHALL SUBMIT THE PROPOSED HOUSE AND GUESTHOUSE FLOOR PLANS TO THE CHILMARK BOARD OF HEALTH FOR THEIR APPROVAL.
 - B) ALL UNDERGROUND UTILITIES, INCLUDING WATER, PHONE, AND ELECTRICAL LINES, MUST BE LOCATED BY THE CONTRACTOR AND DIG SAFE SYSTEM, INC. MUST BE CONTACTED AT 1-888-344-7233 PRIOR TO ANY EXCAVATION.
 - C) ENGINEER SHALL INSPECT BOTTOM OF EXCAVATION IN THE LEACHING FIELD PRIOR TO INSTALLING THE LEACHING FIELD.
 - D) THE ENTIRE LOT LIES WITHIN COASTAL DISTRICT.
 - E) THE ENTIRE LOT LIES WITHIN NHESP PRIORITY HABITATS OF RARE SPECIES JURISDICTION.
 - F) LOCATION AND ELEVATION OF EXISTING SEWER PIPE EXITING FOUNDATION WALL SHALL BE VERIFIED BY THE ENGINEER DURING CONSTRUCTION.
 - G) NO VEHICULAR TRAFFIC ALLOWED OVER THE LEACHING FIELD AND THE SEPTIC TANK.
 - H) PRESSURE PIPE SHALL BE INSTALLED AT A MINIMUM OF 48" BELOW GRADE UNLESS PRESSURE PIPE IS INSTALLED BETWEEN 48"-24" BELOW GRADE WITH 2" THICK BY 24" WIDE RIGID INSULATION INSTALLED OVER PIPE.
 - J) EXISTING PUMP CHAMBER TO BE PUMPED DRY, CRUSHED AND BACKFILLED WITH CLEAN, COARSE, COMPACT SAND. SEE CONSTRUCTION IN FILL NOTE.
 - K) EXISTING SEPTIC TANK AND "D" BOX TO BE PUMPED DRY, DUGOUT, REMOVED OFFSITE, AND BACKFILLED WITH CLEAN, COARSE, COMPACT SAND. SEE CONSTRUCTION IN FILL NOTE.
 - L) EXISTING LEACHING FIELD TO BE DISCONNECTED, PUMPED DRY AND ABANDONED. PORTION OF LEACHING FIELD WITHIN 5' FROM THE PROPOSED LEACHING FIELD TO BE PUMPED DRY, DUGOUT, REMOVED OFFSITE, AND BACKFILLED WITH CLEAN, COARSE, COMPACT SAND. SEE CONSTRUCTION IN FILL NOTE.
 - M) WHEREVER SEWER LINES CROSS WATER SUPPLY LINES, BOTH PIPES SHALL BE CONSTRUCTED OF CLASS 150 PRESSURE PIPE AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHTNESS.

New Sewage Disposal System
 In The Town Of
Chilmark

Site:
 Existing Four Bedroom House &
 Proposed Two bedroom Addition
 for Six Bedrooms Plus
 Existing One Bedroom Guesthouse
 for a Total of Seven Bedrooms
 Map 34, Parcel 1.3
 9 Signal Hill Lane

Owner:
 Santiago Realty Trust
 c/o M. Landesman, ML Management LLC
 888 Seventh Avenue, 4th Floor
 New York, NY 10106

Scale: As Shown	Date: July 10, 2023
Job No.: 8426	Drawn By: H. Chen
Drawing No.: 8426SP	Designed By: H. Chen
Sheet 1 of 2	Checked By: G. Sourati

Sourati Engineering Group LLC
 Professional Land Surveyors

P.O. Box 4458
 107 Beach Road, Suite 202
 Vineyard Haven, MA 02568
 Phone: (508) 693-9933
 Fax: (508) 693-4933

WORKSHEET REFERENCE: 5426W5

DATUM: ALL ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM 1988.

Revisions:

Design Computations:

HYDRAULIC LOADING

6 + 1 = 7 BEDROOMS AT 110 GPD + 770 GPD
 A GARBAGE DISPOSAL IS NOT ALLOWED IN THIS DESIGN.

SEPTIC TANK SIZE

INCREASE FLOW TO 2002 (TITLE VI) + 1540 GALLONS USE 2000 GALLON SEPTIC TANK.

PUMP CHAMBER SIZE

USE 1500 GALLON PUMP CHAMBER.

LEACHING CAPACITY

DESIGN PERCOLATION RATE IS 10 MIN/INCH SOIL TYPE: CLASS 2
 EFFLUENT LOADING RATE 0.60 G/5.F/D
 USE 1 LEACHING FIELD WITH 45 CHAMBERS.

TOTAL AREA OF FIELD + 45 CHAMBERS X 6.25 L.F./CHAMBER X 4.72 S.F./L.F. = 1,327 S.F.
 TOTAL LEACHING CAPACITY PROVIDED + 1,327 S.F. X 0.60 G/5.F/D = 796 G/D.
 TOTAL LEACHING CAPACITY PROVIDED + 796 G/D.
 TOTAL HYDRAULIC LOADING REQUIRED + 770 G/D.

SOILS LOG

TEST HOLE #1 DATE: 6/28/2023 ELEV. + 44.1

DEPTH	HORIZON	TEXTURE
00-04"	A	SANDY LOAM
04-20"	B	SANDY LOAM
20-156"	C1	SILT CLAY/LOAMY SAND
156-198"	C2	SANDY LOAM

TEST HOLE #2 DATE: 6/28/2023 ELEV. + 39.7

DEPTH	HORIZON	TEXTURE
00-05"	A	SANDY LOAM
05-28"	B	SANDY LOAM
28-130"	C	SANDY LOAM

TEST HOLE #3 DATE: 6/28/2023 ELEV. + 41.4

DEPTH	HORIZON	TEXTURE
00-05"	A	SANDY LOAM
05-28"	B	SANDY LOAM
28-130"	C	SANDY LOAM

TEST HOLE #4 DATE: 5/22/2023 ELEV. + 44.2

DEPTH	HORIZON	TEXTURE
00-04"	A	SANDY LOAM
04-30"	B	SANDY LOAM W/ SILT
30-120"	C	LOAMY SAND W/ CLAY

TEST HOLE #5 DATE: 5/22/2023 ELEV. + 44.8

DEPTH	HORIZON	TEXTURE
00-10"	A	SANDY LOAM
10-30"	B	SANDY LOAM
30-60"	C1	SANDY LOAM W/ CLAY
60-102"	C2	SANDY LOAM

STANDING WATER @ 6'-10"

TEST HOLE #6 DATE: 5/22/2023 ELEV. + 44.5

DEPTH	HORIZON	TEXTURE
00-06"	A	SANDY LOAM
06-28"	B	SANDY LOAM
28-50"	C1	SANDY LOAM
50-120"	C2	LOAMY SAND FRIABLE

TEST HOLE #7 DATE: 5/22/2023 ELEV. + 44.9

DEPTH	HORIZON	TEXTURE
		SANDY LOAM W/ CLAY

TEST HOLE #8 DATE: 5/22/2023 ELEV. + 42.5

DEPTH	HORIZON	TEXTURE
00-06"	A	SANDY LOAM
06-22"	B	SANDY LOAM
22-120"	C	LOAMY SAND W/ POCKETS OF SANDY LOAM. 5% COBBLES

TEST HOLE #9 DATE: 5/22/2023 ELEV. + 44.0

DEPTH	HORIZON	TEXTURE
00-06"	A	LOAMY SAND
06-24"	B	SANDY LOAM
24-60"	C1	SANDY LOAM W/ TRACE OF CLAY + SILT, 5% COBBLES
60-120"	C2	SANDY LOAM

TEST HOLE #10 DATE: 1/10/2006

DEPTH	HORIZON	TEXTURE
00-07"	A	FINE-MEDIUM SANDY LOAM
07-22"	B	LOAMY SAND
22-120"	C	MEDIUM-COARSE SAND TO FINE-MEDIUM SANDY LOAM

PERCOLATION TEST #10 WAS PERFORMED BY CHRISTOPHER P. ALLEY FROM SCHOFIELD, BARBINI + HOEHN, INC.

Notes

GENERAL NOTES:

- THIS PLAN IS TO BE USED ONLY FOR THE PERMITTING AND INSTALLATION OF A SEWAGE DISPOSAL SYSTEM. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.
- NO CHANGES TO THIS PLAN ARE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF SOURATI ENGINEERING GROUP, LLC.
- INSTALLATION SHALL BE IN STRICT CONFORMITY WITH TITLE 5 OF THE MASSACHUSETTS STATE SANITARY CODE AND THE RULES + REGULATIONS OF THE TOWN OF CHILMARK BOARD OF HEALTH.
- MACHINERY THAT MAY DISTURB PIPE ALIGNMENT IN THE DISPOSAL SYSTEM SHALL NOT BE USED ON THE DISPOSAL AREA.
- NO EXISTING WELLS WERE FOUND WITHIN 50' FROM THE PROPOSED SOIL ABSORPTION SYSTEM OR WITHIN 50' FROM THE SEPTIC TANK.
- FINISHED SURFACE OF LEACHING AREA SHALL BE GRADED TO INSURE RUNOFF (2% MINIMUM SLOPE).
- THE SEPTIC TANK AND THE DISTRIBUTION BOX SHALL BE EITHER:
 - A. WATERTIGHT ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WARRANTY, OR
 - B. MADE WATERTIGHT BY THE MANUFACTURER, EQUIPMENT SUPPLIER OR INSTALLER, USING ASPHALT OR SYNTHETIC POLYMER SEALER SPECIFIED BY THE CONCRETE OR SYNTHETIC MATERIAL MANUFACTURER.
- SEPTIC TANKS AND DISTRIBUTION BOXES SHALL BE LEVEL AND TRUE TO GRADE ON A LEVEL STABLE BASE THAT HAS BEEN MECHANICALLY COMPACTED AND ONTO WHICH 6 INCHES OF CRUSHED STONE HAVE BEEN PLACED TO MINIMIZE UNEVEN SETTLING.
- ALL SYSTEM COMPONENTS SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS.
- ALL PIPING SHALL BE A MINIMUM OF SCHEDULE 40 PVC UNLESS OTHERWISE NOTED.
- DISTRIBUTION BOX OUTLET LINES SHALL BE LEVEL FOR A MINIMUM OF THE FIRST TWO FEET OF THEIR LENGTH.

CONSTRUCTION IN FILL:

- FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL. THE FILL BE COMPRISED OF CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES, MIXTURES AND LAYERS OF DIFFERENT CLASSES OF SOIL SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN TWO INCHES. A SIEVE ANALYSIS USING A #4 SIEVE SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL UP TO 45% BY WEIGHT OF THE FILL SAMPLE MAY BE RETAINED ON THE #4 SIEVE. SIEVE ANALYSIS ALSO SHALL BE PERFORMED ON THE FRACTION OF THE FILL SAMPLE PASSING THE #4 SIEVE. SUCH ANALYSES MUST DEMONSTRATE THAT THE MATERIAL MEETS EACH OF THE FOLLOWING SPECIFICATIONS:

SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
#10	4.75 MM	100 %
#40	0.30 MM	10 % - 100%
#100	0.15 MM	0 % - 20%
#200	0.075 MM	0 % - 5%

HIGH CAPACITY INFILTRATOR CHAMBER (SOIL ABSORPTION SYSTEM):

- THE INFILTRATORS SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE MANUFACTURER SPECIFICATIONS.

PUMP CHAMBER:

- BASE SECTION SHALL BE MONOLITHICALLY CAST (REINFORCED CONCRETE) AND SHALL HAVE A MINIMUM RISE OF 30" BEFORE ANY JOINT.
- BOTTOM SLAB OF BASE SECTION SHALL BE AT LEAST 4" IN THICKNESS.
- THE CHAMBER SHALL BE CLEANED OUT, MADE WATER TIGHT, AND TEST DURING FINAL INSPECTION BY THE CONTRACTOR. THE EXTERIOR WALLS SHOULD BE SPRAYED OR PAINTED WITH A WATERPROOF COMPOUND AND ALL PIPE INLETS OR CONNECTIONS SHALL BE MADE WATERTIGHT.
- THE CHAMBER SHALL BE EQUIPPED WITH ONE 20" MANHOLE WITH A READY REMOVABLE WATERTIGHT COVER OF DURABLE MATERIAL. THE ACCESS COVER SHALL BE LOCATED WITHIN 6' OF FINAL GRADE.

PUMP:

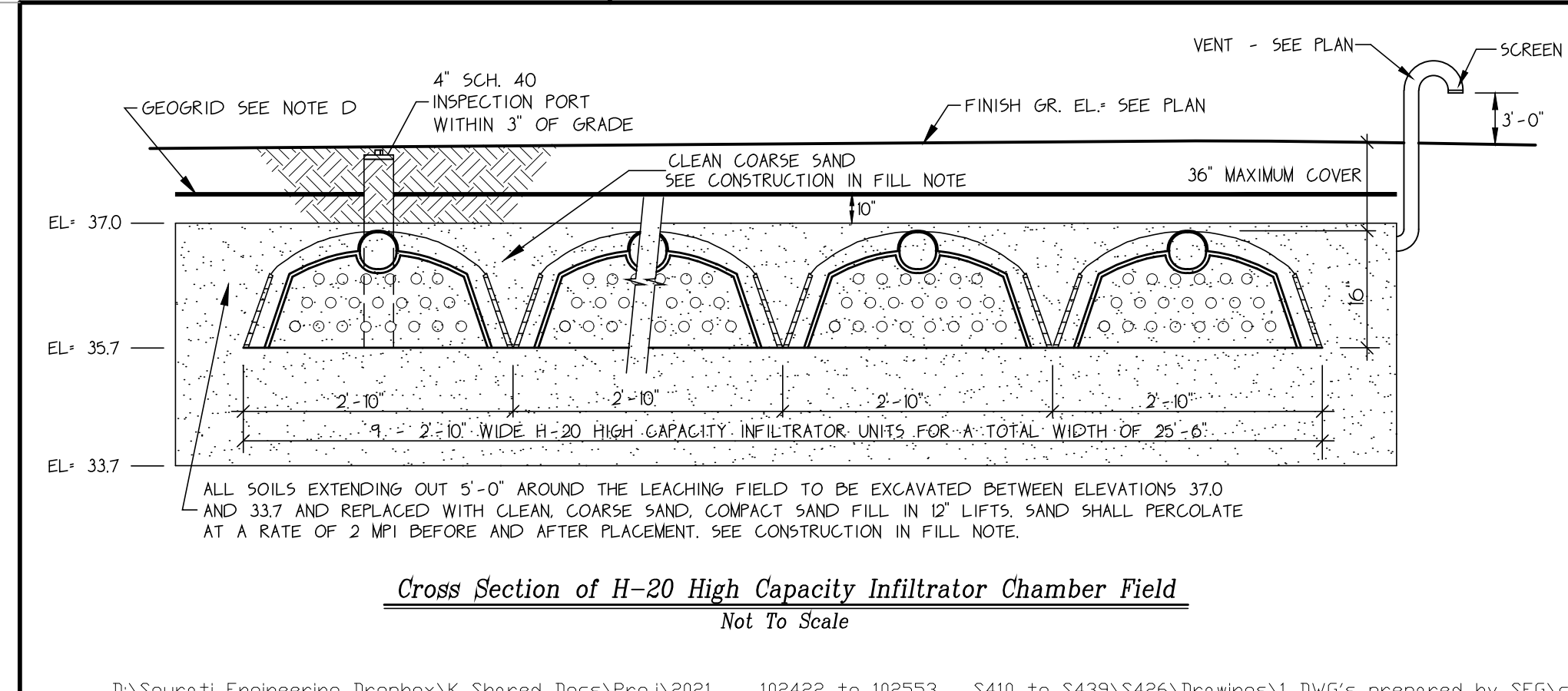
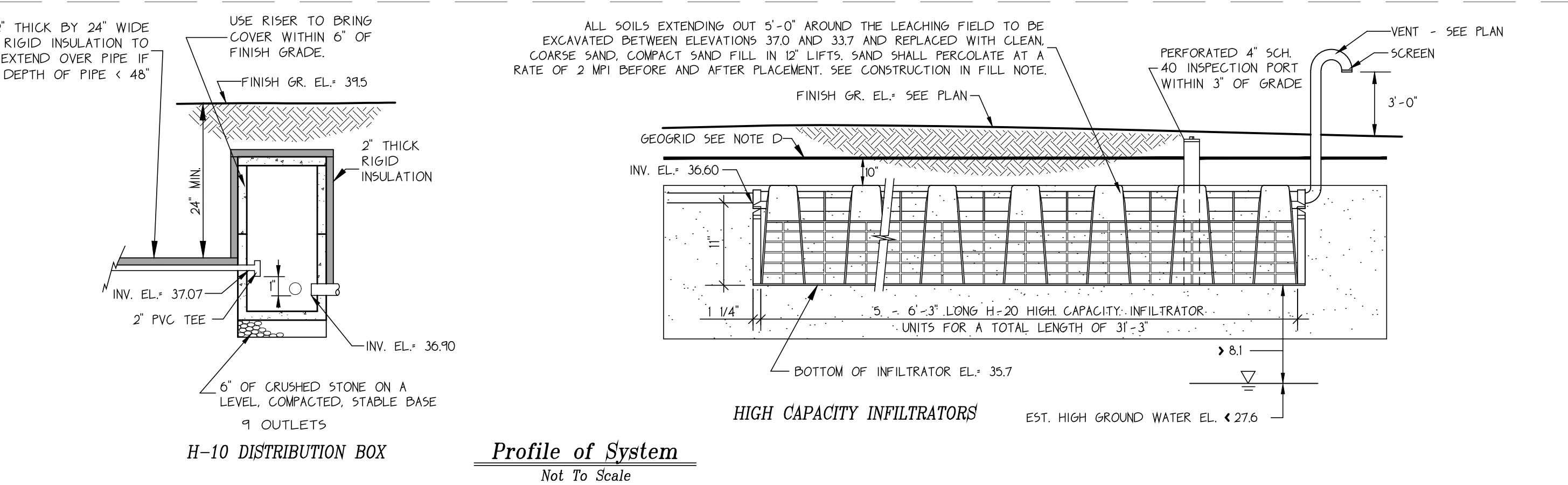
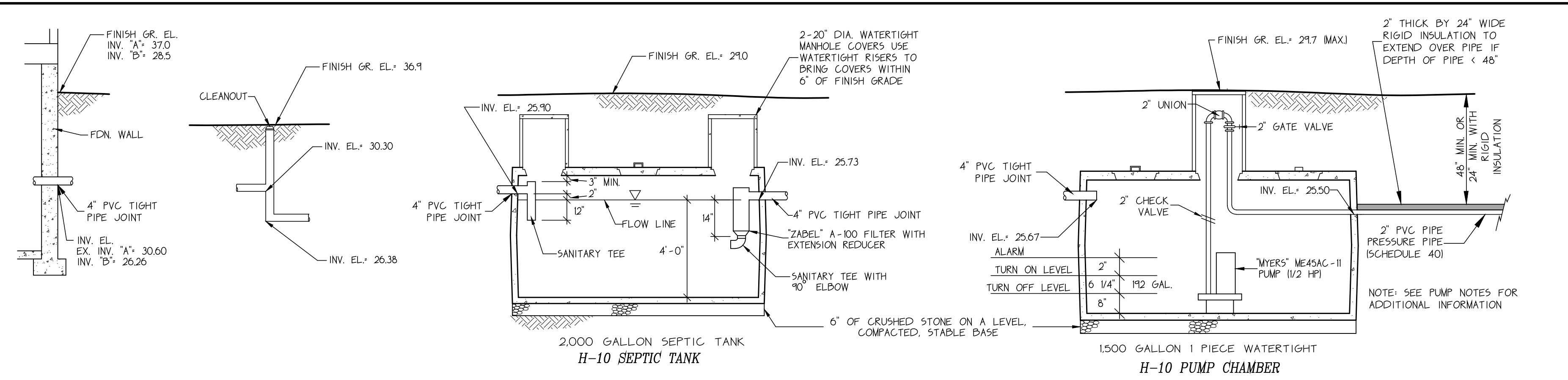
- THE PUMP TO BE INSTALLED IN THE PUMP CHAMBER SHALL CONSIST OF ONE (1) MEASAC-II MYERS HEAVY-DUTY SUBMERSIBLE SEWAGE PUMP OR APPROVED EQUAL. THE PUMP MUST HAVE A CAPACITY OF 30 GPM AGAINST A HEAD OF 15'. MOTORS TO BE 0.5 HP, SINGLE PHASE, 60 CYCLE, 115 VOLTS A.C. ELECTRICAL SERVICE FOR PUMPS MUST BE ON A SEPARATE CIRCUIT BREAKER NOT IN COMMON WITH THE HIGH WATER ALARM.
- THE PUMP SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- THE PUMP AND ALARM REQUIRE PERIODIC OR ROUTINE INSPECTION AND MAINTENANCE SHALL BE OPERATED, INSPECTED AND MAINTAINED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. IN NO INSTANCE SHALL INSPECTION BE PERFORMED LESS FREQUENTLY THAN ONCE EVERY THREE MONTHS. THE RESULTS OF SUCH INSPECTIONS SHALL BE SUBMITTED TO THE APPROVING AUTHORITY.

ALARMS AND SWITCHES:

- THE ON-OFF SWITCHES MUST BE BUILT INTO THE PUMP AND MOTOR ASSEMBLY OR SET AS PER THE DESIGN PLAN.
- THE HIGH WATER ALARM SWITCH MUST BE SET TO THE ELEVATION SHOWN ON THE DESIGN PLAN ATTACHED AND CONSIST OF A MERCURY FLOAT TYPE. THE HIGH WATER ALARM PANEL MUST BE INSTALLED IN THE MAIN HOUSE SO AS TO BE EASILY HEARD WHEN ACTIVATED. THIS ALARM MUST BE CONNECTED TO A SEPARATE ELECTRICAL CIRCUIT NOT COMMON WITH THE PUMP AND MOTOR ASSEMBLY.
- THE PUMP CONTROLS SHALL BE MOISTURE PROOF.

FORCE MAIN:

- ALL PIPING FROM THE PUMP CHAMBER TO THE LEACHING AREA SHALL CONSIST OF 2" DIAMETER PVC SCHEDULE 40 PIPE, UNLESS OTHERWISE NOTED ON THE DESIGN PLAN.
- FORCE MAINS SHALL BE COVERED WITH A MINIMUM OF THREE (3) FEET OF COVER MATERIAL. THE COVER MATERIAL SHALL CONSIST OF CLEAN COMPACT SAND FREE OF LARGE STONES OR OBJECT FOR A DISTANCE OF 6' AROUND THE FORCE MAIN FOR PROPER BEDDING.



New Sewage Disposal System
 In The Town Of
Chilmark

Site:
 Existing Four Bedroom House &
 Proposed Two Bedroom Addition
 for Six Bedrooms Plus
 Existing One Bedroom Guesthouse
 for a Total of Seven Bedrooms
 Map 34, Parcel 1.3
 9 Signal Hill Lane

Owner:
 Santiago Realty Trust
 c/o M. Landesman, M.I. Management LLC
 888 Seventh Avenue, 4th Floor
 New York, NY 10106

Scale: As Shown	Date: July 10, 2023
Job No.: 5426	Drawn By: H. Chen
Drawing No.: 5426SP	Designed By: H. Chen
Sheet 2 of 2	Checked By: G. Sourati

Professional Land Surveyors
Sourati Engineering Group LLC
 Professional Civil Engineers
 P.O. Box 4458
 107 Beach Road, Suite 202
 Vineyard Haven, MA 02568
 Phone: (508) 693-9933
 Fax: (508) 693-4933

- Revisions:**
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