

EB2024-10

Case #



TOWN OF HARWICH
732 Main Street, Harwich, Massachusetts 02645

ZONING BOARD OF APPEALS

Notice of Appeal/Application and Petition for Public Hearing, ("APPLICATION")

This Application does not apply to Comprehensive Permits.

Please refer to the Rules and Regulations of the Town of Harwich Board of Appeals for documentation requirements.

This original completed and signed notice ("Application"), along with a certified abutters list and twelve (12) copies of all plans, sketches, statements, site plans or other supporting documents per the attached checklist must be presented to the Building Department prior to being filed with the Town Clerk. The required documentation, ALL of which must be submitted on the date of filing, is listed on this Application. THE RULES AND REGULATIONS ("RULES") OF THE TOWN OF HARWICH BOARD OF APPEALS APPLY TO ALL APPEALS AND APPLICATIONS AND SHOULD BE CONSULTED BEFORE FILING AN APPEAL OR APPLICATION TO ENSURE COMPLIANCE WITH THEM.

To the Zoning Board of Appeals, Harwich, MA:

(We, I) hereby petition your Board for a public hearing on the request for action checked below:

- () Appeal from decision of or refusal of permit application by the Building Inspector, Selectmen or Planning Board or other administrative officer or officers.
() Application for a Variance from requirements of the Harwich Zoning By-Law.
(X) Application for a Special Permit that is subject to Board of Appeals approval.

I/we am/are the owner[s]/agent of the property involved in this petition, which is located in Harwich, MA at the following address:

41 Sequattom Road, Harwich Said property is further described on

Assessor's Map # 101 and Parcel # S5-2-0 located in the RL Zoning District as shown on the attached plan.

Describe

Petition/Appeal: Seeking Special Permit to authorize two additions on a preexisting nonconforming structure.

Relief requested - Cite specific Bylaw Section(s): Relief from 325-54 (Nonconforming Structures) and 325: Table 3-2, Area Regulations (Setback) pursuant to Section 325-54(A)(2)(c).

Signature of Owner (or Agent) [Signature] Date March 19, 2023

Owner Name Double K. Ranch, LLC Phone No.

Mailing Address: 319 Lafayette Street, Denver, CO 80218 Owners Email:

Agent Name: Brian J. Wall, Esq. Phone No. (508) 888-5700

Mailing Address: 90 Route 6A, Sandwich, MA 02563 Agent Email: bjw@troywallassociates.com

Has a petition previously been submitted for this property (Y/N) No.

If yes, the date of original hearing Petition No. Decision

For Appeal Only:

Reason for Denial:

Denial From: Date of Denial:

Within 14 days following any Board decision, the Board will file its decision with the Town Clerk. A building permit will not be issued during the appeals period, until 21 days after the Board of Appeals decision has been filed with the Town Clerk or if an appeal to that decision has been filed during that time. It is the applicant's responsibility to have the decision recorded at the Barnstable County Registry of Deeds or Land Court, whichever may be applicable, and to present copies of that recording to the Town Clerk and to the Building Department with all Building Permit application requirements.

Please be advised that an incomplete Application may result in a delay in processing your Application and **may result in a denial by the Board** without consideration of the merits of the Application. **IT IS YOUR RESPONSIBILITY TO REVIEW THE RULES THAT APPLY TO YOUR APPEAL/APPLICATION AND TO MAKE SURE BEFORE FILING THAT YOUR APPLICATION/APPEAL COMPLIES WITH THOSE RULES.** The burden of proof is on the petitioner, not on the Town. If you do not understand the criteria, legal counsel should be sought. Either the petitioner or his/her agent is required to appear at the hearing to present the Application.

All applicants for hearing before the Board of Appeals must complete the Application and submit along with it the supporting documentation listed herein to the Building Department for review and subsequent filing with the Town Clerk. The Building Department accepts Applications during posted hours. You are strongly encouraged to submit your Application to the Building Department well in advance of the filing deadline to allow adequate time for staff review for completeness. **All information, including the applicable fee made payable to the Town of Harwich, must be submitted with the Application.**

Please submit the following, sorted and grouped into **twelve (12) packets along with one (1) Certified Abutters List** (Available from the Assessors Department. A separate application and fee is required):

- X** The original Application (additional stamped copies can be provided at a nominal fee):
 - Signed by the owner or agent.
 - If signed by an agent, a letter of authorization signed by the owner must also be included.

- X** A typewritten narrative to explain the project , the purpose for this Application and the relief requested, with citations to the applicable provisions of the MGL and the Harwich Zoning Bylaw.

- X** The original and eleven (11) copies of a Certified Plot Plan with topographical information plan (not septic plans) not more than five (5) years old (total of 12 copies):
 - Full size Certified Plot Plans. (*must be folded.*)
 - Scale no greater than 1" = 50'
 - Original stamped and signed by a Professional Engineer (as allowed by law), or a Professional Land Surveyor.
 - Certified Plot Plan must indicate:
 - the locus;
 - the parcel or parcels of land involved;
 - the existing building or buildings;
 - the proposed building or buildings and/or additions to, or alterations of existing buildings with all dimensions set forth;
 - the location of the septic;
 - the Town of Harwich zoning requirements applicable to the property, as well as existing and proposed dimensions for: frontage, front, sides, and rear setback distances, building height(s), building stories, building and site coverage and parking requirements (if any);
 - all perimeter dimensions (existing and proposed);
 - location and width of abutting and on-site street and drives, parking, existing topography;
 - a grading plan, areas of proposed and retained vegetation, distinction between upland and wetland.
 - Building Plans drawn to scale:
 - Floor layout (for existing structure and proposed additions and/or alterations)
 - Proposed front, side, and rear elevations

- X** Certified Abutters List

- X** Check made payable to "Town of Harwich" for \$315.00.

Name of Applicant: Double K. Ranch, LLC

Address of Property: 41 Sequattom Road

Zoning District: RL

Is the property Located in any Special District(s)/Overlay District(s) established by the Town of Harwich or the State of Massachusetts: Yes _____ No X_____

If Yes, specify District(s): _____

Year Structure(s) Built: 1946_____

Name/Address of Engineer/Architect: Muldoon Architects, Inc., 571 Ma-Rt. 28, Harwich Port, MA

Name/Address of Attorney: Brian J. Wall, Esq., 90 Rt. 6A, Sandwich, MA 02563

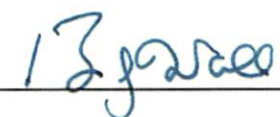
Subject	Existing	Required	Proposed
Lot Area (square feet)	21,498	40,000	21,498
Frontage (linear feet)	100	150	100
Front Yard Setback (feet)	28.7	25	28.7
Side yard Setback (feet)	9.7	20	9.7
Rear Yard Setback (feet)	106.3	20	110.8
Any Yard Setback - Specify which:			
Building Coverage (%)	8.0%	15%	13.2%
Site Coverage (%) (see 325-2)	10.4%	30%	17.0%
Building Height (see 325-2 & 325-108)*	1 story (appx. 25ft)	30	15' 8 1/8"
If this is an Application for an Accessory Apartment, in addition to the above:			
A. Net Floor Area of the Principal Dwelling			
B. Net Floor Area of the proposed Accessory Apartment			
* Building height calculation(s) must be shown on plan for all zones per the Harwich Zoning By-laws Section 325-2. See Article XVII - Floodplain Regulations Section 325-108.			

Form of Relief Requested: Alter a Preexisting Nonconforming Structure under 325-54(A)(2)(c)_____

If the Applicant is requesting a Variance, state the hardship which the Applicant believes justifies this form of relief in accordance with MGL Chapter 40 and the Harwich Zoning Bylaw: N/A

By signing and submitting this Application, you hereby authorize the members of the Board of Appeals, or its agent, to conduct a site visit of the exterior of your property for an inspection of the property involved in this petition, should they deem it appropriate.

The Board of Appeals is entitled to rely on the information contained in this Application. Therefore, the undersigned certifies that the information provided in this Application, and all submitted plans and other documentation, is true and accurate to the best of my knowledge and belief.

Agent's Signature:  Date: March 19, 2024

Owner's Signature: _____ Date: _____

TW TROY WALL ASSOCIATES
ATTORNEYS AND COUNSELLORS AT LAW
A PROFESSIONAL ASSOCIATION OF INDIVIDUAL PRACTITIONERS*

90 ROUTE 6A, SANDWICH, MASSACHUSETTS 02563
TELEPHONE: (508) 888-5700

ROBERT S. TROY
rst@troywallassociates.com

BRIAN J. WALL
bjw@troywallassociates.com

March 19, 2024

G. Brian Sullivan, Chair
Zoning Board of Appeals
Town of Harwich
732 Main Street
Harwich Center, MA 02645

Re: **Double K. Ranch, LLC**
41 Sequattom Road, Harwich
Assessor Parcel 101-S5-2-0
Application for Special Permit

Dear Chairman Sullivan:

Please be advised that I represent the above-referenced applicant, Double K. Ranch, LLC, owner of the property at 41 Sequattom Road. This serves as a request for a special permit under § 325-54(A)(2)(c) of the Harwich Zoning Bylaw seeking approval to construct two additions onto an existing nonconforming 2-bedroom dwelling. A special permit is required because the Building Department has determined (Exhibit 1) that the new construction will be non-conforming in two respects:

1. § 325-54: Nonconforming Structures. The proposed construction will alter a preexisting nonconforming structure.
2. § 325: Table 3-2, Area Regulations (Setback). The proposed new construction does not meet the current side yard setback.

The existing dwelling is non-conforming because it does not meet the current side yard setback on the east side, as well as lot area requirements and frontage requirements. Accordingly, the Board of Appeals has authority to grant relief from the above-referenced sections of the Bylaw and to approve the proposed project under the provisions of § 325-54(A)(2)(c).

1. Existing Conditions.

The property consists of a 21,498+/- square foot lot (.49 acres) with 100 feet frontage on Sequattom Road. The property is improved with a 2-bedroom single-family ranch-style dwelling. The property is further described in a Deed recorded in the Barnstable County Registry of Deeds in Book 32963, Page 325. A copy of the Deed is attached as **Exhibit 2**. The existing conditions are shown on the Existing Conditions Plan attached as **Exhibit 3**.

2. Current Zoning.

The property is situated in an RL Zoning District. Single-family homes are allowed in the RL District by right. Applicable current minimum dimensional requirements are:

Minimum Area:	40,000 sq. ft.
Minimum Frontage:	150 ft.
Front yard setback:	25 ft.
Side yard setback:	20 ft.
Rear yard setback:	20 ft.
Building Coverage:	15% maximum
Site Coverage	30% maximum

3. Legal Status.

According to the Town's assessing records, the existing dwelling was constructed in 1946. The dwelling and the lot are nonconforming to zoning requirements as follows:

Area:	21,498 sq. ft.	(40,000 sq. ft. required)
Frontage:	100 ft.	(150 ft. required)
Side yard setback:	9.7 ft.	(20 ft. required)

4. Proposed Project

The owner seeks to construct two additions onto the existing dwelling, add a stone patio, relocate a shed, and install a new septic system. These proposed alterations are shown on the Proposed Conditions Plan attached as **Exhibit 4**. The objective of the project is to expand the house in order to add two new bedrooms so that there will be a total of four bedrooms. The septic system is being upgraded to a 440 GPD system to handle the increase in bedrooms.

The first addition is proposed on the rear of the dwelling on the easterly side. This addition will extend the existing building into the back yard and will maintain the pre-existing non-conforming side yard setback of 9.7'. The second addition will extend into the back yard on the westerly side of the building. This addition will also expand slightly towards the westerly side property boundary, but it will be setback 23.3' in conformity with the current side yard setback requirement of 20'.

The proposed stone patio will be located at the rear of the dwelling situated between the two new additions. The shed will be relocated in the rear yard behind the patio. The new septic system will be located in the rear yard. None of these aspects of the project raise any zoning concerns.

5. Harwich Zoning.

Section 325-54(A)(2) of the Harwich Zoning Bylaw authorizes an alteration of a preexisting non-conforming single-family dwelling by special permit that makes the structure more nonconforming, as follows:

If the Building Official determines that a proposed addition/extension to a nonconforming single- or two-family residential structure increases the nonconforming nature of the structure, the applicant may seek a new determination from the Board of Appeals. If the Board of Appeals determines that the alteration or extension will increase the nonconforming nature of the structure, no such alteration or extension may occur unless the Board of Appeals issues a special permit for alteration or extension after finding that the alteration or extension will not be substantially more detrimental to the neighborhood than the existing nonconformity. An addition/extension that increases the nonconforming nature of the structure would include:

- a. *A structure built in the same footprint to an increased building height*
- b. *A structure built in the same footprint that does increase the habitable floor area.*
- c. *A structure that continues along the same line as an existing encroachment without increasing that encroachment.*

March 19, 2024

Page 4

The proposed addition on the easterly side of the dwelling falls under § 325-54(A)(2)(c) because the proposed addition will continue along the same line as an existing encroachment and will not increase that encroachment. Thus, the proposed project can be approved if the Board of Appeals finds that the proposed addition will not be more substantially detrimental to the neighborhood than the existing nonconformity.

The Applicant asserts that the project meets the criteria of § 325-54(A)(2)(c) as detailed and explained as follows.

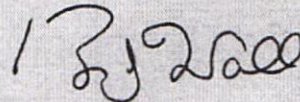
The existing dwelling is modest in size: 1,093 sq. ft. The new additions will increase the size of the dwelling, but it will still be appropriately sized for the neighborhood. This assertion is evidenced by the fact that, even after the dwelling is expanded, the site coverage and building coverage will both be well under allowable limits. The resulting building coverage will be 2,836, or 13.2%, where 15% is allowed. The resulting site coverage will be 3,644 sq. ft., or 17.0%, where 30% is allowed. Thus, the resulting structure will be appropriately sized for the lot and designed to be consistent with the other dwellings in the neighborhood and consistent with the architecture of other dwellings in the neighborhood.

Further, the utilization of the expanded structure will be the same as the existing structure: as a single-family dwelling. The new structure will not cause or contribute to any undue nuisance, hazard of congestion of the neighborhood, zoning district or the Town.

CONCLUSION

As demonstrated herein, the proposed project satisfies the criteria set forth in § 325-54(A)(2)(c) and will not be substantially more detrimental to the neighborhood than the existing nonconformity. Accordingly, the Applicant respectfully requests the Board of Appeals to act favorably on the application and grant a special permit.

Respectfully submitted,



Brian J. Wall

Enclosures

Cc: Mariner Kemper
John Foley, Monomoy Real Estate and Construction

EXHIBIT 1

TOWN OF HARWICH
Building Department
732 Main Street
Harwich, MA 02645



Telephone: (508) 430-7506

By First Class Mail

October 24, 2023

DOUBLE K RANCH LLC
319 LAFAYETTE ST
DENVER, CO 80218

Re: Zoning Relief Required
41 Sequattom Rd, Harwich, MA (Parcel ID 101-S5-2-0)
Zoning District R-L

Dear property owner,

Please be advised that as a condition to issuance of the above-referenced building permit as submitted, shown on a plan prepared by Moran Engineering Associates, dated August 14, 2023, we cannot issue without relief listed below.

Harwich Zoning Bylaw §325-54 "Nonconforming Structures and Uses."
Harwich Zoning Bylaw §325-Table 3-2, Area Regulations (Setback)

Should you desire to proceed with the project, you must first apply for the foregoing relief; this letter shall serve as a referral to the Board for the same. Copies of the necessary zoning forms and applications are available in the offices of the Town's Building and Planning Departments.

In the meantime, your building permit application shall be deemed 'incomplete' and the period to review and issue such permit suspended until such time as you apply for and obtain the special permit; the special permit decision issues and is filed with the Town Clerk; the applicable appeal period elapses; and you provide the Building Department a copy of the special permit decision as recorded with the Barnstable Registry of Deeds or, as applicable, the Barnstable Registry District.

The Town reserve the right, should you not expeditiously and continuously proceed with obtaining the required zoning relief or otherwise withdraw the building permit application, to deny the building permit application for incompleteness, or inconsistency with zoning, or both.

TOWN OF HARWICH

Building Department
732 Main Street
Harwich, MA 02645



Telephone: (508) 430-7506

Further, be advised that, subject to obtaining the required permits and after construction, you will be required to submit a final as-built plan to the Building Department certifying that the project complies with the approved plans and all applicable dimensional requirements under town zoning.

This correspondence also serves as a zoning determination under Section 7 of Massachusetts General Laws Chapter 40A, which may be appealed by a 'person aggrieved' under Sections 8 & 15 of Massachusetts General Laws Chapter 40A.

Please feel free to contact the Building Department to discuss this further, as necessary.

Respectfully,

Jack Mee
Harwich Building Commissioner

EXHIBIT 2

QUITCLAIM DEED

DENNIS P. HOYE, TRUSTEE OF THE GEORGE F. HOYE IRREVOCABLE TRUST OF 2011 u/d/t dated January 25, 2011 (see Trustees Certificate pursuant to M.G.L. c. 184, §35 recorded with Barnstable County Registry of Deeds in Book 25218, Page 99) of c/o 41 Squattom Road, Harwich, MA 02645.

For consideration paid and in full consideration of SEVEN HUNDRED FIFTY THOUSAND AND NO ONE HUNDREDTHS (\$750,000.00) DOLLARS

Grants to **DOUBLE K RANCH, LLC**, a Colorado Limited Liability Company registered in Massachusetts with an address of 301 Lafayette Street, Denver, CO 80218

with QUITCLAIM COVENANTS

The land in HARWICH, BARNSTABLE COUNTY, MASSACHUSETTS, together with the buildings and improvements thereon, further bounded and described as follows:

PARCEL 1

A certain parcel of land with the buildings and improvements thereon, situated in said Harwich (Pleasant Lake) being a certain parcel of land situated at "Squattom" near the south shore of Long Pond, bounded and described below:

Beginning at the Northeast corner of the premises at a bound in the West line of a roadway or street;

Thence, Southerly by said roadway, one hundred (100.00) feet to a bound at land now or formerly of Harold R. Petersen, et ux,

Thence, Westerly by land now or formerly of said Petersen's, one hundred twenty five (125.00) feet to a bound at land now or formerly of Arthur I. Keefe et ux,

The street address of the property is: 41 & 0 Squattom Road, Harwich, MA 02645

Thence, Northerly by land now or formerly of said Keefe's, one hundred (100.00) feet to land now or formerly of Alfred E. Weekes;

Thence, Easterly by land now or formerly of said Weekes, by land now or formerly of J. Edward Barry and by land now or formerly of Francis P. Kirwin, one hundred twenty five (125.00) feet to the place of beginning.

PARCEL II

Also a certain parcel of land with the buildings and improvements thereon, situated in said Harwich, at said "Sequatton", Pleasant Lake, bounded and described as follows:

On the North by Long Pond, fifty (50.00) feet;

On the East by land now or formerly of Marion E. Cole, one hundred fifty (150.00) feet;

On the South by land now or formerly of said Moody, fifty (50.00) feet; and

On the West by land now or formerly of said Weekes.

PARCEL III

Also, another certain parcel of land with the buildings and improvements thereon, situated in said Harwich at said "Sequatton", Pleasant Lake, on the south side of Long Pond and bounded and described as follows:

Beginning at the Northwest corner of the premises at a stake and stones at the shore of said Pond;

Thence, Easterly fifty (50.00) feet by said Pond to a stake and stones;

Thence, Southerly by land now or formerly of J.M. and S.B. Moody and in line with the west side of a street cut through the woods about one hundred fifty (150.00) feet to a stake;

Thence, Westerly by land formerly owned by said Moody fifty (50.00) feet to a stake;

Thence, Northerly by land now or formerly of Francis P. Kirwin about one hundred fifty (150.00) feet to the first mentioned bound.

Excepting and reserving a roadway thirty (30.00) feet wide as staked out across the northern end of the premises.

Said premises are conveyed subject to and with the benefit of any and all rights, rights of way, easements, reservations, restrictions or other conditions of record insofar as the same may be in force and applicable.

The Grantor does hereby certify that the above-described property is not Homestead property and is not the principal residence of any person.

Being the same premises conveyed to the Grantor by the Deed recorded with Barnstable County Registry of Deeds in Book 25218, Page 101; see also death certificate of George F. Hoye recorded in Book 32086, Page 63 and Affidavit of No Estate Tax Due recorded herewith.

Executed as a sealed instrument and under the pains and penalties of perjury this
4th day of June A.D. 2020

Dennis P. Hoye
DENNIS P. HOYE, TRUSTEE

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss.

On this 4th day of June, 2020, before me, the undersigned Notary Public, personally appeared DENNIS P. HOYE, TRUSTEE, as aforesaid, proved to me through satisfactory evidence of identification, which was MA drivers lic to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of this document are truthful and accurate to the best of his knowledge and belief.

NOTARY SEAL:

Sharon M. Loeffler
NOTARY PUBLIC
My Commission expires: 2/24/23

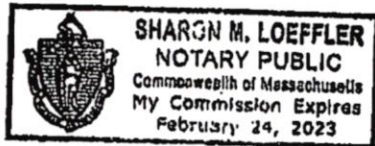
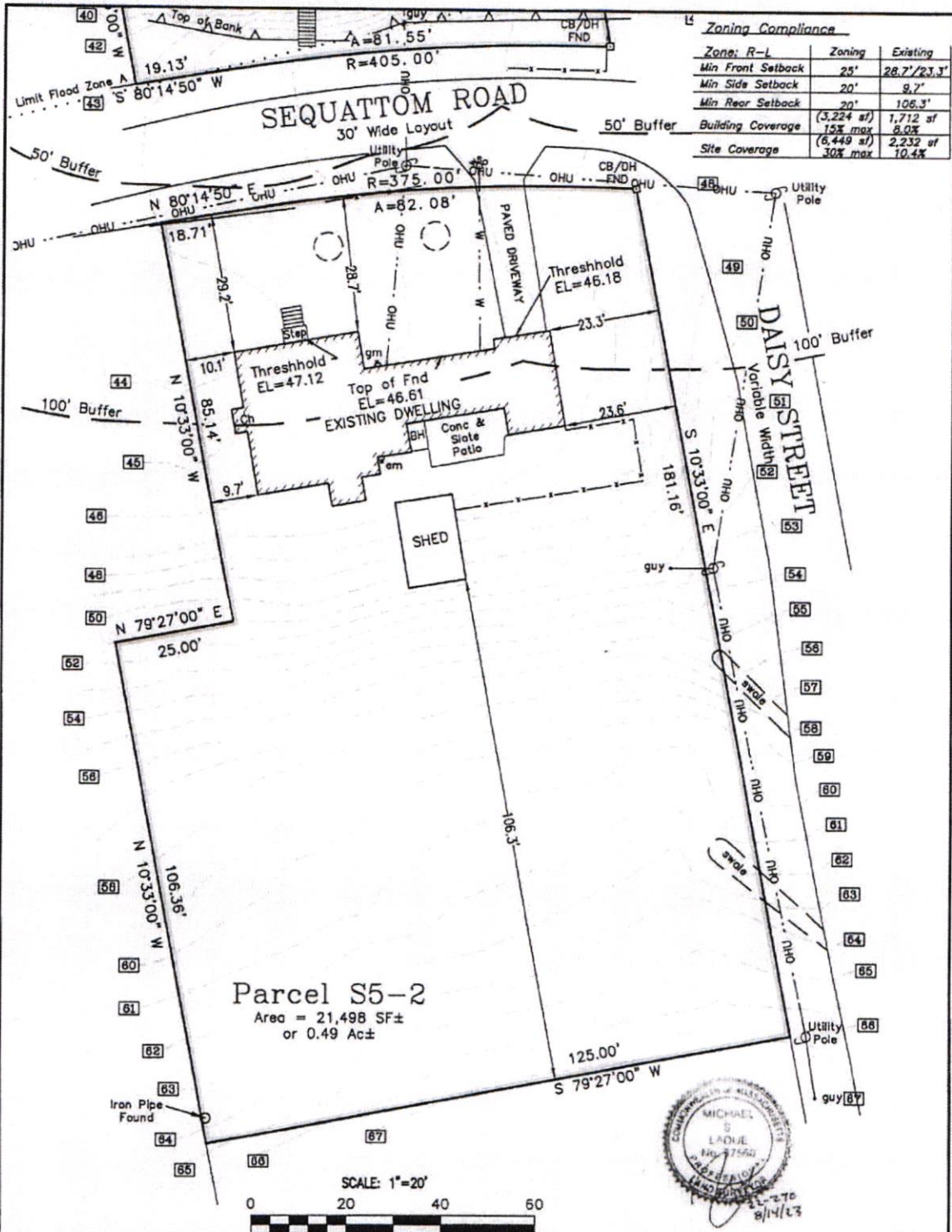
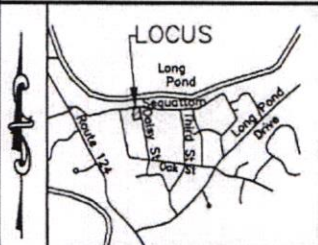


EXHIBIT 3



Zoning Compliance

Zone: R-L	Zoning	Existing
Min Front Setback	25'	28.7'/23.3'
Min Side Setback	20'	9.7'
Min Rear Setback	20'	106.3'
Building Coverage	(3,224 sf) 15% max	1,712 sf 8.0%
Site Coverage	(6,449 sf) 30% max	2,232 sf 10.4%



NOTE:

- * This property is not located within a Special Flood Hazard Area.
- ** This property is not located within a Zone II, Drinking Water Protection District.
- *** This area is located with a Natural Resource Area Nitrogen Sensitive Area.

LEGEND

— 50	Existing Contour
--- OHU ---	Overhead Utility Lines
- - - W - - -	Existing Water Line
- X -	Existing Fence Line
()	Existing Cesspool

Assessors' ID: 101-S5-2
Deed: Book 32,963, Page 326
Plan: Book 550, Page 75, Lot 61

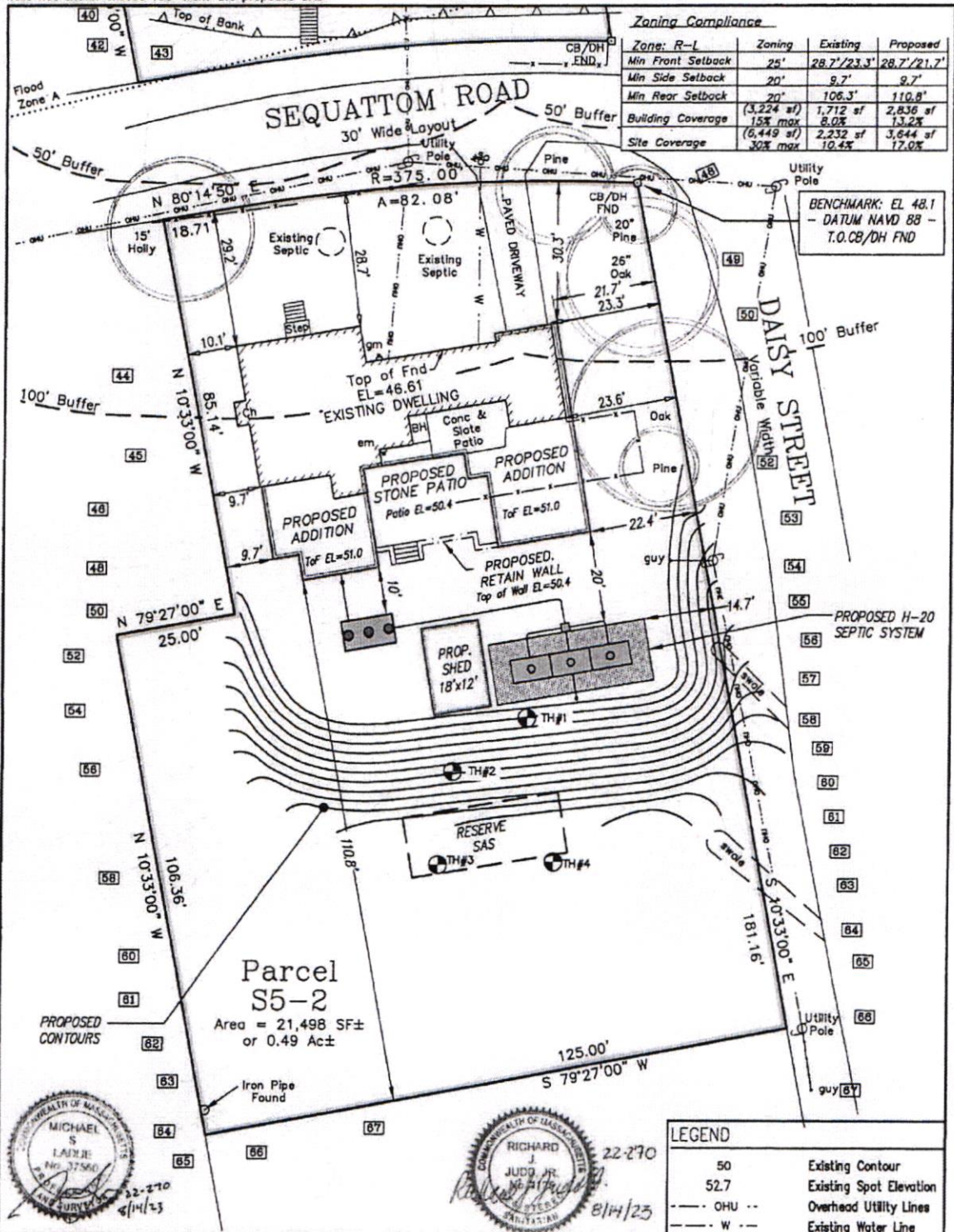
MORAN ENGINEERING ASSOCIATES
508-432-2878 941 ROUTE 2B, HARWICH, MA

EXISTING CONDITIONS PLAN IN HARWICH
Prepared For: Mariner Kemper
41 SEQUATTOM ROAD HARWICH, MA

PROJECT: 22-270 SHEET 1 of 1 DATE: 01/16/23

EXHIBIT 4

Wells not shown exceed 150' from the proposed SAS

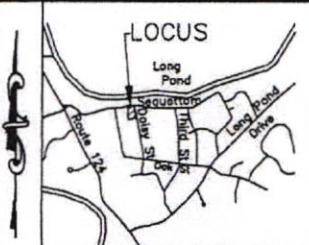
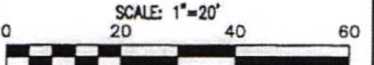


Zoning Compliance			
Zone: R-1	Zoning	Existing	Proposed
Min Front Setback	25'	28.7'/23.3'	28.7'/21.7'
Min Side Setback	20'	9.7'	9.7'
Min Rear Setback	20'	106.3'	110.8'
Building Coverage	(3,224 sf)	1,712 sf	2,836 sf
	15% max	8.0%	13.2%
Site Coverage	(6,449 sf)	2,232 sf	3,644 sf
	30% max	10.4%	17.0%

BENCHMARK: EL 48.1
- DATUM NAVD 88 -
T.O. CB/DH FND



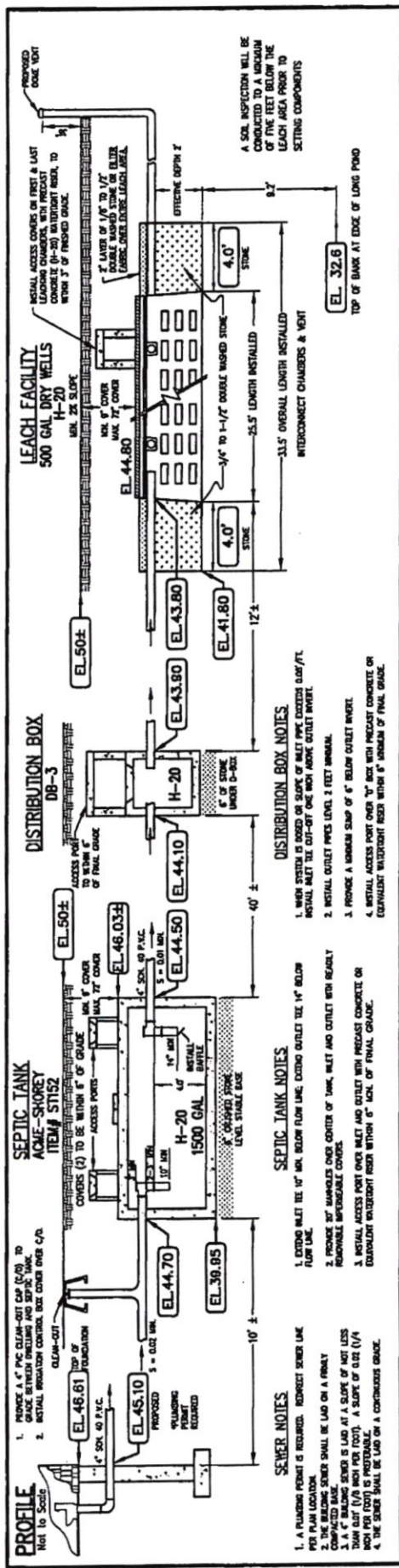
LEGEND	
50	Existing Contour
52.7	Existing Spot Elevation
--- OHU ---	Overhead Utility Lines
--- W ---	Existing Water Line
X	Existing Fence Line
emg	Electric Meter
gms	Gas Meter



- NOTE:**
1. This property is not located within a Special Flood Hazard Area.
 2. This property is not located within a Zone II, Drinking Water Protection District.
 3. This property is located in a Nitrogen Sensitive Area.
 4. House roof storm-water runoff is to be directed to drywells and drip stone trenches.
 5. Site grading is to contain storm-water runoff & prevent against storm-water flowing onto adjacent properties.

Assessors' ID: 101-S5-2
Deed: Book 32,963, Page 326
Plan: Book 550, Page 75, Lot 61

MORAN ENGINEERING ASSOCIATES
508-432-2878 941 ROUTE 26, HARWICH, MA
SITE & SEPTIC DESIGN PLAN IN HARWICH
Prepared For: Mariner Kemper
41 SEQUATTOM ROAD HARWICH, MA
PROJECT: 22-270 SHEET 1 of 2 DATE: 08/14/23



GENERAL NOTES

- ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH TITLE 5 OF THE STATUTORY CODE AND ANY APPLICABLE REGULATIONS.
- FROM TO BACK FILLING THE INSTALLATION, THE DESIGNER AND HEALTH AGENCY SHALL BE NOTIFIED FOR INSPECTION.
- ANY ALTERATIONS OF THIS DESIGN MUST BE APPROVED BY THE DESIGNER AND BOARD OF HEALTH, IN WRITING.
- THIS SYSTEM IS NOT DESIGNED FOR A GARBAGE CHUTE.
- THE INSTALLER IS TO VERIFY THE LOCATION(S) OF UTILITIES, CESSPOOLS(S) AND SEWER INVERTS PRIOR TO CONSTRUCTION.
- ALL UNSUITABLE MATERIAL WITHIN 5 FEET IN ALL DIRECTIONS FROM THE SOIL ABSORPTION SYSTEM SHALL BE REMOVED AND REPLACED WITH CLEAN, COARSE SAND.
- ALL FILL MATERIAL UTILIZED FOR THE SOIL ABSORPTION SYSTEM SHALL BE CLEAN, COARSE SAND FREE FROM DELETERIOUS MATERIAL AND SHALL HAVE A PERCOLATION RATE OF LESS THAN 2 MINUTES PER INCH BEFORE AND AFTER PLACEMENT.
- EXISTING CESSPOOLS(S) TO BE PUMPED AND BACK FILLED PER TITLE 5 ABANDONMENT PROCEDURES.
- DURING INSTALLATION, THE CONTRACTOR IS RESPONSIBLE FOR PROMOVING A SAFE EXCAVATION AREA.
- THE GROUND COVER OVER SEPTIC SYSTEM COMPONENTS SHALL NOT EXCEED 3".
- ALL GRASSY SEWER PIPE SHALL BE 4" DIAMETER SCHEDULE 40 PIPE UNLESS OTHERWISE NOTED. THE MINIMUM SLOPE OF 4" DIAMETER SCHEDULE 40 PIPE SHALL NOT BE LESS THAN 0.01' PER FOOT.
- WHEREVER SEPTIC LINES CROSS WATER SERVICE LINES OR WHEN WATER SERVICE LINES CROSS WITHIN 10' OF THE PROPOSED SOIL ABSORPTION SYSTEM, PIPES SHALL BE CLASS 150 PRESSURE PIPE AND SHOULD BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS. COORDINATE WITH LOCAL WATER DEPARTMENT.
- PLACE MAGNETIC MARKING TAPE OVER ALL COMPONENTS.

DESIGN

1. REQUIRED FLOW: 4 BEDROOMS X 110 GPD/PERSON = 440-GPD

2. SEPTIC TANK CAPACITY: 440-GPD X 2 = 880-GPD
USE: 1500-GALLON (H-20) SEPTIC TANK

3. LEACH FACILITY DESIGN: 33.5' X 12.8' X 2.0' (H-20)
SIDE WALL AREA: 2 (33.5 + 12.8) X 2.0 X 0.74 GPD/SF = 137.04
BOTTOM AREA: 33.5 X 12.8 X 0.74 GPD/SF = 312.31
TOTAL: = 454.35 GALLON PER DAY

454-GPD PROVIDED > 440-GPD REQUIRED

USE: (3) 8.5' X 4.8' W X 2.0' D CHAMBERS (H-20) WITH 4.0' OF DOUBLE WASHED STONE ALONG SIDES AND ENDS.
RESERVE SAS: 33.5' X 12.8' X 2.0' = 1008

DEEP OBSERVATION HOLE # 1 TEST BY: RICK JAUO. WITNESS: C. SCHÖENGER, RHD DATE: 1/19/23

DEPTH	PERM	TEXTURE	COLOR (Munsell)	MOISTURE (%)	SMALLER	CONDUCTIVITY	OTHER
5.0	OH	Organic	NA	NO	NO	NO	NO
5.5	AE	Loamy Sand	10YR 5/2	NO	Granular	Very Fiddable	NO
6.0	AE	Loamy Medium Sand	7.5YR 4/6	NO	Loose, Single Grains	Very Fiddable	NO
6.5	BE	Medium-Coarse Sand	10YR 6/6	NO	Loose, Single Grains	Very Fiddable	NO
7.0	C	Medium-Coarse Sand	10YR 6/6	NO	Loose, Single Grains	Very Fiddable	NO

DEEP OBSERVATION HOLE # 2 TEST BY: RICK JAUO. WITNESS: C. SCHÖENGER, RHD DATE: 1/19/23

DEPTH	PERM	TEXTURE	COLOR (Munsell)	MOISTURE (%)	SMALLER	CONDUCTIVITY	OTHER
6.1	OH	Organic	NA	NO	NO	NO	NO
6.6	AE	Loamy Sand	10YR 5/2	NO	Granular	Very Fiddable	NO
7.1	BE	Loamy Medium Sand	7.5YR 4/6	NO	Loose, Single Grains	Very Fiddable	NO
7.6	BE	Medium-Coarse Sand	10YR 6/6	NO	Loose, Single Grains	Very Fiddable	NO
8.1	CE	Fine-Medium Sand	2.5Y 7/2	NO	Loose, Single Grains	Very Fiddable	NO

DEEP OBSERVATION HOLE # 3 TEST BY: RICK JAUO. WITNESS: C. SCHÖENGER, RHD DATE: 1/19/23

DEPTH	PERM	TEXTURE	COLOR (Munsell)	MOISTURE (%)	SMALLER	CONDUCTIVITY	OTHER
6.1	OH	Organic	NA	NO	NO	NO	NO
6.6	AE	Loamy Sand	10YR 5/2	NO	Granular	Very Fiddable	NO
7.1	BE	Loamy Medium Sand	7.5YR 4/6	NO	Loose, Single Grains	Very Fiddable	NO
7.6	BE	Medium-Coarse Sand	10YR 6/6	NO	Loose, Single Grains	Very Fiddable	NO
8.1	CE	Medium-Coarse Sand	10YR 6/6	NO	Loose, Single Grains	Very Fiddable	NO

Bottom of perc: 6' (Bw), 24-Galons, < 2 Min / Inch. Loading Rate: 0.74 GPD/SF

CONSTRUCTION NOTES

- CONTACT OFFICE (508-432-2878) A MINIMUM OF 48-HOURS PRIOR TO START OF PROJECT TO SCHEDULE INSPECTIONS.
- EXISTING CESSPOOLS(S) ARE TO BE LOCATED, PUMPED AND FILLED, OR REMOVED. A SOIL ASSESSMENT IS REQUIRED PRIOR TO THE PLACEMENT OF LEACHING AREA. DESIGNER IS TO VERIFY SOIL CONDITIONS TO A MINIMUM OF FIVE FEET BELOW SAS. INSTALLER & DESIGNER ARE TO COORDINATE A DATE & TIME WITH THE HARBOR HEALTH DEPARTMENT.
- PROVIDE LEACHING AREA INSPECTION PORTS ON FIRST & LAST CHAMBERS. COVERS TO WITHIN 3' OF FINISHED GRADE.
- DESIGNER IS TO VERIFY SYSTEM INSTALLATION PRIOR TO BACKFILLING. ALL PRIOR CONSTRUCTION LANDSCAPING DETAILS ARE TO BE BETWEEN INSTALLER AND PROPERTY OWNER OR AGENT.

GENERAL NOTES

- ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH TITLE 5 OF THE STATUTORY CODE AND ANY APPLICABLE REGULATIONS.
- FROM TO BACK FILLING THE INSTALLATION, THE DESIGNER AND HEALTH AGENCY SHALL BE NOTIFIED FOR INSPECTION.
- ANY ALTERATIONS OF THIS DESIGN MUST BE APPROVED BY THE DESIGNER AND BOARD OF HEALTH, IN WRITING.
- THIS SYSTEM IS NOT DESIGNED FOR A GARBAGE CHUTE.
- THE INSTALLER IS TO VERIFY THE LOCATION(S) OF UTILITIES, CESSPOOLS(S) AND SEWER INVERTS PRIOR TO CONSTRUCTION.
- ALL UNSUITABLE MATERIAL WITHIN 5 FEET IN ALL DIRECTIONS FROM THE SOIL ABSORPTION SYSTEM SHALL BE REMOVED AND REPLACED WITH CLEAN, COARSE SAND.
- ALL FILL MATERIAL UTILIZED FOR THE SOIL ABSORPTION SYSTEM SHALL BE CLEAN, COARSE SAND FREE FROM DELETERIOUS MATERIAL AND SHALL HAVE A PERCOLATION RATE OF LESS THAN 2 MINUTES PER INCH BEFORE AND AFTER PLACEMENT.
- EXISTING CESSPOOLS(S) TO BE PUMPED AND BACK FILLED PER TITLE 5 ABANDONMENT PROCEDURES.
- DURING INSTALLATION, THE CONTRACTOR IS RESPONSIBLE FOR PROMOVING A SAFE EXCAVATION AREA.
- THE GROUND COVER OVER SEPTIC SYSTEM COMPONENTS SHALL NOT EXCEED 3".
- ALL GRASSY SEWER PIPE SHALL BE 4" DIAMETER SCHEDULE 40 PIPE UNLESS OTHERWISE NOTED. THE MINIMUM SLOPE OF 4" DIAMETER SCHEDULE 40 PIPE SHALL NOT BE LESS THAN 0.01' PER FOOT.
- WHEREVER SEPTIC LINES CROSS WATER SERVICE LINES OR WHEN WATER SERVICE LINES CROSS WITHIN 10' OF THE PROPOSED SOIL ABSORPTION SYSTEM, PIPES SHALL BE CLASS 150 PRESSURE PIPE AND SHOULD BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS. COORDINATE WITH LOCAL WATER DEPARTMENT.
- PLACE MAGNETIC MARKING TAPE OVER ALL COMPONENTS.

MORAN ENGINEERING ASSOCIATES
508-432-2878

SITE & SEPTIC SYSTEM DESIGN PLAN
Prepared For: Mariner Kemper
HARWICH, MA
41 SEQUATTOM ROAD

PROJECT: 22-270 SHEET 2 of 2 DATE: 08/14/23