

|  | SEPTIC TANK & PUMP CHAMBER |          | SOIL ABSORPTION SYSTEM |          |
|--|----------------------------|----------|------------------------|----------|
|  | REQUIRED                   | PROPOSED | REQUIRED               | PROPOSED |
| PROPERTY LINE  | 10                         | 10       | 10                     | 10       |
| CELLAR / CRAWL SPACE WALL  | 10                         | N/A      | 20                     | N/A      |
| SLAB FOUNDATION  | 10                         | 10       | 10                     | 40       |
| WATER SUPPLY LINE  | 10                         | 40       | 10                     | 80       |
| SURFACE WATERS   | 25                         | 330+/-   | 50                     | 300+/-   |
| BVW  | 25                         | 180+/-   | 50                     | 195+/-   |
| SURFACE WATER SUPPLY (SWS)   | 400                        | N/A      | 400                    | N/A      |
| TRIBUTARY TO SWS   | 200                        | N/A      | 200                    | N/A      |
| WETLAND BORDERING SWS  | 100                        | N/A      | 100                    | N/A      |
| CERTIFIED VERNAL POOL  | 50                         | N/A      | 100                    | N/A      |
| PRIVATE WELL   | 50                         | 65       | 100                    | 102.5    |
| PUBLIC WELL  | PROHIBITED IN ZONE I       | N/A      | PROHIBITED IN ZONE I   | N/A      |
| IRRIGATION WELL  | 10                         | N/A      | 25                     | N/A      |
| DRAIN TO SWS   | 50                         | N/A      | 100                    | N/A      |
| DRAIN CAPTURING SEASONAL HIGH GROUNDWATER (EXCLUDING FOUNDATION DRAIN) | 25                         | N/A      | 50                     | N/A      |
| OTHER DRAIN  | 5                          | 10       | 10                     | 40       |
| LEACHING CATCH BASIN & DRY WELL  | 10                         | N/A      | 25                     | N/A      |
| DOWNHILL SLOPE GREATER THAN 3:1  | N/A                        | N/A      | 15                     | 15       |

#### GENERAL NOTES

- SEPTIC SYSTEM INSTALLATION CONTRACTORS SHALL BE LICENSED BY THE BOARD OF HEALTH AND MUST COMPLY WITH ALL REQUIREMENTS OF THE BOARD OF HEALTH DISPOSAL WORKS CONSTRUCTION PERMIT AND ANY CONDITIONS, IF ISSUED BY THE CONSERVATION COMMISSION.
- ALL CONSTRUCTION IS TO CONFORM WITH THE REQUIREMENTS OF THE STATE ENVIRONMENTAL CODE TITLE V (EFFECTIVE DATE 7/1/2023) AND THE TOWN OF MENDON BOH REGULATIONS.
- THERE SHALL BE NO CHANGES MADE TO THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE BOARD OF HEALTH AND THE DESIGN ENGINEER.
- ANY CHANGE IN SITE CONDITIONS, DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- SOIL TEST PIT DATA SHOWN IS LIMITED TO THE CONDITIONS EXISTING AT THE SUBJECT TEST PIT ONLY. IF DIFFERENT SOIL CONDITIONS ARE FOUND IN THE AREA OF THE PROPOSED SOIL ABSORPTION SYSTEM THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
- THE CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO ANY EXCAVATION AT THE SUBJECT PROPERTY. IT IS SPECIFICALLY CAUTIONED THAT THE SUBSURFACE UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE BEEN COMPILED FROM AVAILABLE RECORDS AND OBSERVABLE SITE FEATURES. UTILITIES OTHER THAN THOSE SHOWN MAY BE PRESENT AT THIS LOCATION.
- THIS PLAN HAS BEEN PREPARED SPECIFICALLY AS A SEPTIC SYSTEM DESIGN AND IS NOT TO BE USED TO ESTABLISH PROPERTY LINES OR BUILDING SETBACKS. PROPERTY LINES AND BUILDING LOCATIONS ARE GRAPHIC ONLY, PROPERTY LINES NOT HAVING BEEN VERIFIED. NO REPRESENTATION OR CERTIFICATION AS TO THE ACCURACY OF THOSE SHOWN IS IMPLIED.

#### CONSTRUCTION NOTES

- CONTRACTOR SHALL COORDINATE INSPECTION TIMES WITH THE LOCAL BOARD OF HEALTH AND DESIGN ENGINEER 24-HOURS IN ADVANCE OF THE FOLLOWING INSPECTIONS:
  - AFTER EXCAVATION OF UNSUITABLE MATERIAL FROM THE SOIL ABSORPTION AREA
  - PRIOR TO COVERING THE CONSTRUCTED SYSTEM
  - AFTER SYSTEM BACKFILL AND FINAL GRADING
- ALL CONSTRUCTION IS TO CONFORM WITH THE REQUIREMENTS OF THE STATE ENVIRONMENTAL CODE TITLE V (EFFECTIVE DATE 7/1/2023) AND THE TOWN OF MENDON BOH REGULATIONS.
- CONSTRUCTION DETAILS:
  - ALL PIPES, TRENCHES, SEPTIC TANK, D. BOX TO BE LAID ON FIRM BASE. ON A CONTINUOUS GRADIENT, AND IN A STRAIGHT LINE.
  - ALL FINISH GRADES AND DISTURBED AREA TO BE LOAMED & SEED.
- ALL TIGHT-JOINT PLUMBING SHALL BE CONSTRUCTED OF SCH. 40 PVC PIPE WITH CLEANED AND CEMENTED FITTINGS, UNLESS OTHERWISE PERMITTED.
- ALL PRECAST PIPE CONSTRUCTION JOINTS AND FITTINGS SHALL BE MADE WATERTIGHT BY PARGING WITH HYDRAULIC CEMENT.
- THE CONTRACTOR SHALL PROVIDE A SIEVE ANALYSIS OF THE TITLE 5 PERC SAND UTILIZED FOR FILL TO VERIFY THAT IT MEETS THE REQUIREMENTS OF 310 CMR 15.255(3). TITLE 5 SAND FILL SHALL COMPLY WITH THE FOLLOWING:

| SIEVE SIZE | PARTICLE SIZE |
|------------|---------------|
| #4         | 4.75 MM       |
| #50        | 0.30 MM       |
| #100       | 0.15 MM       |
| #200       | 0.075         |
- THE CONTRACTOR SHALL PREVENT ANY HEAVY CONSTRUCTION MACHINERY AND/OR TRUCKS FROM DRIVING OVER THE PROPOSED SOIL ABSORPTION SYSTEM UNTIL FINISHED GRADE IS ESTABLISHED.
- THE CONTRACTOR SHALL INSTALL MAGNETIC TAPE OVER THE SYSTEM PIPING AND COMPONENTS.
- THE DESIGN ENGINEER SHALL CERTIFY AND PREPARE AN "AS-BUILT" PLAN FOR SUBMITTAL TO THE BOARD OF HEALTH UPON SEPTIC SYSTEM COMPLETION.
- ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" LOAM & SEED POST CONSTRUCTION.
- EXCAVATION AND FLAGGING OF THE SOIL ABSORPTION SYSTEM SHALL CONFORM TO 310 CMR 15.246 (1 & 2).
- ELEVATIONS REFER TO NAVD 88 SEE BENCH MARK SPIKE IN 16" APPLE TREE.
- THERE ARE NO FOUNDATION DRAINS.
- THE SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE INSPECTION PORT CONSISTING OF A PERFORATED FOUR INCH PIPE PLACED VERTICALLY DOWN INTO THE CHAMBER. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP AND ACCESSIBLE TO WITHIN THREE INCHES OF FINISH GRADE.

#### SITE NOTES

- LOCUS IS NOT WITHIN A DEP DESIGNATED ZONE II AREA.
  - WETLAND DELINEATION WAS COMPLETED BY DIPRETE ENGINEERING ASSOCIATES. WETLAND RESOURCE AREAS WERE NOT IDENTIFIED ON THE SUBJECT PROPERTY.
- BASE PLAN IS BASED UPON A PROPERTY AND TOPOGRAPHIC SURVEY COMPLETED BY DIPRETE ENGINEERING DATED 10/24/2025

#### REQUESTED WAIVER FROM 310 CMR 15

- NONE

#### REMOVE & REPLACE AREA

CONTRACTOR SHALL EXCAVATE AND REMOVE ALL UNSUITABLE MATERIAL TO A DEPTH OF APPROXIMATELY 36" (TO C HORIZON) AND REPLACE WITH CLEAN FILL THAT MEETS REQUIREMENTS OF 310 CMR 15.255 (TITLE V SEPTIC FILL) TO ELEVATION 412.6 (TOP OF CHAMBER) DIRECTLY UNDER AND WITHIN 5' HORIZONTALLY OF THE SOIL ABSORPTION SYSTEM

APPROXIMATE FILL QUANTITY IS 31' X 53' X 5' DEPTH = 365 CU YD

#### PROPERTY LINE ADJUSTMENT

THE PROPERTY LINE BETWEEN A.P. M16 P60 (60 KINSLEY LANE) AND A.P. M16 P54 (54 KINSLEY LANE) WILL BE ADJUSTED TO ADD APPROXIMATELY 6,920 SF OF LAND TO 54 KINSLEY LANE.

#### ZONING TABLE

TOWN OF MENDON RURAL RESIDENTIAL (RR) DISTRICT  
REQUIREMENT FOR ONE FAMILY DWELLING

| CRITERIA      | REQUIRED for RR | REQUIRED PER SECTION 2.01(c) | PROPOSED  |
|---------------|-----------------|------------------------------|-----------|
| LOT AREA      | 60,000 SF       | 5,000 SF                     | 16,025 SF |
| FRONTAGE      | 200'            | 50'                          | 267.28'   |
| FRONT YARD    | 50'             | 10'                          | 34.9'     |
| SIDE YARD     | 20'             | 10'                          | 15'       |
| REAR YARD     | 20'             | 10'                          | N/A       |
| LOT DEPTH     | 200'            | N/A                          | 80'±      |
| LOT WIDTH     | 200'            | N/A                          | 200'±     |
| BLDG COVERAGE | N/A             | 30%                          | 9%        |
| HEIGHT        | 35'             | N/A                          | 30'       |
| STORIES       | 2 1/2           | N/A                          | 2         |

LOT WAS CREATED ON DEC. 3, 1942 BY DEED BK 2874 PG 1942  
MENDON ZONING BYLAW WAS ADOPTED MAR. 10, 1961

PER SECTION 2.01 (c):

"Any increase in area, frontage, width, yard, or depth requirements of this Zoning By-Law shall not apply to a lot for single and two-family residential use which at the time of recording or endorsement, whichever occurs sooner, was not held in common ownership with any adjoining land, conformed to then existing requirements and had less than the proposed requirement but at least five thousand square feet of area and fifty feet of frontage. The minimum setback for said residential lots shall be at least 10 feet and the maximum building coverage shall not exceed 30%."

#### SOIL & OBSERVATION TESTING

STH 1 & 2 PERFORMED ON 8/19/2025  
BY ALLISON DRAKE SE 14954, DIPRETE ENGINEERING INC.  
WITNESSED BY STEVEN DONATALI, TOWN OF MENDON BOH

STH 25-1 GRADE EL. 410.9

|           |                           |           |
|-----------|---------------------------|-----------|
| EL. 410.4 | Ap HORIZON FSL 10YR 3/3   | 0-7"      |
| EL. 407.1 | Bw HORIZON FSL 10YR 4/6   | 7" - 35"  |
| EL. 402.9 | 2C HORIZON GFLS 2.5YR 4/3 | 35" - 96" |

WEEPING OBSERVED: N/A  
MOTTLING OBSERVED: 36"  
REFUSAL OBSERVED: N/A  
PERC. RATE: 3 MPI @ 29-47"  
ESHGW: 36" (EL. 407.9)

STH 25-2 APPROX. GRADE EL. 410.4

|           |                           |           |
|-----------|---------------------------|-----------|
| EL. 409.7 | Ap HORIZON FSL 10YR 3/3   | 0-8"      |
| EL. 408.8 | Bw1 HORIZON FSL 10YR 4/6  | 8" - 19"  |
| EL. 407.4 | Bw2 HORIZON FSL 10YR 4/4  | 19" - 36" |
| EL. 406.4 | 2C HORIZON GFLS 2.5YR 4/3 | 36" - 48" |
| EL. 406.4 | REFUSAL                   |           |

WEEPING OBSERVED: N/A  
MOTTLING OBSERVED: 30"  
REFUSAL OBSERVED: 48"  
PERC. RATE: N/A  
ESHGW: 36" (EL. 407.9)

#### SYSTEM DESIGN CRITERIA

- BUILDING TYPE: RESIDENTIAL
- NO. OF BEDROOMS 3
- DESIGN FLOW: 3 BEDROOMS X 110 G.P.D./BED = 330 G.P.D.
- DESIGN PERC. RATE = 3 M.P.I. (STH-1)
- GARBAGE DISPOSAL: NO
- SEPTIC TANK DESIGN REQUIREMENT: 200% DESIGN FLOW  
330 X 2 = 660 GAL. (USE 1,500 GAL. SEPTIC TANK)
- LEACH AREA REQUIREMENTS  
CLASS II - GFLS - PERC RATE 3 MPI = 0.60 GPD/SF  
330 X 2 = 660 GAL. (USE 1,500 GAL. SEPTIC TANK)
- INFILTRATOR QUICK4 PLUS LP WITH 8" INV. TRENCH CONFIGURATION = 6.96 SF/LP PER MASS DEP APPROVAL FOR GENERAL USE 6/12/15

USE INFILTRATOR QUICK4 PLUS LP IN TRENCH CONFIGURATION:

LEACH AREA REQUIRED = 330 GPD/60 GPD/SF = 550 SQUARE FEET  
CHAMBER LENGTH REQUIRED = 550 SF /6.96 SF/LP = 79 LF REQUIRED  
CHAMBER EFFECTIVE LENGTH IS 48' PER CHAMBER  
CHAMBER EFFECTIVE LENGTH IS 13.3' PER END CAP  
USE (2) CHAMBER TRENCH ROWS WITH 10 CHAMBERS IN EACH ROW.  
EFFECTIVE LENGTH PER ROW = 42.2'  
TOTAL EFFECTIVE LENGTH = 84.4'

#### SEPTIC TANK SIZING

SEPTIC TANK SHALL BE A TWO COMPARTMENT TANK  
MIN CAPACITY OF FIRST COMPARTMENT IS 330 GAL X 2 = 660 GAL  
MIN CAPACITY OF SECOND COMPARTMENT IS 3300 GAL X 1 = 330 GAL  
USE 1500 GALLON SEPTIC TANK  
USE D-BOX DB-5 W/ BAFFLE OR EQUAL

#### PUMP SYSTEM DESIGN:

DOSE LEACH FIELD 2 TIMES DAILY: 330 GPD TOTAL / 2 = 165 GAL PER DOSE  
PROVIDE HIGH WATER ALARM WITH FLOAT SWITCH SET 3" ABOVE NORMAL WORKING LEVEL  
ALARM SHALL CONSIST OF A RED LIGHT AND HORN MOUNTED WITHIN THE BUILDING  
ALARM MUST BE WIRED ON A SEPARATE ELECTRICAL CIRCUIT, HAVE A TEST SWITCH AND A SILENCER SWITCH.

PUMP CHAMBER SHALL PROVIDE MIN. 24 HOUR EMERGENCY STORAGE ABOVE WORKING LEVEL

USE SHEA CONCRETE PRODUCTS 1,000 SIMPLEX PUMP CHAMBER  
BOTTOM AREA = 30 SQUARE FEET

TANK DEPTH PER DOSE = 165 GAL / 7.48 GAL/SF = 22.1 CUFT PER DOSE  
22.1 CUFT / 30 SF BOT AREA = 0.75 FT DEPTH PER DOSE

SET FLOAT SWITCH AS FOLLOWS:

H.W. ALARM - 18" ABOVE BOTTOM OF TANK  
PUMP ON - 15" ABOVE BOTTOM OF TANK  
PUMP OFF - 6" ABOVE BOTTOM OF TANK

EMERGENCY STORAGE PROVIDED:  
51" TANK DEPTH - 15' WORKING LEVEL DEPTH = 36" (3.0') EMERGENCY STORAGE  
3' X 30 SF BOTTOM AREA = 90 CUFT STORAGE = 617 GAL STORAGE

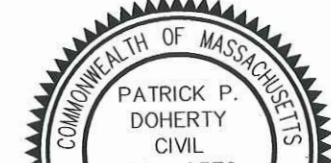
STATIC HEAD = 11'  
FRICTION LOSS: 40' EQUIVALENT LENGTH  
@60 GPM = 40' X 5.87/100' = 2.3'  
TOTAL DYNAMIC HEAD = 13.3'  
USE BARNES SE411 PUMP: 4/10 H.P. 2" SOLIDS

Prepared By:

**MIDPOINT**  
ENGINEERING • CONSULTING

37 Sutton Rd  
Webster, MA 01570  
(508) 721-1900  
pdoherty@midpointengineering.com

Seal



Site Location

Site Location



OWNER:  
David & Rebecca Doherty  
54 Kinsley Ln, Mendon MA 01756  
(XXX) XXX-XXXX

APPLICANT:  
Patrick Doherty  
139 S Shore Rd  
Webster, MA 01570  
(774) 287-7937

Date: Dec. 9, 2025 Scale: 1" = 20'

| No. | Revision | Date |
|-----|----------|------|
|     |          |      |
|     |          |      |
|     |          |      |
|     |          |      |
|     |          |      |
|     |          |      |
|     |          |      |

Project Title

**PROPOSED  
SINGLE FAMILY  
HOUSE**

54 KINSLEY LANE  
MENDON, MA 01756

Issued For

**DRAFT FOR REVIEW**

Not for Construction

Drawing Title

**On-Site  
Sewage Disposal  
Plan**

Drawing No.

**C-1**

Proj. No.

XXX

Sheet

1 of 1



