NOT TO SCALE TEST HOLE DATA

PERFORMED MAY 31, 2023 WITH DANIELLE HOLMES, LLHD

TEST HOLE #1 - DEPTH 98" TOPSOIL

NO GROUNDWATER/NO APPARENT REDOX

NO GROUNDWATER/NO REDOX

12-48" YELLOW-BROWN COARSE SAND & GRAVEL (30%) 48-98" LIGHT YELLOW-BROWN SAND MOTTLING AT 74" (NOT GROUNDWATER) ROOTS TO 84"

NOTE: 30-32" APPEARED TO BE BURIED TOP SOIL REMNANTS TEST HOLE #2 - DEPTH 108"

13-58" YELLOW-BROWN COARSE SAND & GRAVEL (30%) 58-108" LIGHT YELLOW-BROWN SAND ROOTS TO 80"

NOTE: 18-21" APPEARED TO BE BURIED TOP SOIL REMNANTS

TEST HOLE #3 - DEPTH 82" TOPSOIL 11-30" YELLOW-BROWN COARSE SAND & GRAVEL (20%) 30-82" LIGHT YELLOW-BROWN SAND MOTTLING AT 74" (NOT GROUNDWATER)

ROOTS TO 58" NO GROUNDWATER/NO REDOX NO REFUSAL TEST HOLE #4 - DEPTH 88"

0-40" FILL SLOPING 40-49" ORIGINAL TOP SOIL 49-88" YELLOW-BROWN COARSE SAND & GRAVEL (30%) ROOTS TO 78" NO GROUNDWATER/NO REDOX NO REFUSAL

> PERC TEST DATA PERFORMED JUNE 1, 2023 BY JAMES BERNARDO. LS

PERC TEST #1 - TOTAL DEPTH 42" DEPTH TO MEASUREMENT DATUM 24" 11:03 11: 05 11: 07 11: 09

RATE: 0.66 MINUTES/INCH

11:11

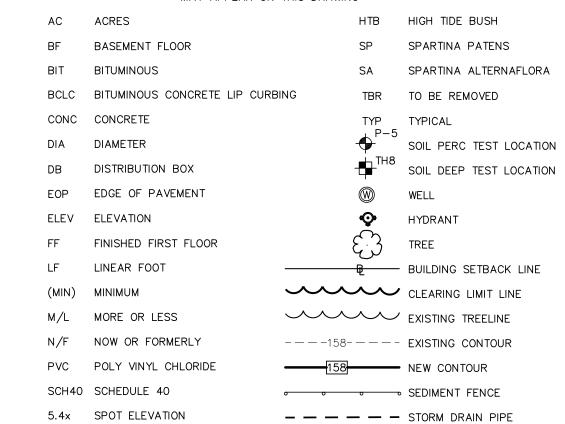
SQUARE FEET

TR TO REMAIN

PERC TEST #2 - TOTAL DEPTH 44" DEPTH TO MEASUREMENT DATUM 26" 11:14 1 1/2" 11:16 11:18 8 1/2" 11: 20 11: 24

RATE: 0.66 MINUTES/INCH

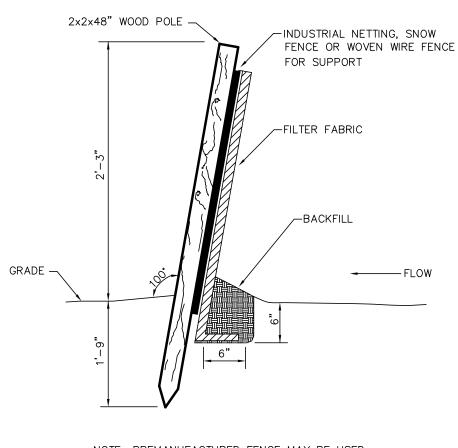
THE FOLLOWING SYMBOLS/ABBREVIATIONS MAY APPEAR ON THIS DRAWING



STONE WALL

----- W ----- WATER

———— S ———— SANITARY SEWER



NOTE: PREMANUFACTURED FENCE MAY BE USED. SEDIMENT FENCE

30" (GST6230)

36" (GST6236)

NOT TO SCALE

GST™LEACHING SYSTEM B-B' CROSS SECTION Finished Grade shall be pitched to sheet flow stormwater away from system V Cover material depth shall be >6" and shall be uniform over system ASTM C-33 Sand Distribution Pipe*

≥2" *H= 6" (GST6206) 12" (GST6212) *3" min. I.D., ASTM D-3034, SDR 35 pipe for gravity applications 18" (GST6218) 0.75" min. I.D., ASTM D-2665, SCH 40 PVC pipe for pressure applications 24" (GST6224) Copyright 2009 GEOMATRIX SYSTEMS, LL Manufactured under one or more of the llowing US Patents: 7,374,670, 7,165,390, 7,35 Other US and foreign patents pending. JOSEPH R. THEROUX

4/20/2023 MR. JIM BERNARDO BERNARDO SURVEYING LLC 102-A SPITHEAD RD. WATERFORD, CT. 06385

RE: WETLAND DELINEATION, 50 GURLEY ROAD, EAST LYME, CT. DEAR MR. BERNARDO,

AT YOUR REQUEST I HAVE DELINEATED THE WETLANDS AND WATERCOURSE ON THE ABOVE THESE WETLANDS HAVE BEEN DELINEATED IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY AND THE DEFINITIONS OF WETLANDS AND WATERCOURSES AS FOUND IN THE CONNECTICUT STATUTES, CHAPTER 440, SECTION 22A-

FLUORESCENT PINK FLAGS WITH A CORRESPONDING LOCATION NUMBER DELINEATE THE BOUNDARY OF THE UPLANDS AND WETLANDS/WATERCOURSE. FLAG SERIES WF- 1 THROUGH WF-25 DELINEATE THE BOUNDARY OF A PALUSTRINE FORESTED WETLAND, THE HIGH WATER MARK OF THE NIANTIC RIVER, AND ITS ASSOCIATED FLOODPLAIN

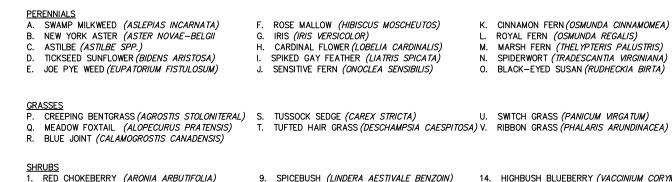
FLAG SERIES WF-1 A THROUGH WF-1 OA DELINEATE A PORTION OF THE NIANTIC RIVER AND ITS REPORT, PLEASE FEEL FREE TO CONTACT ME.

Joseph R. Theroux

JOSEPH R. THEROUX MEMBER SSSSNE, NSCSS, SSSA.

- EARTH COVER FINISHED GRADE · · · · D · · · · · D · · · · · D · - INVERT OF INLET 2 INCHES ABOVE INVERT OF OUTLET SANITARY TEE ON OUTLET SIDE BAFFLE MAY BE SANITARY TEE REQ'D USED INSTEAD ((EVEN WITH BAFFLE SANITARY TEE

TYPICAL SEPTIC TANK CROSS SECTION



1. RED MAPLE *(ACER RUBRUM)* 24. PIN OAK (QUERCUS PALUSTRIS) SHADBLOW (AMELANCHIER SPP.) 22. SWEETGUM (LIQUIDAMBAR STYRACIFLUA) 28. GREEN ASH (FRAXINUS PENNSYLVANICA)

1. ADDITIONAL PLANTS MAY BE SUBSTITUTED FOR THOSE LISTED ABOVE WITH MUNICIPAL APPROVAL. 2. CALL BEFORE YOU DIG 1-800-922-4455.

B-B' Cross Section

Geomatrix Systems, LLC., Old Saybrook, CT

THE RAINGARDEN IS SIZED TO ACCOMODATE THE FIRST 1" OF RAINFALL FROM THE ASSOCIATED ROOF AREA. A MINMUM OF 75 SQ FT IS REQUIRED BASED ON A MINIMUM 8" DEPTH.

WHERE TO DIG

WHERE TO PUT THE SOIL YOU'VE DUG

CROSS SECTION OF RAIN GARDEN

GRAPHIC SCALE

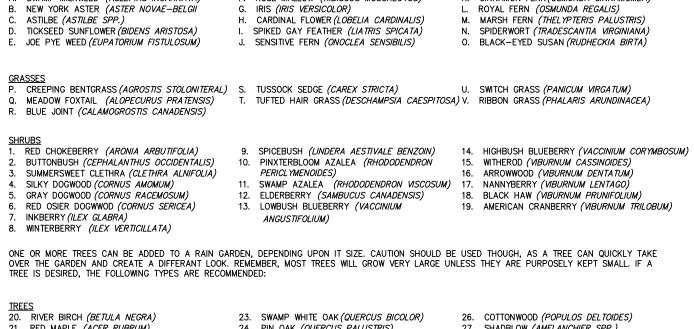
(IN FEET)

1 inch = 20 ft.

PLANTS SELECTED TO FIT SITE CONDITIONS

OVERFLOW LEVEL SPREADER ROCK LINED TO PREVENT EROSION —

SUGGESTED PLANT LIST FOR CONNECTICUT RAIN GARDENS



2. NO EXCAVATION SHALL TAKE PLACE WITHOUT NOTIFYING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455. 3. WATER SUPPLY WILL BE FROM A NEW PRIVATE DRILLED WELL. 4. NO UTILITIES SHALL RUN THROUGH ANY PORTION OF THE PRIMARY OR RESERVE LEACHING AREAS 5. THE PLACEMENT OF FILL, PIPES AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE TOWN SANITARIAN OR AUTHORIZED REPRESENTATIVE. THE TOWN SANITARIAN SHALL BE NOTIFIED 24 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY. 6. SITE PREPARATION PROCEDURES FOR THE INSTALLATION OF THE NEW SSDS: A. STRIP ALL VEGETATION, ORGANIC MATTER (APROX 7" DEPTH) AND TOPSOIL IN THE AREA B. INSTALL SYSTEM PER PLAN. C. NATIVE SOIL SHALL BE USED AS BACKFILL, PLACED AND COMPACTED D. SEPTIC TANK SHALL BE SET LEVEL ON A MINIMUM OF SIX INCHES OF

> C. EFFECTIVE LEACHING AREA PROVIDED 52 TOTAL LINEAR FEET OF EXCAVATED ROW LEACHING AREA PER LINEAL FOOT 10.0 SF/FT TOTAL EFFECTIVE LEACHING AREA PROVIDED = 520 SF

WITH AN APPROVED OUTLET EFFLUENT FILTER AND

D. 100% RESERVE AREA = 20 LF OF GST 6236 E. MLSS CALCULATION NEED NOT BE CONSIDERED, DEPTH TO RESTRICTIVE LAYER GREATER THAN 60". 8. ALL SOLID AND PERFORATED DISTRIBUTION PIPE USED AFTER THE SEPTIC TANK SHALL BE PVC ASTM D 3034, SDR 35.

B. DESIGN: USE NEW 1000 GALLON SEPTIC TANK BY JOLLEY PRECAST (OR APPROVED EQUAL)

9. A CONFIRMATION TEST HOLE WILL BE REQUIRED AT THE TIME OF THE FOUNDATION EXCAVATION TO VERIFY THE BOTTOM OF THE LEACHING SYSTEM IS GREATER THAN 8 FEET ABOVE LEDGE ROCK.

1. THIS PLAN AND THE SURVEY IT IS BASED ON HAVE BEEN PREPARED IN ACCORDANCE WITH THE

3. THE PROPERTY SHOWN HERE MAY BE SUBJECT TO, OR BENEFITED BY THE FOLLOWING:

4. THE SUBJECT PROPERTY IS LOCATED ENTIRELY WITHIN THE CA & R-10 ZONE DISTRICTS.

09011C0477J MAP EFFECTIVE: 8-5-2013, FEDERAL EMERGENCY MANAGEMENT AGENCY".

NETWORK (ACORN) BASE STATION: CTGR. HAVING THE FOLLOWING VALUES:

VERTICAL ACCURACY CONFORMS TO CLASS V-2.

ASSIGNED STREET ADDRESS OF 50 GURLEY ROAD.

LATITUDE = $N41^{\circ} 20' 07.3560"$

MHW: 1.0 FFFT

MAP REFERENCES:

NAVD88: 0.0 FEET

CRANDALL C. ENGR'S (UNRECORDED).

BY CECIL BANNING (DR 2 #34)

PRIOR TO INSTALLATION OF SYSTEM.

DISCHARGE LEVEL AFTER ACCEPTANCE.

A. EFFECTIVE LEACHING AREA REQUIRED:

1 ROW OF 52 LF OF GST6212

7. SUBSURFACE SEWAGE DISPOSAL SYSTEM DESIGN CRITERIA:

DESIGN PERCOLATION RATE 10.1 MIN / 1 INCH 495 SF EFFECTIVE LEACHING AREA REQUIRED

MLW: -1.6 FEET

LONGITUDE = W72° 02' 58.96923"

ELLIPSOID HEIGHT = -18.342 METERS

ASSESSOR AND LAND EVIDENCE RECORDS ON MAY 2, 2023.

10. TIDAL ELEVATIONS ARE AS FOLLOWS BASED ON THE TIDAL EPOCH 83-01

DISPOSITION OF THE LAND CONSTITUTING THE RIGHT OF WAY IS UNCLEAR.

NUMBER 44-09 SHEETS 10 & 11 OF 11 (CT-DOT RECORDS)

APRIL 1934 L.E. DABOLL CIVIL ENG'R (BOOK 2 PAGE 65)

REGISTRATION NUMBER APPEARS BELOW OR THEREON.

LOCATION SURVEY, THE BOUNDARY DETERMINATION CATEGORY IS DEPENDENT RESURVEY AND THE

HORIZONTAL ACCURACY CONFORMS TO CLASS A-2. TOPOGRAPHIC SURVEY IS CLASS T-2 AND THE

REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300B MINIMUM STANDARDS OF ACCURACY, CONTENT AND CERTIFICATION FOR SURVEYS AND MAPS. THE TYPE OF SURVEY IS AN IMPROVEMENT

NO DECLARATION IS EXPRESSED OR IMPLIED BY THIS MAP OR COPIES THEREOF UNLESS THE PRINT BEARS THE IMPRESSION TYPE SEAL AND ORIGINAL LIVE SIGNATURE OF THE SURVEYOR WHOSE NAME AND

2. REFERENCE IS MADE TO EAST LYME LAND EVIDENCE RECORDS VOLUME 718 AT PAGE 43 FOR A WARRANTY DEED DATED SEPTEMBER 2, 2005 REGARDING RECORD TITLE TO THE SUBJECT PROPERTY.

THE ROW IDENTIFIED AS FORMERLY "COVE ROAD" IS SUBJECT TO A RIGHT OF WAY IN FAVOR OF LAND

5. BY GRAPHICAL DEPICTION ONLY, THIS PARCEL LIES WITHIN FLOOD HAZARD ZONES AE (EL 9 FEET), X (0.2%

6. THE SUBJECT PROPERTY IS SHOWN ON THE EAST LYME TAX ASSESSOR MAP 36.0 AS LOT 56 AND HAS AN

COORDINATE SYSTEM (NAD 83) EPOCH 2011 (2010.0). ELEVATIONS DEPICTED HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) TRANSFORMED FROM ELLIPSOID HEIGHT TO

ORTHOMETRIC HEIGHT UTILIZING NGS2018 GEOID. AS DETERMINED BY GLOBAL POSITIONING SYSTEM (GPS) OBSERVATIONS UTILIZING THE STATE OF CONNECTICUT'S ADVANCED CONTINUOUSLY OPERATING REFERENCE

7. BEARINGS AND COORDINATES NOTED HEREON ARE REFERENCED TO THE CONNECTICUT STATE PLANE

8. THIS PLAN REPRESENTS THE LOCATION OF THE BOUNDS AND SITE CONDITIONS DETERMINED BY FIELD SURVEY ON APRIL 28, 2023. RECORD TITLE AND ADJOINER INFORMATION WAS OBTAINED FROM TAX

9. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN

COMPILED. IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROLE TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE

SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO JAMES BERNARDO LAND SURVEYING, LLC. THE SIZE,

LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

11. THE INLAND WETLANDS SHOWN HEREON WERE DELINEATED IN THE FIELD BY JOSEPH THEROUX, CERTIFIED

12. THE WESTERLY END OF GURLEY ROAD WAS ABANDONED BY THE EAST LYME BOARD OF SELECTMEN ON JANUARY 17, 1973 AS RECORDED IN TOWN MEETING MINUTES BOOK 11 AT PAGES 193 & 214. THE

1. PLAN TWO ROD RIGHT OF WAY & VICINITY BETWEEN INTERSTATE I-95 & ROUTE NO. 1 BOSOTON POST

ROAD, EAST LYME, CONN. SCALE: 1"=40' OCT. 1979 BY CECIL BANNING LAND SURVEYOR (UNRECORDED).

TURNPIKE FROM THE OLD LYME TOWN LINE NORTHEASTERLY TO THE WATERFORD TOWN LINE SCALE: 1"=80'

2. PLAN SHOWING LAND IN THE THE TOWN OF EAST LYME BELONGING TO THE ESTATE OF KATHERINE LEWIS

GURLEY AND SOME ADJACENT LANDS 1929 SCALE: 1"=50' SURVEYED AND DRAWN BY DABOLL AND

3. CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP TOWN OF EAST LYME CONNECTICUT

4. PLAN OF LAND IN EAST LYME CONN TO BE CONVEYED BY MARY VINE TO JOHN BURKE SCALE: 1"=50'

1. THIS PLAN IS FOR A PERMIT PURPOSES ONLY. IT IS NOT A CONTRACT DOCUMENT OR

5. PLAN OF PROPERTY KATHLEEN MACGREGOR GURLEY ROAD - EAST LYME, CONN. SCALE 1"=28' NOV. 1971

OF AND FIVE FEET DOWNGRADIENT, 2' LATERALLY SURROUNDING THE NEW LEACHING SYSTEM.

NEW THREE (3) BEDROOM RESIDENCE WITH NO LARGE CAPACITY TUBS OR GARBAGE GRINDERS

AND ANY UNSUITABLE MATERIAL THAT MAY INTERFERE WITH THE PROPER FUNCTION OF

OF THE SSDS. INSTALL APPROVED SELECT FILL IN ACCORDANCE WITH REQUIREMENTS

IN 12 INCH LIFTS. THIS FILL MUST HAVE A MINIMUM PERCOLATION RATE OF 10 MINUTES/INCH AFTER PLACEMENT AND COMPACTION.

ALL COMPACTION SHALL BE TO 95% MODIFIED PROCTER DENSITY.

PROCESSED AGGREGATE OR BROKEN STONE BASE ON COMPACTED SUBGRADE.

BACKFILL AROUND TANK SHALL BE PLACED AND COMPACTED IN SIX INCH

LIFTS TO 95% MODIFIED PROCTOR DENSITY. FILL TANK WITH WATER TO

SOIL SCIENTIST AND WERE FIELD LOCATED BY JAMES BERNARDO LAND SURVEYING, LLC

ANNUAL CHANCE) & X AS SHOWN ON "NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE

MAP NEW LONDON COUNTY, CONNECTICUT PANEL 477, COMMUNITY: TOWN OF EAST LYME MAP NUMBER:

FORMERLY IDENTIFIED AS THE "LOVERAGE LOT" AND "NOAHS ARC" NOW DAVID L FAIRBANKS.

STANDARD CONDITIONS OF LLHD APPROVAL

1. DESIGN APPROVED WITHOUT A GARBAGE GRINDER OR LARGE TUB EXCEEDING 100 GALLONS, IF INSTALLED

SEPTIC TANK SHALL BE SIZED ACCORDINGLY. 2. ALL NEWLY INSTALLED SEPTIC TANKS SHALL HAVE AN APPROVED NON-BYPASS EFFLUENT FILTER THAT IS RATED FOR THE DESIGN FLOW OF THE SSDS.

3. STABLE BENCHMARK ADJACENT TO PROPOSED BUILDING AND SEWAGE DISPOSAL SYSTEM. INSTALLER SHOULD NOT BE REQUIRED TO TRANSFER BENCHMARKS WHEN CONSIDERABLE DIFFERENCES (MORE THAN 10'TO 15') EXIST BETWEEN THE BENCHMARK AND LEACHING AREA. IF THE BENCHMARK IS DISTURBED PRIOR TO

CONSTRUCTION, THE ENGINEER SHOULD SET ANOTHER ONE FOR CONSTRUCTION PURPOSES. 4. IF A RISER COVER WEIGHS LESS THAN 100 LBS, THEN THE TANK COVER SHALL REMAIN IN PLACE OR A SECONDARY SAFETY LID OR DEVICE SHALL BE PROVIDED. IT IS RECOMMENDED THAT SECONDARY SAFETY LIDS OR DEVICES BE UTILIZED FOR SAFETY REASONS EVEN IF THE RISER COVER WEIGHS 100 LBS OR GREATER. SECONDARY SAFETY LIDS OR DEVICES MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS AND SHOULD BE INSTALLED AS SHALLOW AS POSSIBLE TO FACILITATE MAINTENANCE.

THE FOLLOWING ARE NOT CURRENTLY REQUIRED BY CT PUBLIC HEALTH CODE AND/OR LLHD PLAN REVIEW POLICIES BUT ARE ENCOURAGED/RECOMMENDED TO PROTECT THE PROPOSED STRUCTURES, ONSITE SEPTIC SYSTEM, WATER TREATMENT DISCHARGE SYSTEM AND/OR WATER SUPPLY/GROUNDWATER.



TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

James Dernardo JAMES BERNARDO LICENSE #70121

4-2-2024 DATE

S BERNARDO JRVEYING, LLC ITHEAD ROAD CONNECTICUT



NOTATIONS & RAIN GARDEN ADDED LEACH FIELD REVISED WELL MOVED AND LLHD COMMENTS ADDRESSED DESCRIPTION DATE

REVISIONS

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S R

SHEET 1 OF 2

Sheet No.

1" =20'

MAY 2, 2023 roject No.

23023-1