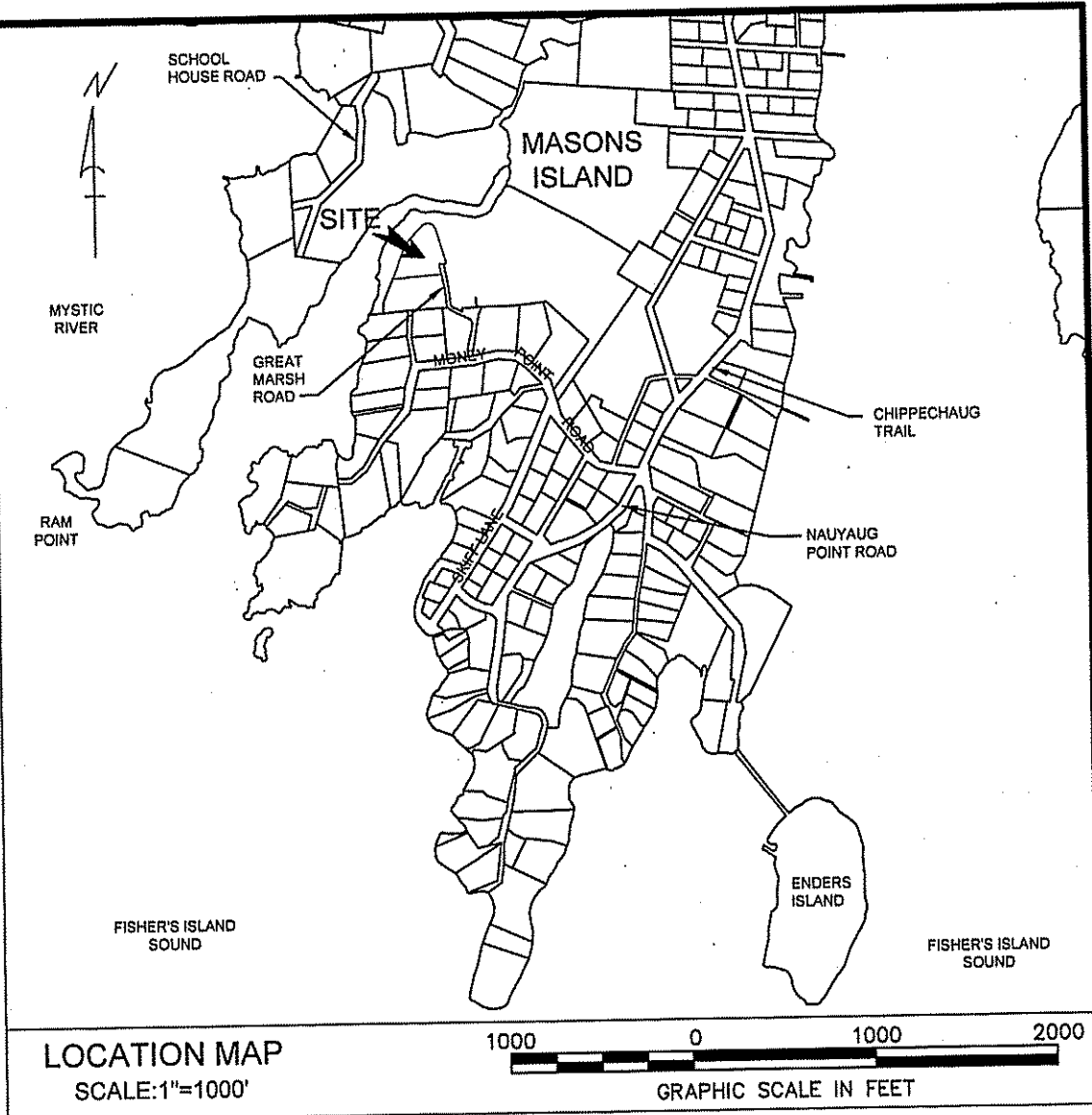


SITE PLAN FOR GENERIC RESIDENCE AND SUBSURFACE SEWAGE DISPOSAL SYSTEM

LOT 4 & 5 GREAT MARSH ROAD,
MYSTIC-STONINGTON, CONNECTICUT
APRIL 22, 2020
REVISED: SEPTEMBER 15, 2020



ABBREVIATIONS

AC	ACRE
ELEV	ELEVATION
FF	FIRST FLOOR ELEVATION
FGF	FINISH GARAGE FLOOR
INV	INVERT
LF	LINEAR FEET
MIN	MINIMUM
ML	MORE OR LESS
N/F	NOW OR FORMERLY
PVC	POLYVINYL CHLORIDE
SF	SQUARE FEET
TF	TOP OF FRAME
TBR	TO BE REMOVED
BW	BOTTOM OF WALL
TW	TOP OF WALL

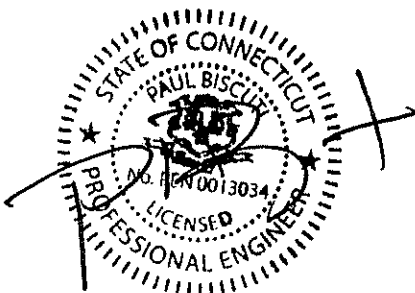
LEGEND

• 22.5	NEW SPOT ELEVATION
--- 20 ---	EXISTING CONTOUR
--- 20 ---	PROPOSED CONTOUR
□ □ □	TEMPORARY SEDIMENT FENCE
TH 1	TEST HOLES
PT	PERCOLATION TEST
E	ELECTRICAL SERVICE
W	WATER SERVICE
B	BUILDING SETBACK LINE
EXPOSED ROCK	EXPOSED ROCK
mE	MODIFIED BLUFFS AND ESCARPMENTS
EM	ESTUARINE EMBAYMENTS



INDEX TO SHEETS

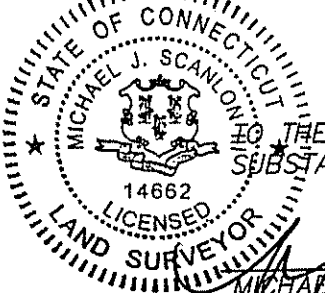
COVER SHEET	SHEET 1
PROPERTY SURVEY AND EXISTING CONDITIONS PLAN	SHEET 2
SITE PLAN FOR NEW RESIDENCE AND SUBSURFACE SEWAGE DISPOSAL SYSTEM	SHEET 3
DETAILS	SHEET 4



APPLICANT:
MASONS ISLAND COMPANY
1 RAM POINT ROAD
MYSTIC-STONINGTON, CT 06355

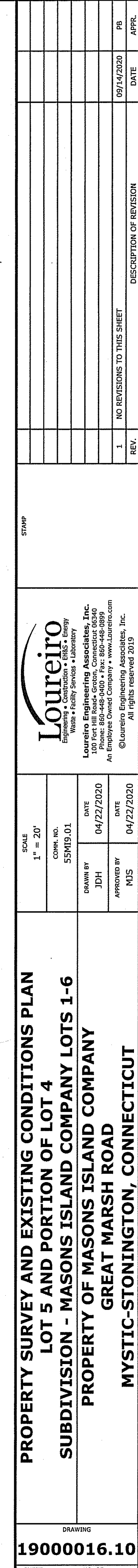
Prepared By:

Loureiro
Engineering • Construction • EH&S • Energy
Waste • Facility Services • Laboratory
Loureiro Engineering Associates, Inc.
100 Northwest Drive • Plainville, Connecticut 06062
Phone: 860-747-6181 • Fax: 860-747-8822
An Employee Owned Company • www.Loureiro.com
Engineering • Construction • EH&S • Energy
Waste • Facility Services • Laboratory

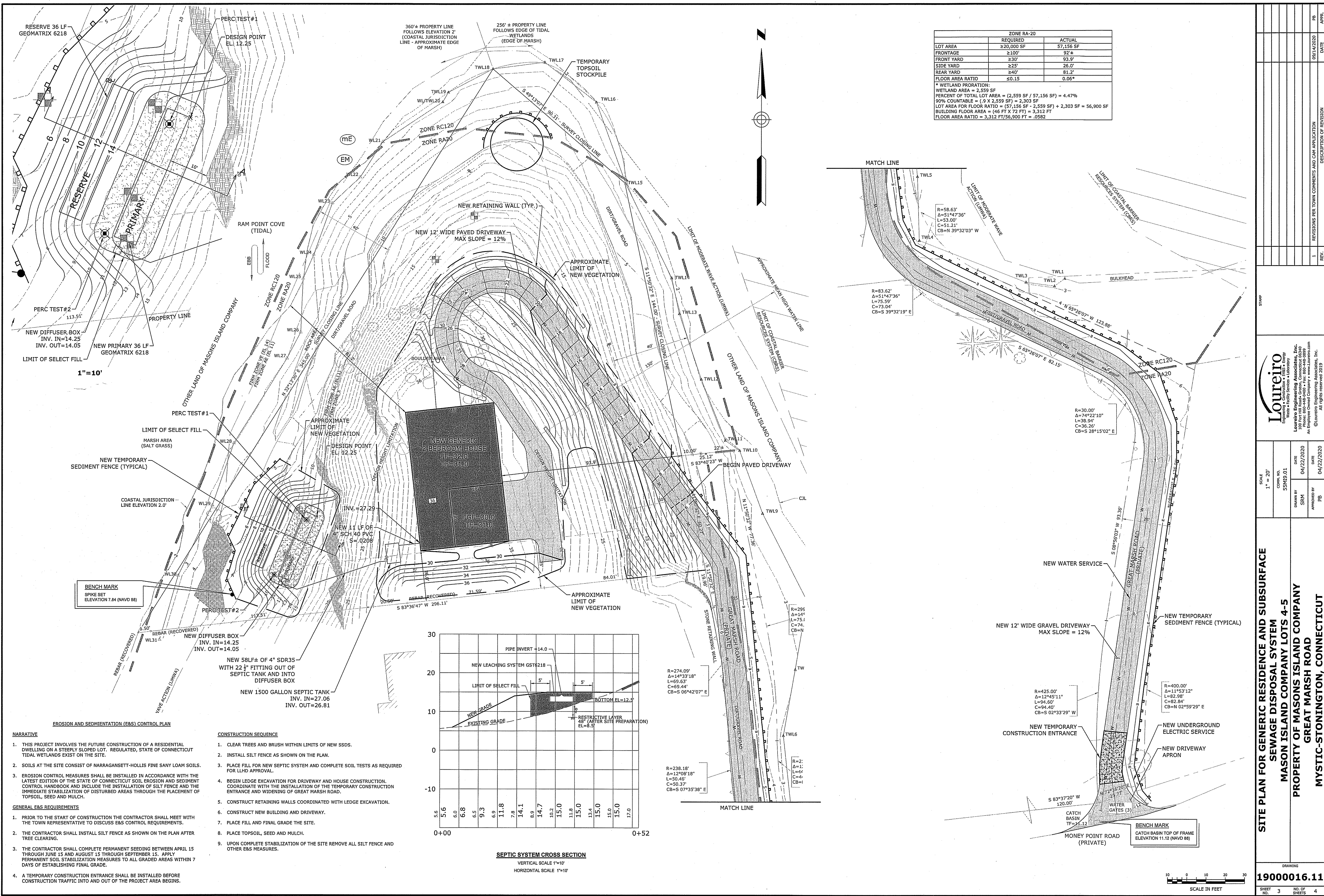


TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS
SUBSTANTIALLY CORRECT AS NOTED HEREON.

9.15.2020
DATE

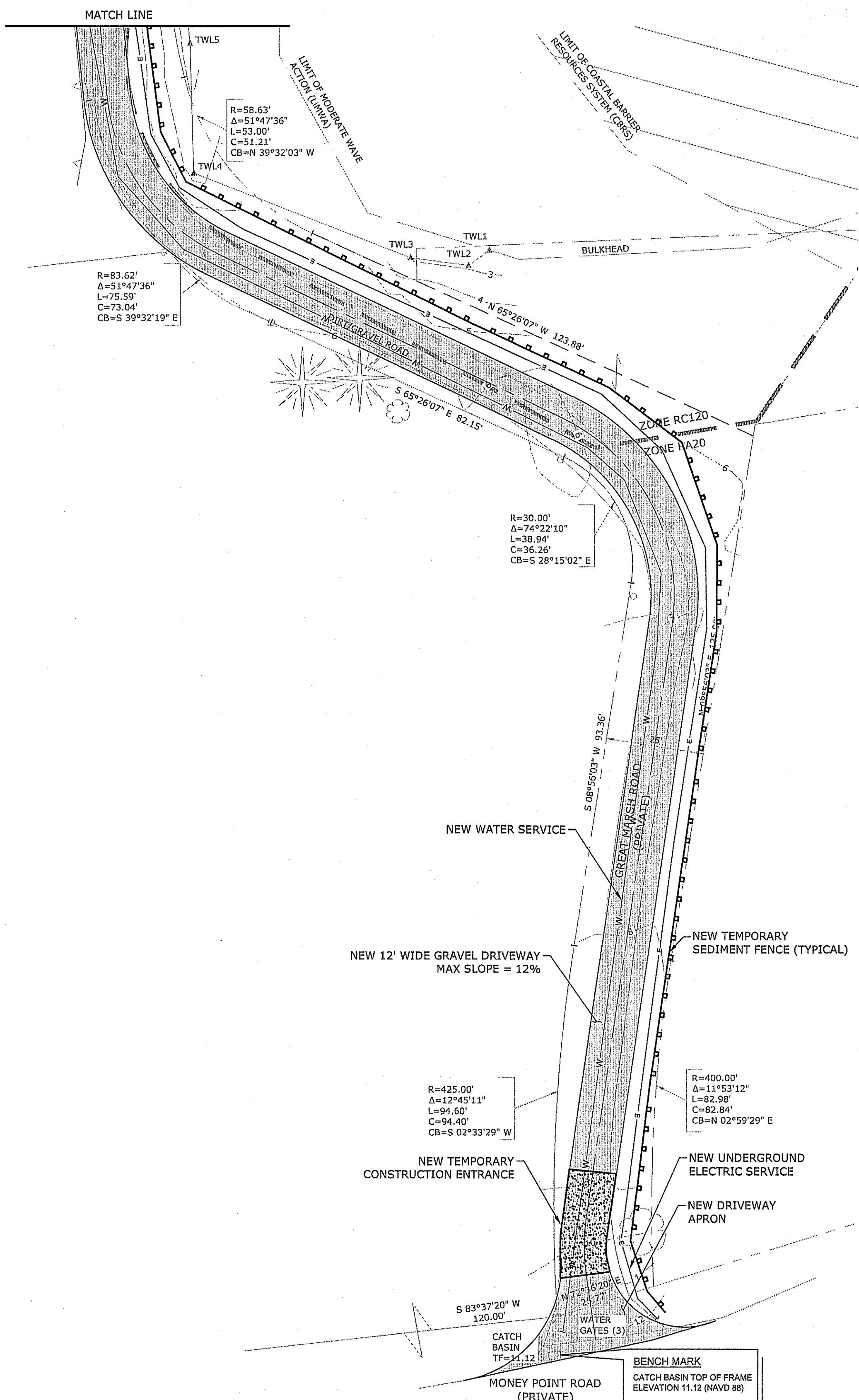


19000016.10



ZONE RA-20		
	REQUIRED	ACTUAL
LOT AREA	≥20,000 SF	57,156 SF
FRONTAGE	≥100'	92' ±
FRONT YARD	≥30'	93.9'
SIDE YARD	≥25'	26.0'
REAR YARD	≥40'	81.2'
FLOOR AREA RATIO	≤0.15	0.06*

* WETLAND PRORATION:
WETLAND AREA = 2,559 SF
PERCENT OF TOTAL LOT AREA = (2,559 SF / 57,156 SF) = 4.47%
90% COUNTABLE = (4.9 X 2,559 SF) = 2,303 SF
LOT AREA FOR FLOOR RATIO = (57,156 SF - 2,559 SF) + 2,303 SF = 56,900 SF
BUILDING FLOOR AREA = (46 FT X 72 FT) = 3,312 FT
FLOOR AREA RATIO = 3,312 FT/56,900 FT = .0582



EROSION AND SEDIMENTATION (E&S) CONTROL PLAN

NARRATIVE

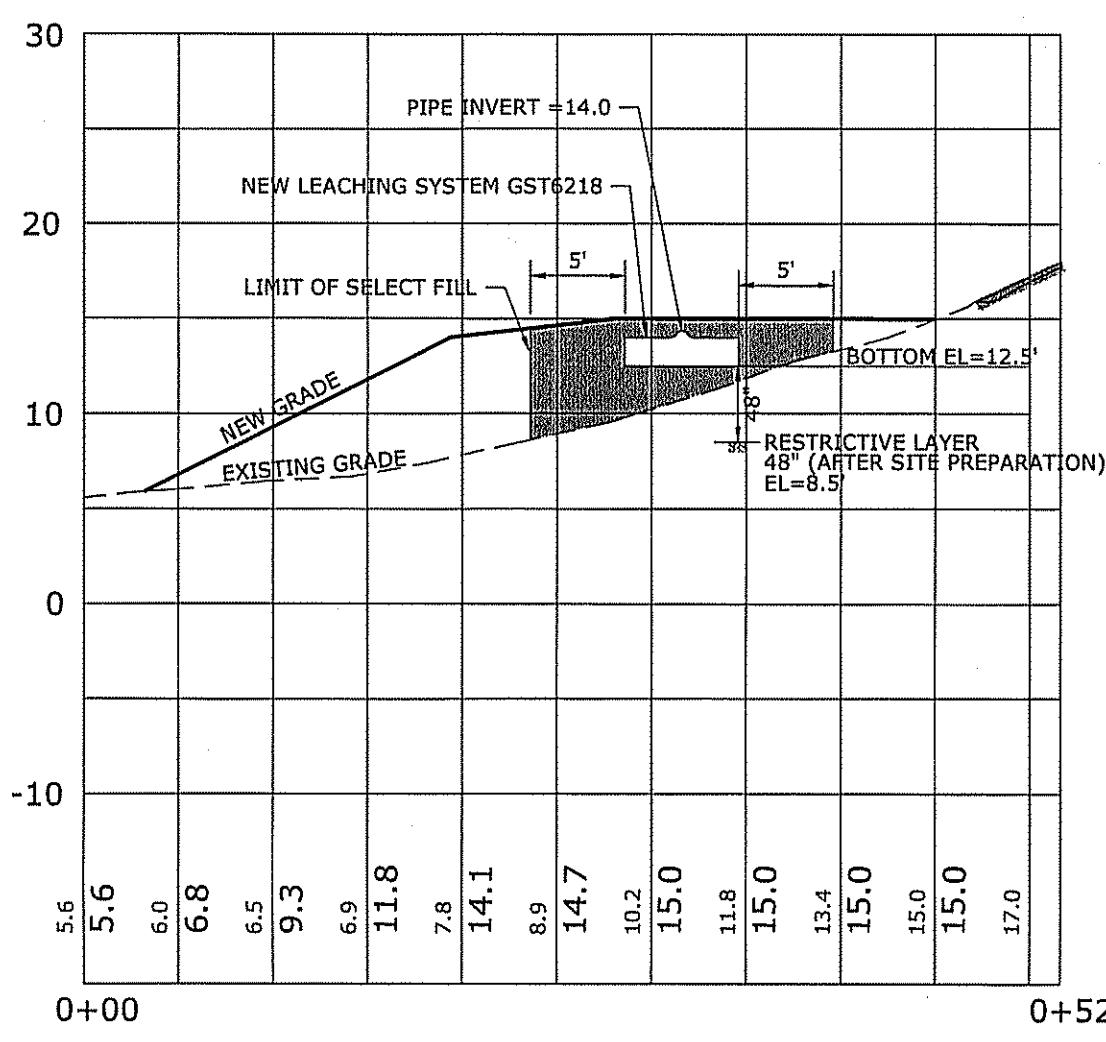
- THIS PROJECT INVOLVES THE FUTURE CONSTRUCTION OF A RESIDENTIAL DWELLING ON A STEEPLY SLOPED LOT. REGULATED, STATE OF CONNECTICUT TIDAL WETLANDS EXIST ON THE SITE.
- SOILS AT THE SITE CONSIST OF NARRAGANSETT-HOLLIS FINE SANDY LOAM SOILS.
- EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE OF CONNECTICUT SOIL EROSION AND SEDIMENT CONTROL HANDBOOK AND INCLUDE THE INSTALLATION OF SILT FENCE AND THE IMMEDIATE STABILIZATION OF DISTURBED AREAS THROUGH THE PLACEMENT OF TOPSOIL, SEED AND MULCH.

GENERAL E&S REQUIREMENTS

- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL MEET WITH THE TOWN REPRESENTATIVE TO DISCUSS E&S CONTROL REQUIREMENTS.
- THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON THE PLAN AFTER TREE CLEARING.
- THE CONTRACTOR SHALL COMPLETE PERMANENT SEEDING BETWEEN APRIL 15 THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPTEMBER 15. APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE.
- A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF THE PROJECT AREA BEGINS.

CONSTRUCTION SEQUENCE

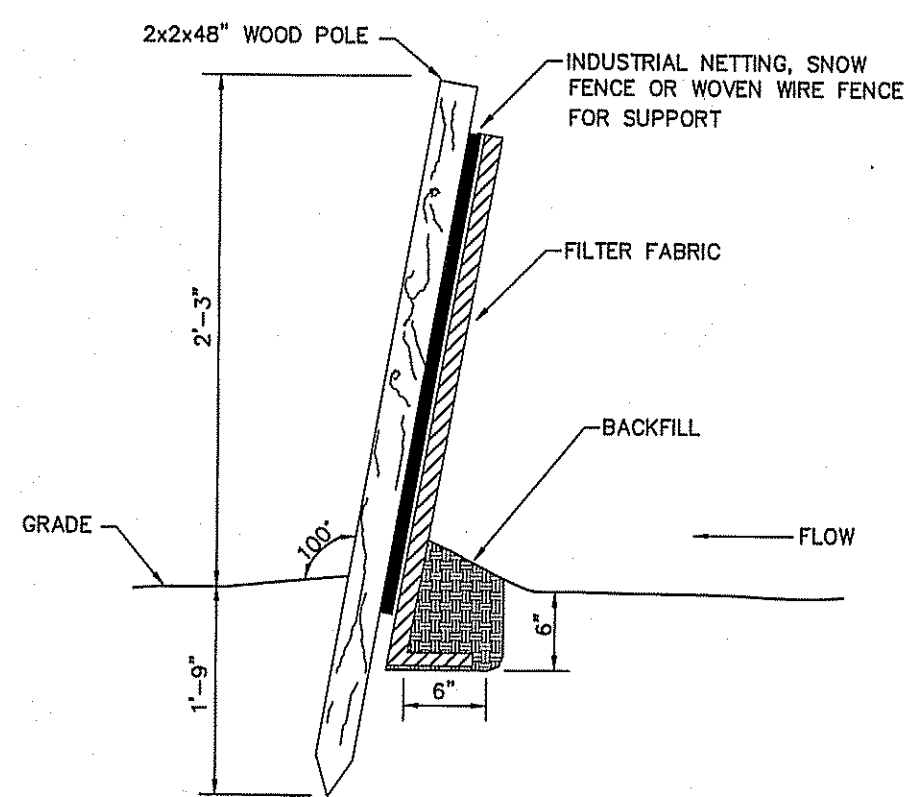
- CLEAR TREES AND BRUSH WITHIN LIMITS OF NEW SSDS.
- INSTALL SILT FENCE AS SHOWN ON THE PLAN.
- PLACE FILL FOR NEW SEPTIC SYSTEM AND COMPLETE SOIL TESTS AS REQUIRED FOR LLHD APPROVAL.
- BEGIN LEDGE EXCAVATION FOR DRIVEWAY AND HOUSE CONSTRUCTION. COORDINATE WITH THE INSTALLATION OF THE TEMPORARY CONSTRUCTION ENTRANCE AND WIDENING OF GREAT MARSH ROAD.
- CONSTRUCT RETAINING WALLS COORDINATED WITH LEDGE EXCAVATION.
- CONSTRUCT NEW BUILDING AND DRIVEWAY.
- PLACE FILL AND FINAL GRADE THE SITE.
- PLACE TOPSOIL, SEED AND MULCH.
- UPON COMPLETE STABILIZATION OF THE SITE REMOVE ALL SILT FENCE AND OTHER E&S MEASURES.



SITE PLAN FOR GENERIC RESIDENCE AND SUBSURFACE SEWAGE DISPOSAL SYSTEM		DRAWING		19000016.11	
MASON ISLAND COMPANY LOTS 4-5		DATE		04/22/2020	
PROPERTY OF MASON'S ISLAND COMPANY		DRAWN BY		SRM	
MYSTIC-STONINGTON, CONNECTICUT		APPROVED BY		PB	
		DATE		04/22/2020	
		REVISIONS PER TOWN COMMENTS AND CAN APPLICATION		REV	
		DATE		09/14/2020	
		DATE		APR	

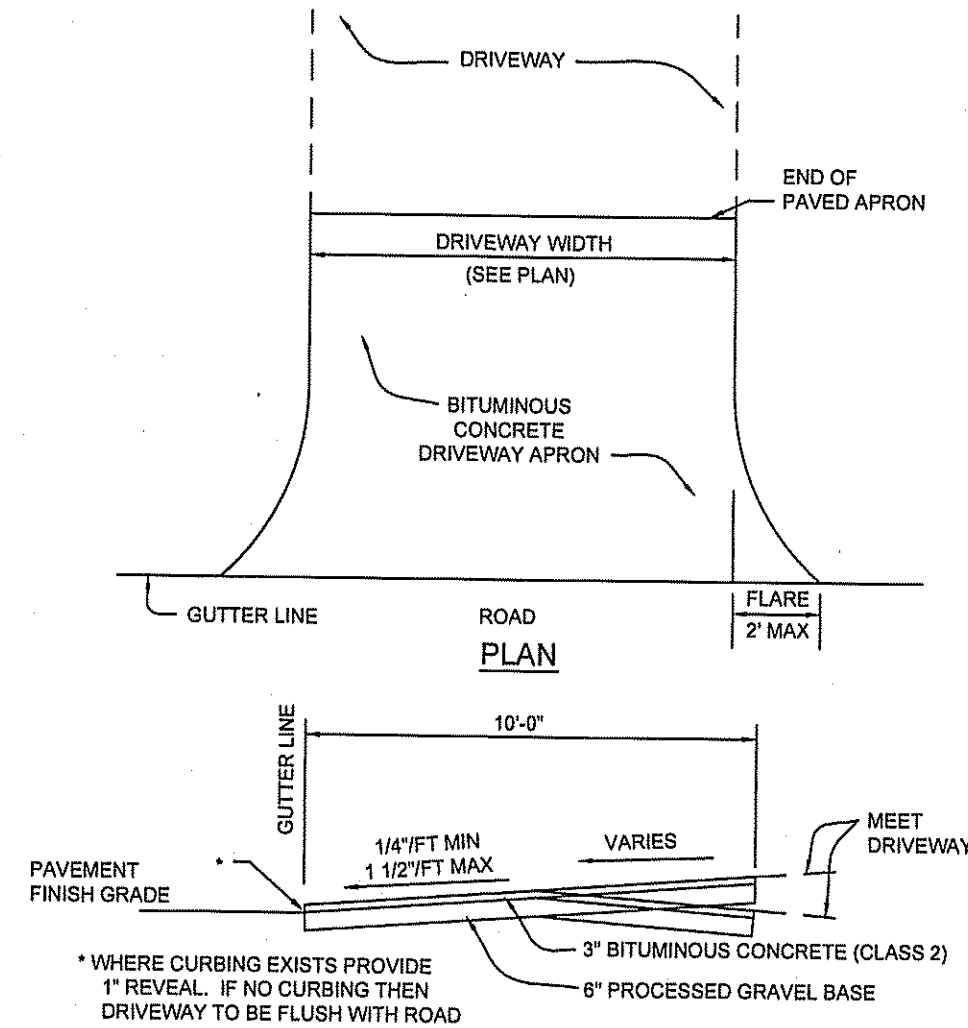
STAMP

Loureiro
Loureiro Engineering Associates, Inc.
Professional Engineers & Surveyors
1000 Main Street, Suite 200
Mystic, CT 06340
Phone: 860-548-9400 • Fax: 860-548-9409
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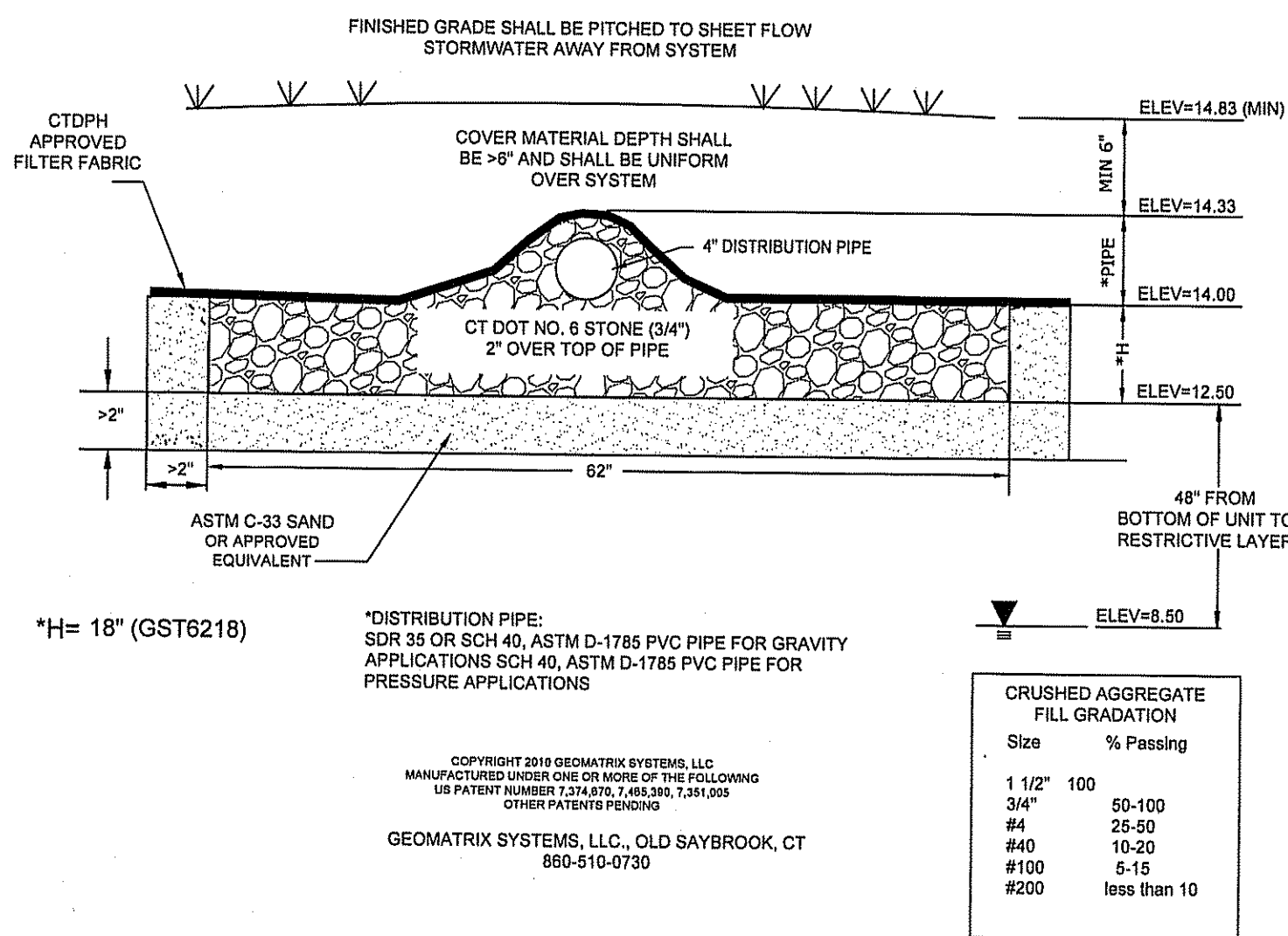


NOTE: PREMANUFACTURED FENCE MAY BE USED.

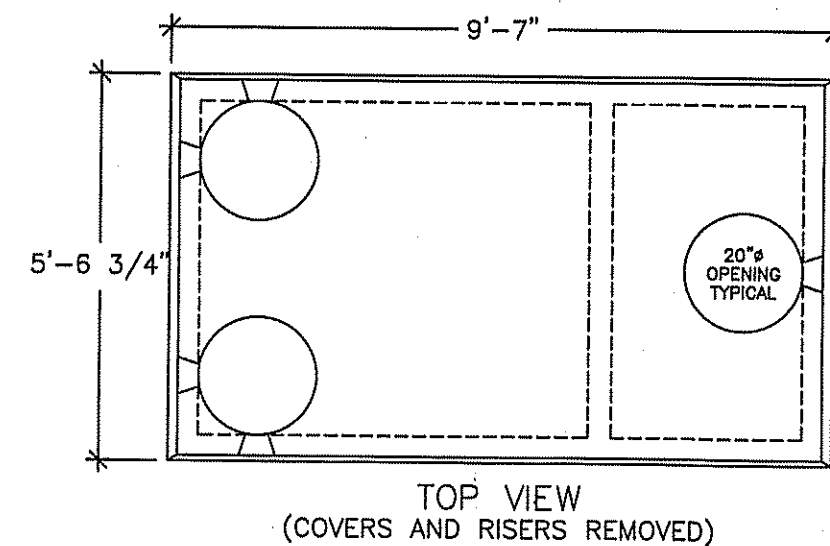
SEDIMENT FENCE
NOT TO SCALE



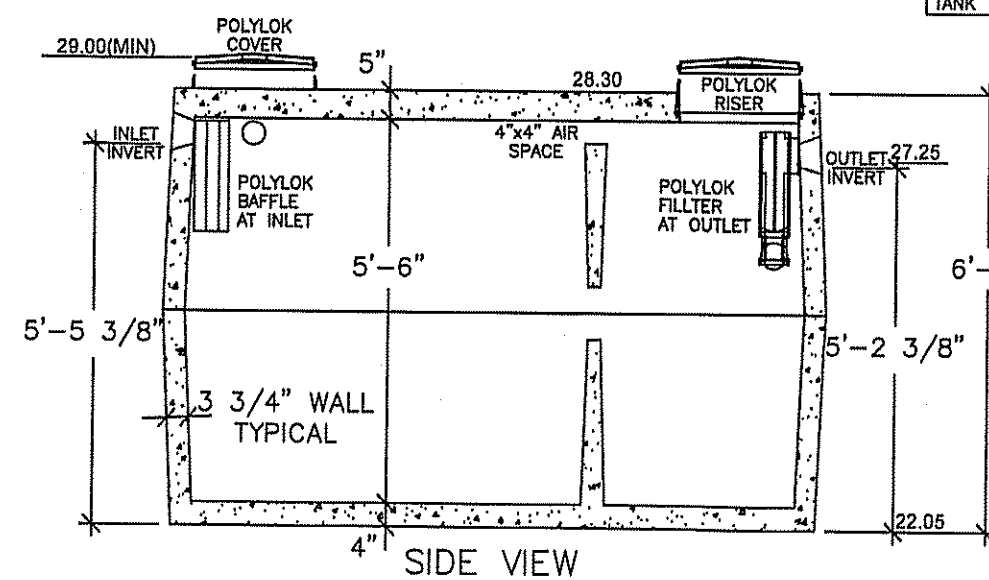
SECTION BITUMINOUS CONCRETE DRIVEWAY APRON
NOT TO SCALE



GEOMATRIX GST LEACHING SYSTEM
NOT TO SCALE

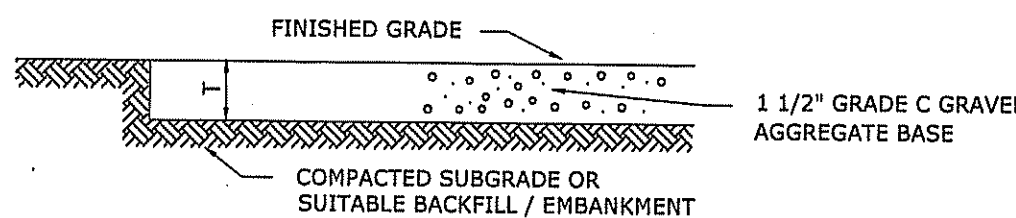


TOP VIEW
(COVERS AND RISERS REMOVED)



SIDE VIEW

1500 GALLON REGULAR SEPTIC TANK
NOT TO SCALE



- NOTES:
- 1) T-8" HEAVY DUTY SURFACE COURSE
 - 2) ALL COMPACTION TO BE 95% STANDARD PROCTOR DENSITY
 - 3) CONNECTICUT DEPARTMENT OF TRANSPORTATION SPECIFICATION SECTION M.02.03

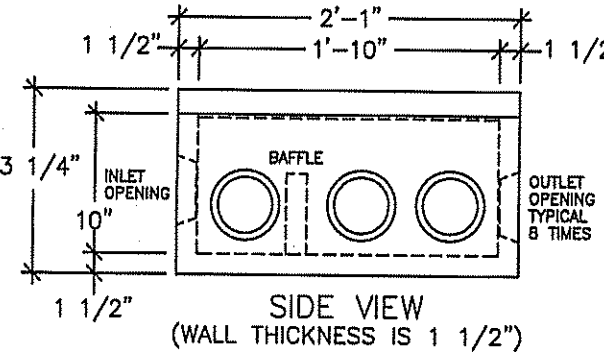
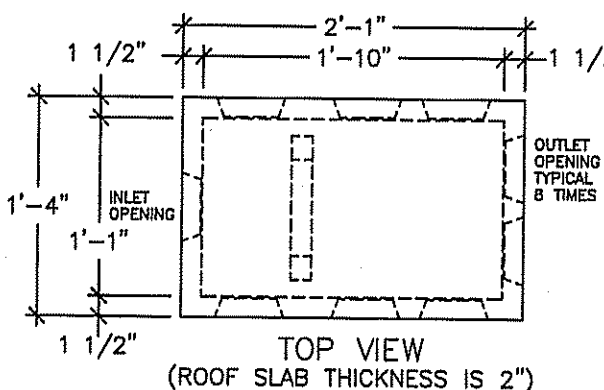
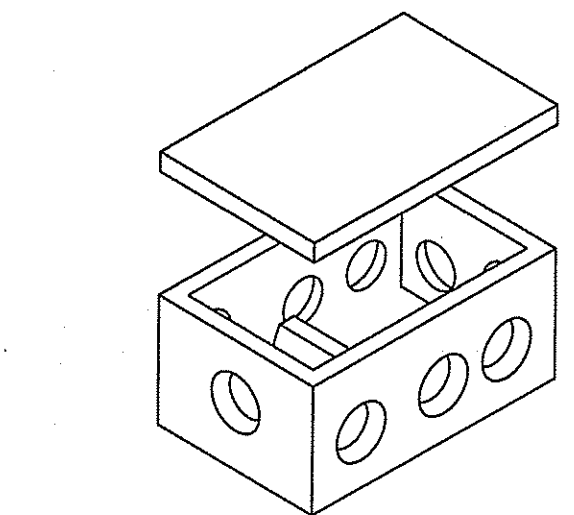
GRAVEL ACCESS DRIVE
NOT TO SCALE

DIFFUSER BOX

DIFFUSER BOX DESIGN SPECIFICATION CONFORMS TO LATEST: ASTM DESIGNATION C913

- NOTES:
1. PIPE INLET AND OUTLET LOCATIONS HAVE POLYLOK PIPE SEALS.
 2. CONCRETE COMPRESSIVE STRENGTH- 4000 PSI AT 28 DAYS.
 3. METHOD OF MANUFACTURE: WET CAST.
 4. SECTION IS MONOLITHIC.

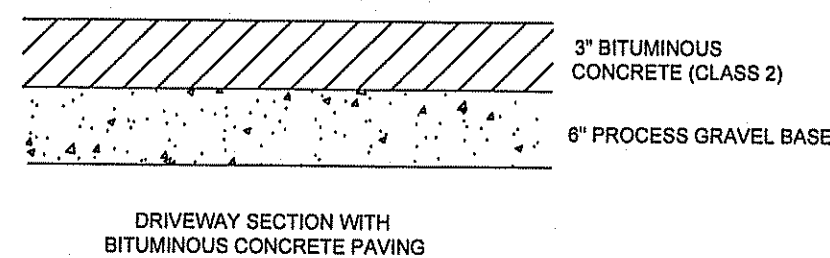
PRODUCT	APPROX. WEIGHT
DIFFUSER BOX	230 LBS.



DIFFUSER BOX DETAIL
NOT TO SCALE

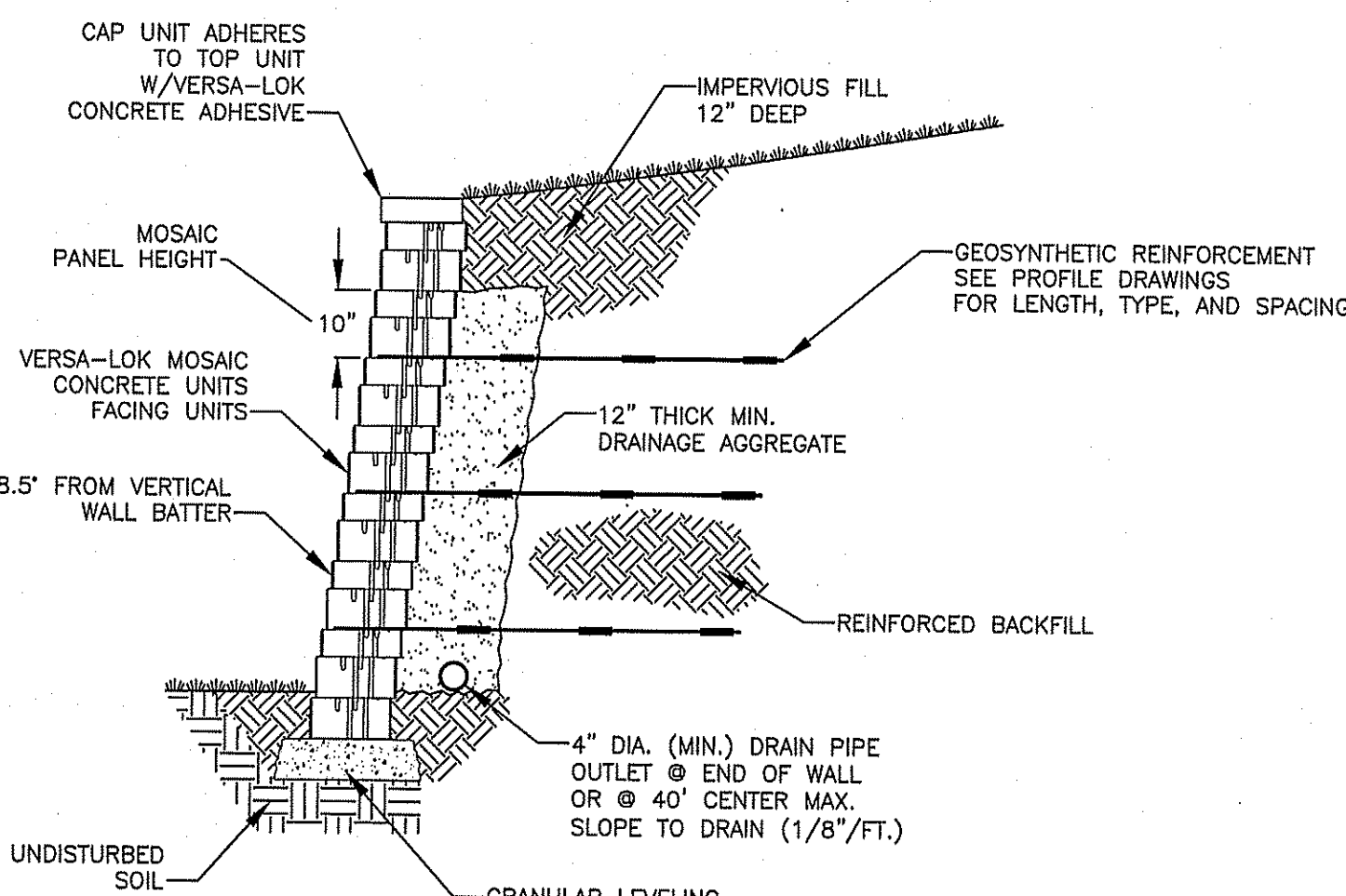
TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



RESIDENTIAL DRIVEWAY CROSS SECTION

NOT TO SCALE



TYPICAL SECTION-REINFORCED RETAINING WALL
NOT TO SCALE

NOTE: RETAINING WALL DESIGN SHALL BE COMPLETED BY A CT REGISTERED PROFESSIONAL ENGINEER.

PERCOLATION TEST #1

PRE-SOAK AT 8:15

TEST AT 1:30

DEPTH 24" BELOW GROUND SURFACE (BGS)

DEPTH BGS (INCHES)	TIME (MINUTES)	DIFFERENCE (INCHES)
2-1/2"	0	
10-1/2"	5	8.0"
13-1/2"	10	3.0"
15-1/2"	15	2.0"
16-1/2"	20	1.0"
18.0"	25	1-1/2"
19.0"	33	1.0"
20.0"	35	1.0"
20-3/4"	40	3/4"
21-1/4"	45	1-0"
22.0"	50	1/2"
22-1/4"	55	1/4"
22-1/2"	60	1/4"
22-3/4"	65	1/4"
23.0"	70	1/4"

PERC RATE = 5 MIN/1/4" INCHES = 20.0 MIN/INCH

PERCOLATION TEST #2

PRE-SOAK AT 8:15

TEST AT 1:30

DEPTH 20" BELOW GROUND SURFACE

DEPTH BGS (INCHES)	TIME (MINUTES)	DIFFERENCE (INCHES)
3.0"	0	
8-1/2"	5	3-1/2"
7-1/2"	10	1.0"
9.0"	15	3/4"
9-3/4"	20	3/4"
10-1/2"	25	3/4"
11.0"	33	1/2"
11-3/4"	35	3/4"
12-1/4"	40	1/2"
12-3/4"	45	1/4"
13.0"	50	1/4"
13-1/4"	55	1/4"
13-1/2"	60	1/4"

PERC RATE = 5 MIN/1/4" INCHES = 20.0 MIN/INCH

SSDS DESIGN POINT

ELEVATION GRADE = 12.29'
RESTRICTIVE LAYER = 48" (AFTER SITE PREPARATION)
RESTRICTIVE LAYER ELEV = 8.5' (LEDGE)
MIN. SEPARATION = 4"
ELEV = 12.5' BOTTOM OF LEACHING SYSTEM
ELEV = 14' TOP OF LEACHING SYSTEM
ELEV = 14.33' PIPE CROWN (4" DIA PIPE)
ELEV = 14.83' MINIMUM GROUND GRADE

SUBSURFACE SEWAGE DISPOSAL SYSTEM (SSDS) BASIS OF DESIGN:

1. SITE TESTING OF THE PROPERTY INDICATES THE EXISTENCE OF POTENTIALLY SUITABLE SOILS (MINIMUM OF 24" OF NATURALLY OCCURRING SOIL OVER LEDGE) FOR THE INSTALLATION OF A REPAIR SUBSURFACE SEWAGE DISPOSAL SYSTEM (SSDS) IN ACCORDANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE ON-SITE SEWAGE DISPOSAL REGULATIONS AND TECHNICAL STANDARDS. TO ACHIEVE THE REQUIRED MINIMUM 4" OF SOIL (24" OF WHICH MUST BE NATURALLY OCCURRING) TO LEDGE TO CREATE SUITABLE SOIL CONDITIONS, FILL MUST BE IMPORTED AND PLACED WITHIN AND AROUND THE NEW LEACHING SYSTEM AREA. THIS PLAN DETAILS THE LIMITS OF AND TYPE OF FILL TO BE PLACED.
2. A CT LICENSED LAND SURVEYOR SHALL STAKE THE LIMITS OF THE FILL STRIP AREA SUBJECT TO REVIEW AND APPROVAL BY LEDGE LIGHT HEALTH DISTRICT (LLHD).
3. THE PLACEMENT TESTING AND APPROVAL OF THE APPROVED FILL SHALL BE IN ACCORDANCE WITH LLHD POLICY AND PROCEDURES.
4. AS REFERENCED IN THESE NOTES, "TECHNICAL STANDARDS" MEANS THE JANUARY 2018 CONNECTICUT PUBLIC HEALTH CODE ON-SITE SEWAGE DISPOSAL REGULATIONS AND TECHNICAL STANDARDS FOR SSDS.
5. THIS PROPERTY IS A RESIDENTIAL BUILDING LOT CREATED PRIOR TO JANUARY 1, 2007. PER SECTION VII.A OF THE TECHNICAL STANDARDS, POTENTIALLY SUITABLE SOIL FOR SSDS DESIGN INCLUDES AREAS WITH LESS THAN 4" OF EXISTING SOIL ABOVE LEDGE ROCK AND AT LEAST 2" OF NATURALLY OCCURRING SOIL. ALSO, PER SECTION II, TABLE 1.C THE SEPARATING DISTANCE TO AN OPEN WATERCOURSE IS 25'.
6. DEEP TEST PITS AND PERCOLATION TESTS WERE PERFORMED ON APRIL 17 AND MAY 7, 2019 BY LOUREIRO ENGINEERING ASSOCIATES AND WITNESSED BY LLHD.
7. THE NEW LEACHING SYSTEM SHALL NOT BE INSTALLED AS PART OF THE SITE PREPARATION WORK.
8. SUBSEQUENT TO SITE PREPARATION ADDITIONAL SITE TESTING WILL BE CONDUCTED TO VERIFY SUITABLE SOIL CONDITIONS.
9. SSDS BASIS OF DESIGN:

- A. 2 BEDROOM HOUSE
- B. PERCOLATION RATE = 20.0 MINUTES/INCH
- C. EFFECTIVE LEACHING AREA (ELA) REQUIRED = 500 SF
- D. LEACHING SYSTEM DESIGN:

GEOMATRIX SYSTEM 6218 WITH ELA = 14.0 SF/LF AND A SINGLE D-BOX. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.

TOTAL LENGTH REQUIRED = 500 SF X 1.1 LF/4.0 SF = 35.7'. USE 36.0'.

ELA PROVIDED = 36 LF X 14.0 SF/LF = 504.0 SF.

RESERVE AREA PROVIDED = 36 LF GEOMATRIX SYSTEM 6218

- E. PRIMARY MLSS CALCULATION:
GROUND GRADE WITHIN 25 FT OF SYSTEM = $(12' - 6.5')/25' = 0.22 \text{ FT/FT} = 22\%$
RESTRICTIVE LAYER DEPTH (AFTER SITE PREPARATION) = 48 INCHES; HF = 14
PERCOLATION RATE = 20 MINUTES PER INCH: PF = 1.5
SINGLE FAMILY 2 BEDROOMS: FF = 1.0
MLSS REQUIRED = $HF \times FF \times PF = 14 \times 1.0 \times 1.5 = 21'$
MLSS PROVIDED = 36'
10. SEPTIC TANK CAPACITY = 1,000 GALLON (2 BEDROOM HOME) + 250 GALLONS FOR A GARBAGE GRINDER + 250 GALLONS FOR A LARGE TUB = 1,500 GALLONS.
11. THERE WILL BE NO FOOTING DRAINS FOR THE HOUSE.
12. WATER SUPPLY PROVIDED BY AQUARIUM WATER COMPANY.
13. THERE ARE NO OPERATIONAL WELLS WITHIN 75' OF THE NEW SSDS BASED ON RECORD INFORMATION AND FIELD OBSERVATIONS.
14. PROCEDURES FOR THE INSTALLATION OF FILL:

- A. INSTALL HAYBALE BACKED SILT FENCE ALONG THE DOWN-GRADIENT LIMITS OF FILL.
 - B. STRIP ALL VEGETATION, ORGANIC MATTER AND TOPSOIL IN THE AREA OF AND TEN FEET SURROUNDING THE NEW LEACHING SYSTEM. REMOVE ANY UNSUITABLE MATERIAL WHICH MAY INTERFERE WITH THE PROPER FUNCTION OF THE SYSTEM. STOCKPILE TOPSOIL FOR FUTURE USE.
 - C. PLACE FILL:
1. NO EXCAVATION SHALL OCCUR PRIOR TO NOTIFYING "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 OR 811.
 2. NO UTILITIES SHALL BE INSTALLED THROUGH ANY PORTION OF THE SSDS.
 3. SELECT FILL SHALL BE PLACED WITHIN OR ADJACENT TO THE LEACHING SYSTEM PER THE PLAN AND SHALL MEET THE REQUIREMENTS OF SECTION VII.A OF THE TECHNICAL STANDARDS. SELECT FILL SHALL BE PLACED TO THE TOP OF THE PROPOSED LEACHING SYSTEM AND SHALL EXTEND A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE LEACHING SYSTEM AND TO DEPTHS INDICATED IN THE CROSS SECTION. FILL SHALL BE MODERATELY COMPACTED IN 12 INCH LIFTS.
 4. A SIEVE ANALYSIS FROM A SOIL TESTING LABORATORY SHALL BE PROVIDED TO LEDGE LIGHT HEALTH DISTRICT FOR ALL SELECT FILL MATERIAL TO DEMONSTRATE COMPLIANCE WITH THE TECHNICAL STANDARDS.
 5. NATIVE SOIL OR COMMON FILL SHALL BE USED AS BACKFILL ABOVE THE TOP OF THE LEACHING SYSTEM AND BEYOND THE LIMITS OF SELECT FILL.

DETAILS FOR GENERIC RESIDENCE AND SUBSURFACE

SEWAGE DISPOSAL SYSTEM

MASONS ISLAND COMPANY LOTS 4-5

PROPERTY OF MASONS ISLAND COMPANY

GREAT MARSH ROAD

MYSTIC-STONINGTON, CONNECTICUT

DRAWING

19000016.12

SHEET NO. 4 NO. OF SHEETS 4

DATE 09/14/2020 REV. 1 NO REVISIONS TO THIS SHEET DESCRIPTION OF REVISION

Loureiro
ENGINEERING ASSOCIATES, INC.
2000 ROUTE 1
STONINGTON, CT 06424
PHONE: 860-443-5400 FAX: 860-443-5999
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