

SOIL EXAMINATION REPORT							
SOIL EVALUATOR: TODD M. PILLING, P.E. (SE #1941) DATE: NOV. 18, 2021				DATE: NOV. 18, 2021			
APPROVING AUTHORITY: KATHLEEN WALDRON, BOARD OF HEALTH AGENT							
DEEP OBSERVATION HOLE # 3							
GROUND ELEV.	DEPTH (IN INCHES)	SOIL HORIZ.	SOIL TEXTURE (U.S.D.A.)	SOIL COLOR (MUNSELL)	MOTTLING (IN INCHES)	% OF GRAVEL, STONES, CONCRETES, ETC.	OTHER
219.8	0"-12"	Ap	SANDY LOAM	10 YR 3/2	NONE		
211.8	12"-96"	C	COARSE SAND	10 YR 5/4	NONE		50% Cobbles & Gravel
212.1	92"		GROUNDWATER OBSERVED (STANDING WATER IN HOLE)				
212.6	86"		GROUNDWATER OBSERVED (WEeping FROM PIT FACE)				
N/A	N/A		GROUNDWATER OBSERVED (MOTTLING)				
N/A	N/A		GROUNDWATER OBSERVED (FRIMPTER)				
219.8			GROUND SURFACE ELEVATION				

PERCOLATION TEST # 3							
DEPTH OF PERC SHELF (IN INCHES): 16"-34"				ELEVATION: 218.5-217.0			
START PRE-SOAK: 12:18				END PRE-SOAK: 12:24			
TIME AT 12": COULD NOT SATURATE				TIME AT 9": N/A			
TIME FROM 9" TO 6": N/A				PERC RATE: LESS THAN 2 M.P.H.			

DEEP OBSERVATION HOLE # 4							
GROUND ELEV.	DEPTH (IN INCHES)	SOIL HORIZ.	SOIL TEXTURE (U.S.D.A.)	SOIL COLOR (MUNSELL)	MOTTLING (IN INCHES)	% OF GRAVEL, STONES, CONCRETES, ETC.	OTHER
219.8	0"-24" (FRONT)	Ap	SANDY LOAM	10 YR 3/2	NONE		
215.3	0"-54" (REAR)	C	COARSE SAND	10 YR 5/4	NONE		
210.8	24"/54"-108"	C	COARSE SAND	10 YR 5/4	NONE		50% Cobbles & Gravel
211.3	102"		GROUNDWATER OBSERVED (STANDING WATER IN HOLE)				
211.3	102"		GROUNDWATER OBSERVED (WEeping FROM PIT FACE)				
N/A	N/A		GROUNDWATER OBSERVED (MOTTLING)				
N/A	N/A		GROUNDWATER OBSERVED (FRIMPTER)				
219.8			GROUND SURFACE ELEVATION				

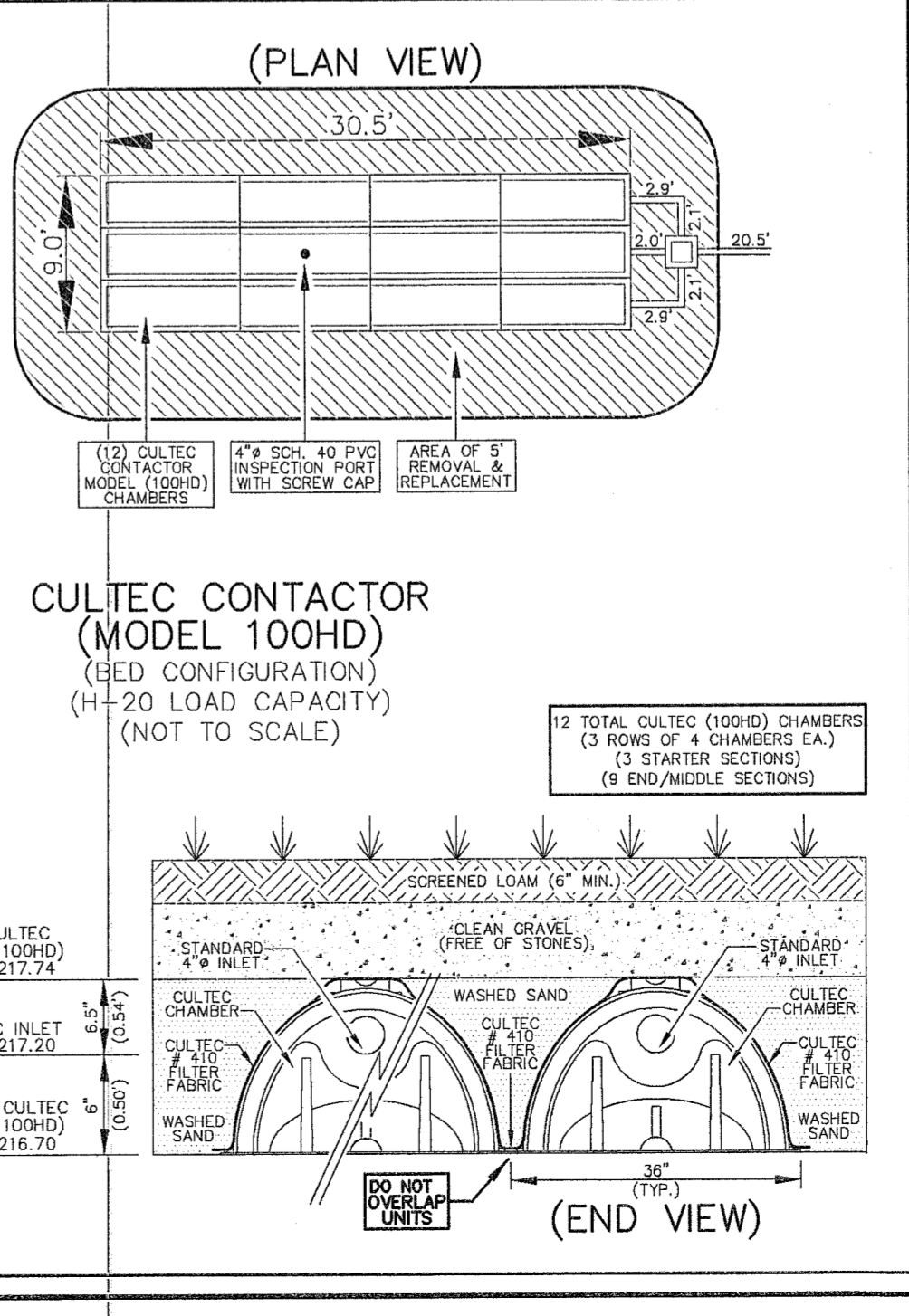
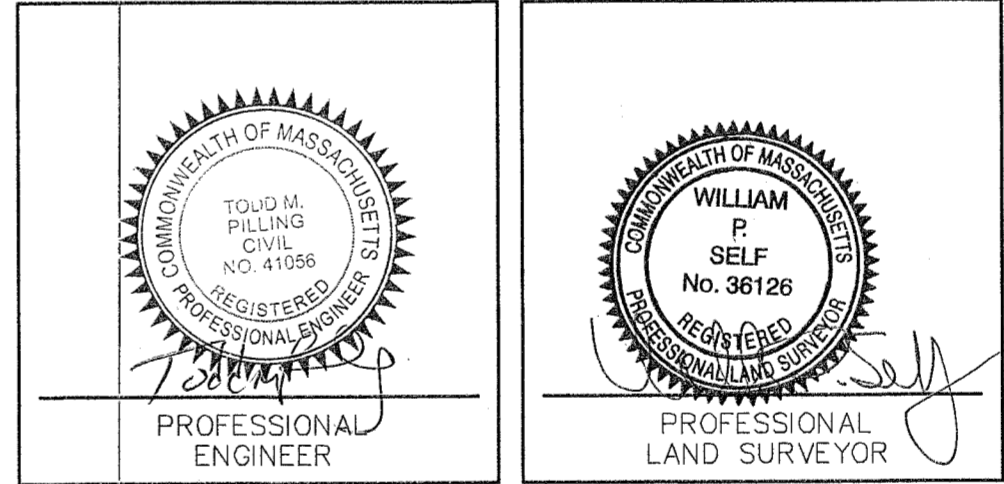
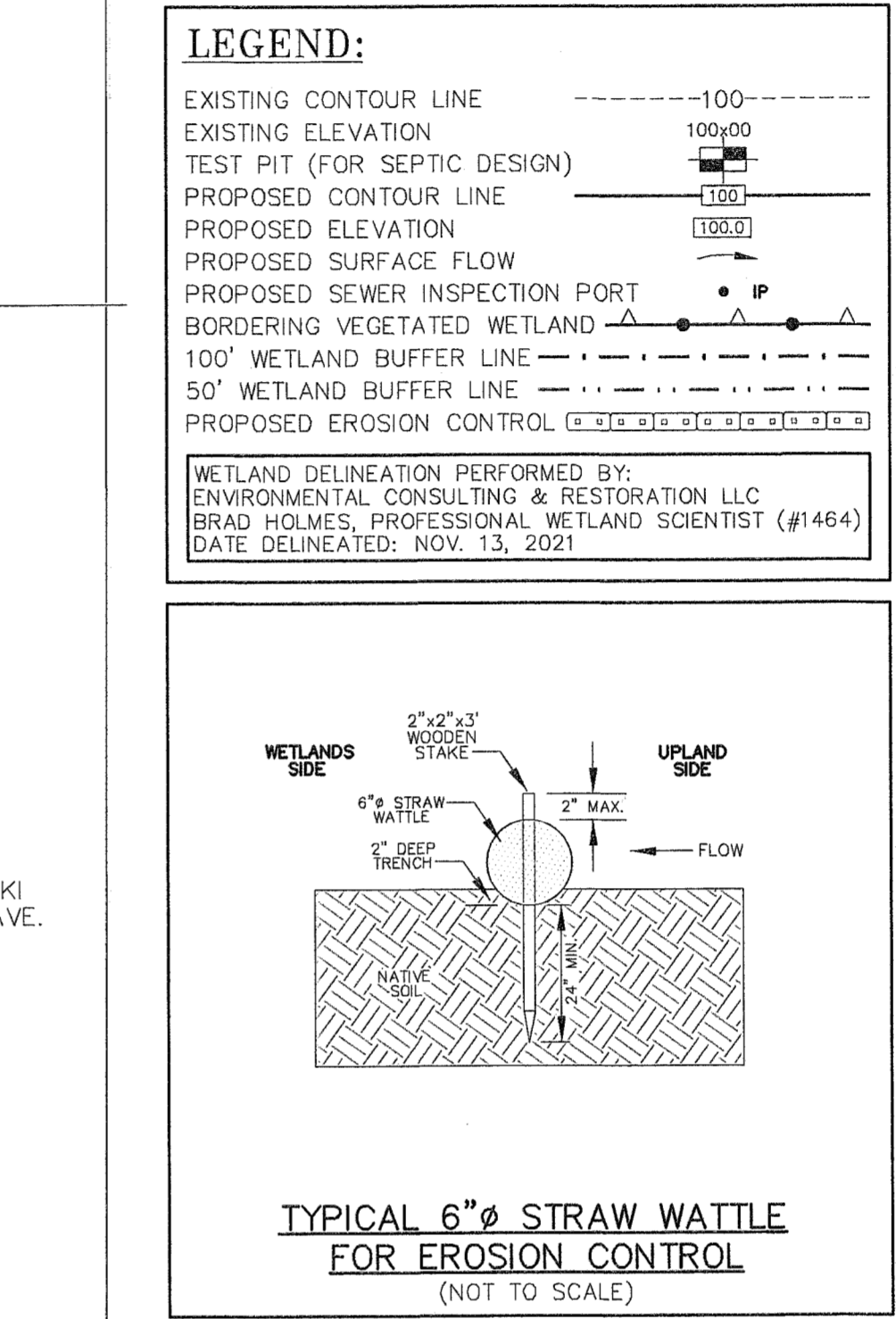
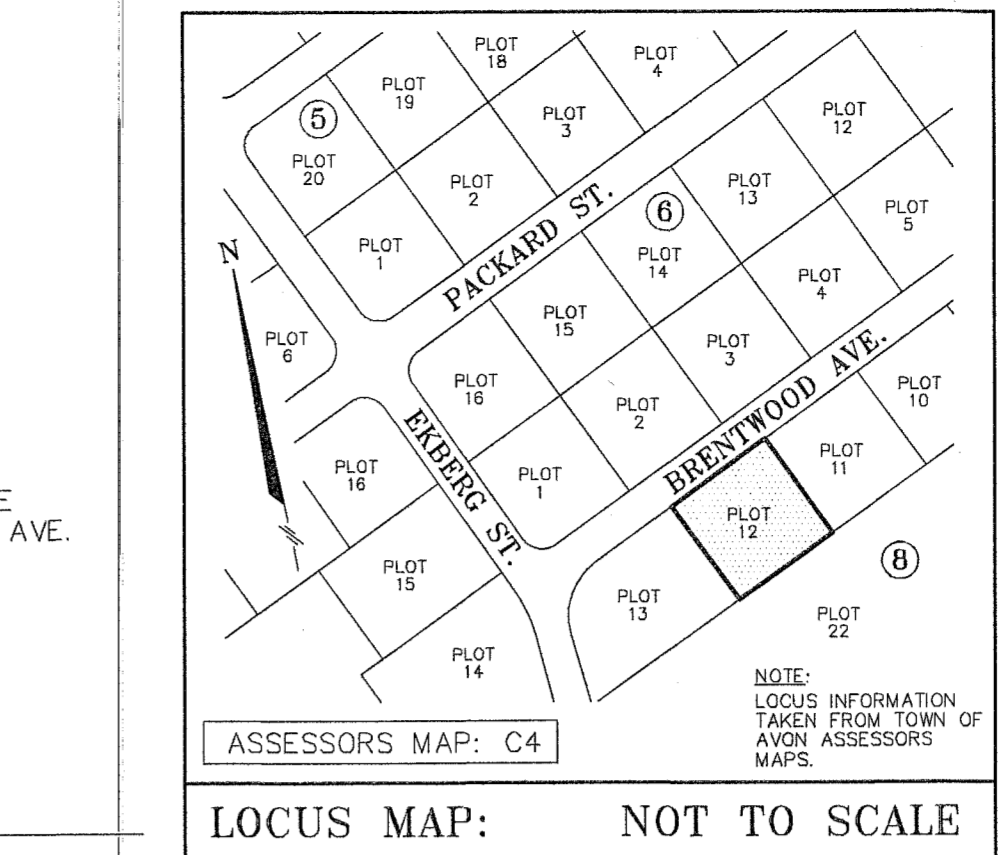
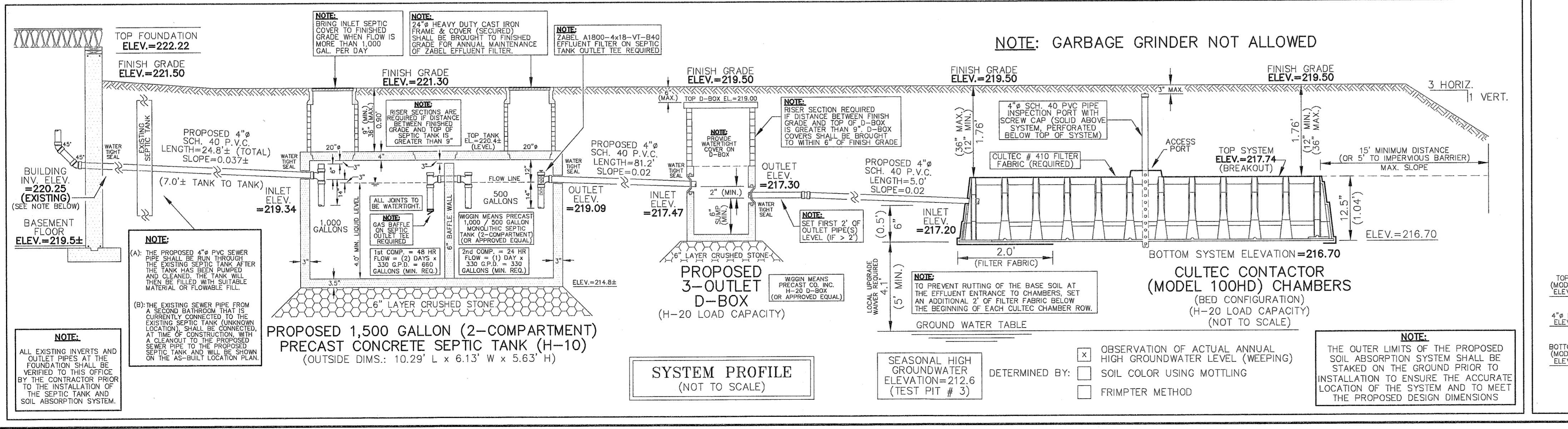
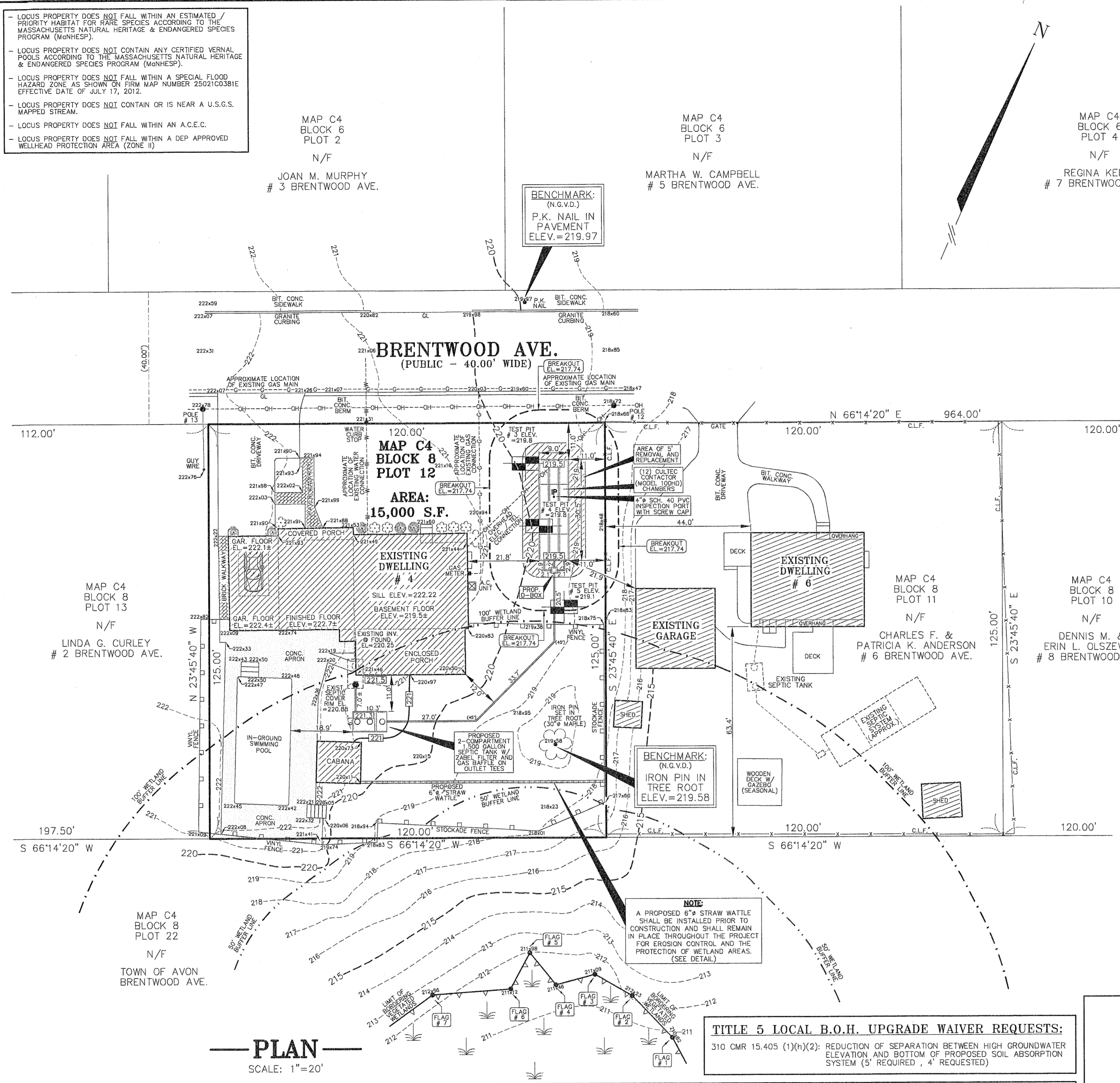
DEEP OBSERVATION HOLE # 5							
GROUND ELEV.	DEPTH (IN INCHES)	SOIL HORIZ.	SOIL TEXTURE (U.S.D.A.)	SOIL COLOR (MUNSELL)	MOTTLING (IN INCHES)	% OF GRAVEL, STONES, CONCRETES, ETC.	OTHER
219.1	0"-42"	HtM	(UNKNOWN)	(UNKNOWN)	N/A		
214.9	42"-50"	Ab	SANDY LOAM	10 YR 3/2	NONE		
213.9	50"-63"	Bw	SANDY LOAM	10 YR 5/6	NONE		
209.9	63"-111"	C	COARSE SAND	10 YR 5/4	NONE		50% Cobbles & Gravel
210.1	108"		GROUNDWATER OBSERVED (STANDING WATER IN HOLE)				
N/A	N/A		GROUNDWATER OBSERVED (WEeping FROM PIT FACE)				
N/A	N/A		GROUNDWATER OBSERVED (MOTTLING)				
N/A	N/A		GROUNDWATER OBSERVED (FRIMPTER)				
219.1			GROUND SURFACE ELEVATION				

DESIGN CALCULATIONS	
DAILY SEWAGE FLOW:	
(3) BEDROOMS @ 110 GAL. PER DAY = 330 GAL. PER DAY	
DESIGN FLOW = 330 GAL. PER DAY	
TOTAL DESIGN FLOW = 330 GALLONS PER DAY REQUIRED	
SEPTIC TANK (2-COMPARTMENT) REQUIREMENTS:	
VOLUME OF TANK MUST EQUAL (2) x DAILY DESIGN FLOW	
DESIGN FLOW = 330 GAL. PER DAY x (2) = 660 GAL. (MIN.)	
MINIMUM TANK SIZE = 1,500 GALLON CAPACITY	
SOIL ABSORPTION SYSTEM (GRAVEL-LESS) (9'0" x 30'5")	
DESIGN PERC. RATE = 5 MIN. / INCH (CLASS 1 SOIL)	
EFFECTIVE LOADING RATE: 0.74 G.P.D. / S.F.	
REQUIRED AREA = 330.0 G.P.D. / 0.74 G.P.D. / S.F. = 445.95 S.F.	
EFFECTIVE LEACHING AREA PER LINEAR FOOT OF CULTEC CONTACTOR (MODEL 100HD) CHAMBERS = 5.00 S.F. / L.F. (BED CONFIGURATION)	
445.95 S.F. / 5.00 S.F. / L.F. = 89.19 LINEAR FEET OF CHAMBERS REQUIRED	
5.00 S.F. / L.F. = 89.19 LINEAR FEET OF CHAMBERS REQUIRED	
PROPOSED: 12 CHAMBERS AT 7.5' / CHAMBER = 90.00 L.F.	
90.00 L.F. x 5.00 S.F. / L.F. = 450.00 S.F.	
450.00 S.F. x 0.74 G.P.D. / S.F. = 333.00 G.P.D. PROVIDED	
- GARBAGE GRINDER NOT ALLOWED	

ELEVATION SCHEDULE:	
TOP OF FOUNDATION ELEVATION	222.22
FINISHED BASEMENT FLOOR ELEVATION	219.54
FINISHED GARAGE FLOOR ELEVATION	222.44
SEWER INVERT ELEVATION @ FOUNDATION	220.25
SEWER INVERT ELEVATION INTO SEPTIC TANK	219.34
SEWER INVERT ELEVATION OUT OF SEPTIC TANK	219.09
TOP SEPTIC TANK ELEVATION (LEVEL)	220.44
SEWER INVERT ELEVATION INTO DISTRIBUTION BOX	217.47
SEWER INVERT ELEVATION OUT OF DISTRIBUTION BOX	217.30
SEWER INVERT ELEV. INTO CULTEC CONTACTOR (MODEL 100HD)	217.20
TOP ELEVATION OF CULTEC CONTACTOR (MODEL 100HD)	217.74
BOTTOM ELEVATION OF CULTEC CONTACTOR (MODEL 100HD)	216.70
TOP ELEVATION OF POLYETHYLENE BREAKOUT BARRIER	N/A
BOTTOM ELEVATION OF POLYETHYLENE BREAKOUT BARRIER	N/A
SEASONAL HIGH GROUNDWATER (WEeping) (T.P. # 3)	212.6

NOTE:
 THE INSTALLER SHALL REMOVE TOPSOIL, SUBSOIL OR OTHER UNSUITABLE OR IMPERVIOUS SOIL TO A MINIMUM OF 3' LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SYSTEM AND DOWN TO THE NATURALLY OCCURRING PERVIOUS MATERIAL AND REPLACE WITH A TITLE 5 APPROVED SAND AS NOTED WHEN THE FOLLOWING IS CHECKED: [X]

- REMOVE A & B HORIZONS AS SHOWN IN SOIL LOGS.
 REMOVE UNSUITABLE "C" LAYERS (SOUTHERLY END) OF SEPTIC SYSTEM BETWEEN TEST PITS # 4 & # 5 TO AN APPROXIMATE ELEVATION: 213.54 (DEPTH VARIES)



GENERAL NOTES:

- THIS PLAN IS NOT INTENDED TO ESTABLISH PROPERTY LINES OR LAND OWNERSHIP.
- THIS PLAN IS NOT TO BE RECORDED AT THE REGISTRY OF DEEDS.
- THIS PLAN MAKES NO REPRESENTATIONS AS TO WETLAND AREAS EXCEPT AS NOTED.
- THERE ARE NO SURFACE WATER SUPPLY OR GRAVEL PACKED WELLS WITHIN 400'; NO TUBULAR PUBLIC WELLS WITHIN 250' AND NO PRIVATE POTABLE WELLS WITHIN 150' OF THE PROPOSED SANITARY SYSTEM.

DESIGN SPECIFICATIONS:
 (NOTICE TO THE INSTALLING CONTRACTOR:)

- THE SANITARY DISPOSAL FACILITY SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF 310 CMR 15.00 THE STATE ENVIRONMENTAL CODE TITLE 5; MINIMUM REQUIREMENTS FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE, AS WELL AS LOCAL BOARD OF HEALTH, MUNICIPAL AND REGIONAL REQUIREMENTS. NO VARIATIONS FROM THIS PLAN SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THIS OFFICE.
- SOIL CONDITIONS CAN VARY - WATER TABLE ELEVATION AND THE LIMITS OF ACCEPTABLE SOIL MUST BE VERIFIED PRIOR TO INSTALLATION OF THE SYSTEM.
- LOCATIONS OF UNDERGROUND UTILITIES ARE TAKEN FROM THE BEST AVAILABLE INFORMATION AND IS NOT WARRANTED TO BE CORRECT NOR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY DIG-SAFE, MASSACHUSETTS STATE LAW REQUIRES THAT ANYONE WHO EXCAVATES ON PUBLIC OR PRIVATE PROPERTY MUST NOTIFY UTILITY COMPANIES AT LEAST 72 HOURS BEFORE DIGGING - EXCEPT IN AN EMERGENCY. THE EXPENSE OF REPAIRING DAMAGED FACILITIES GOES TO THOSE RESPONSIBLE FOR DAMAGING THEM. NOTIFY DIG-SAFE TO MARK FACILITIES ON THE GROUND PRIOR TO EXCAVATING. (DIG-SAFE # 811)
- ALL BENCHMARKS SHOWN ON THIS PLAN ARE TO BE CHECKED FOR CONSISTENCY BY THE CONTRACTOR. ANY DISCREPANCIES MUST BE RESOLVED BY THIS OFFICE.
- FILL MATERIAL TO CONFORM WITH THE LATEST REQUIREMENTS OF 310 CMR 15.255. THE INSTALLER IS FULLY RESPONSIBLE FOR HAVING A SIEVE ANALYSIS PERFORMED ON THE FILL MATERIALS. A COPY OF THE PLOT OF THE SIEVE ANALYSIS SHALL BE PROVIDED TO THE DESIGN ENGINEER AND THE BOARD OF HEALTH PRIOR TO THE INSTALLATION OF THE SYSTEM. THE DESIGN IS INTENDED TO MEET TITLE 5 AND OTHER APPLICABLE REQUIREMENTS. THE PREPARATION OF THIS PLAN DOES NOT GUARANTEE THAT THE SYSTEM WILL BE INSTALLED AS DESIGNED, NOR DOES THIS PLAN GUARANTEE THE OPERATION OF THE SYSTEM.
- IT IS THE INTENT OF THIS DESIGN THAT ALL MATERIALS AND CONSTRUCTION BE IN CONFORMANCE WITH TITLE 5. ANY SUBSTITUTIONS OR DEVIATIONS MUST BE APPROVED PRIOR TO INSTALLATION.
- IF ANY PORTION OF THE EXISTING SEPTIC SYSTEM IS ENCOUNTERED DURING CONSTRUCTION, THAT PORTION OF THE SYSTEM IS TO BE REMOVED ALONG WITH ANY CONTAMINATED MATERIAL AND DISPOSED OF PROPERLY.
- ANY EXISTING CESSPOOLS (S) ARE TO BE PUMPED, COLLAPSED AND FILLED IN WITH CLEAN GRAVEL.
- ALL PIPING SHALL BE SCHEDULE 40 P.V.C. (UNLESS NOTED OTHERWISE).
- ALL BUILDING SEWERS SHALL BE CONNECTED TO SEPTIC TANK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING EXISTING LAUNDRY FLOOR TO INTERIOR PLUMBING.
- SEPTIC TANKS, GREASE TRAPS AND PUMP CHAMBERS SHALL BE PRECAST REINFORCED WATER TIGHT CONCRETE (4,000 P.S.I. AT 28 DAYS) WITH SUITABLE WATER TIGHT ACCESS MANHOLES (20" MIN.) AND PIPE PENETRATION KNOCKOUTS. HEAVY DUTY (18-20 WHEEL LOADS) REQUIRED WHEN STRUCTURES ARE LOCATED IN AREAS SUBJECT TO TRAFFIC.
- ZABEL A1800 FILTER SHALL BE REQUIRED AT OUTLET TEE OF SEPTIC TANK.
- CAST IRON FRAMES AND COVERS (WHEN REQUIRED), SHALL BE MEDIUM DUTY OR HEAVY DUTY IN TRAFFIC AREAS.
- DISTRIBUTION BOXES SHALL BE A PRE-CAST CONCRETE WATER TIGHT STRUCTURE WITH A Baffle AND SUFFICIENT PIPE PENETRATION KNOCKOUTS.
- LEACHING AREA REQUIREMENT IS NOT INCREASED BY 50% THEREFORE THE DESIGN OF THIS SYSTEM DOES NOT PERMIT THE USE OF GARBAGE DISPOSAL UNITS.
- ALL SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) INSPECTION PORT CONSISTING OF A PERFORATED FOUR (4) INCH DIAMETER PIPE PLACED VERTICALLY DOWN INTO THE STONE TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE STONE. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP BE ACCESSIBLE TO WITHIN THREE (3) INCHES OF FINISH GRADE.
- ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
- AN AS-BUILT SURVEY OF THE INSTALLED SYSTEM IS REQUIRED. THIS OFFICE SHALL BE NOTIFIED PRIOR TO THE BACKFILLING OF THE SYSTEM COMPONENTS FOR ON INSPECTION AND FIELD LOCATION OF THE SYSTEM.
- A FINAL TOPOGRAPHIC AS-BUILT IS REQUIRED BY THE BOARD OF HEALTH PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF COMPLIANCE. THIS AS-BUILT IS FOR COMPLIANCE WITH THE BREAK-OUT REQUIREMENTS ONLY AND DOES NOT REPRESENT COMPLETION OF SURFACE RESTORATION OR RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE COMPLETION OF HIS WORK.

ZONING DISTRICT: RESIDENCE-SUBURBAN A ("RES R-25")

MINIMUM LOT SIZE: 25,000 S.F.
 MINIMUM LOT AREA PER DWELLING UNIT: 25,000 S.F.
 MINIMUM LOT FRONTAGE: 150'
 MINIMUM LOT WIDTH: N/A
 MINIMUM LOT DEPTH: N/A
 MINIMUM LOT SETBACKS: FRONT YARD = 25'
 SIDE YARD = 15'
 REAR YARD = 30'

MAXIMUM BUILDING HEIGHT: 35'
 MAXIMUM LOT COVERAGE BY STRUCTURE: 35%

PARKING REQUIREMENTS: 2 SPACES PER DWELLING UNIT

ASSESSORS MAP: C4 BLOCK: 8 PLOT: 12

F.E.M.A. FLOOD HAZARD INFORMATION:
 F.I.R.M. MAP COMMUNITY #: 250231
 PANEL #: 0381
 SUFFIX: E
 MAP #: 25021C0381E
 EFFECTIVE DATE: JULY 17, 2012
 ZONE: X

- LOCUS PROPERTY FALLS WITHIN D.E.P. APPROVED WELLHEAD PROTECTION AREA (ZONE II)
 - LOCUS PROPERTY FALLS WITHIN TOWN OF AVON WATER SUPPLY PROTECTION DISTRICT

OWNER ON RECORD: JOSEPH J. & CAROL A. MERLO, TRUSTEES
 JCM FAMILY TRUST
 # 4 BRENTWOOD AVE.
 AVON, MA. 02322

DEED REFERENCE: CERT. # 187847 DOC. # 1297745
 PLAN REFERENCE: PLAN # 21199N

"SEPTIC SYSTEM DESIGN (REPAIR)"

SITE PLAN OF LAND IN AVON, MA.

4 BRENTWOOD AVE. - AVON, MA.

PREPARED FOR: JOSEPH J. MERLO
 # 4 BRENTWOOD AVE.
 AVON, MA. 02322

DATE: JAN. 18, 2022 SCALE: 1" = 20'

CURLEY & HANSEN SURVEYORS
 160 Pond St. Avon, Ma.
 (508) 580-2117

AL-952A