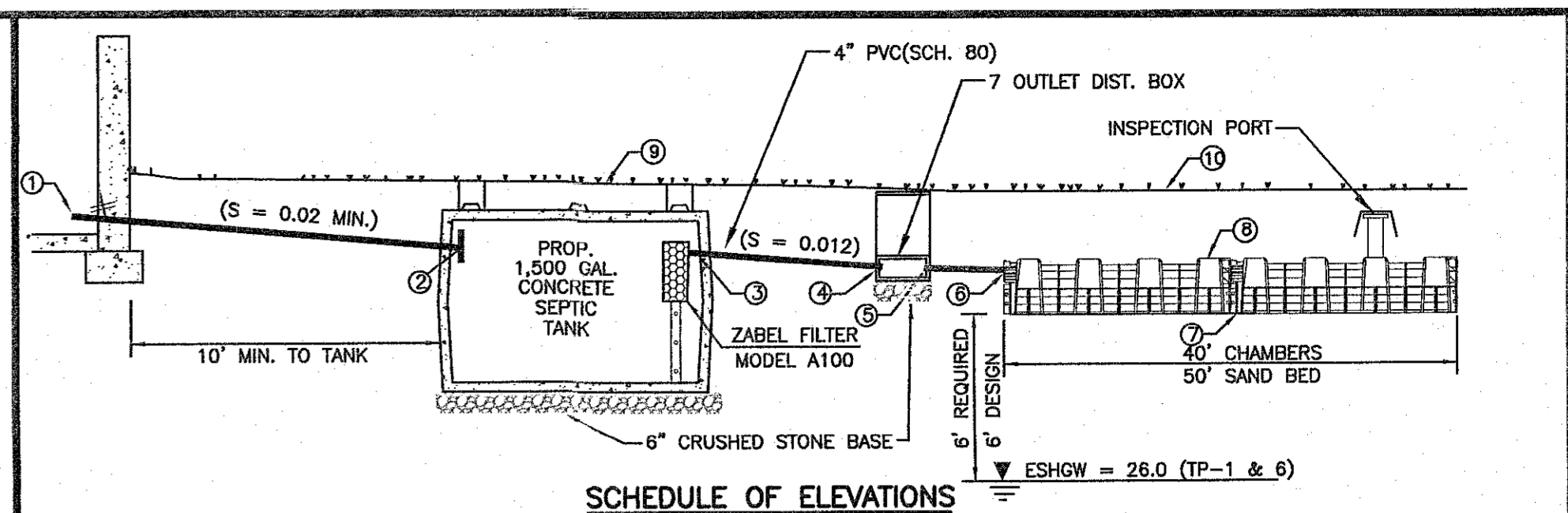
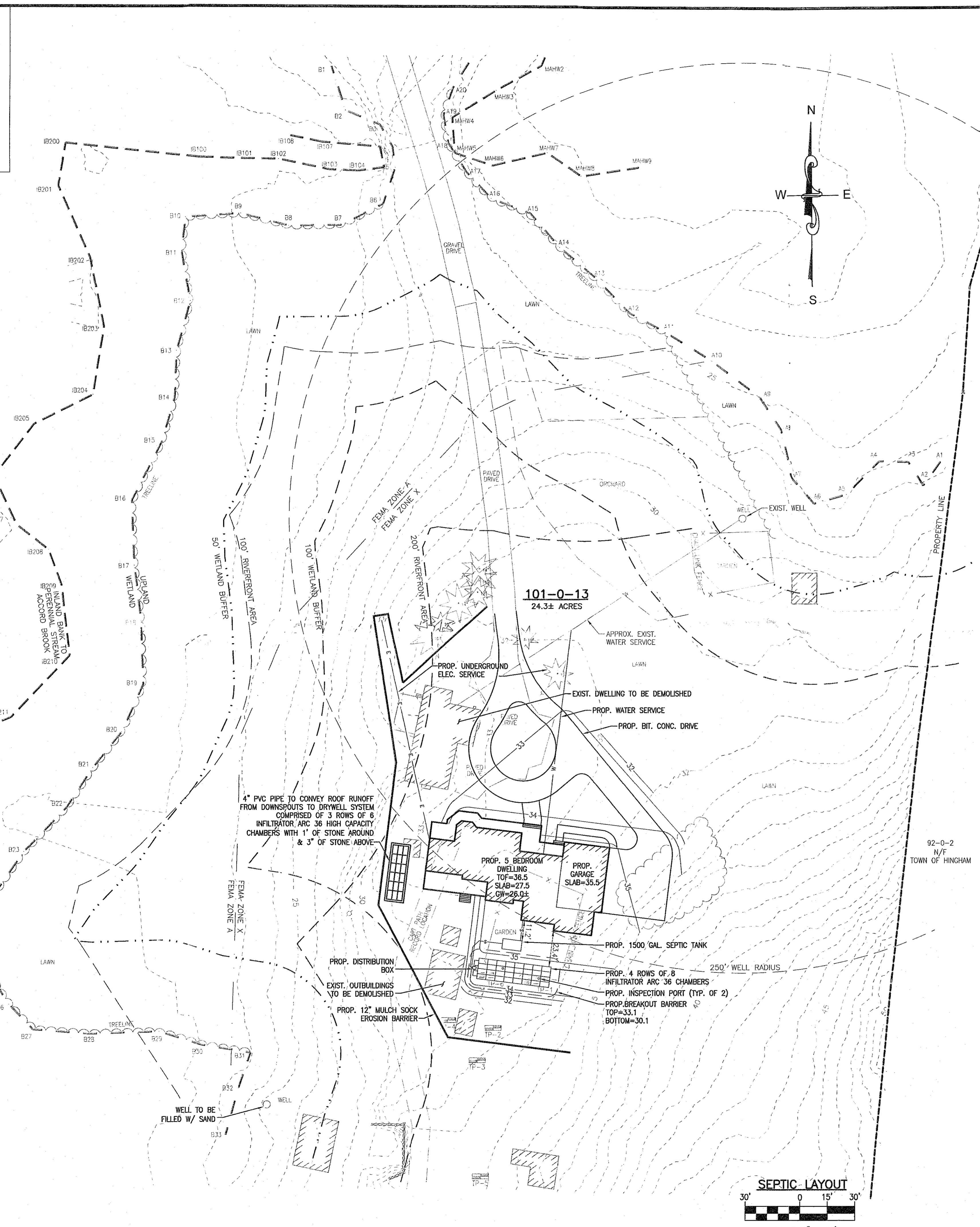


VICINITY MAP



SCHEDULE OF ELEVATIONS

1. PIPE INV. AT SLAB = 33.50 MINIMUM	6. INV. OF PIPE AT INFILTRATION CHAMBER = 32.00
2. INV. OF PIPE AT SEPTIC TANK INLET = 33.25	7. BOTTOM OF INFILTRATION CHAMBER = 32.00
3. INV. OF PIPE AT SEPTIC TANK OUTLET = 33.00	8. TOP OF CHAMBER (BREAKOUT) = 33.08
4. INV. OF PIPE AT SEPTIC TANK = 32.82	9. FINISHED GRADE OVER SEPTIC TANK = 35.0 (MIN.) - 37.2 (MAX.)
5. INV. OF PIPE AT DIST. BOX OUTLET = 32.65	10. FINISHED GRADE OVER LEACHING FACILITY = 34.1 (MIN.) - 36.1 (MAX.)

SOIL TEST DATA

SOIL TESTING AND EVALUATION BY: JAMES GARFIELD
 SOIL TESTING WITNESSED BY: JOHN CHESSIA
 DATE: APRIL 30, 2021

TP-1	APPROX. GRADE EL. 31.5	TP-2	APPROX. GRADE EL. 31.5
EL. 29.6	A HORIZON LOAMY SAND 10YR 3/2 23"	EL. 30.5	A HORIZON LOAMY SAND 10YR 3/2 12"
EL. 28.2	B HORIZON LOAMY SAND 10YR 5/6 40"	EL. 29.1	B HORIZON LOAMY SAND 10YR 5/6 29"
EL. 21.5	C HORIZON SAND 2.5Y 5/4 120"	EL. 23.0	C HORIZON SAND 2.5Y 5/4 102"

WEeping OBSERVED: 93"
 MOTTLING OBSERVED: 66"
 PERC. RATE: <2 MPI @ 39-57"
 ESHGW: 66" (EL. 28.0)

WEeping OBSERVED: NONE
 MOTTLING OBSERVED: 62"
 PERC. RATE: <2 MPI @ 29-47"
 ESHGW: 62" (EL. 26.3)

TP-3	APPROX. GRADE EL. 32.0	TP-4	APPROX. GRADE EL. 30.5
EL. 31.3	A HORIZON LOAMY SAND 10YR 3/2 8"	EL. 29.8	A HORIZON LOAMY SAND 10YR 3/2 9"
EL. 29.8	B HORIZON LOAMY SAND 10YR 5/6 27"	EL. 28.9	B HORIZON LOAMY SAND 10YR 5/6 21"
EL. 25.3	C HORIZON LOAMY SAND 2.5Y 5/4 80"	EL. 21.0	C HORIZON LOAMY SAND 2.5Y 5/4 114"

WEeping OBSERVED: NONE
 MOTTLING OBSERVED: 54"
 PERC. RATE: NONE
 ESHGW: 54" (EL. 27.5)

WEeping OBSERVED: 90"
 MOTTLING OBSERVED: 60"
 PERC. RATE: <2 MPI @ 22-40"
 ESHGW: 60" (EL. 25.5)

TP-5	APPROX. GRADE EL. 34.0	TP-6	APPROX. GRADE EL. 31.3
EL. 32.6	A HORIZON LOAMY SAND 10YR 3/2 17"	EL. 29.8	A HORIZON LOAMY SAND 10YR 3/2 18"
EL. 31.2	B HORIZON LOAMY SAND 10YR 5/6 34"	EL. 28.9	B HORIZON LOAMY SAND 10YR 5/6 34"
EL. 29.6	C HORIZON LOAMY SAND 2.5Y 5/4 53"	EL. 21.0	C HORIZON LOAMY SAND 2.5Y 5/4 114"

WEeping OBSERVED: NONE
 MOTTLING OBSERVED: NONE
 PERC. RATE: NONE
 ESHGW: 53" (EL. 29.6)

WEeping OBSERVED: 96"
 MOTTLING OBSERVED: NONE
 PERC. RATE: <2 MPI @ 31-49"
 ESHGW: 96" (EL. 23.3)

ZONING TABLE

CRITERIA	REQUIRED	EXISTING	PROPOSED
LOT AREA	40,000 S.F.	1,057,062± S.F.	NO CHANGE
FRONTAGE	150'	124.07'	NO CHANGE
FRONT YARD	50'	1,459.7'	1,530.0'
SIDE YARD	20'	241.7'	162.7'
REAR YARD	20'	761.2'	698.4'
HEIGHT	35'	<35'	<35' (SEE ARCHITECTURAL PLANS)
STORIES	2.5	<2.5	<2.5 (SEE ARCHITECTURAL PLANS)

DESIGN DATA

- BUILDING TYPE: SINGLE FAMILY DWELLING
- NO. OF BEDROOMS: 5
- DESIGN FLOW: 5 x 110 GPD/BEDROOM = 550 GPD (GALLONS PER DAY)
- DESIGN PERCOLATION RATE: 2 MPI (TP-1 & 6)
- GARBAGE DISPOSAL: NO
- SEPTIC TANK DESIGN REQUIREMENT: 200% DESIGN FLOW
 550 x 2 = 1100 GAL. (PROVIDE NEW 1500 GAL. SEPTIC TANK)
- LEACH AREA REQUIREMENTS GALLONS/SQ. FT.
 BOTTOM: 0.74 GAL./S.F. SIDE: 0.74 GAL./S.F.
- TOTAL LEACH AREA REQUIRED:
 TITLE 5: 550 GPD / (0.74 GPD/S.F.) = 743 S.F.
 PROVIDED: 4 ROWS OF 8 INFILTRATOR ARC 36 CHAMBERS
 EFFECTIVE AREA: (32 CHAMBERS x 5.00'L x 4.80 S.F./L.F.) = 768 S.F.
 CAPACITY = 768 S.F. x 0.74 GPD/S.F. = 568 GPD
 *EFFECTIVE AREA PER GENERAL USE CERTIFICATION ISSUED BY DEP

REMOVE & REPLACE NOTE

CONTRACTOR TO EXCAVATE ALL UNSUITABLE MATERIAL TO A DEPTH OF C HORIZON (40"±) DIRECTLY UNDER & WITHIN 5' OF PROPOSED LEACHING AREA AND REPLACE CLEAN TITLE 5 PERC SAND TO TOP OF CHAMBER ELEVATION.
 (VOL. OF SAND = (21.32'W x 50'L x ((33.08-28.2)D x 1.2) / 27 = 231 C.Y. ±

TITLE V LOCAL UPGRADO APPROVAL REQUESTS

NONE

HINGHAM BOARD OF HEALTH SUPPLEMENTARY RULES & REGULATIONS FOR THE DISPOSAL OF SANITARY SEWAGE

SECT. VII.J & M(1): TO ALLOW A REDUCTION FROM 5" (REQ'D) TO 3.6" (PROP.) OF NATURALLY OCCURRING PERVIOUS STRATA ABOVE THE MAXIMUM GROUNDWATER ELEVATION.

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 MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- THERE SHALL BE NO CHANGES MADE IN THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE BOARD OF HEALTH AND DESIGN ENGINEER.
- ANY CHANGE IN SITE CONDITIONS, DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING PRIOR TO THE COMMENCEMENT OF WORK.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH TITLE 5 (310 CMR 15) AND THE LOCAL BOARD OF HEALTH REQUIREMENTS TO THE FULLEST EXTENT PRACTICABLE. NO GUARANTEE TO THE SYSTEMS PERFORMANCE IS EXPRESSED OR IMPLIED.
- SOIL TEST DATA SHOWN IS LIMITED TO THE CONDITIONS EXISTING AT THE SUBJECT TEST PIT LOCATION ONLY. IF DIFFERENT SOIL CONDITIONS ARE FOUND IN THE AREA OF THE PROPOSED SOIL ABSORPTION SYSTEM THEY SHALL BE BROUGHT TO THE ATTENTION OF MORSE ENGINEERING IMMEDIATELY.
- 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 BUILDING LOCATIONS ARE GRAPHIC ONLY. PROPERTY LINES NOT HAVING BEEN VERIFIED. NO REPRESENTATION OR CERTIFICATION AS TO THE ACCURACY OF THOSE SHOWN IS IMPLIED.
- 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.
- CONTRACTOR TO VERIFY AND ENSURE THAT ALL INTERIOR PLUMBING IS DIRECTED INTO PROPOSED SEPTIC SYSTEM. ANY VARIATIONS FROM THE DESIGN AS SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.

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 ALL UNSUITABLE MATERIAL FROM SOIL ABSORPTION AREA.
 - PRIOR TO COVERING THE CONSTRUCTED SYSTEM.
 - AFTER SYSTEM BACKFILL AND FINAL GRADING.
- ALL CONSTRUCTION MUST COMPLY WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE 310 CMR 15 & THE ANY LOCAL BOARD OF HEALTH SUPPLEMENTAL REGULATIONS.
- ALL TIGHT-JOINT PLUMBING SHALL BE CONSTRUCTED OF SCH. 40 PVC PIPE WITH CLEANED AND CEMENTED FITTINGS, UNLESS OTHERWISE NOTED.
- 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 mm
- THE CONTRACTOR SHALL PREVENT ANY HEAVY CONSTRUCTION MACHINERY AND/OR TRUCKS FROM DRIVING OVER THE PROPOSED SOIL ABSORPTION SYSTEM LOCATION UNTIL FINISHED GRADE IS ESTABLISHED.
- THE CONTRACTOR SHALL INSTALL MAGNETIC TAPE OVER SYSTEM PIPING & 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.
- ALL SEPTIC SYSTEM COMPONENTS TO BE STAKED OUT BY PROFESSIONAL LAND SURVEYOR PRIOR TO SYSTEM INSTALLATION.
- CONTRACTOR SHALL ABANDON EXISTING SEPTIC COMPONENTS IN ACCORDANCE WITH 310 CMR SEC. 15.354 OF TITLE 5 AND LOCAL REGULATIONS BY PUMPING DRY, CRUSHING AND BACKFILLING.

SITE NOTES

- LOCUS DOES NOT LIE WITHIN A DEP DESIGNATED ZONE II RESOURCE AREA.
- WETLANDS WERE DELINEATED BY ENVIRONMENTAL CONSULTING & RESTORATION IN MARCH 2021.
- PROPERTY LINE DATA WAS OBTAINED FROM RECORDED DEED (37370-84) AND RECORDED PLANS ON FILE AT THE PLYMOUTH COUNTY REGISTRY OF DEEDS.
- ALL ACTIVE/POTABLE WELLS OBSERVED WITHIN 250' OF THE PROPOSED SYSTEM ARE SHOWN.
- LOCUS LIES IN FEMA ZONES "X" & "A" AS SHOWN ON FEMA COMMUNITY MAP PANEL 25023C 0101J DATED JULY 17, 2012.

		PREPARED BY: 	
PROJECT: 0 POPES LANE ASSESSORS PARCEL 101-0-13 HINGHAM, MASSACHUSETTS		DESIGN: JMH CHECK: GJM JOB NO: 21-161	
APPLICANT: JOSEPH & KATHRYN CRESPO		DATE: 5/26/2021 REV:	
PLAN TITLE: LOT & SEPTIC DESIGN PLAN		SHEET: 1 OF 2	

