

NOT TO SCALE

### **ELEVATION SCHEDULE:**

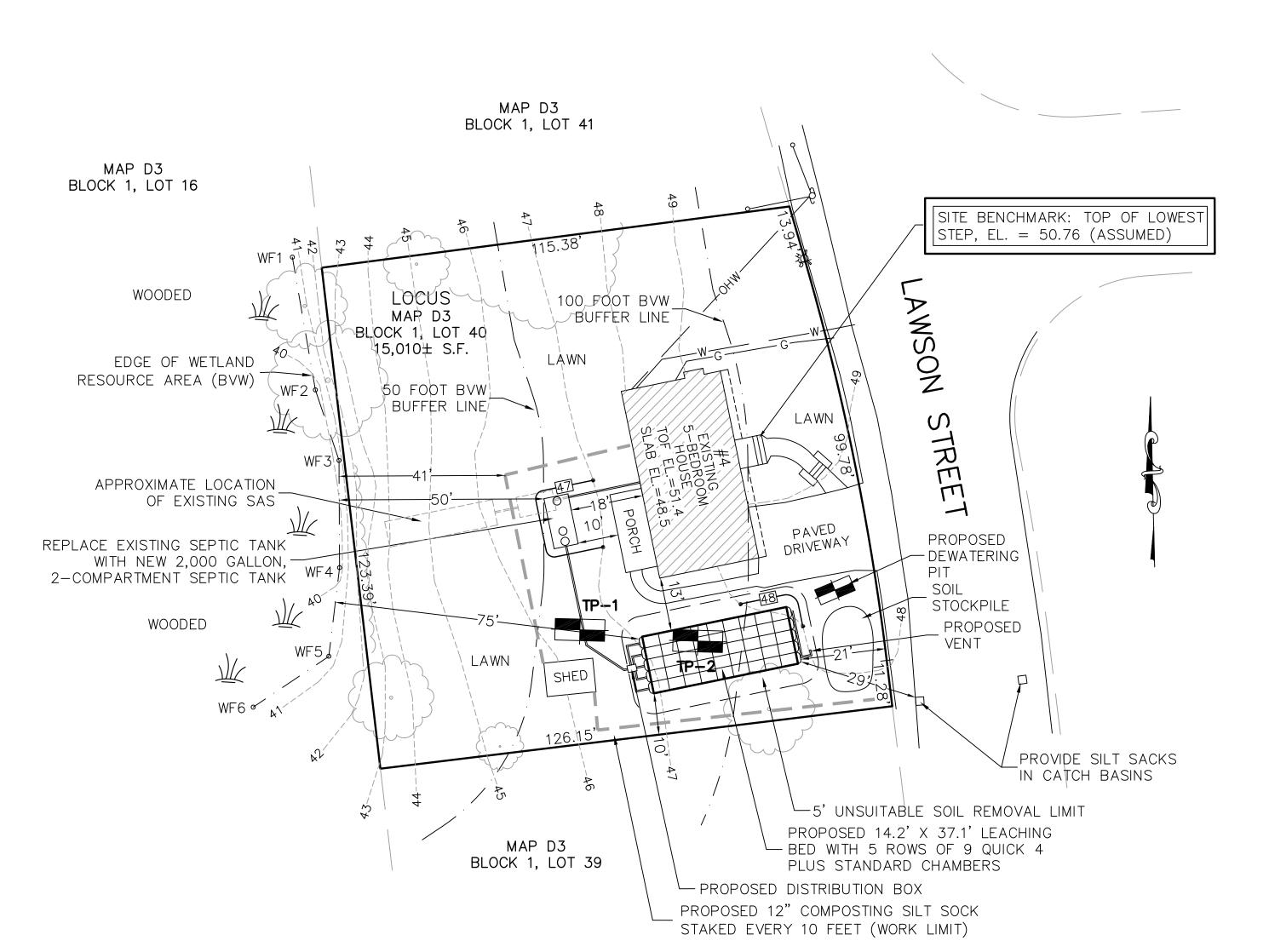
DESCRIPTION	ELEVATION		
4" INV. AT HOUSE (EXISTING)	45.5		
4" INV. AT SEPTIC TANK (IN)	45.00		
4" INV. AT SEPTIC TANK (OUT)	44.75		
4" INV. AT DIST. BOX (IN)	44.20		
4" INV. AT DIST. BOX (OUT)	44.03		
4" INV. INTO SAS	43.94		
ELEVATION AT BOTTOM OF SAS	43.50		
GROUNDWATER ELEVATION	39.85		

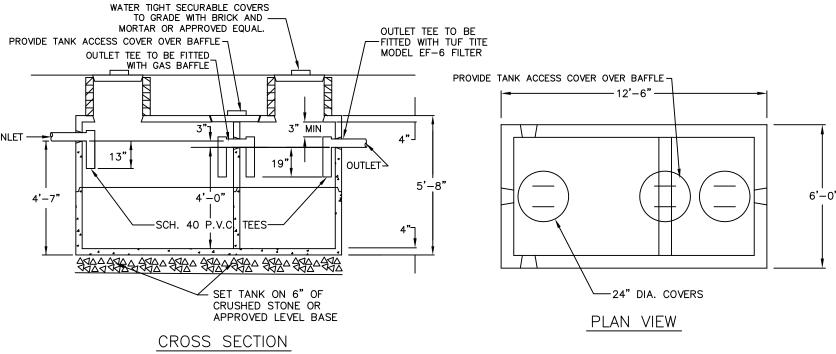
# LOCUS PLAN

Scale 1" = 20'

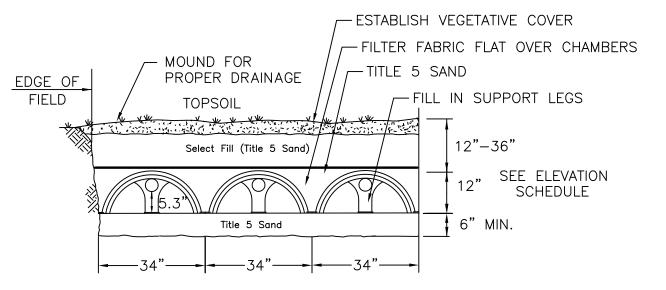
EDGE OF BITUMINOUS PAVEMENT

TP-1 OBSERVATION HOLE LOCATION

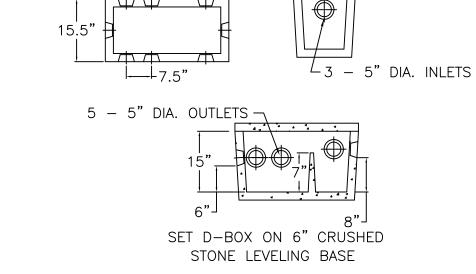




2,000 GALLON 2-COMPARTMENT PRECAST SEPTIC TANK NOT TO SCALE



QUICK 4 PLUS STANDARD CONFIGURATION NOT TO SCALE



NOTE: DISTRIBUTION BOX SHALL COMPLY TO MINIMUM REQUIREMENTS OF 310 CMR 15.232.

> DISTRIBUTION BOX NOT TO SCALE

### WETLAND AND EROSION CONTROL NOTES 1. WETLAND DELINEATION PERFORMED BY BROOKE MONROE, BOTANIST.

- 2. EROSION CONTROL (WORK LIMIT) LINE TO BE INSTALLED PRIOR TO ANY ACTIVITY AND REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
- 3. CONTRACTOR RESPONSIBLE FOR IMPLEMENTING ALL CONSERVATION COMMISSION AND BOARD OF HEALTH DIRECTIVES.
- 4. THE SITE IS LOCATED IN AN AREA OF CRITICAL ENVIRONMENTAL CONCERN. 5. CONTRACTOR TO SWEEP STREET AT THE END OF EACH WORK DAY.

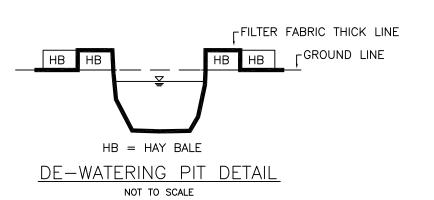
THAT THERE IS NO WETLAND RESOURCE AREA OR ABUTTER ENCROACHMENT.

6. SILT SACKS (2) TO BE INSTALLED AT THE 2 CATCH BASINS IN THE STREET AS SHOWN. CONTRACTOR TO MAINTAIN AND MONITOR DURING WORK AND REMOVED AFTER WORK IS DONE. 7. THE NAME AND CONTACT NUMBERS OF THE GENERAL CONTRACTOR MUST BE PROVIDED TO THE ENGINEER AND CONSERVATION COMMISSION PRIOR TO STARTING WORK. 8. CONTRACTOR TO MONITOR, REPAIR AND MODIFY EROSION CONTROL TO ASSURE

### LEGEND LOCAL UPGRADE APPROVAL REQUESTS:

1. VARIANCE FROM SECTION 310 CMR 15.212 OF THE STATE SANITARY CODE WHICH REQUIRES A MINIMUM VERTICAL SEPARATION FROM THE SOIL UNDERLYING THE SOIL ABSORPTION SYSTEM ABOVE THE HIGH GROUND-WATER ELEVATION SHALL BE FOUR (4) FEET WITH A RECORDED PERC RATE OF GREATER THAN TWO MINUTES PER INCH. A VARIANCE THAT WOULD ALLOW A VERTICAL SEPARATION REDUCTION FROM THE REQUIRED FOUR (4) FEET TO 3.5 FEET IS REQUESTED.

2. USE OF A GRAIN SIZE DISTRIBUTION ANALYSIS ACCORDANCE WITH DEP GUIDANCE POLICY #BRP/DWM/PeP-POO-1 TO ESTABLISH DESIGN LOADING RATE.



COMPOSTING SILT SOCK

EROSION CONTROL DETAIL

NOT TO SCALE

-GROUND LINE

12" DIA. SILT SOCK

STAKED EVERY 10'

NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE LOCAL BOARD OF HEALTH AND COLLINS ENGINEERING

- GROUP AT LEAST 48 HOURS PRIOR TO REQUIRED INSPECTIONS. 2. SITE BENCHMARK IS THE TOP OF THE LOWEST FRONT STEP AS INDICATED ON THIS PLAN,
- EL = 50.76 (ASSUMED DATUM).

3. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE LIMITS OF THE SEWAGE DISPOSAL FIELD DURING THE COURSE OF CONSTRUCTION OF THE SYSTEM. 4. NO FIELD MODIFICATIONS TO THE SEWAGE SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN

5. UNLESS OTHERWISE NOTED ALL SYSTEM COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH TITLE V OF THE STATE ENVIRONMENTAL CODE AND ANY APPLICABLE LOCAL RULES.

- 6. DISTRIBUTION BOX SHALL BE MANUFACTURED BY J&R PRECAST, INC. OR APPROVED EQUAL.
- 7. GROUT TO BE USED AT ALL POINTS WHERE PIPES ENTER OR LEAVE ALL CONCRETE STRUCTURES IN ORDER TO PROVIDE A WATERTIGHT SEAL.
- 8. THE FIRST TWO FEET OF EACH LINE EXITING THE DISTRIBUTION BOX SHALL BE LEVEL.
- 9. THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE A GARBAGE GRINDER OR WATER FILTRATION
- 10. SYSTEM COMPONENTS TO WITHSTAND H-10 LOADING CRITERIA. 11. PROPERTY LINE SHOWN IS APPROXIMATE ONLY AND IS NOT A RESULT OF A PROPERTY

APPROVAL OF THE ENGINEER AND THE LOCAL BOARD OF HEALTH.

12. THE CONTRACTOR SHALL DECOMMISSION (PUMP & FILL OR REMOVE) THE EXISTING SEPTIC

SYSTEM AND ALL ASSOCIATED PIPING IN ACCORDANCE WITH 310 CMR 15.354. 13. AS SHOWN, THERE ARE NO KNOWN WELLS WITHIN 100 FEET OF THE PROPOSED LEACH

14. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED (LOAM AND SEED) TO

INCLUDE HISTORIC TEST PITS OUTSIDE CONSTRUCTION LIMITS. 15. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ANY APPLICABLE PERMITS.

16. CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING DIG SAFE (888-DIGSAFE) AND ANY OTHER APPLICABLE UTILITY COMPANIES PRIOR TO STARTING WORK.

- 17. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY.
- 18. CONTRACTOR WILL BE RESPONSIBLE FOR COMBINING LAUNDRY FLOW WITH SYSTEM. 19. CONTRACTOR RESPONSIBLE FOR IMPLEMENTING ALL O.S.H.A. PROCEDURES TO INCLUDE BUT
- NOT LIMITED TO CONFINED SPACE ENTRY PROCEDURES. 20. CONTRACTOR RESPONSIBLE FOR CONFIRMING LOCATION OF EXISTING LEACHING FACILITY
- 21. CONTRACTOR TO CONFIRM EXISTING PLUMBING, BENCHMARK, AND SILL ELEVATIONS PRIOR
- TO CONSTRUCTION. 22. MAGNETIC LOCATOR TAPE TO BE PLACED ON ALL SEPTIC SYSTEM COMPONENTS.

### DESIGN DATA:

DESIGN FLOW: 5 BEDROOMS x 110 GPD/BEDROOM = 550 GPD

SEPTIC TANK:  $550 \text{ GPD } \times 2.0 = 1,100 \text{ GALLONS}$ 

USE NEW 2,000 GALLON, 2-COMPARTMENT SEPTIC TANK

### SOIL ABSORPTION SYSTEM:

PERCOLATION RATE DETERMINED FROM SIEVE ANALYSIS PERFORMED ON SOIL SAMPLE COLLECTED FROM LAYER C AT TEST PIT TP-2. TEST REVEALED SOIL IS A LOAMY SAND (75.5% SAND, 19.2% SILT, 5.3% CLAY). DESIGN LOADING RATE SELECTED FOR CLASS I SOILS WITH 70-85% SAND IN ACCORDANCE WITH DEP GUIDANCE POLICY #BRP/DWM/PeP-P00-1.

DESIGN LOADING RATE = 0.66 GPD/SF

LEACHING AREA REQ'D =  $\frac{550 \text{ GPD}}{0.66 \text{ GPD/SF}}$  = 834 SF

USE 14.5' X 37.1' LEACHING BED WITH 5 ROWS OF 9 INFILTRATOR QUICK 4 PLUS CHAMBERS = 185.5 L.F. EACH ROW (9) 4' UNITS PLUS 1.1' END CAP CREDIT = 36'+1.1' = 37.1'

37.1' PER ROW X 5 ROWS = 185.5 L.F.

QUICK 4 CHAMBER LEACHING AREA = 4.73 S.F/L.F.

LEACHING AREA PROVIDED:

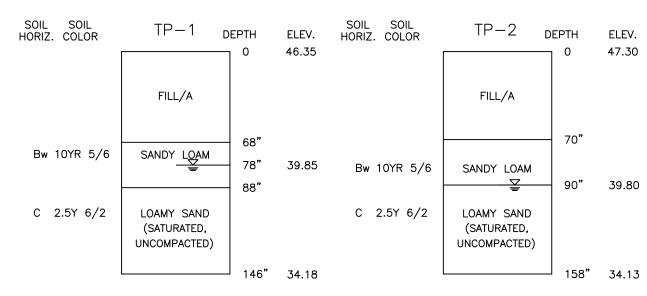
185.5 L.F. X 4.73 S.F/L.F = 877 SF > 834 SF REQUIRED

DAILY FLOW CAPACITY:

877 SF X 0.66 GPD/SF = 579 GPD > 550 GPD REQ'D

# SOIL DATA:

DATE: OCTOBER 29, 2020 PERFORMED BY: GEORGE R. COLLINS, P.E. WITNESSED BY: KATHLEEN WALDRON, AVON BOH



EST. SEASONAL HIGH GROUNDWATER ELEV. 39.85 DESIGN LOADING RATE ESTABLISHED BY SIEVE SAMPLE COLLECTED FROM LAYER C AT TP-2.

NOTE: LAYERS FILL/A, B, AND C TO BE REMOVED TO A DEPTH OF 96" BELOW GRADE AND REPLACED WITH CLEAN FILL IN ACCORDANCE WITH 310 CMR 15.255(3). UNSUITABLE SOIL TO BE REMOVED TO A DISTANCE OF 5'-0" BEYOND THE LIMITS OF THE SOIL ABSORPTION SYSTEM.

# PLAN TO ACCOMPANY A CONSERVATION FILING

				DRAWING TITLE PLAN AND DETAILS SUBSURFACE SEWAGE DISPOSAL SYSTEM UPGRADE	SCALE: AS SHOWN DATE:	GEORGE P
L				PROJECT 4 LAWSON STREET AVON, MA	11-19-20 DRAWN BY:	COLLINS CIVIL NO. 41631
				WILSON AUGUSTE 4 LAWSON STREET, AVON, MA 02322	SWR DESIGNED BY:	ONAL ENGLISH
				COLLINS CIVIL ENGINEERING GROUP, INC.  BRAINTREE - FALMOUTH - WEST BRIDGEWATER  CIVIL ENGINEERING - LAND SURVEY - L.S.P. SERVICES	SWR CHECKED BY: GRC	DRAWING NO.
RI	EV.	DATE DESCRIPTION	BY APP.	225 SOUTH MAIN STREET, WEST BRIDGEWATER, MA 02379 TEL:508-580-2332 MOBILE: 617-347-1363 E-MAIL:GRCPE@AOL.COM	APPROVED BY: GRC	PROJECT NO. 20-226-3199