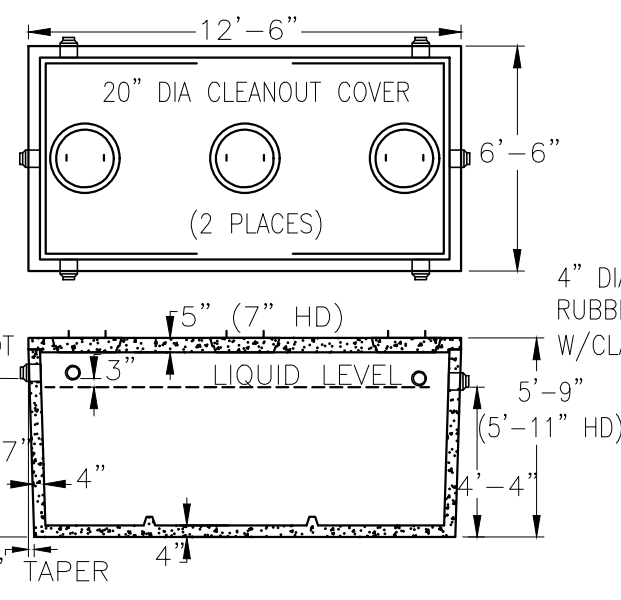
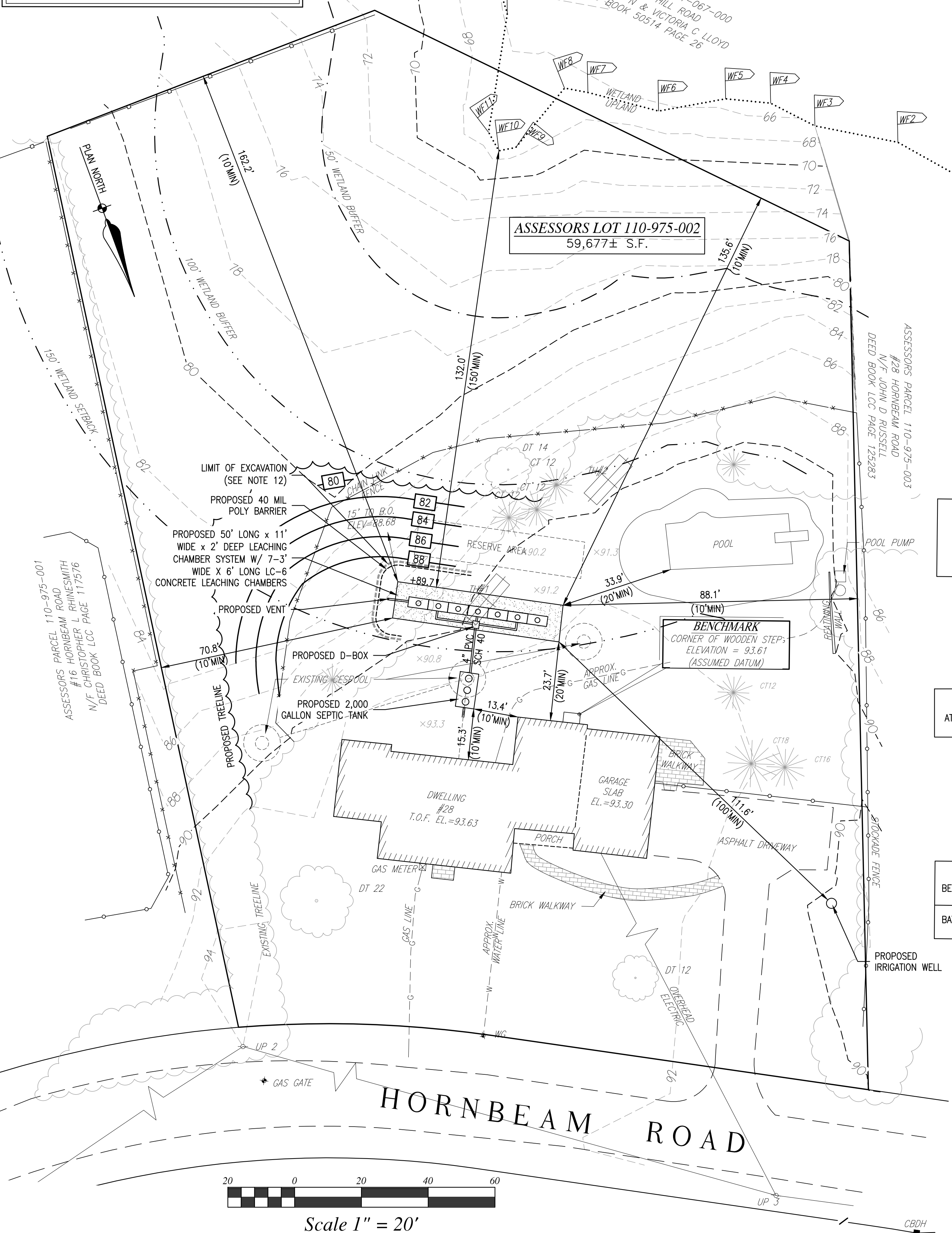


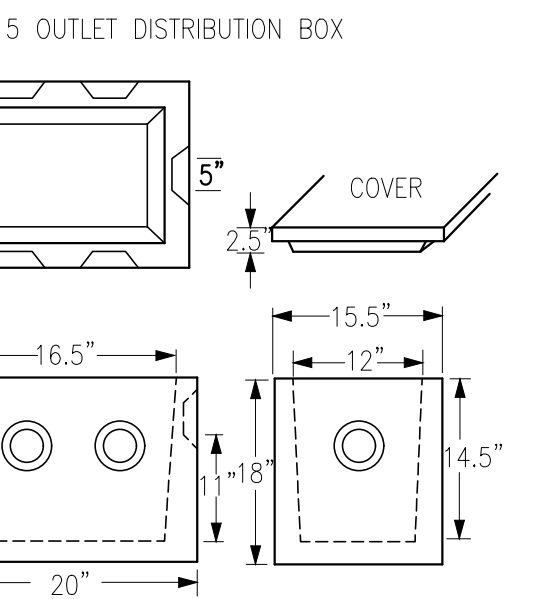
VARIANCE REQUEST FROM TOWN OF DUXBURY SUPPLEMENTAL RULES AND REGULATIONS TO THE STATE ENVIRONMENTAL CODE TITLE 5

1.10(1) REDUCTION IN SYSTEM (SOIL ABSORPTION SYSTEM) LOCATION SETBACKS TO A WETLAND FROM THE REQUIRED 150 FT. TO 132 FT.



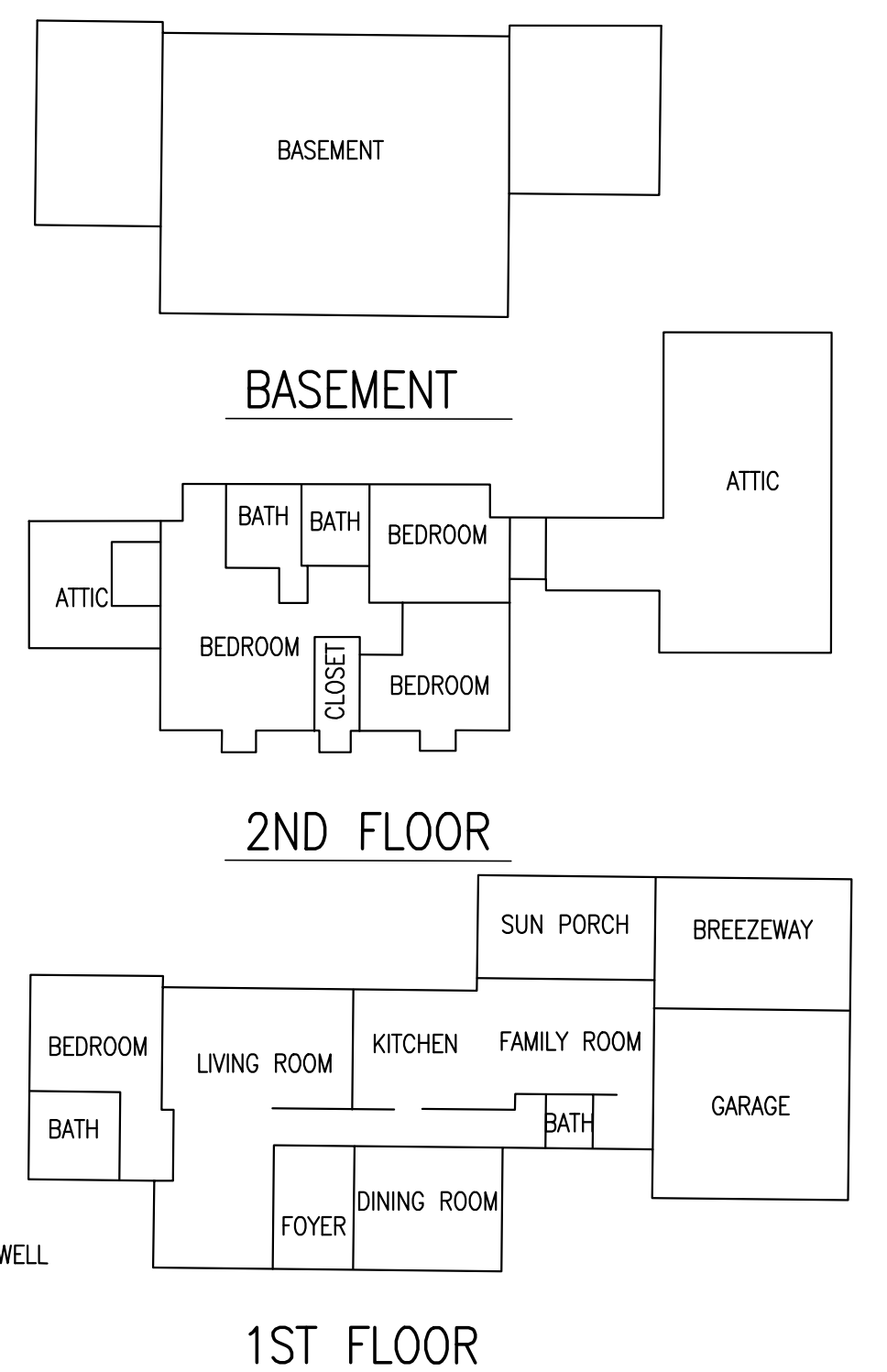
- NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 2. DESIGN CONFORMS WITH 310 CMR, SECTION 15.00 DEP TITLE 5 REGS FOR SEPTIC TANKS
 3. ALL REINFORCEMENT PER ASTM C1227.
 4. TEES AND GAS BAFFLE SOLD SEPARATELY.
 5. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
 6. IF COVER EXCEEDS 4 FEET, HEAVY DUTY TANK REQUIRED. ALSO AVAILABLE IN AASHTO HS-20 LOADING.

SEPTIC TANK DETAIL (NOT TO SCALE)



- DESIGN NOTES:
1. 4,000 P.S.I. CONCRETE @ 28 DAYS
 2. KNOCK-OUT OPENINGS FOR 4" PVC
 3. PRODUCT WEIGHT = 220 LBS.
 4. 12" RISER SECTION AVAILABLE

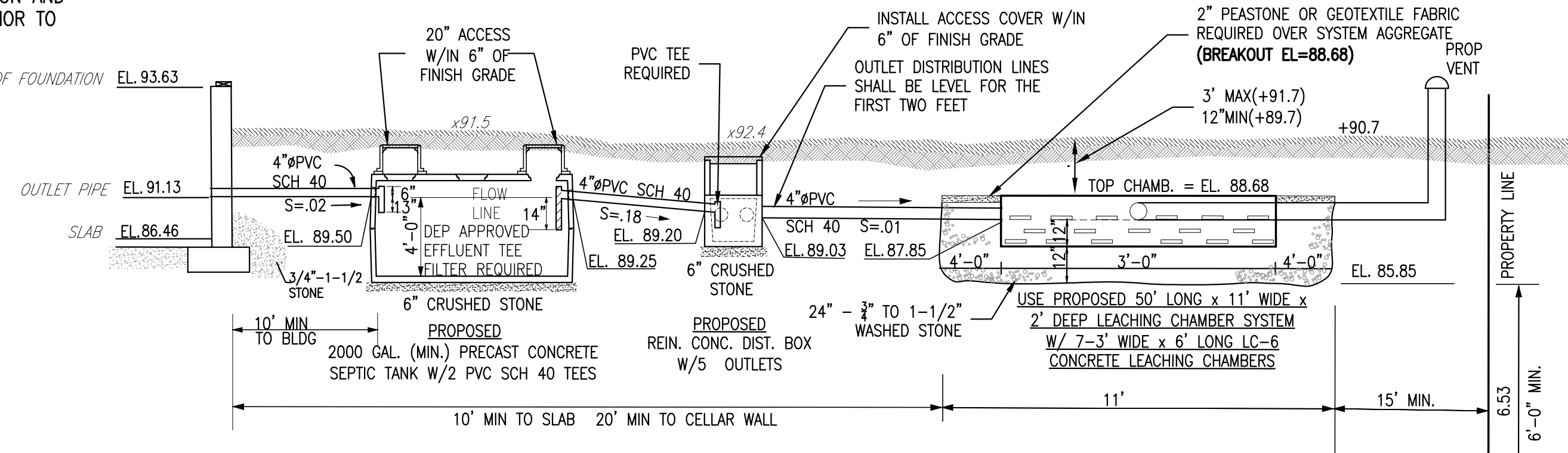
D-BOX DETAIL (NOT TO SCALE)



REQUIRED INSPECTIONS

1. AFTER EXCAVATION OF LEACHING AREA PRIOR TO INSTALLING SAND.
 2. AFTER SYSTEM CONSTRUCTION PRIOR TO BACKFILLING.
 3. AFTER FINAL GRADING IS COMPLETED.
- (ADDITIONAL INSPECTIONS MAY BE REQUIRED BY THE BOARD OF HEALTH)

CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF OUTLET PIPE PRIOR TO INSTALLATION OF ANY SYSTEM COMPONENTS



SUBSURFACE SEWAGE DISPOSAL SYSTEM (NOT TO SCALE)

SEPTIC DESIGN (NOT DESIGNED FOR GARBAGE GRINDER)

1. DESIGN DAILY FLOW: 5 BR. x 110 GPD = 550 GPD
2. SEPTIC TANK: 550 GPD x 2 = 1100 GAL. USE: 1500 GAL (MIN)
3. LEACHING CHAMBERS: P.R. = 2 MIN/IN CLASS 1

USE: 1-50' LONG x 11' WIDE x 2' DEEP LEACHING CHAMBER SYSTEM

TITLE 5
 PROPOSED AREA: 2(2x11) + 2(2x50) + (11x50) = 794
 CAPACITY: 794 S.F. x 0.74 GPD/S.F. = 587 > 550 GPD(D.D.F.)

SEPTIC NOTES

1. PROPERTY LINE DATA FROM PLAN ENTITLED "SUBDIVISION PLAN OF LAND IN DUXBURY" BY DATE: MARCH 6 1952, 2015 DRAWN BY DELANO & KEITH, SURVEYORS, RECORDED AT THE PLYMOUTH REGISTRY OF DEEDS UNDER LAND COURT PLAN NUMBER 226688B.
2. TOPOGRAPHIC SURVEY BY GRADY CONSULTING NOVEMBER 18, 2021.
3. SOILS TESTING BY KEVIN GRADY, GRADY CONSULTING WITNESSED BY TRACY MAYO, NOVEMBER 10, 2021.
4. CALL DIG SAFE 1-888-344-7233 AT LEAST 4 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. NOTIFY TOWN AND GRADY CONSULTING PRIOR TO BACKFILLING OF SYSTEM.
6. NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED SYSTEM.
7. THE SITE IS NOT LOCATED IN AN AQUIFER PROTECTION ZONE I OR ZONE II.
8. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED (310 CMR 15.221(12))
9. NO STREAMS, SURFACE & SUBSURFACE DRAINS AND WETLANDS EXIST WITHIN 100 FT OF THE PROPOSED SYSTEM, EXCEPT AS SHOWN.
10. THE SITE IS NOT LOCATED IN A FLOOD PLAN DISTRICT. NO WORK IS PROPOSED WITHIN THE FLOOD PLAN DISTRICT.
11. NO KNOWN EASEMENTS ARE IN THE AREA OF THE PROPOSED SYSTEM.
12. EXCAVATE ALL MATERIAL (A, B, LAYERS) TO MEDIUM SAND C LAYER (68"), 5' AROUND SYSTEM. REPLACE WITH CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255 (3). EXCAVATION TO BE INSPECTED BY GRADY CONSULTING L.L.C. AND TOWN PRIOR TO SOIL REPLACEMENT

APPROXIMATE PERC SAND VOLUME = 60 x 21 x (88.7 - 85.0±) / 27 + 20% = 207± C.Y.
 +REMOVE ANY CONTAMINATED SOIL FROM EXISTING SYSTEM (20± C.Y.)

TOWN OF DUXBURY CHECKLIST NOTES

1. WETLANDS ARE LOCATED WITHIN 150' OF THE PROPOSED SYSTEM A VARIANCE IS REQUESTED.
2. THE PROPOSED SYSTEM IS NOT LOCATED WITHIN A FEMA DESIGNATED FLOOD HAZARD ZONE.
3. THE PROPOSED SYSTEM IS NOT LOCATED WITHIN AN AQUIFER ZONE II.
4. NO KNOWN WELLS ARE LOCATED WITHIN 150' OF THE PROPOSED SYSTEM.

110-975-001	16 HORNBEAM ROAD - TOWN WATER
110-975-003	38 HORNBEAM ROAD - TOWN WATER
122-975-012	51 HORNBEAM ROAD - TOWN WATER
110-975-013	39 HORNBEAM ROAD - TOWN WATER
110-975-014	31 HORNBEAM ROAD - TOWN WATER
110-975-015	17 HORNBEAM ROAD - TOWN WATER
121-067-000	1 HARDEN HILL ROAD - TOWN WATER

5. NO KNOWN IRRIGATION WELLS ARE LOCATED WITHIN 100' OF THE PROPOSED SYSTEM.
6. IN THE EVENT OF REPLACEMENT, THE EXISTING SYSTEM WILL BE REMOVED AND REPLACED IN THE SAME LOCATION.
7. LOCAL VARIANCE FROM DUXBURY RULES AND REGULATIONS IS REQUIRED FOR THE PROPOSED SYSTEM.

REVISION	RESPOND TO COMMENTS FROM TRACY MAYO
JANUARY 5, 2022	

SEPTIC REPAIR PLAN
 #28 HORNBEAM ROAD
 DUXBURY, MASSACHUSETTS

APPLICANT: CHRISTOPHER TURNER
 10 COMMERCE BOULEVARD
 MIDDLEBORO, MA 02364

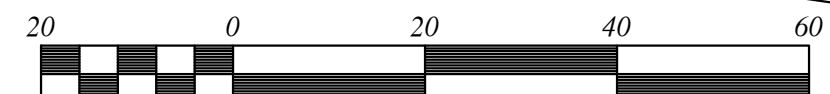
DECEMBER 7, 2021
 SCALE: 1"=20'
 JOB NO. 21-415

GRADY CONSULTING, L.L.C.
 Civil Engineers, Land Surveyors & Landscape Architects
 71 Evergreen Street, Suite 1, Kingston, MA 02364
 Phone (781) 585-2300 Fax (781) 585-2378



SOIL LOGS

T.H.#1 EL. 90.70		T.H.#2 EL. 89.32	
0'-6"	A LOAM	0'-6"	A LOAM
6"-24"	B LOAMY SAND	6"-24"	B LOAMY SAND
24"-96"	C MEDIUM SAND	24"-120"	C MEDIUM SAND
PERC @ 24"-42" P.R.=3 MIN/IN		PERC @ 34"-52" P.R.=3 MIN/IN	
82.70		79.32	
D= 8'-0" NO WATER @ 8'-0" (EL.=82.70)		D= 10'-0" NO WATER @ 10'-0" (EL.=79.32)	



Scale 1" = 20'