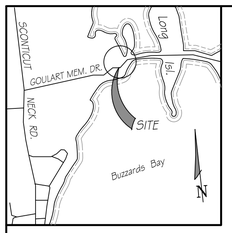
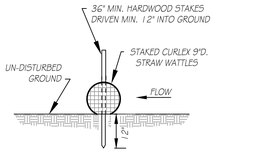


LOCUS PLAN

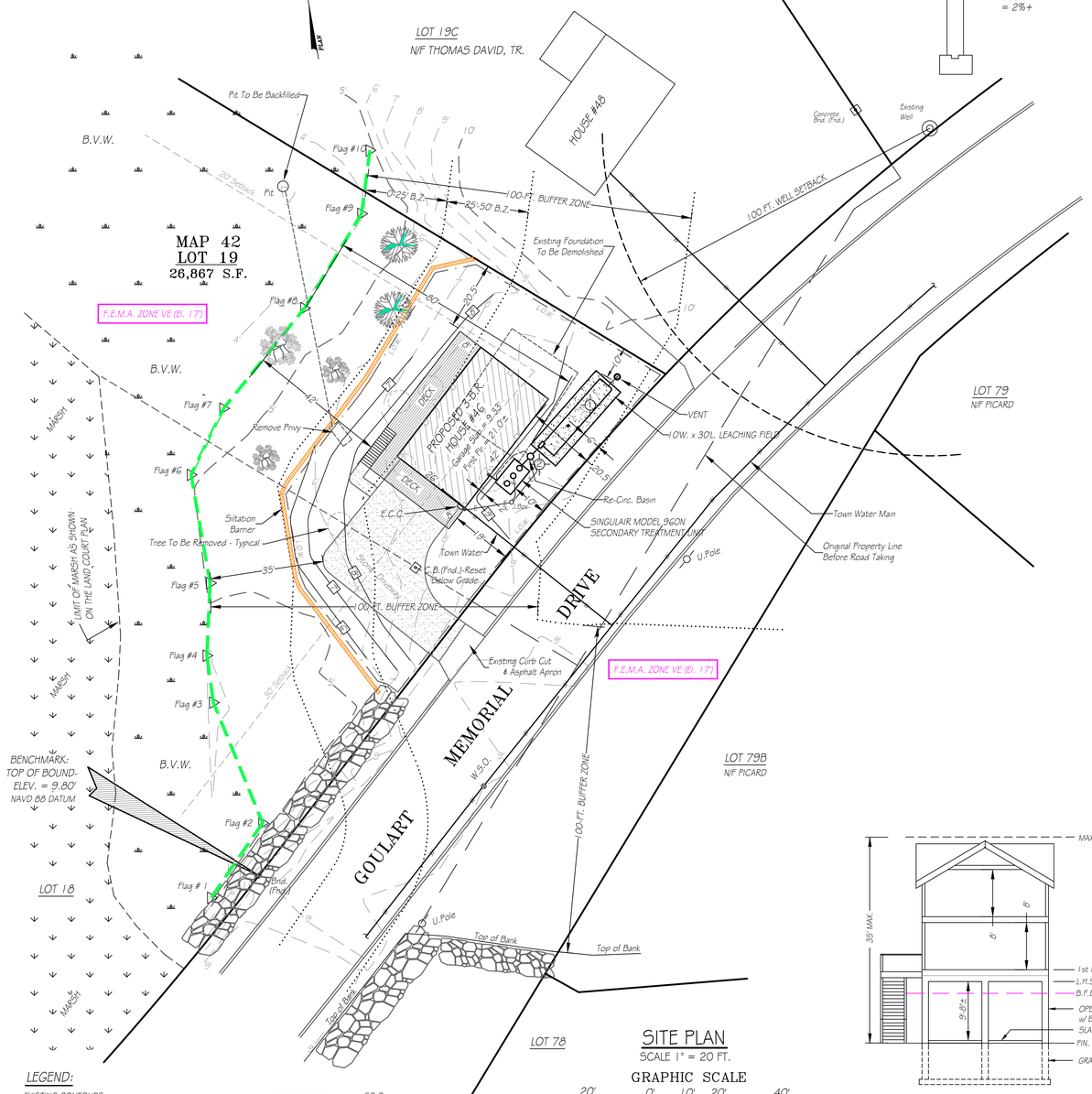
1 INCH = 2,000 FT. ±



NOTE: STRAW WATTLES SHALL BE COMPOSED OF STRAW FIBERS ENCASED IN DURABLE BIODEGRADABLE NETTING.

SILTATION BARRIER DETAIL

N.T.S.



SITE PLAN

SCALE 1" = 20 FT.

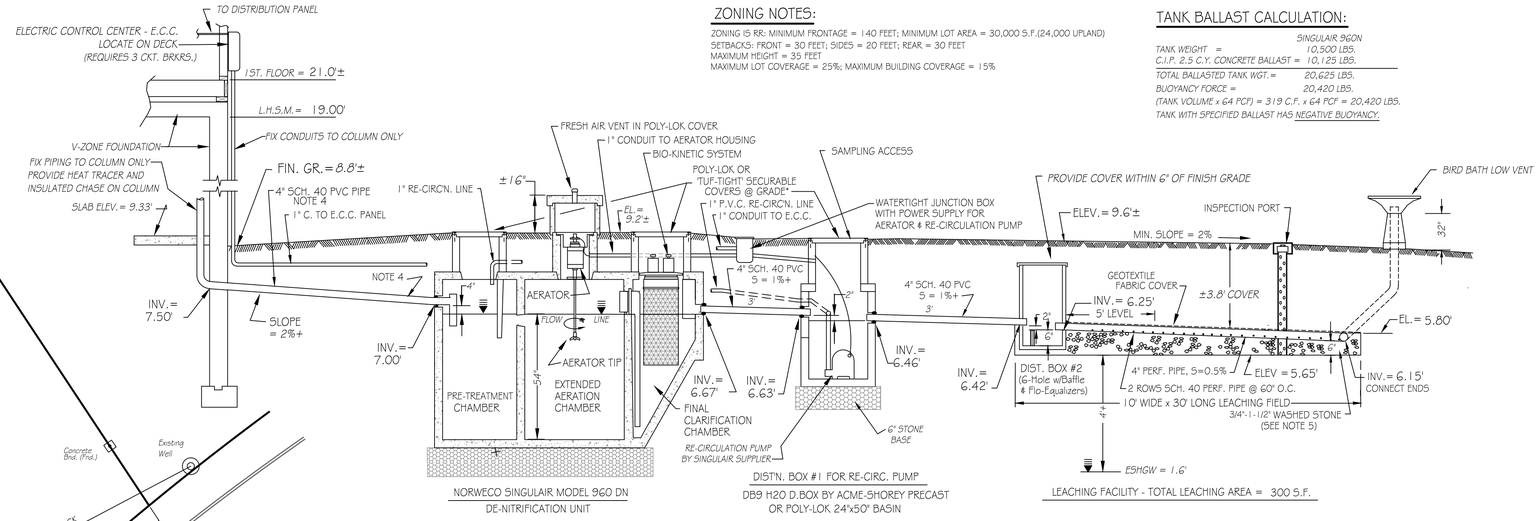
GRAPHIC SCALE

20' 0' 10' 20' 40'

(IN FEET)
1 inch = 20 ft.

LEGEND:

EXISTING CONTOURS: 52
PROPOSED CONTOURS: 52
EDGE OF WETLANDS:
LIMIT OF BUFFER ZONE:
LIMITS OF F.E.M.A. ZONES:
SPOT ELEVATIONS: ×53.9
TEST PIT LOCATION:
SEPTIC TANK:
DELINEATION FLAG: #6



NORWECO SINGULAIR MODEL 960 DN DE-NITRIFICATION UNIT

DISTN. BOX #1 FOR RE-CIRC. PUMP

DB9 H20 D.BOX BY ACME-SHOREY PRECAST OR POLY-LOK 24'x50" BASIN

LEACHING FACILITY - TOTAL LEACHING AREA = 300 S.F.

ZONING NOTES:

ZONING IS RR: MINIMUM FRONTAGE = 140 FEET; MINIMUM LOT AREA = 30,000 S.F.(24,000 UPLAND)
SETBACKS: FRONT = 30 FEET; SIDES = 20 FEET; REAR = 30 FEET
MAXIMUM HEIGHT = 35 FEET
MAXIMUM LOT COVERAGE = 25%; MAXIMUM BUILDING COVERAGE = 15%

TANK BALLAST CALCULATION:

	SINGULAIR 960N
TANK WEIGHT =	10,500 LBS.
C.I.P. 2.5 C.Y. CONCRETE BALLAST =	10,125 LBS.
TOTAL BALLASTED TANK WGT.=	20,625 LBS.
BUOYANCY FORCE =	20,420 LBS.

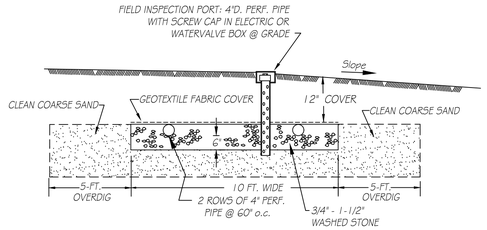
(TANK VOLUME x 64 PCF) = 319 C.F. x 64 PCF = 20,420 LBS.
TANK WITH SPECIFIED BALLAST HAS NEGATIVE BUOYANCY.

SECTION THRU SYSTEM

NOT TO SCALE

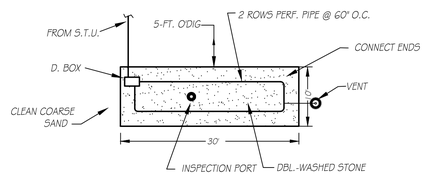
SYSTEM DESIGN DATA:

PERCOLATION RATE = 5 MIN./INCH
BOTTOM & SIDE L.T.A.R. = 0.74 GPD/S.F.
DESIGN FLOW = 3 B.R.'s = 110 Gal/Brm./Day = 330 GPD (MIN)
REQUIRED LEACHING AREA FOR STANDARD TITLE 5 SYSTEM:
330 GPD / 0.74 GPD/S.F. = 445 S.F.
REDUCED LEACHING AREA FOR SECONDARY TREATMENT UNIT:
445 S.F. x 60% = 267 S.F.
USE 15' WIDE x 30' LONG LEACHING FIELD:
BOTTOM AREA = 10' W. x 30' L. = 300 S.F.
SIDE AREA = N/A = 0 S.F.
TOTAL LEACHING AREA = 300 S.F.
DESIGN FLOW RATE FOR 3 B.R.'s = 330 GPD. (MIN.)
SYSTEM CAPACITY = (300 S.F./0.60 x 0.74 GPD/S.F.) = 370 G.P.D.



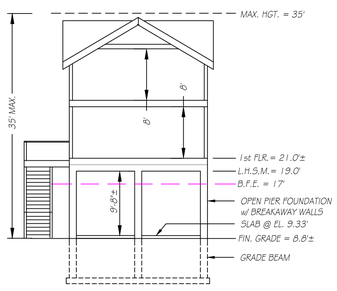
CROSS SECTION THRU FIELD

NOT TO SCALE



PLAN VIEW: LEACHING FIELD

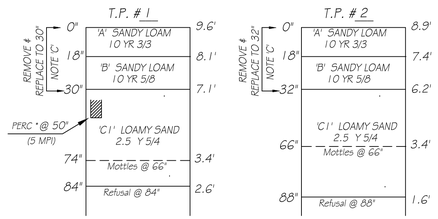
NOT TO SCALE



PROPOSED HOUSE ELEVATIONS

NOT TO SCALE

SOIL LOG



* PERCOLATION TEST LOCATION: T.P. # 1 ; BOTTOM OF TEST HOLE = 50" ; PERC. TEST & DETERMINATION OF SUB-SOIL CONDITIONS WERE DONE ON MARCH 31, 2025 AS WITNESSED BY DAVID FLAHERTY, R.S., FAIRHAVEN BOARD OF HEALTH AGENT.

MAINTENANCE:

- THE SINGULAIR 5.T.U./DE-NITRIFICATION UNIT SHALL BE COVERED BY A MAINTENANCE CONTRACT FROM THE MANUFACTURER'S REPRESENTATIVE IN ACCORDANCE WITH NOTE 6 BELOW.
- THE SINGULAIR UNIT AND THE LEACHING FIELD REQUIRE BACTERIAL PROCESSES TO DIGEST WASTES. AVOID EXCESSIVE USE OF BLEACH AND ANTI-BACTERIAL PRODUCTS TO ENSURE HEALTHY BIOLOGICAL ACTIVITY IN THE SEPTIC SYSTEM.

GENERAL NOTES:

1. THIS SYSTEM DOES NOT MAKE PROVISION FOR A GARBAGE GRINDER NOR THE BACKFLUSH EFFLUENT FROM A WATER TREATMENT SYSTEM NOR THE DISPOSAL OF PRESCRIPTION MEDICATIONS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH MASS. TITLE 5 AND LOCAL BOARD OF HEALTH REGULATIONS, EXCEPT AS PERMITTED BY VARIANCES AS NOTED HEREON.
3. ALL COMPONENTS SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE. PIPE SHALL BE LAID ON A FIRM BASE, FREE OF STONES. PRE-CAST CONCRETE TANKS SHALL BE MINIMUM 11-10 AASHTO RATING, CONSTRUCTED IN CONFORMANCE WITH TITLE 5, SEC. 15.223. DISTRIBUTION BOX SHALL HAVE COVER WITHIN 6" OF FINISH GRADE.
4. BUILDING SEWER SHALL BE CAST IRON OR SCH.40 P.V.C. PIPE; GRAVITY EFFLUENT PIPES & RE-CIRCULATION LINE SHALL BE SCH.40 P.V.C. PIPE.
5. WASHED STONE AND PEASTONE SHALL BE DOUBLE-WASHED STONE, FREE OF IRON, FINES AND DUST IN PLACE, WITH LESS THAN 2/10 % FINER THAN #200 SIEVE. STONE WITH EXCESS FINES SHALL BE REPLACED AT NO EXPENSE TO THE OWNER.
6. THE DE-NITRIFICATION UNIT SHALL BE NORWECO SINGULAIR MODEL 960 DN WASTEWATER TREATMENT SYSTEM IN 3-CHAMBER MONOLITHIC CONCRETE TANK WITH PRETREATMENT CHAMBER, AERATION CHAMBER WITH FRACTIONAL HORSEPOWER AERATOR TIMED TO OPERATE 60 MINS. ON AND 60 MINS. OFF, AND FINAL CLARIFICATION CHAMBER WITH BIO-KINETIC FILTER. UNIT SHALL BE CERTIFIED TO MEET NSF STANDARD 40 AND BIO-KINETIC SYSTEM TO MEET NSF STANDARD 46. THE UNIT SHALL PROVIDE FOR A ROLLING ANNUAL AVERAGE TOTAL NITROGEN (TN)
EFFLUENT LIMIT OF 19 MILLIGRAMS PER LITER OR LESS. DE-NITRIFACTION UNIT AND ACCESSSORIES AVAILABLE FROM ALL-CAPE ENVIRONMENTAL INC. (774) 313-6602; OR SIEGMUND ENVIRONMENTAL SERVICES (866) 999-1389.
THE HOMEOWNER SHALL MAINTAIN AND COMPLY WITH AN OPERATION AND MAINTENANCE AGREEMENT APPROVED BY THE BOARD OF HEALTH THAT:
(a) REQUIRES THE HOMEOWNER TO TAKE IMMEDIATE CORRECTIVE ACTION INCLUDING NOTIFICATION TO THE BOARD OF HEALTH WITHIN 7 DAYS IF THE TOTAL NITROGEN (TN) EFFLUENT LIMITS ARE NOT IN COMPLIANCE WITH BOARD OF HEALTH REGULATIONS.
(b) REQUIRES NOTIFICATION TO THE BOARD OF HEALTH IN WRITING WITHIN 7 DAYS OF ANY CANCELLATION, EXPIRATION OR OTHER CHANGE IN THE STATUS OF THE OPERATION AND MAINTENANCE AGREEMENT.
(c) REQUIRES THE REPAIR, MODIFICATION OR REPLACEMENT OF THE UNIT IF THE BOARD OF HEALTH DETERMINES THAT THE SYSTEM IS NOT CAPABLE OF MEETING THE REQUIRED REDUCTION IN TOTAL NITROGEN (tn) IN THE EFFLUENT.
7. THE INSTALLER SHALL PROVIDE A CERTIFICATION IN WRITING TO THE BOARD OF HEALTH THAT THE SYSTEM HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE TERMS OF THE D.E.P. APPROVAL LETTER FOR THE DE-NITRIFICATION UNIT.
8. THE ENGINEER CERTIFIES TO THE SOIL CONDITIONS AND PERCOLATION RATE ONLY IN THE AREA TESTED. THE INSTALLER SHALL NOTIFY THE ENGINEER IF SOIL CONDITIONS ARE FOUND DIFFERENT THAN SHOWN ON SOIL LOG.
9. PRIOR TO FINAL COVER OF SYSTEM, THE INSTALLER SHALL NOTIFY THE ENGINEER TO MAKE AN 'AS- BUILT' INSPECTION. FINAL COVER SHALL NOT BE PLACED UNTIL SYSTEM IS APPROVED BY THE ENGINEER AND THE BOARD OF HEALTH.
10. THE CONTRACTOR SHALL REMOVE & REPLACE THE WALKWAY, REPAIR THE DRIVEWAY AND LOAM & SEED OR MULCH ALL DISTURBED AREAS.

NOTES:

NOTE 'A': THIS PARCEL IS SHOWN AS ASSESSORS MAP 42, LOT 19. DEED REFERENCE CERTIFICATE 25806. THIS PARCEL IS ALSO SHOWN AS LOTS 16 & 17 ON A PLAN TITLED "SUBDIVISION PLAN OF LAND IN FAIRHAVEN" DATED APRIL 25, 1963 BY SAMUEL H. CORSE, SURVEYOR; AND RECORDED AT THE PLYMOUTH REGISTRY OF DEEDS LAND COURT DIVISION PLAN NO. 17921D.

NOTE 'B': THE DWELLING SHOWN HEREON LIES WITHIN A SPECIAL FLOOD HAZARD AREA, ZONE VE (EL.17) AS DELINEATED ON F.E.M.A. COMMUNITY PANEL NO. 25005C0501F, DATED JULY 7, 2009.

NOTE 'C': REMOVE UNSUITABLE SOILS BENEATH THE LEACHING FIELD AND TO A 5-FOOT DISTANCE ON SIDES WHERE SHOWN, AND REPLACE WITH CLEAN, COARSE SAND UP TO THE LEVEL OF GEOTEXTILE COVER. THE BOTTOM AND SIDES OF THE EXCAVATION SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SAND FILL. EQUIPMENT SHALL NOT BE OPERATED ON THE SCARIFIED SURFACES PRIOR TO BACKFILLING. OVERDIG SAND SHALL CONFORM TO TITLE 5 SEC. 15.255(3).

NOTE 'D': INSTALLER SHALL CONSTRUCT THE SYSTEM USING A PLAN BEARING THE APPROVAL OF THE LOCAL BOARD OF HEALTH.

NOTE 'E': NOTIFY DIG-SAFE PRIOR TO ANY EXCAVATION.

NOTE 'F': NO POTABLE WATER WELLS ARE KNOWN TO EXIST WITHIN 200 FT. OF THE PROPOSED LEACHING FACILITY EXCEPT AS SHOWN.

NOTE 'G': THIS DESIGN IS IN CONFORMANCE WITH MASS. TITLE 5 & BOARD OF HEALTH REGULATIONS, AND WITH D.E.P. REMEDIAL USE APPROVAL FOR NORWECO SINGULAIR (TRANSMITTAL #X252291) AND WITH D.E.P. STANDARD CONDITIONS FOR REMEDIAL USE, INCLUDING REDUCTION IN LEACHING FIELD AREA.

RICHARD J. BRAGA No. 28788 REGISTERED PROFESSIONAL ENGINEER

PLAN OF SITE, PROPOSED HOUSE & SUBSURFACE SEWAGE DISPOSAL
PREPARED FOR
ANTHONY & MARCELLE DAVID
MAP 42 LOT 19
46 GOULART MEMORIAL DRIVE
FAIRHAVEN, MA

CAI Charon Associates, Inc.
Consulting Engineers
323 Neck Road - Rochester, MA 02770
Tel: 508-763-8362 Fax: 508-763-9582

SCALE: AS NOTED
DATE: APRIL 18, 2025

DWG. NO. SD-1