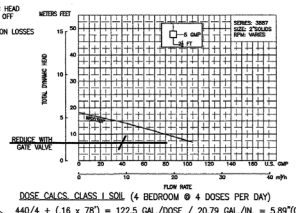
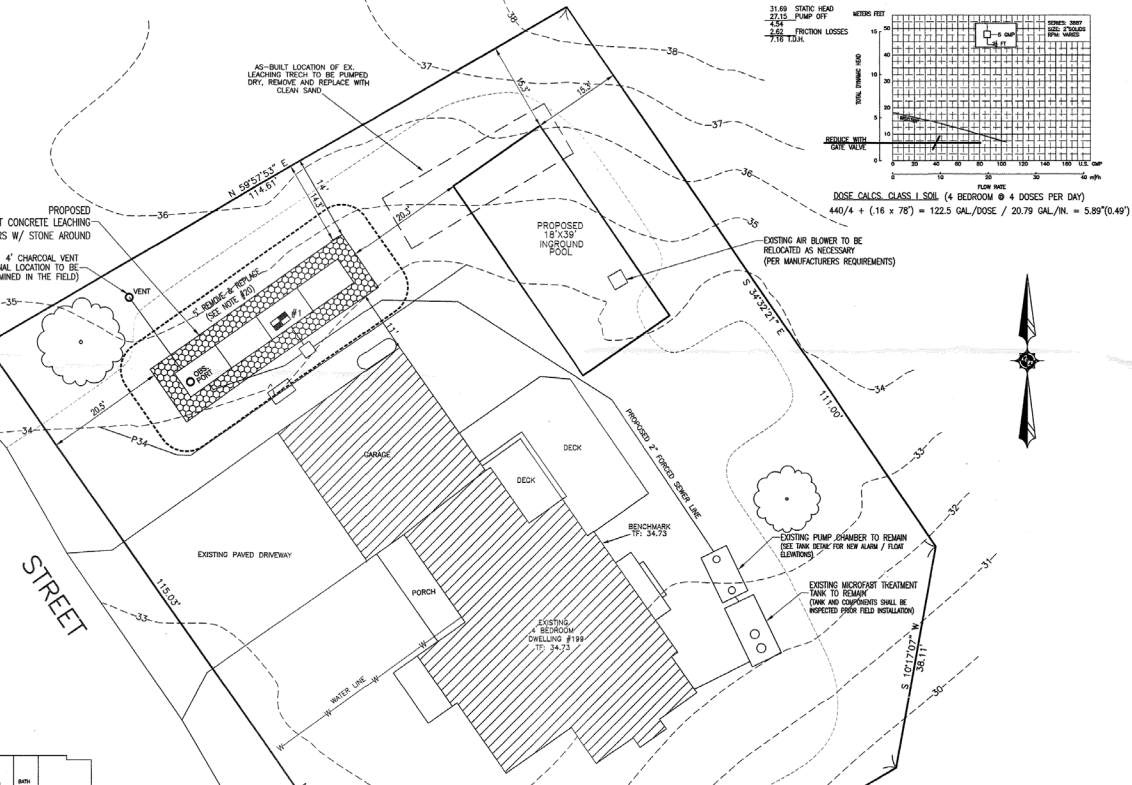
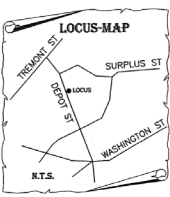
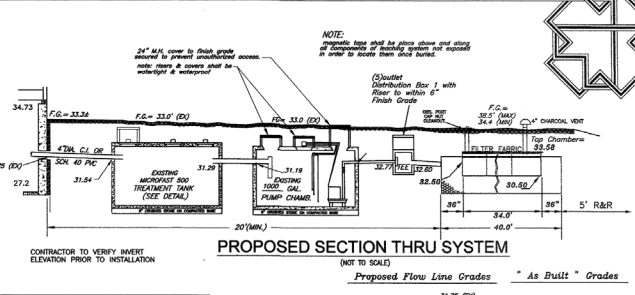
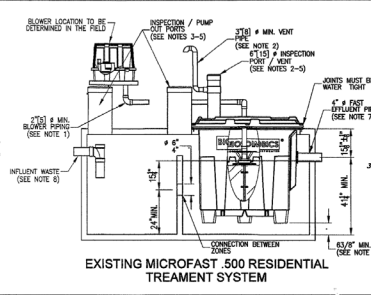
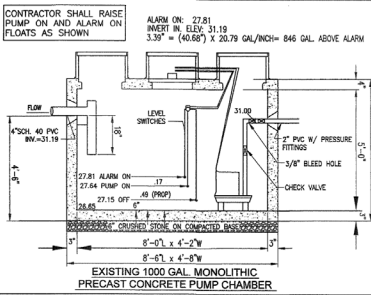
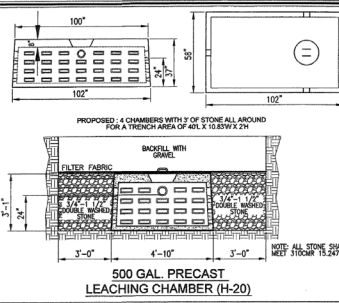


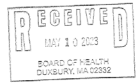


**Underground Septic Tanks & Pump Chambers**

- 1.) Tanks shall be structurally sound and to withstand the cover imposed loads.
- 2.) Tanks shall be watertight.
- 3.) Tanks shall be precast concrete.
- 4.) Manufacturers of septic tanks shall implement a quality control/quality assurance program in conformity with ASTM standard C-1227-03. Tanks shall be embossed with a seal stating that the ASTM standard has been met. Tanks not embossed with a seal shall be rejected.
- 5.) Tanks shall be accessible for inspection and maintenance. No structures shall be located directly above, above, or near the tanks which may interfere with performance, access, inspection, and pumping or repair.
- 6.) Inlet and outlet tees shall be schedule 40 pvc, or approved equal.
- 7.) Septic tanks shall be provided with at least three (3) 30" diameter manholes. Manholes shall be of the center and end wall type with the floor for compartment tanks, the center manhole shall be the access to the compartmentation system design in excess of 1,000 GPD, all manholes shall be made accessible, water-tight access part (interlocked) and durable material, with steps where appropriate. Manhole covers shall be removable, and of impermeable and durable material. Covers shall be within six inches of finished grade and shall be secured to prevent unauthorized access.



Proposed Flow Line Grades	As Built Grades
INV. AT FOUNDATION	31.59 (E2)
INV. INTO TREATMENT TANK	31.64 (E2)
INV. OUT OF TREATMENT TANK	31.59 (E2)
INV. INTO PUMP CHAMBER	31.59 (E2)
INV. INTO DIST. BOX	32.77
INV. OUT OF DIST. BOX	32.60
INV. INTO CHAMBER	32.50
BOTTOM OF CHAMBER	30.50
WATER TABLE	NOTE # 24.32
	NOTES # 33.40 (2/16/19)



**DESIGN CRITERIA**

- 9.) Unless otherwise noted (T.O.D.), the design of this system conforms to the requirements of the Commonwealth Of Massachusetts Environment Code Title 8, and the requirements of the local board of health.
- 10.) The design of this system did not allow for the use of a garbage disposal.
- 11.) The septic tank shall be inspected and cleaned annually.
- 12.) Grease trap, if applicable, shall be inspected every month, and shall be cleaned every 3 months or when the level of grease is 60% of the effective depth of the trap.
- 13.) The design of this system conforms with the following minimum distances from the proposed sanitary system:
  - A.) Surface water supply or gravel packed wells... 125 ft.
  - B.) Tubular public wells... 250 ft.
  - C.) Private potable wells... 100 ft.
  - D.) Other sanitary soil absorption system... 10 ft.
  - E.) Wetlands... 65 ft.
- 14.) No structures shall be located upon, above or within 20' of the leaching field area. The reserve area (T.O.D. expansion) is considered to be the same as the leaching field area.
- 15.) The top of all system components, including the septic tank, distribution box or dosing chamber and soil absorption system, shall be installed no more than 36" below finish grade.

**Leaching Chambers Area**

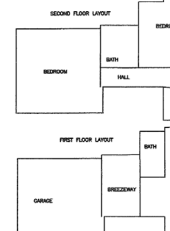
- 16.) Leaching chambers shall be A WIGGINS PRECAST or engineer approved equal.
- 17.) All installations shall be true to line and grade.
- 18.) All piping shall be PVC SCH. 40
- 19.) Distribution pipe(s) shall have a minimum diameter of 4" and a minimum slope of 0.01.
- 20.) All unsuitable material including top soil and sub soil shall be removed as follows:
  - a.) Removal shall be to a depth of 30" ±, and a distance of 2 ft. in all directions of the proposed leaching field area. And existing S.A.S. and unsuitable soils.
  - b.) Removed soil shall be replaced with clean sand meeting the requirements of 310 CMR 15.255(3).

**Inspection Schedule**

- 22.) To obtain the board of health certification, confirmation of the proper installation is required. The installer shall obtain the written approval of the engineer and the local board of health representative at the completion of each of the following steps:
  - a.) Excavation of unsuitable material
  - b.) Placement of the clean backfill
  - c.) Installation of the system with all components exposed for inspection and preparation of the "As Built".

**Utility Notes**

- 24.) The location of utilities are approximate only. Dig-Safe and other appropriate authorities shall be notified to verify actual locations, prior to any excavating. Re-bore if / as required.



PARCEL ID#  
109-013-000-000  
15,469' S.F.

- PARCEL ID# 014-000 (TOWN WATER)
- PARCEL ID# 013-002 (TOWN WATER)
- PARCEL ID# 020-002 (TOWN WATER)
- PARCEL ID# 020-005 (TOWN WATER)
- PARCEL ID# 015-002 (TOWN WATER)

- 1) LOCUS DOES LIE IN A ZONE II WELL PROTECTION AREA
- 2) LOCUS DOES NOT LIE IN A SPECIAL FLOOD HAZARD ZONE AS DETERMINED BY THE FIRM MAP.
- 3) THERE ARE NO KNOWN WETLANDS WITHIN 150' OF THE PROPOSED LEACHING AREA
- 4) THERE ARE NO KNOWN WELLS WITHIN 200' OF THE PROPOSED LEACHING AREA.
- 5) THIS SYSTEM CONFORMS TO THE TOWN OF DUXBURY HEALTH REGULATIONS AND TITLE V.

T.P. 1

ITEM	DESCRIPTION	DATE
A	SMALL WOOD SIGN	3/28/23
B	REPAIR OF TRENCH	3/28/23
C	WELLS	3/28/23

**SOIL LOGS**

PERC. RESULTS: >2 MIN/INCH  
Present During Tests On 3/28/23  
Soil Evaluator: JOE WERRY

DESIGN CALCULATIONS  
NUMBER OF BEDROOMS = 4  
GALLONS PER ROOM = 750  
REQUIRED CAPACITY = 3000  
LEACHING AREA = 440  
LEACHING AREA PROVIDED = 880  
LEACHING CAPACITY = 440  
DESIGN CALCULATION: 440 x 2 = 1100 GAL. USE 1500 GAL. SENSATIONAL AREA: (100' x 21' + 60' x 21') = 200 S.F. BOTTOM AREA: (100' x 17') = 1700 S.F. TOTAL AREA = 600 S.F.

Issue	Date	Description	Drawn	Design	Check	Rev. Eng.
#1	4/25/23	REPAIR OF SANITARY SYSTEM				

PROPOSED Sanitary System  
TOWN: DUXBURY 109-013-000-000  
LOCATION: 199 DEPOT STREET  
PREPARED FOR: MICHAEL BOWDEN  
SCALE: 1" = 10' (OR AS NOTED) DATE: APRIL 25, 2023

WEBBY ENGINEERING ASSOCIATES, INC.  
Civil Engineers & Land Surveyors  
180 County Road - Plympton, MA.  
(781) 585-1164

