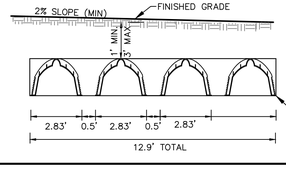
GENERAL NOTES:

1. All materials and construction shall conform to the requirements of the Massachusetts Department of Environmental Protection sanitary code Title 5, and the Town of Hingham Board of Health Rules an regulations.
2. Existing utilities shown on this plan are approximate only. Contractor shall verify the location of said utilities prior to construction and shall use extreme caution during excavation as not to disturb any of said utilities.
3. System components to withstand AASHTO H-10 loading criteria. Machinery and vehicles shall not pass over the system area after construction.
4. The proposed system shown has NOT been designed to accommodate a garbage grinder. Owner to ensure garbage grinder is not used. Deed restriction required.
5. It is the owners responsibility to ensure ALL sewerage flows exiting the building enter the proposed system.
6. If soil or groundwater conditions differing from those shown in the soil logs are encountered during construction, the design engineer and Board of Health are to be notified immediately.
7. The design engineer and Board of Health are to be notified for the following inspections:
   Excavation prior to placing sand, system prior to backfilling and final grading.
8. Contractor to ensure grading over and adjacent to the proposed system preserves existing natural onsite/offsite surface water flow patterns, such that runoff is handled on site and does not create puddling or any nuisance conditions. It is the homeowners responsibility to ensure slopes/swales are adequately vegetated and maintained to prevent erosion and provide proper surface water flow.
9. The required As Built Plan is to conform to DEP and Town of Hingham regulations.
10. System pumping and routine maintenance shall be in accordance with 310 CMR 15.351. It is recommended that the septic tank be pumped on an annual basis.
11. This plan is for the sole purpose of designing and constructing a septic system. It is not intended to be used for the determination of property ownership and/or the transfer of property.
12. No field changes are to be made to this plan without written consent of the design engineer and Board of Health.
13. No record locations available for wells on immediately adjacent lots.
14. Contractor is to verify existing sewer location and elevation prior to start of construction and notify Design Engineer of any discrepancies.
15. Septic tank outlet cover to be labeled "Filter Below".
16. Septic system must be constructed prior to construction of proposed dwelling.

SYSTEM CROSS SECTION

NO SCALE



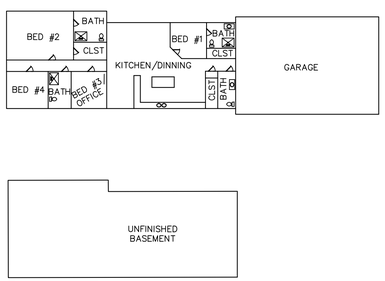
DESIGN CRITERIA

REGULATIONS USED:
STATE: 310 CMR 15.000 – TITLE 5
LOCAL: TOWN OF HINGHAM

Design Perc Rate: <2 MIN./INCH
No. of Bedrooms: 4
Daily Flow: 440 GPD
Load Rate: 0.74 GPD/SF
Soil Class: I
Area Required: 595 SF

INFILTRATOR DESIGN
Total Length of Chambers: 124 L.F. (REQ'D)
Total Length of Chambers: 140 L.F. (PROP.)
Effective Loading Rate: 4.8 SF/LF*
Area Provided: 672 SF
Capacity: 672 SF x .74 GPD/SF = 497 GPD

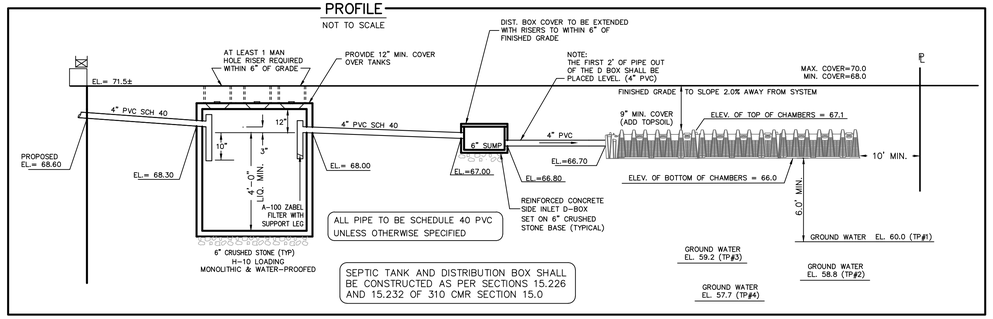
*PER GENERAL USE APPROVAL TO INFILTRATOR SYSTEMS.
(ARC 36 CHAMBERS (8-inch INVERT))



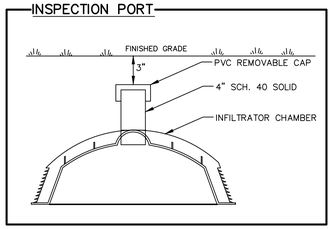
HOUSE PLAN

PROFILE

NOT TO SCALE



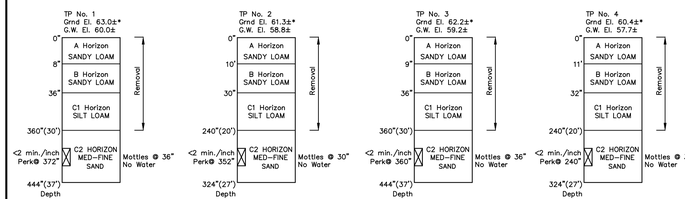
INSPECTION PORT



SOIL LOGS

Date: August 22-24, 2018

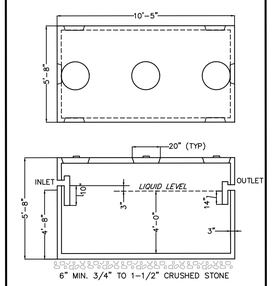
BOH AGENT: Susan Sarni/Betty Nee – Hingham B.O.H.
SOILS EVALUATOR: Brendan Sullivan P.E.– Cavanaro Consulting
EXCAVATOR: Al Emanuello



* ELEVATIONS WERE TAKEN PRIOR TO PERFORMING TEST PITS ON AUGUST 2018.

SEPTIC TANK

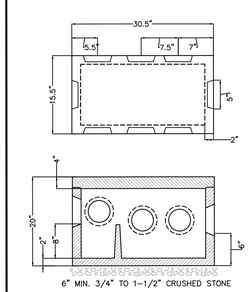
NOT TO SCALE



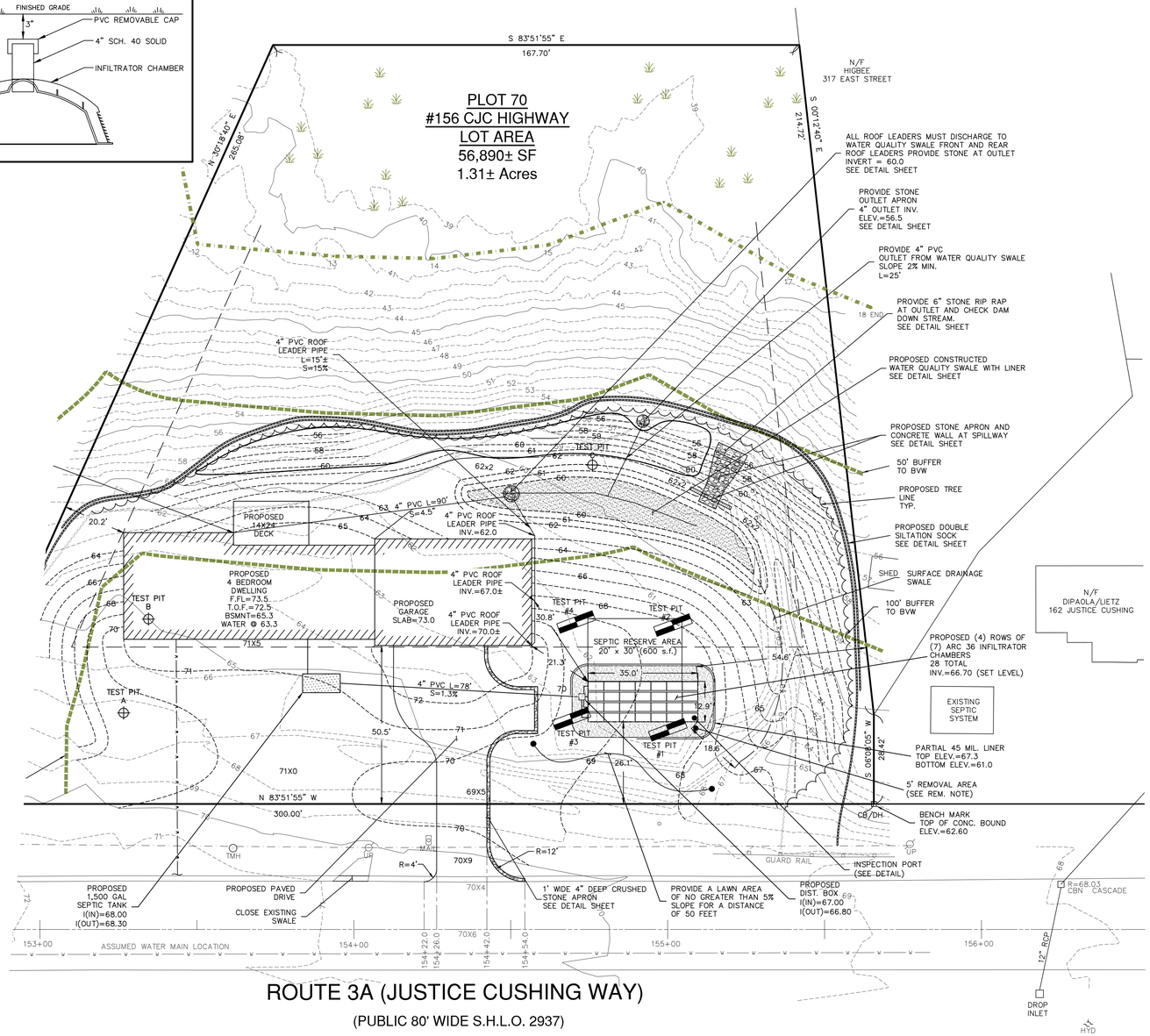
1,500 GALLON SEPTIC TANK
(SCITUATE PRECAST OR EQUAL)
4,000 PSI CONCRETE @ 28 DAYS

DISTRIBUTION BOX

NOT TO SCALE



5 OUTLET DISTRIBUTION BOX
(SCITUATE PRECAST OR EQUAL)
4,000 PSI CONCRETE @ 28 DAYS



ROUTE 3A (JUSTICE CUSHING WAY)

(PUBLIC 80' WIDE S.H.L.O. 2937)

DRAWING REVISIONS		
4	8/11/20	BOARD OF HEALTH COMMENTS
3	6/4/20	PLANNING DECISION COMMENTS
2	4/8/20	COMMENTS
1	6/19/19	ADDED GRADING AND INFILTRTION
ACTION	DATE	DESCRIPTION

FEMA:

LOCUS LIES IN F.I.R.M. ZONE X AS SHOWN ON COMMUNITY PANEL NO. 25023C0117K DATED NOVEMBER 4, 2016.

DATUM:

ELEVATIONS SHOWN HEREON REFERENCE NAVD88 VERTICAL DATUM.

OWNER OF RECORD:

CHIEF JUSTICE LLC
61 BURNS WAY
WEYMOUTH, MA 02190
ASSESSOR'S PARCEL: 65 – 70
DEED BOOK: 47682, PAGE: 176

UTILITIES:

UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON VISIBLE ABOVE GROUND UTILITIES AND RECORD INFORMATION OF BELOW GROUND UTILITIES AND ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR TAKING ALL NECESSARY PRECAUTIONS BEFORE BEGINNING ANY EXCAVATION. (DIGSAFE 1-800-322-4844)

REMOVE & REPLACE NOTES:

REMOVE ALL UNSUITABLE MATERIAL WITHIN 5' OF THE PROPOSED SYSTEM AND AN AVERAGE OF 30 FEET BELOW THE EXISTING SURFACE ELEVATION OR UNTIL THE SECOND C-LAYER IS ENCOUNTERED, AS SOIL STRATA VARIES. REPLACE SAME UP TO THE TOP OF THE CHAMBER (ELEVATION 67.1±) WITH CLEAN, GRANULAR FILL IN ACCORDANCE WITH 310 CMR 15.255(3). APPROXIMATE QUANTITY OF SAND FILL = 1,900± CUBIC YARDS. (INCLUDES 20% FOR COMPACTION.)*

* FILL QUANTITIES ARE APPROXIMATE ONLY AND MAY VARY ACCORDING TO SOIL CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION. CONTRACTOR TO VERIFY IN FIELD AS CONSTRUCTION COSTS MAY BE AFFECTED.

SITE SPECIFIC NOTES:

1. THE INTENT OF THIS DESIGN IS TO MEET STATE AND LOCAL SANITARY CODES. THE DESIGNER DOES NOT WARRANT, OR REPRESENT, THAT THE SYSTEM WILL BE INSTALLED AS DESIGNED, NOR DOES THE DESIGNER ASSURE THE OPERATION AND PERFORMANCE OVER TIME.
2. ALL TANKS SHALL BE WATERTIGHT THROUGH MANUFACTURER'S SPECIFICATION & WARRANTY.
3. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR EQUAL FOR FUTURE RELOCATION IN ACCORDANCE 310 CMR 15.221(12).
4. ALL BOOTS OR PIPE JOINTS TO BE SEALED WITH HYDRAULIC CEMENT OR INSTALLED WITH WATERTIGHT SLEEVES IN ACCORDANCE WITH 310 CMR 15.405(1)(j).
5. ANY REQUIRED TREE REMOVAL SHALL BE REVIEWED WITH THE HOMEOWNER PRIOR TO THE START OF CONSTRUCTION, AS ADDITIONAL COSTS MAY BE INCURRED.

VARIANCES REQUESTED FROM THE SUPPLEMENTARY RULES AND REGULATIONS FOR THE DISPOSAL OF SANITARY SEWERAGE:

1. SECTION VI.9 THICKNESS OF UNSATURATED, NATURAL MATERIAL 6 FEET REQUIRED BELOW BOTTOM OF SYSTEM.

   MINIMUM EXISTING DEPTH ABOVE GROUNDWATER IS 0'

2. SECTION VI.12 CONSTRUCTION IN FILL 6' THICKNESS OF NATURALLY OCCURRING UNSATURATED MATERIAL UNDER SDS.

   MINIMUM EXISTING DEPTH ABOVE GROUNDWATER IS 0'

3. SECTION VI.7 NO LEACHING FACILITY SHALL BE CONSTRUCTED WITHIN:

   25 FEET OF ANY SURFACE OR SUBSURFACE DRAIN WHEN THE DRAIN IS HIGHER THAN THE PROPOSED LEACHING FACILITY.

PROPOSED = 21 FEET

50 FEET OF ANY SURFACE OR SUBSURFACE DRAIN WHEN THE DRAIN IS LOWER THAN THE PROPOSED LEACHING FACILITY.

PROPOSED = 18 FEET

CAVANARO CONSULTING
687 MAIN STREET
P.O. BOX 5175
NORWELL, MASSACHUSETTS 02061
PHONE: 781.659.8187
FAX: 781.659.8186

SEPTIC SYSTEM DESIGN

SITE PLAN SET
156 JUSTICE CUSHING HWY
HINGHAM, MA 02043

PREPARED FOR:
FRED BUTTS
51 BURNS WAY
S. WEYMOUTH, MA 02190

COMMONWEALTH OF MASSACHUSETTS – BRENDAN P. SULLIVAN No. 46928 – REGISTERED PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS – BRENDAN P. SULLIVAN No. 41358 – REGISTERED PROFESSIONAL ENGINEER

SCALE: 1" = 20'
0' 10' 20' 40'

PROJECT NO. : 18124	DRAWING NO.
SCALE : 1"=20'	SAS
DATE : 6/3/19	
DESIGNED BY : BPS	
DRAWN BY : DB	SHEET NO. 4 OF 9
CHECKED BY : BPS	FILENAME: X:\PROJECTS\2018\18062\DWG\18062_BOH.DWG