

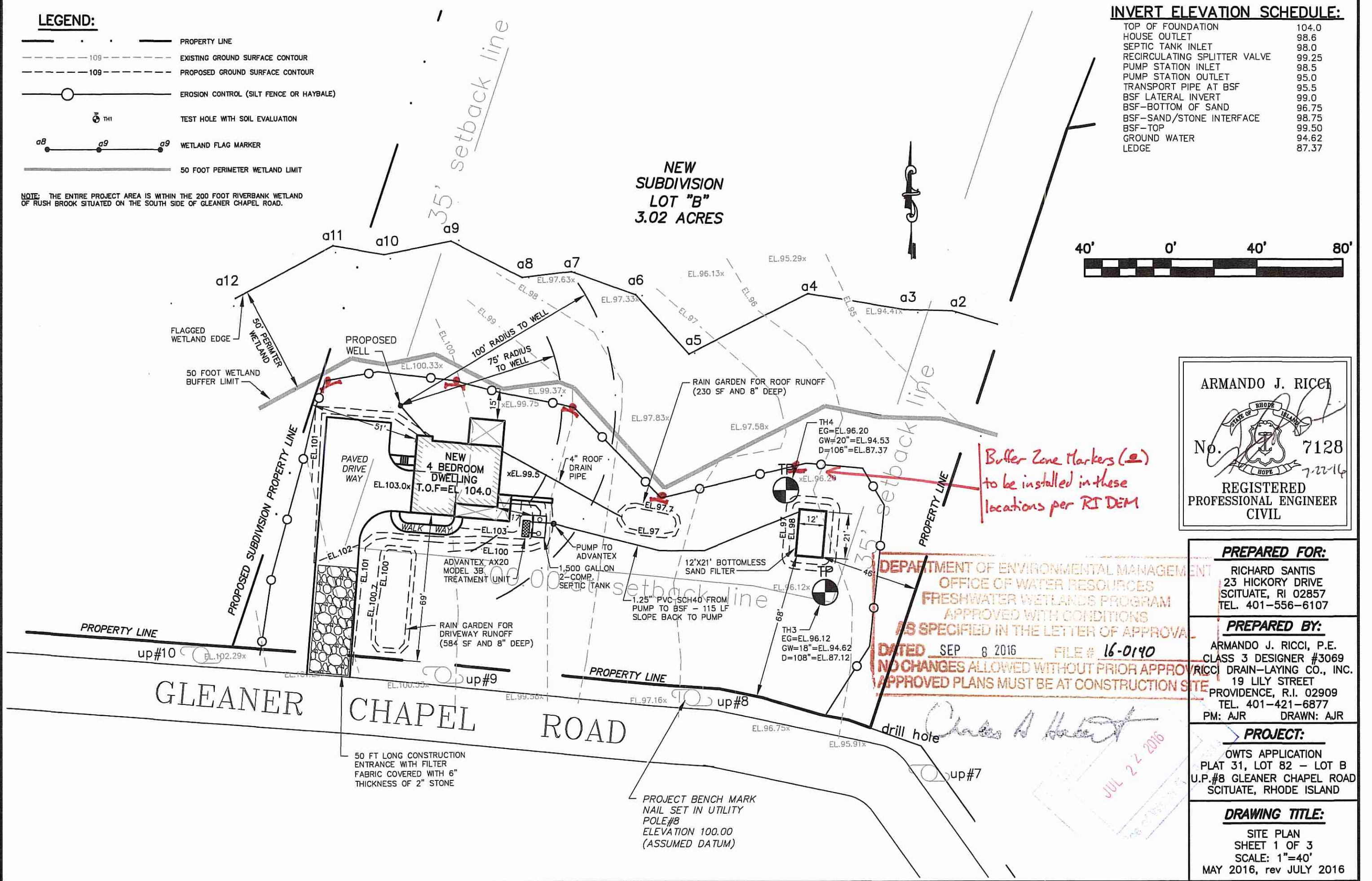
LEGEND:

- PROPERTY LINE
- EXISTING GROUND SURFACE CONTOUR
- PROPOSED GROUND SURFACE CONTOUR
- EROSION CONTROL (SILT FENCE OR HAYBALE)
- TEST HOLE WITH SOIL EVALUATION
- WETLAND FLAG MARKER
- 50 FOOT PERIMETER WETLAND LIMIT

NOTE: THE ENTIRE PROJECT AREA IS WITHIN THE 200 FOOT RIVERBANK WETLAND OF RUSH BROOK SITUATED ON THE SOUTH SIDE OF GLEANER CHAPEL ROAD.

INVERT ELEVATION SCHEDULE:

TOP OF FOUNDATION	104.0
HOUSE OUTLET	98.6
SEPTIC TANK INLET	98.0
RECIRCULATING SPLITTER VALVE	99.25
PUMP STATION INLET	98.5
PUMP STATION OUTLET	95.0
TRANSPORT PIPE AT BSF	95.5
BSF LATERAL INVERT	99.0
BSF-BOTTOM OF SAND	96.75
BSF-SAND/STONE INTERFACE	98.75
BSF-TOP	99.50
GROUND WATER	94.62
LEDGE	87.37



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 No. 7128
 REGISTERED PROFESSIONAL ENGINEER CIVIL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED SEP 8 2016 FILE # 16-0190
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

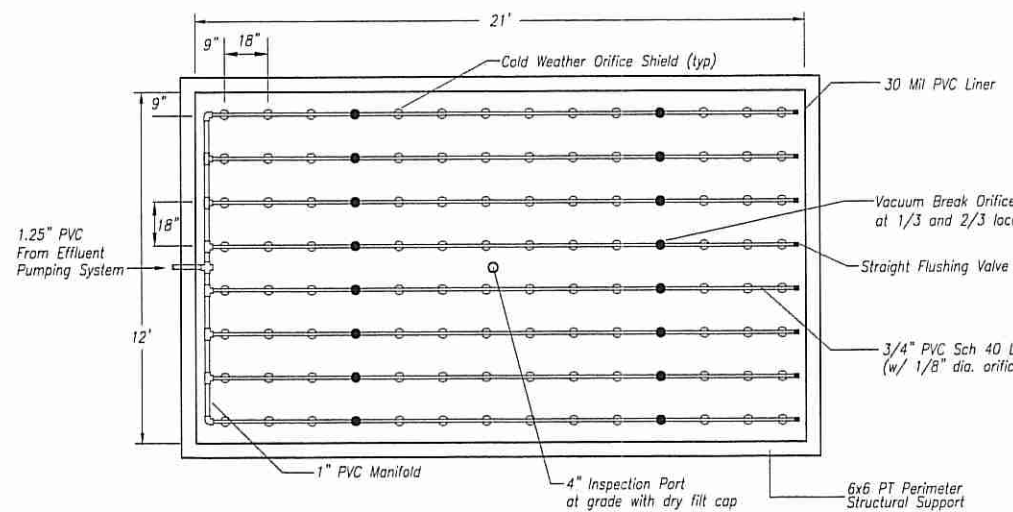
PREPARED FOR:
 RICHARD SANTIS
 23 HICKORY DRIVE
 SCITUATE, RI 02857
 TEL. 401-556-6107

PREPARED BY:
 ARMANDO J. RICCI, P.E.
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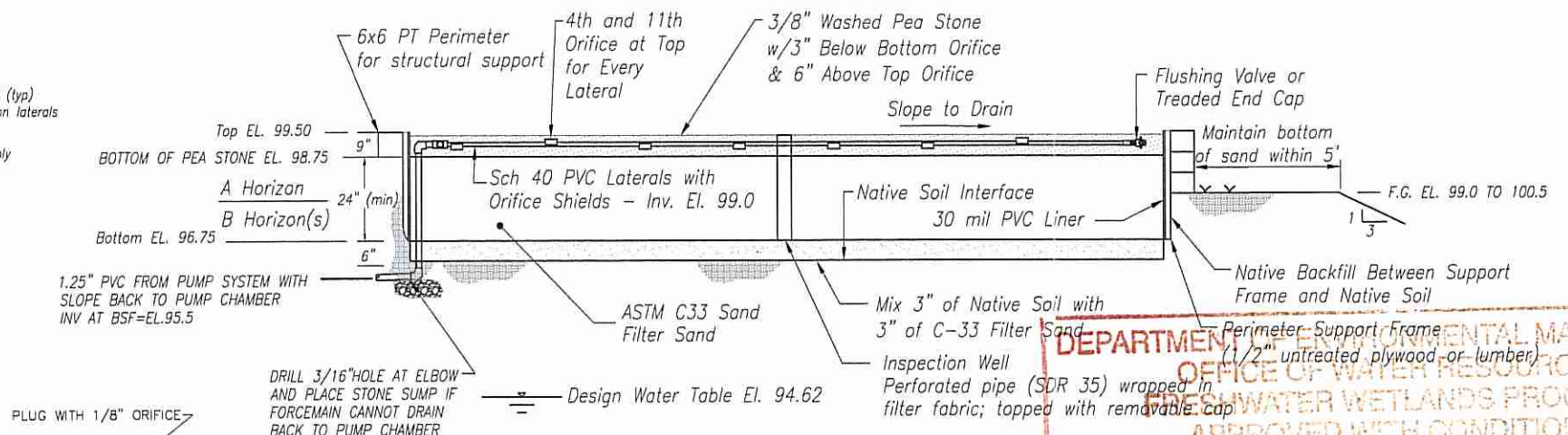
PROJECT:
 OWTS APPLICATION
 PLAT 31, LOT 82 - LOT B
 U.P.#8 GLEANER CHAPEL ROAD
 SCITUATE, RHODE ISLAND

DRAWING TITLE:
 SITE PLAN
 SHEET 1 OF 3
 SCALE: 1"=40'
 MAY 2016, rev JULY 2016

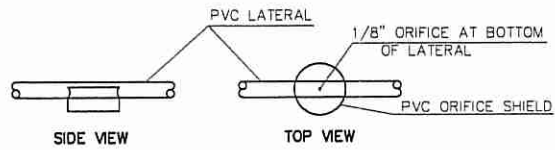
Charles A. Hester
 JUL 22 2016



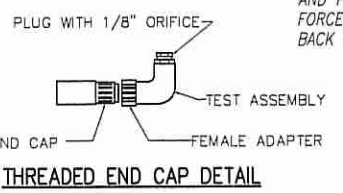
TOP VIEW - 10'x15' BOTTOMLESS SAND FILTER (SINGLE ZONE)



TYPICAL BOTTOMLESS SAND FILTER CROSS SECTION



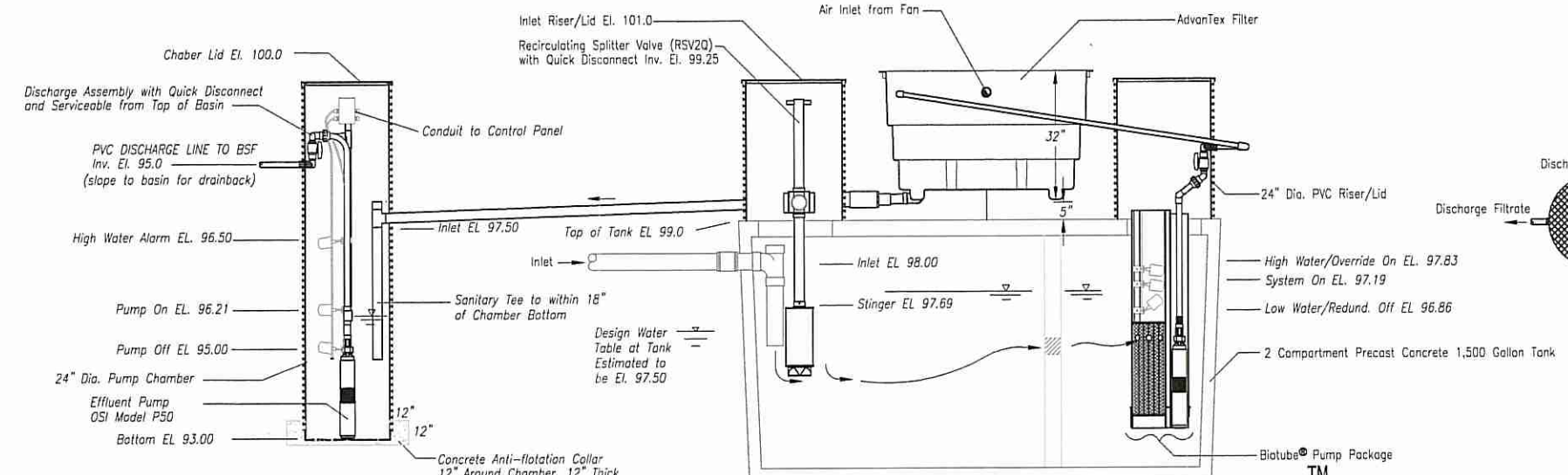
COLD WEATHER ORIFICE SHIELD DETAIL N.T.S.



12'x21' (252.0 S.F.) Bottomless Sand Filter - Single Zone - 112 Orifices

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NOTE: ORIFICES LOCATED AT THE 1/3 LOCATION AND 2/3 LOCATION ON EACH LATERAL SHALL BE DRILLED IN TOP OF LATERAL FOR VACUUM BREAK AND MANIFOLD DRAINBACK TO AVOID FREEZING. SHIELD SHALL BE PLACED OVER ORIFICE.

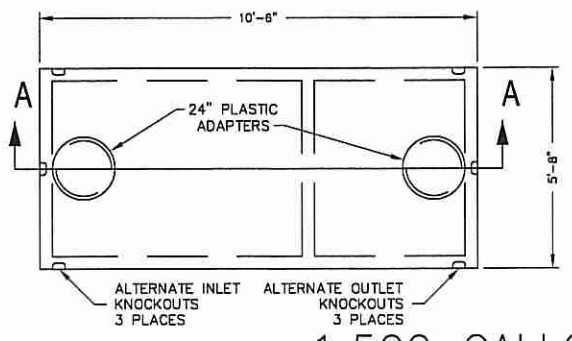


NOTE: DISCHARGE ASSEMBLY DRAWN TO SHOW KEY COMPONENTS - ALL PIPING AND FITTINGS SHALL BE INSTALLED TO ENSURE DRAIN-BACK INTO THE PUMP BASIN TO AVOID FREEZING OF SHALLOW BURY DISCHARGE PIPING (WHERE APPLICABLE).

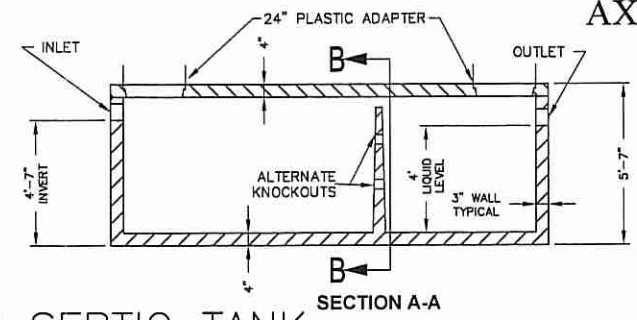
IF LIGHT DUTY TANK IS USED: ADD 2 CUBIC YARDS OF CONCRETE OVER TOP OF TANK AND TO SIDE FOR ANTI-FLOTATION
 IF HEAVY DUTY TANK IS USED: NO ADDITIONAL CONCRETE WEIGHT REQUIRED

AdvanTex Treatment System with High Head Pump Chamber

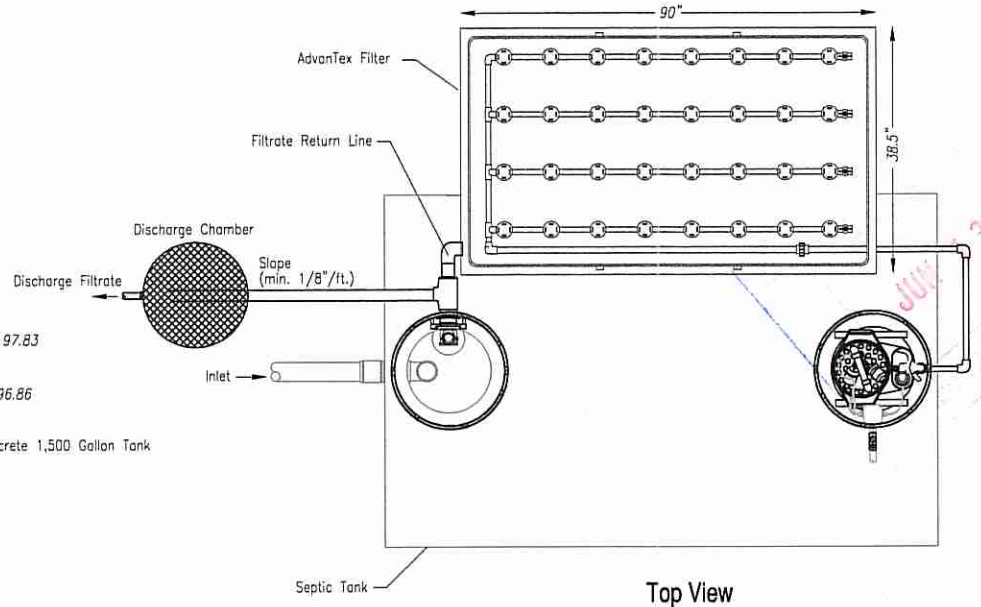
AX Series - Model 3b - No Scale



1,500 GALLON SEPTIC TANK



- NOTES:
1. CONCRETE - 5,000 PSI MINIMUM STRENGTH @ 28 DAYS
 2. STEEL REINFORCEMENT - ASTM A-615, GRADE 60
 3. COVER TO STEEL - 1\"/>



Top View

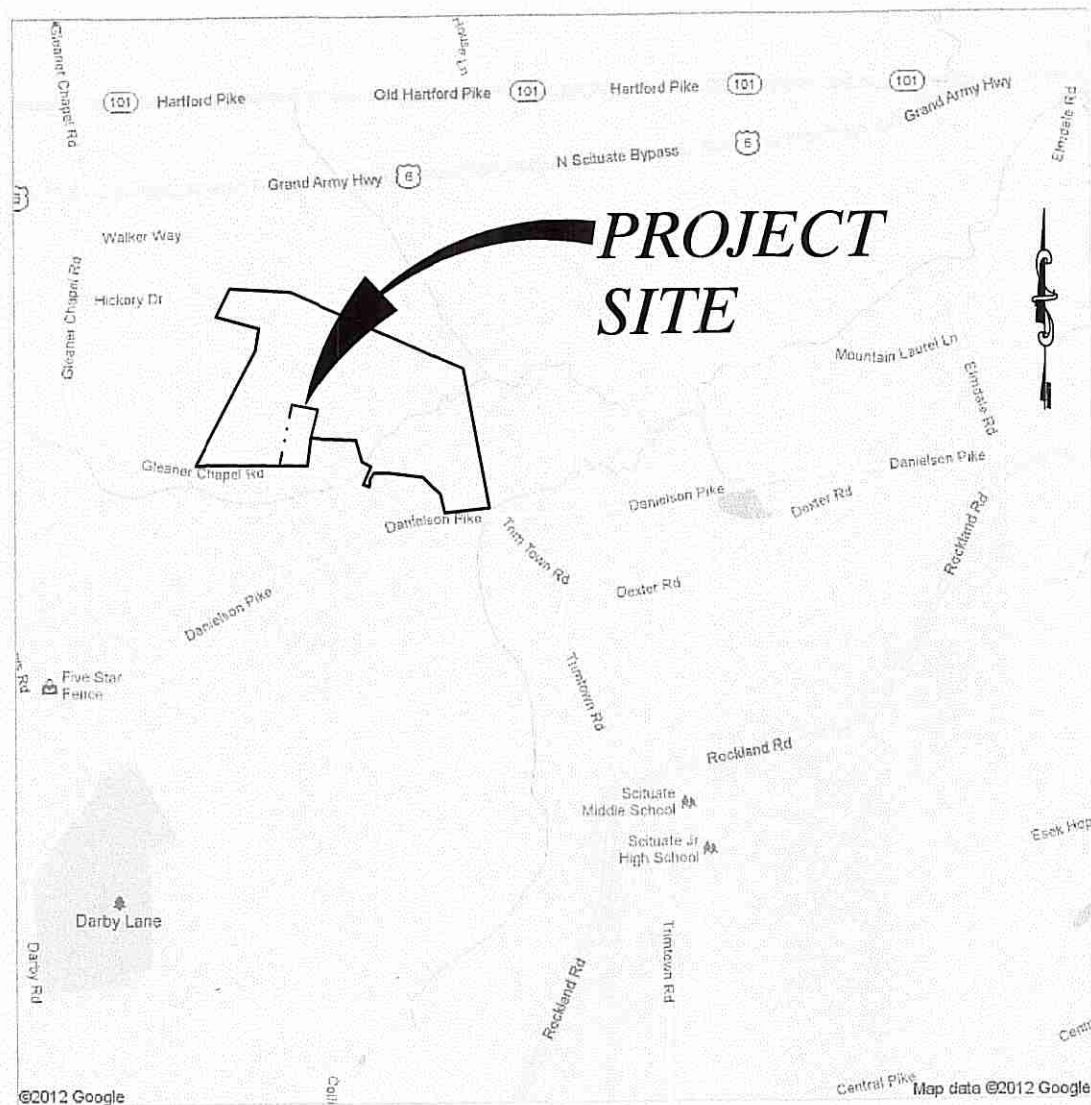
ARMANDO J. RICCI
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 5-25-16

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 SCITUATE, RHODE ISLAND

DRAWING TITLE:
 DETAILS
 SHEET 2 OF 3
 SCALE: AS NOTED
 MAY 2016



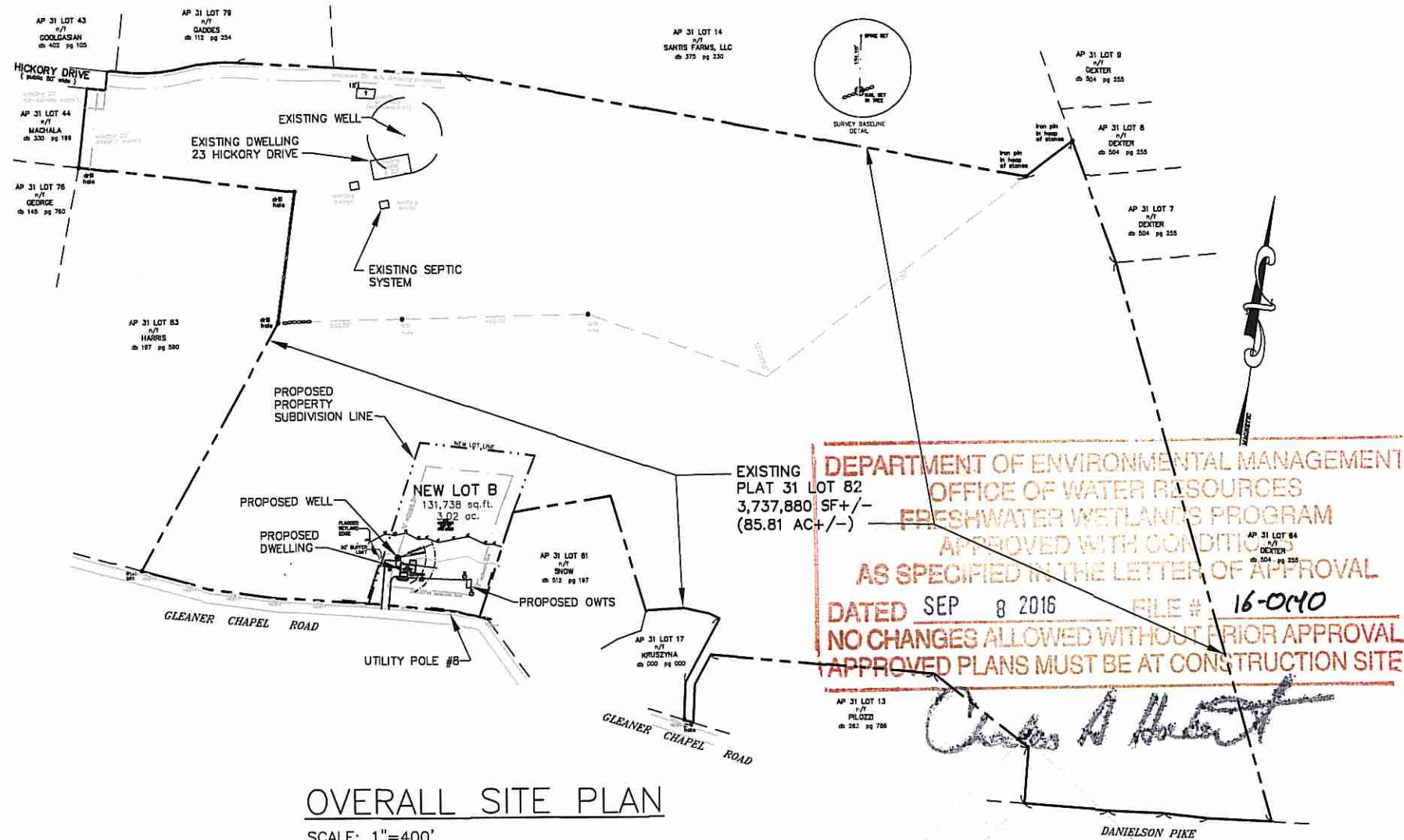
LOCUS
NOT TO SCALE

SEPTIC SYSTEM GENERAL NOTES:

- ALL DESIGN, CONSTRUCTION, AND MAINTENANCE REQUIREMENTS TO BE IN CONFORMANCE WITH THE RHODE ISLAND "RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS", LATEST EDITION.
- CLEAR ALL TREES AND STUMPS WITHIN 10 FEET OF THE SYSTEM.
- DESIGNER SHALL BE ON-SITE DURING SITE PREPARATION FOR BSF.
- EXCAVATE TO BOTTOM OF BSF, SCARIFY SOIL AND MIX IN 3" OF ASTM C33 FILTER SAND. IF ANY FILL IS PRESENT AT BOTTOM OF BSF ELEVATION, THE FILL SHALL BE REMOVED, THE TOP OF THE ORIGINAL GROUND SHALL BE SCARIFIED, SEPTIC GRAVEL SHALL BE PLACED TO BOTTOM OF BSF ELEV. AND THEN 2" OF FILTER SAND FOR THE BSF SHALL BE PLACED. THE BOTTOM 3" OF THE SEPTIC GRAVEL LAYER AND THE FILTER SAND LAYER SHALL BE MIXED WITH THE UNDERLYING SOIL.
- EXCESS SOIL, CONSTRUCTION MATERIALS, AND DEBRIS SHALL NOT BE STOCKPILED OR DISPOSED OF WITHIN A R.I. REGULATED WETLAND.
- SITE IS LOCATED WITHIN THE SCITUATE RESERVOIR DRINKING WATER SUPPLY WATERSHED CRITICAL RESOURCE AREA. SEPARATION TO GROUNDWATER IS 4 FEET AND SEPARATION TO ROCK IS GREATER THAN 6 FEET.
- ALL DRAINS WITHIN 200 FT OF SEPTIC SYSTEM ARE SHOWN. NO SUBSURFACE DRAINAGE WITHIN 200 FT. OF THE ISDS.
- NO POTABLE WATER SUPPLY PIPE WITHIN 25 FT. OF THE ISDS.
- EXISTING AND PROPOSED INDIVIDUAL WELLS WITHIN 200 FT. OF SEPTIC SYSTEM ARE SHOWN. NO INDIVIDUAL WELL WITHIN 100 FT. OF SEPTIC SYSTEM. NO PUBLIC WELL WITHIN 500 FT. OF SEPTIC SYSTEM.
- REFER TO PLANS FOR THE EXACT LOCATION OF SYSTEM, BUILDING, WELL, SYSTEM COMPONENTS AND SURFACE, INVERT AND BOTTOM OF SYSTEM ELEVATIONS.
- FILTER SAND FOR BSF SHALL MEET ASTM C33. STONE FOR BSF SHALL BE 3/8" ROUND DOUBLE WASHED.
- PIPING FROM HOUSE TO SEPTIC TANK SHALL BE PVC SCH. 40. PIPING CONNECTIONS TO ADVANTEX SHALL BE PVC SCH 40. PIPING FROM PUMP CHAMBER TO BSF SHALL BE EITHER PVC SCH 40 OR HDPE RATED AT 200 PSI. PIPING WITHIN BSF SHALL BE PVC SCH 40.
- FINISH GRADE SHALL MAINTAIN A MINIMUM ELEVATION OF 96.75 WITHIN 5 FEET OF BSF PERIMETER THEN 3:1 SLOPE TO EXISTING GROUND. MAINTAIN ELEVATION 96.75 WITHIN 10 FEET OF SEPTIC TANK. FINISH GRADE SHALL DIVERT SURFACE WATER AWAY FROM SEPTIC TANK AND BSF.
- INSTALLATION MUST BE SUPERVISED BY DESIGN ENGINEER.
- BENCH MARK IS SHOWN ON DRAWING AND IS WITHIN 150' OF SYSTEM.
- WETLANDS IDENTIFICATION AND SOIL EVALUATIONS WERE PERFORMED BY NATURAL RESOURCE SERVICES INC.

WETLAND GENERAL NOTES:

- PROPERTY LINE SURVEY AND SITE TOPOGRAPHIC INFORMATION WAS ACQUIRED BY SURVEY PERFORMED BY PETER CIPOLLA PLS.
- WETLAND DELINEATION WAS PERFORMED BY NATURAL RESOURCES LTD.
- ACCORDING TO THE TOWN OF SCITUATE, RHODE ISLAND FLOOD INSURANCE RATE MAP (PANEL 44007C0260G, DATED MARCH 1, 2009) PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE SITE IS LOCATED WITHIN ZONE X - MINIMAL FLOOD HAZARD.
- WITHIN NON-PAVED OR VEGETATED AREAS, THE CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES TO AREAS LOCATED WITHIN THE LIMIT OF VEGETATIVE CLEARING AND SURFACE DISTURBANCE (LOD) AS SHOWN ON THE PLAN.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS IN LOCATIONS AS SHOWN ON THE PLAN OR AS DICTATED BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. THE CONTRACTOR SHALL MAINTAIN THE EROSION AND SEDIMENTATION CONTROLS IN EFFECTIVE CONDITION DURING CONSTRUCTION AND UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH GRASS.
- NO WORK IS PROPOSED WITHIN WETLAND AND 50 FOOT BUFFER AREA. ENTIRE SITE IS LOCATED WITHIN 200 FT RIVERBANK WETLAND OF RUSH BROOK SITUATED ON THE SOUTH SIDE OF GLEANER CHAPEL ROAD..



OVERALL SITE PLAN
SCALE: 1"=400'

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Armando J. Ricci

JUN 13 2016

SOIL EVALUATION RESULTS (7-16-15):

TEST HOLE	EXIST GROUND ELEV	ORIG GROUND ELEV	GROUNDWATER ELEV	LEDGE ELEV.
TH 3	96.12	96.12	18" = EL.94.62	108" = EL.87.12
TH 4	96.20	96.20	20" = EL.94.53	106" = EL.87.37

DESIGN INFORMATION FOR NEW INDIVIDUAL SEWAGE DISPOSAL SYSTEM:

DESIGN DATA: 4 BDRM SYSTEM - USING ADVANTEX AX20 WITH BOTTOMLESS SAND FILTER
ESTIMATED FLOW: 115 GAL/BDRM X 4 BDRMS = 460 GPD
SEPTIC TANK: 1,500 GAL. REQ'D - 1,500 GAL. SPECIFIED
LOADING RATE: 1.9 GAL/SF/DAY (SOIL CATEGORY = B)
GROUNDWATER: 18 INCHES FROM ORIGINAL GROUND (SOIL EVAL PERFORMED 7/16/15)
REQUIRED AREA: 460 GALS. / 1.9 GALS/SF/DAY = 242.1 SF REQUIRED - USE 12'X21' BOX
PROVIDE DEMAND DOSING TO BSF WITH 24 DOSE/DAY, MAX 0.25 GAL/DOSE
ORIFICES REQ'D: 460 GAL / 24 DOSES / 0.25 GAL/DOSE = 76.7 ORIFICES REQUIRED
USE 8 LATERALS SPACED 18" O.C. AND 14 ORIFICES PER LATERAL: 112 ORIFICES PROVIDED
DOSE PER ORIFICE = 460 GPD / 112 ORIFICES / 24 DOSES = 0.17 GAL/ORIFICE/DOSE.
VOLUME OF DOSE = 460 GAL / 24 DOSES = 19.2 GALLONS
PUMP DOSE VOL = ORIFICE VOL + TRANSPORT PIPE VOL = 19.2+9.3=28.5 GAL
HEIGHT BETWEEN PUMP ON AND OFF FLOAT = 28.5 GAL/7.48/(3.14x1x1)=1.21 FT
THE ADVANTEX UNIT SHALL BE TIME DOSED WITH 24 CYCLES PER DAY. THE BOTTOMLESS SAND FILTER SHALL BE DEMAND DOSED FOLLOWING THE TIME DOSED ADVANTEX UNIT.

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DRAWING TITLE:

NOTES & LOCUS
SHEET 3 OF 3
SCALE: AS NOTED
MAY 2016