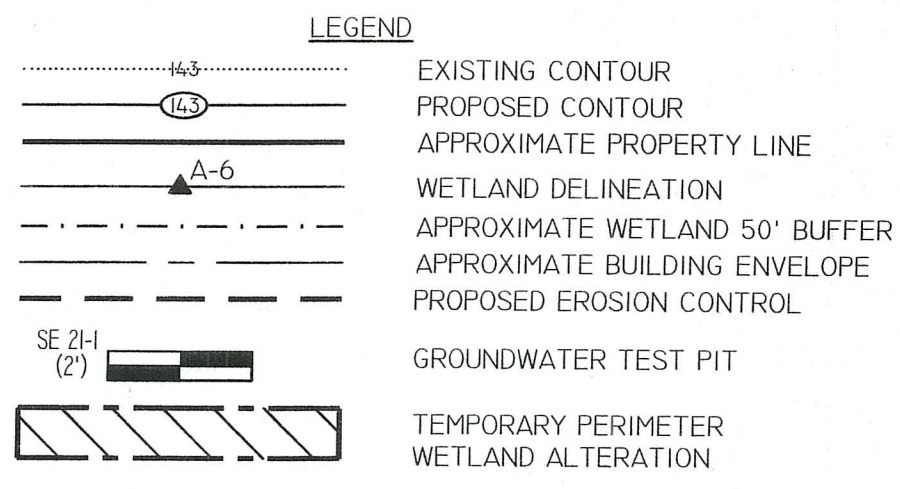
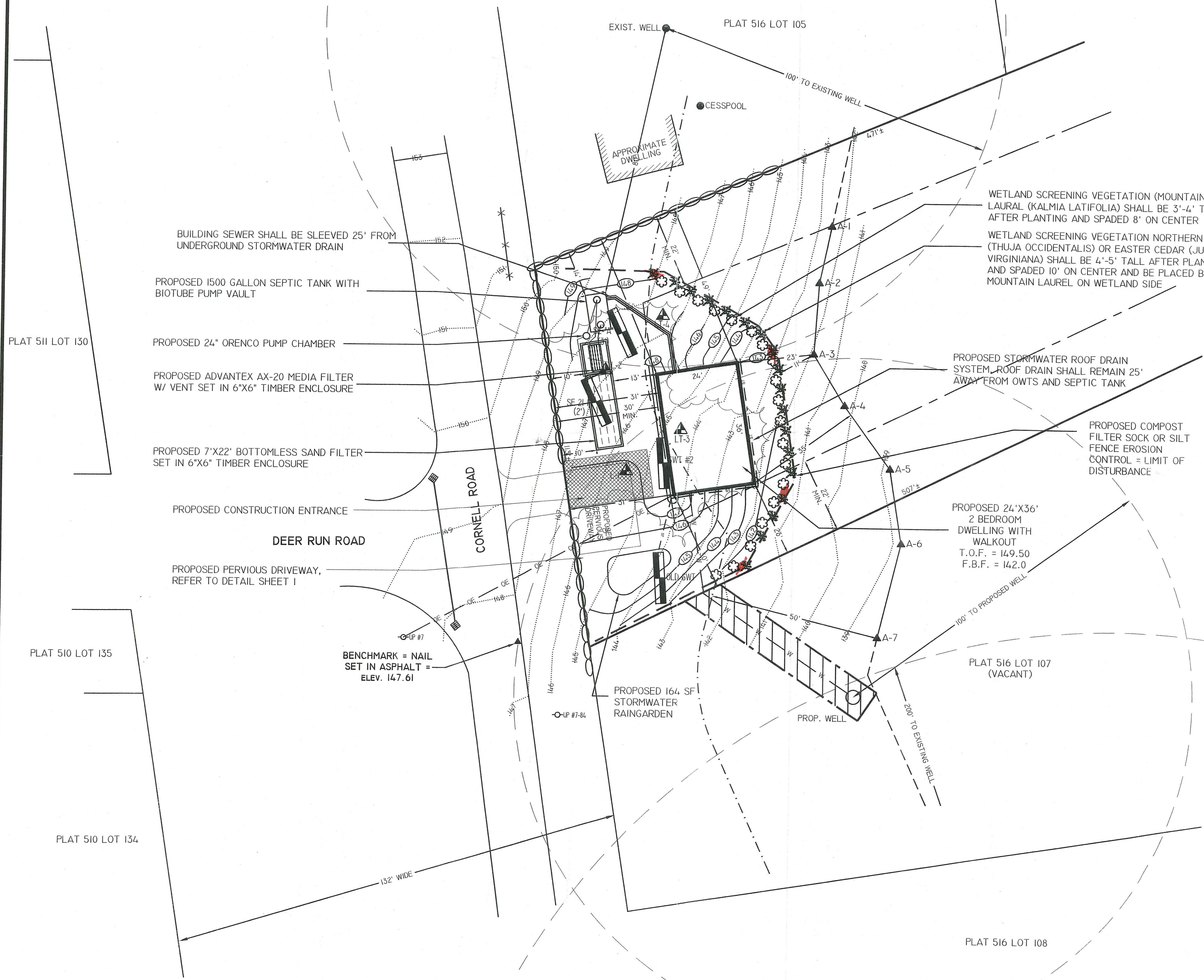


NOTES FOR PERIMETER WETLANDS RESTORATION:

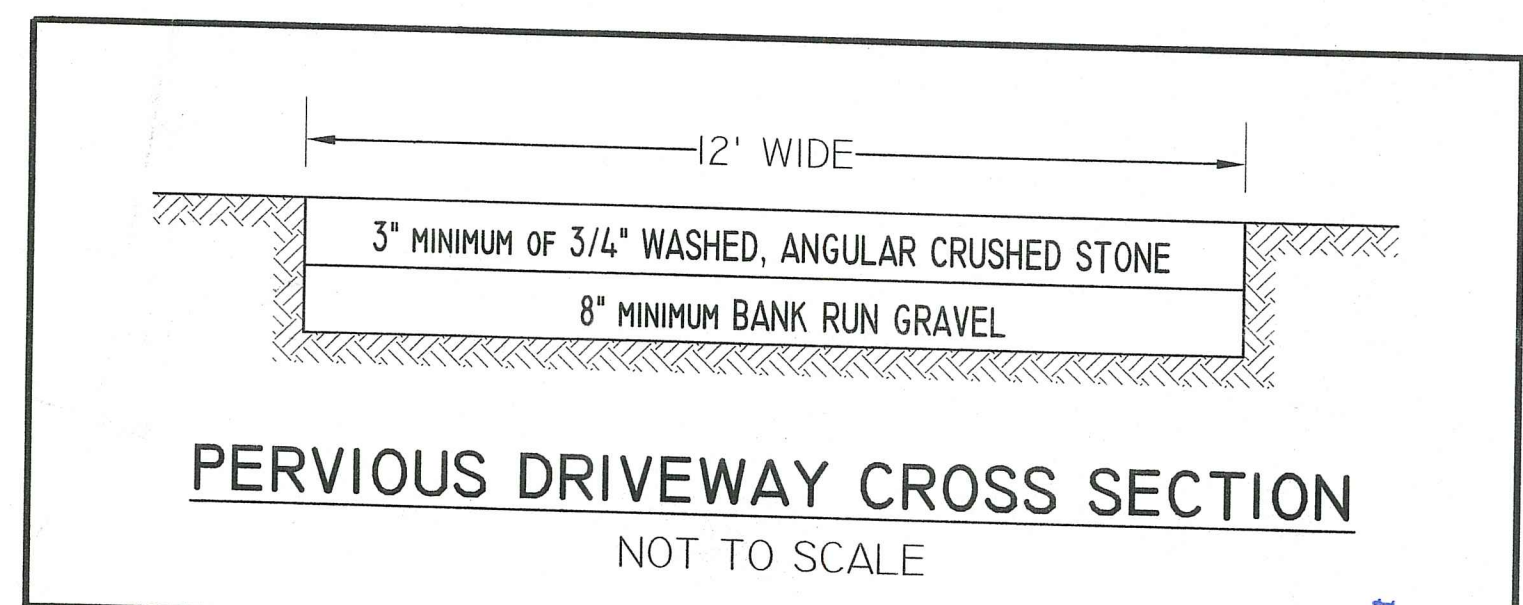
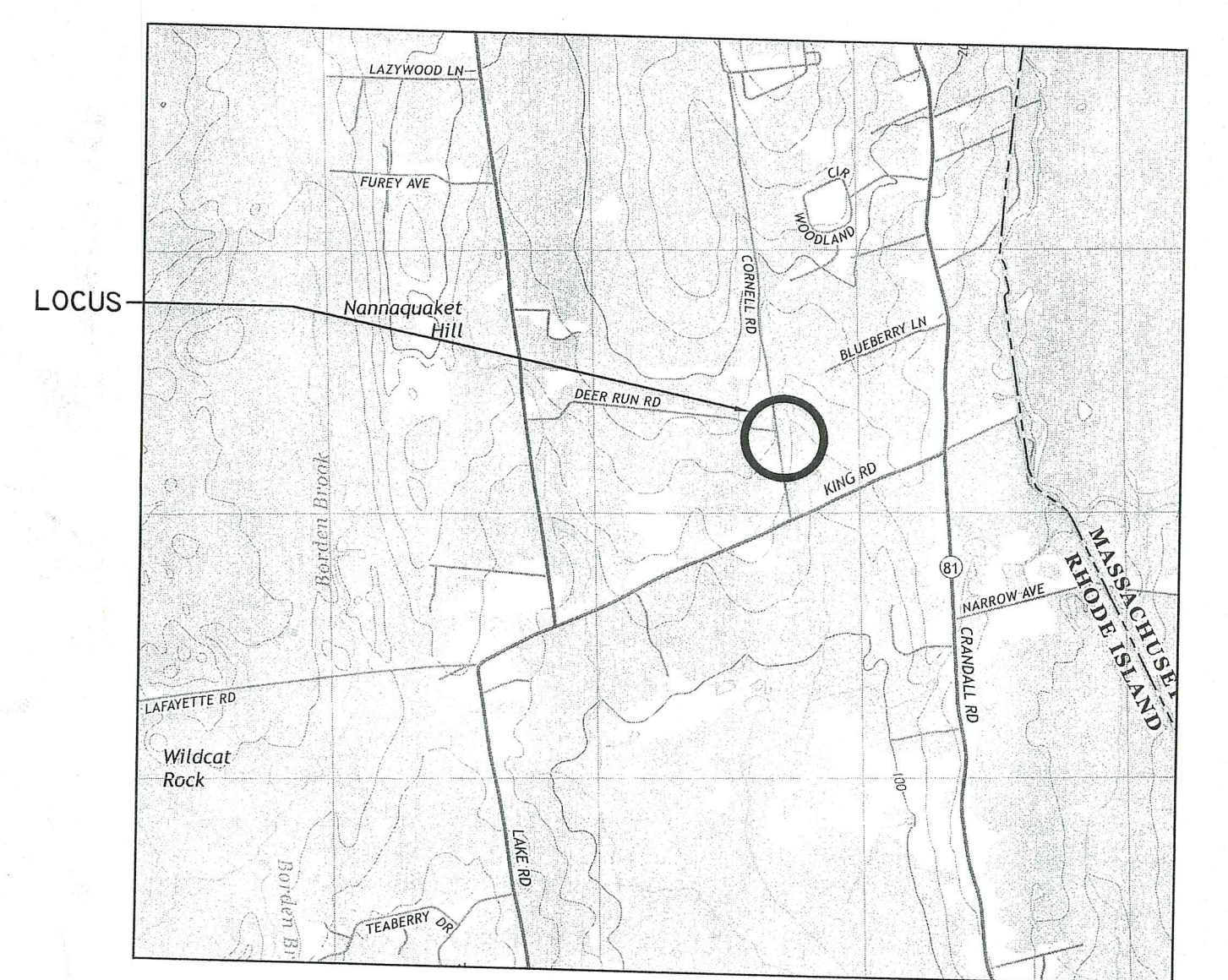
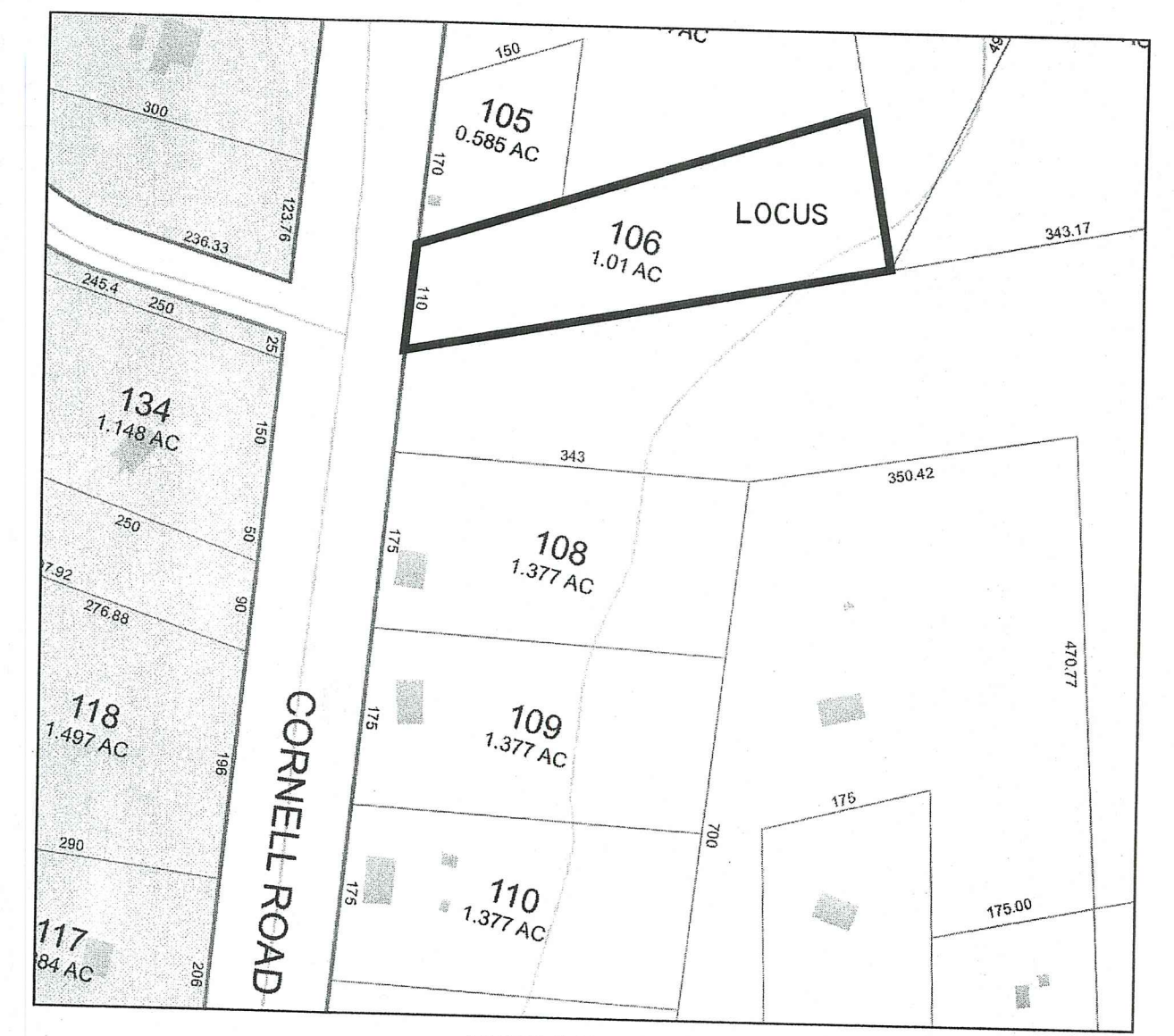
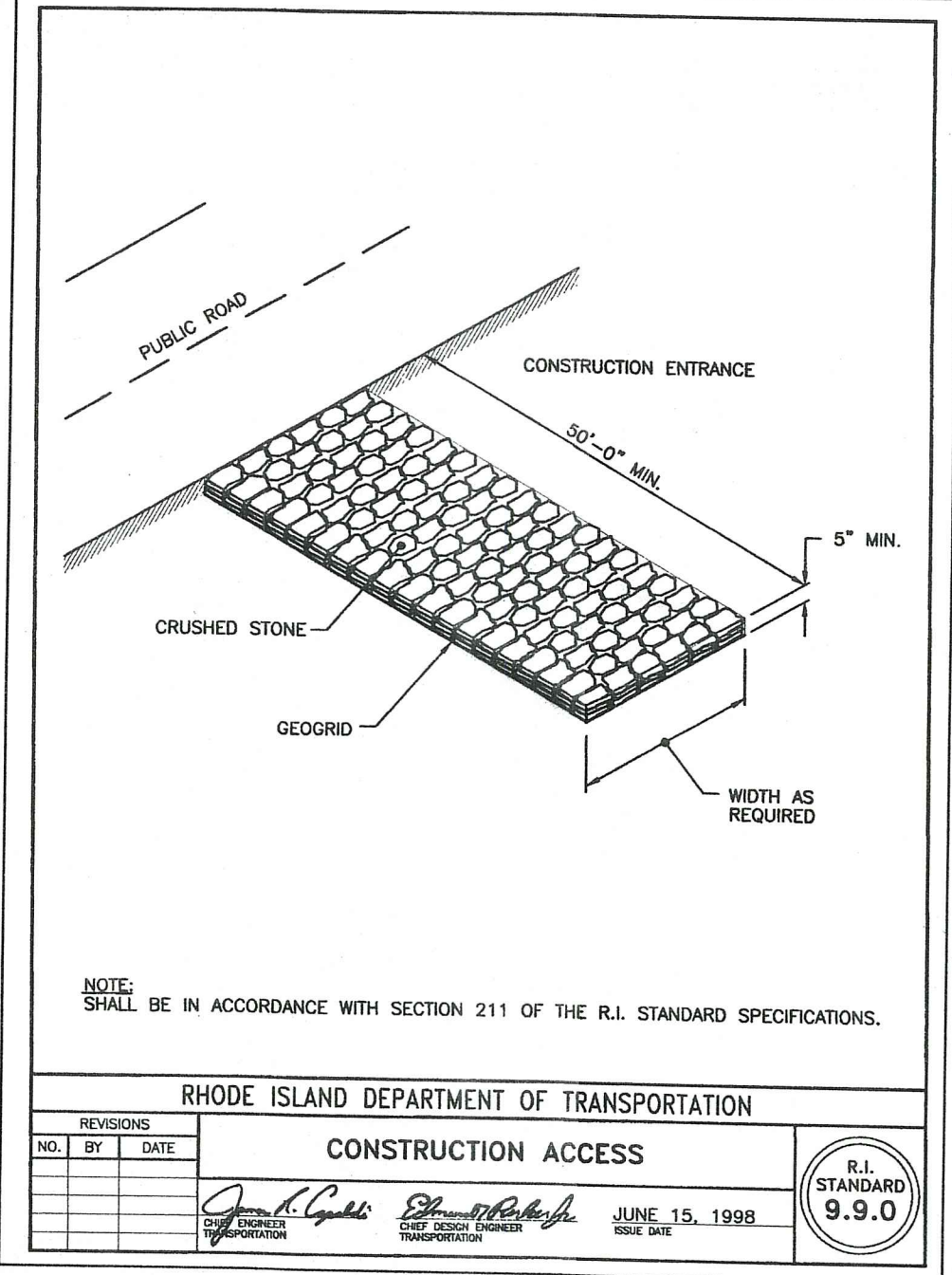
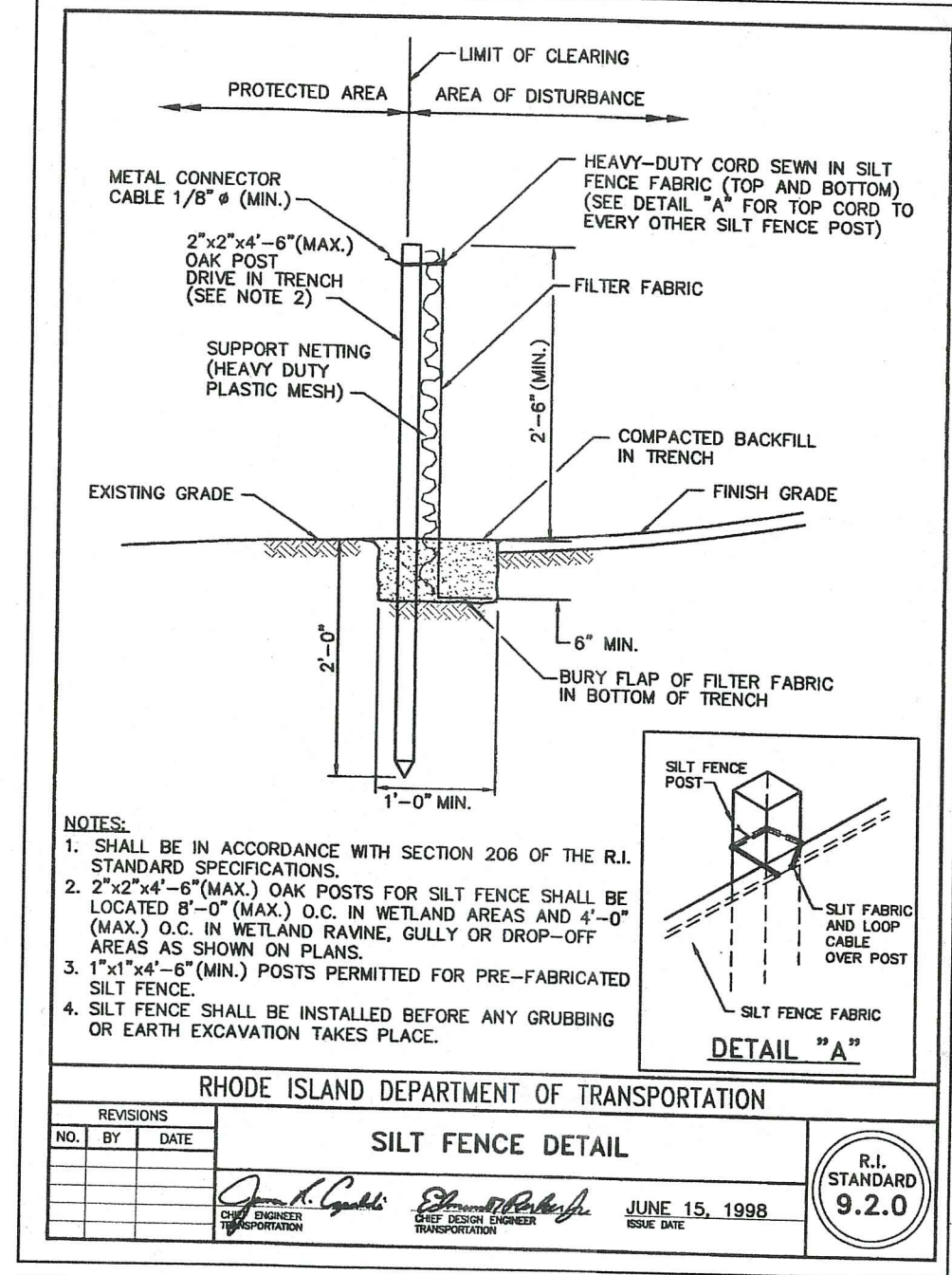
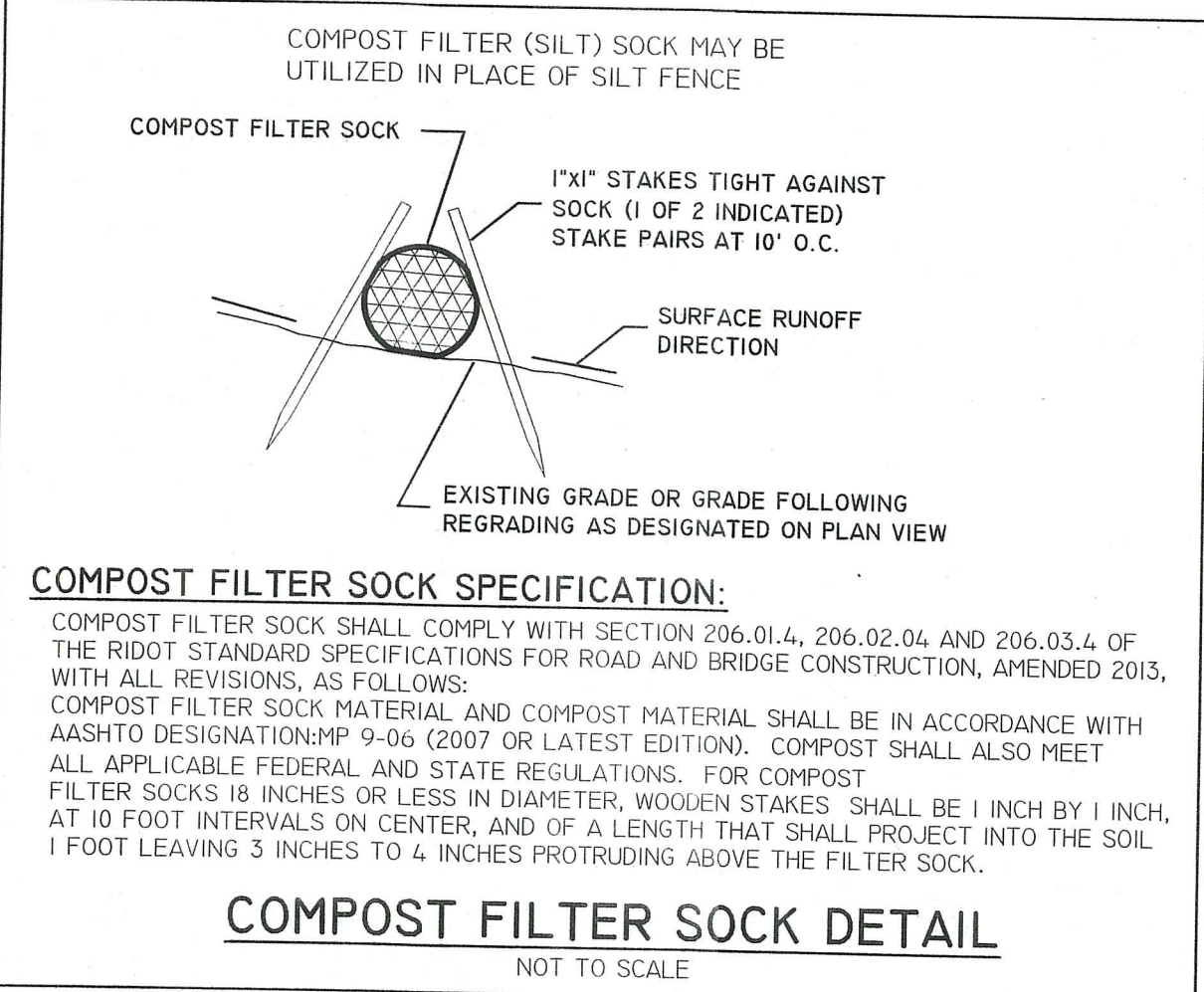
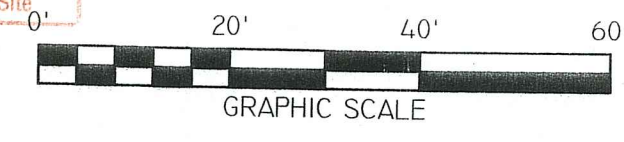
1. ANY DRILLING SPOILS SHALL BE REMOVED AND DISPOSED OF OUTSIDE OF REGULATED WETLANDS.
2. THE DISTURBED AREA SHALL BE REGRADED TO SMOOTH OUT RUTS FROM THE WELL DIGGING OPERATIONS.
3. ALL DISTURBED SOILS SHALL BE SEEDED WITH A CONSERVATION GRASS MIXTURE.
4. THE RESTORATION AREA SHALL BE PLANTED WITH THE FOLLOWING:
 - (12) HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM)
 - (12) PEPPERBUSH (CLETHRA ALNIFOLIA)
5. THE PLANTINGS SHALL BE WATERED AS NEEDED THROUGHOUT THE FIRST GROWING SEASON TO ENSURE SURVIVAL.

● = Permanent buffer markers per RIDEM



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL

OWTS# 0033-1471 F.W.M.# 22-0084
APPROVED: [Signature] DATE: 6/2/22
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

NOTE PER DEM:
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

WILLIAM F. SMITH
PROFESSIONAL ENGINEER
No. 65084

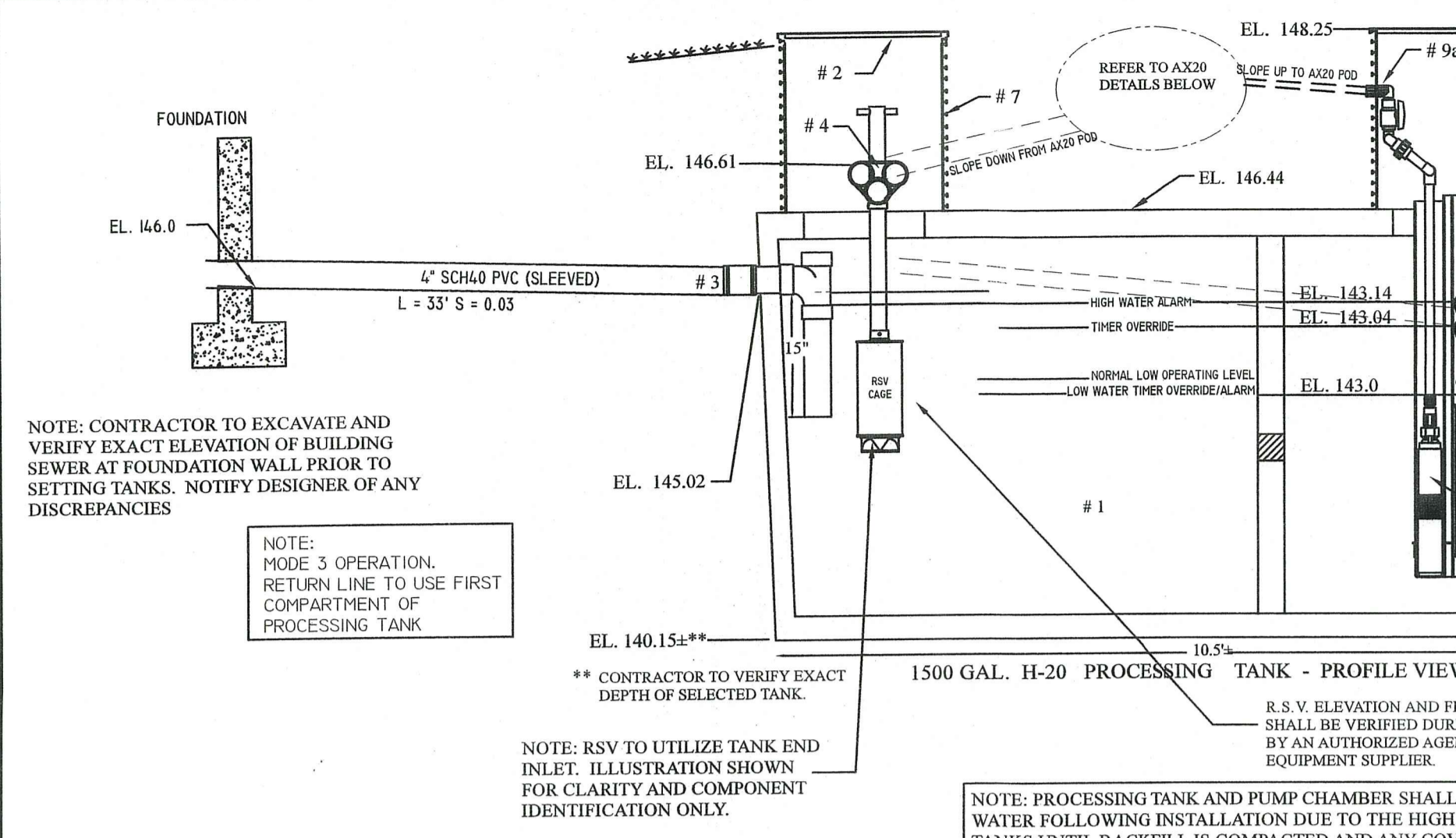
PROPOSED OWTS NEW CONSTRUCTION PLAN
PREPARED FOR
RAYMOND MELLO
ASSESSOR'S PLAT 516 LOT 106
CORNELL ROAD
TIVERTON, RHODE ISLAND

SCALE: 1" = 20' DATE: FEBRUARY 2, 2022

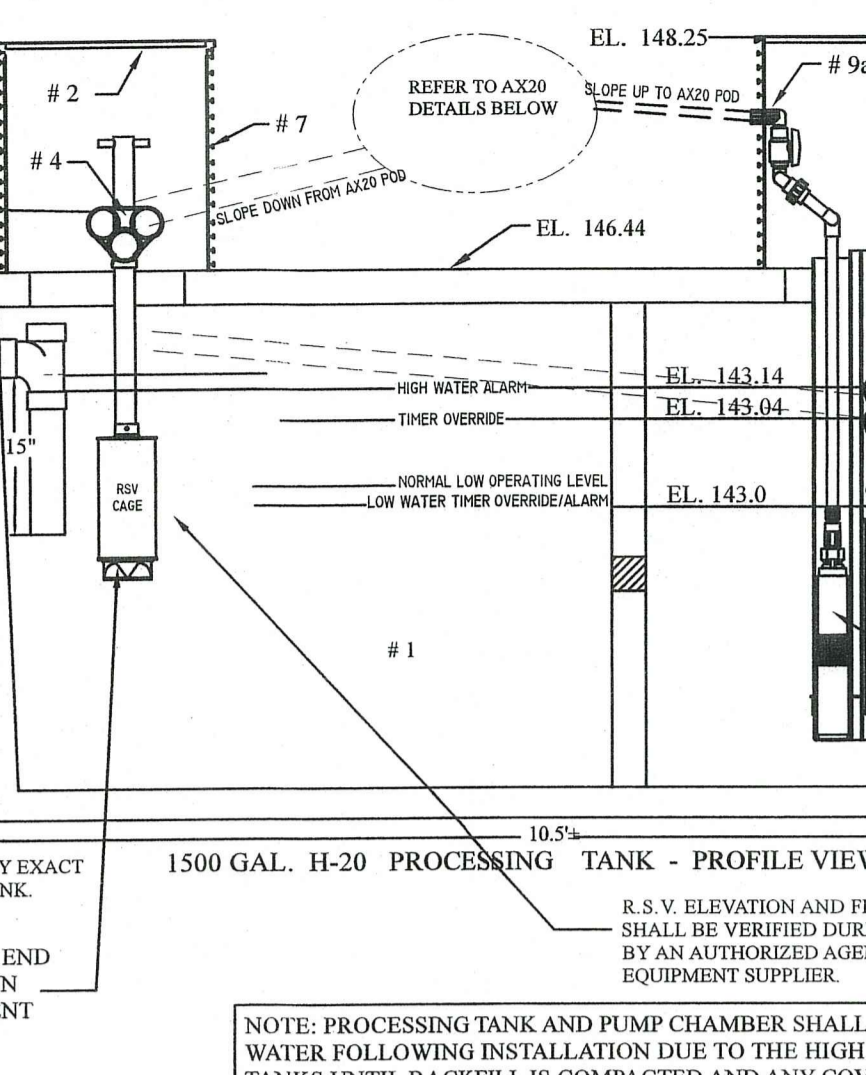
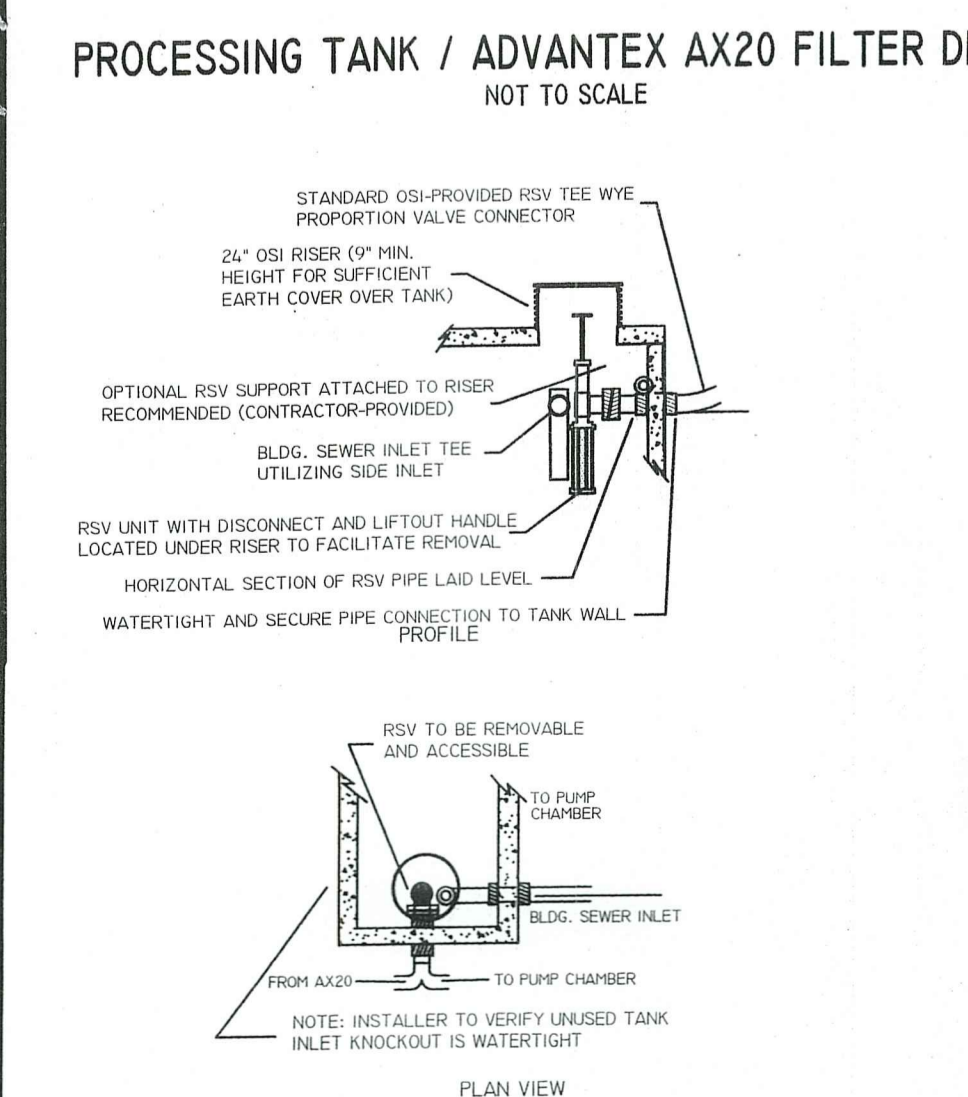
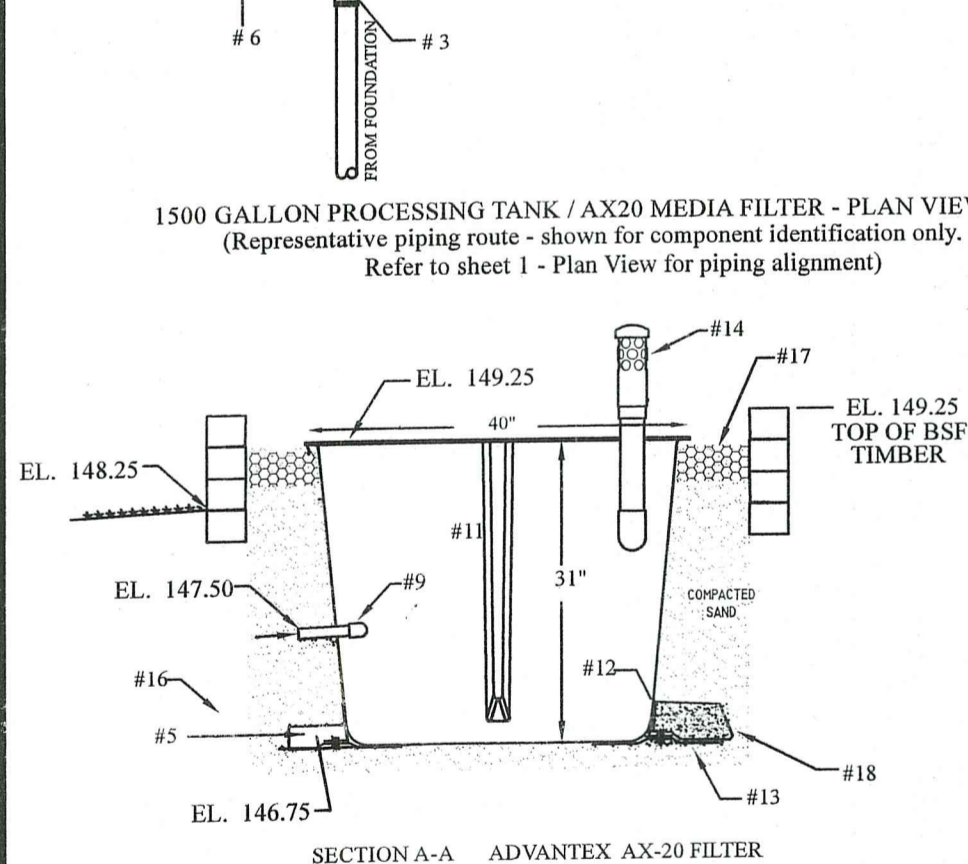
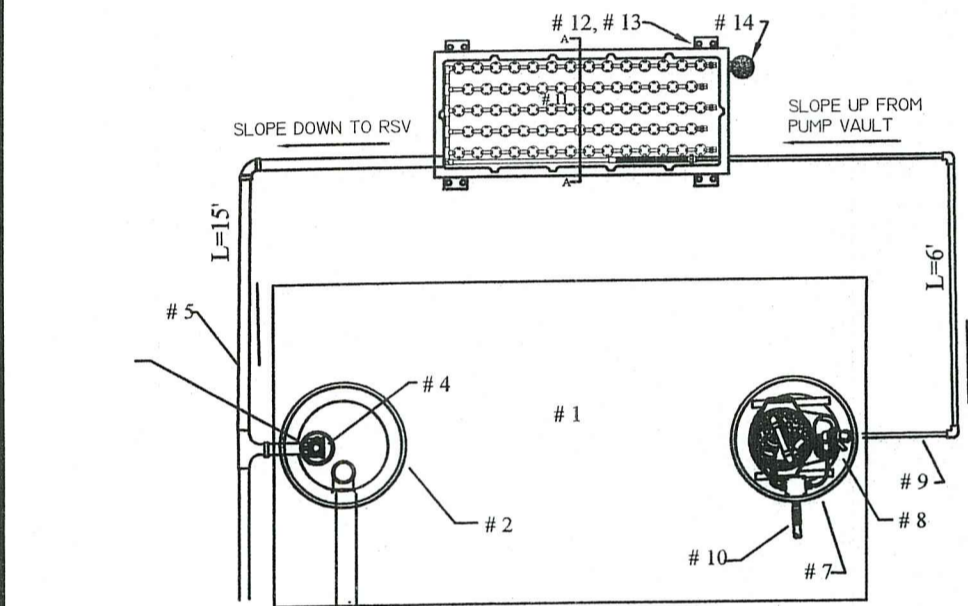
Civil Engineering Concepts, Inc.
34A MAIN STREET
LITTLE COMPTON, RI 02857
PH: (401) 592-0177
FAX: (401) 592-0178
EMAIL: wsmithccc@aol.com

REVISIONS:
1) 05/13/22: Edits per RIDEM comments (3/29/22)

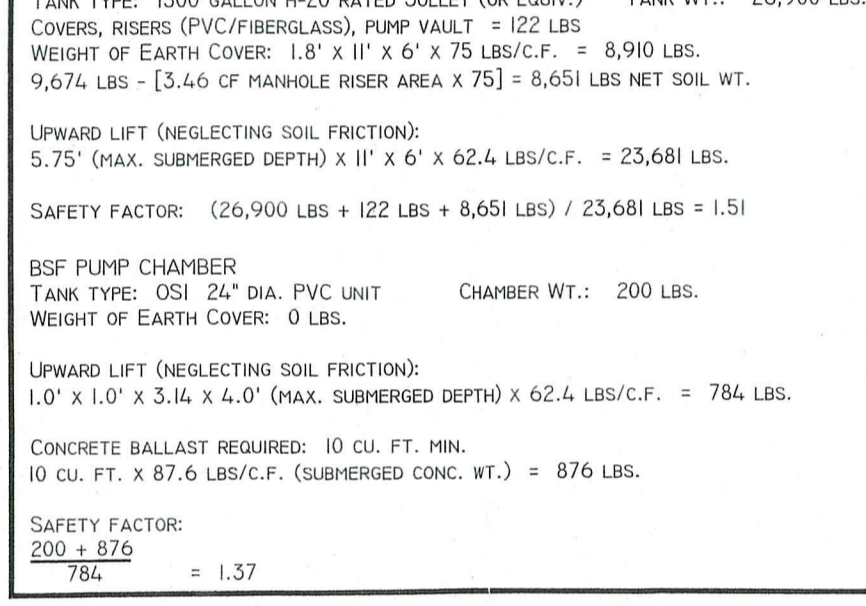
SHEET 1 OF 2 JOB#: 21-053



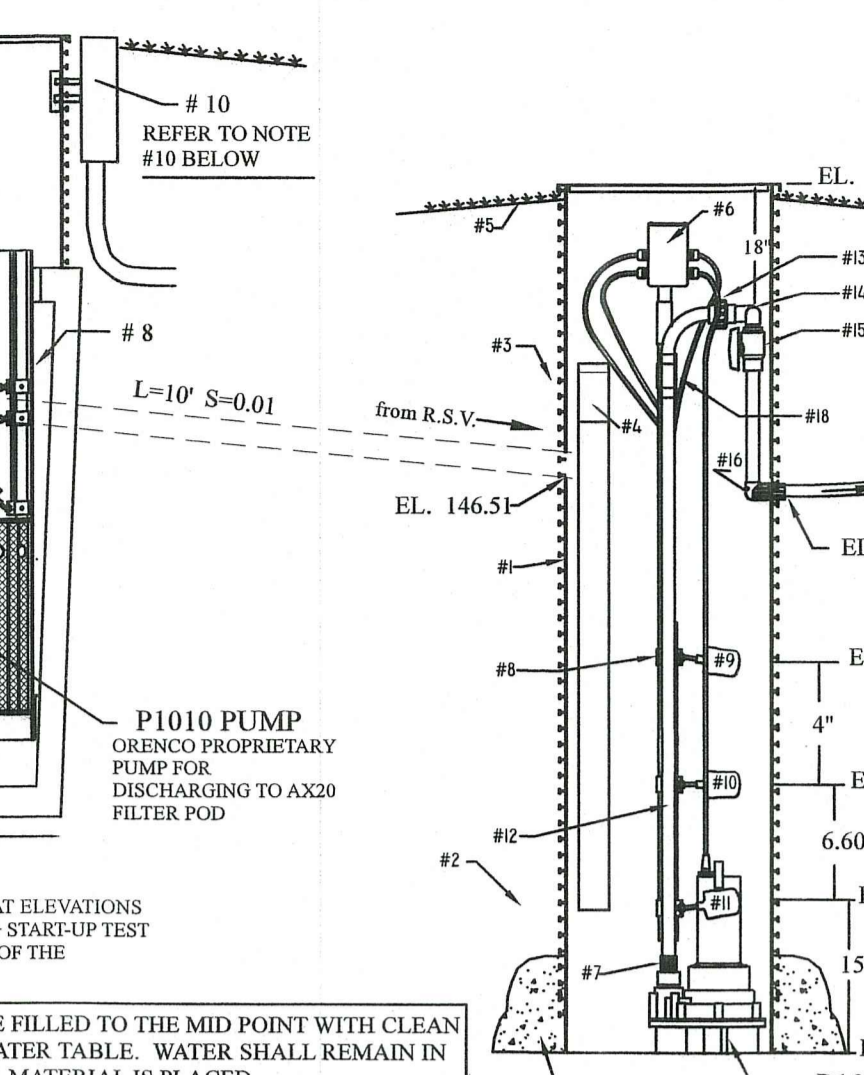
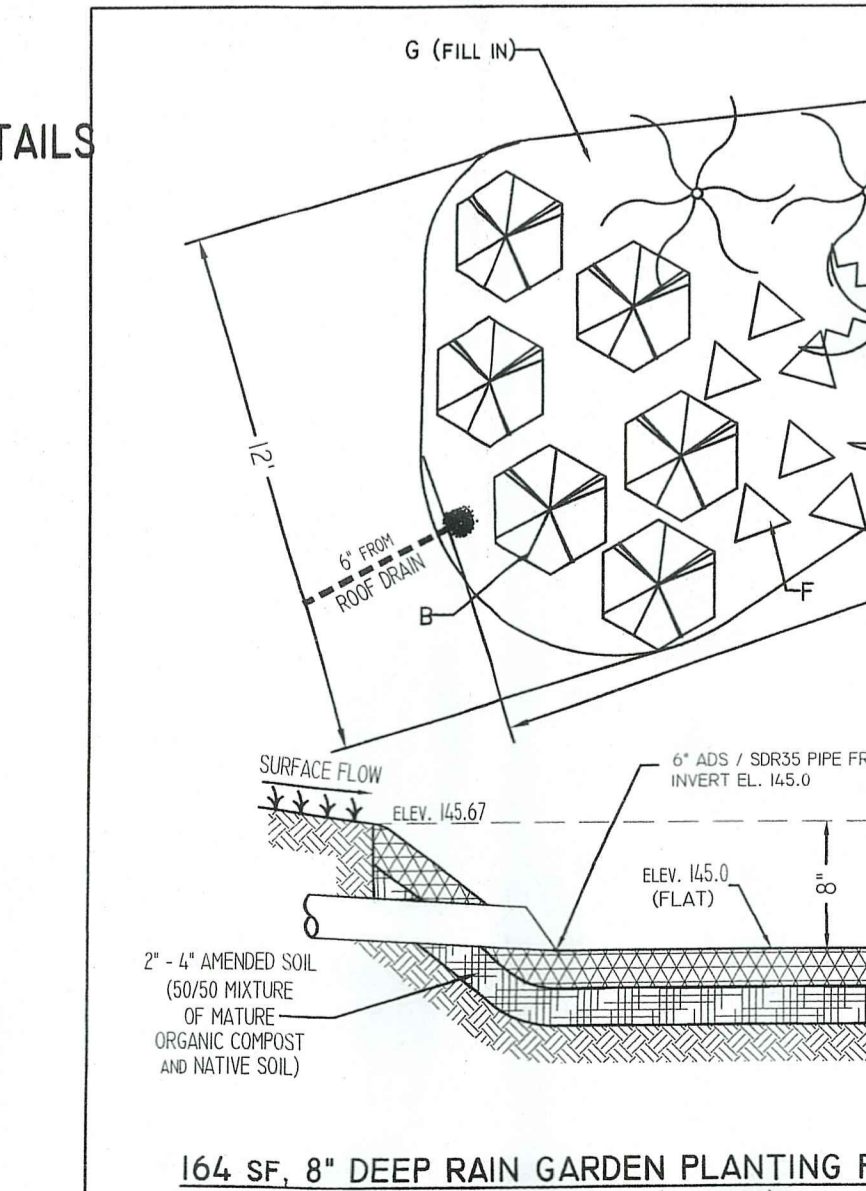
- 1500 GALLON H-20 RATED PROCESSING TANK WITH BAFFLE WALL.
- 24" DIA. OSI PVC INLET RISER, W/ FIBERGLASS BOLT DOWN COVER, ON WATERTIGHT TANK ADAPTER.
- 4" SCH-40 PVC BUILDING SEWER PIPE W/ INLET TEE.
- REGULATION SPLITTER VALVE (MANUFACTURER SPECIFIED).
- 2" SCH-40 GRAVITY PIPE FROM AX20 POD TO R.S.V.
- 2" SCH-40 GRAVITY PIPE FROM R.S.V. TO B.S.F. PUMP CHAMBER.
- 24" DIA. OSI PVC OUTLET RISER, W/ FIBERGLASS BOLT DOWN COVER, ON WATERTIGHT TANK ADAPTER.
- OSI BIOTUBE REGRIC. PUMP PACKAGE W/ OSI PFS050S, 1/2 HP, 1" DISCHARGE PUMP.
- 1" CLASS 200 (SCH40) PVC FROM BIOTUBE AX PUMP TO AX20 POD.
- WATERPROOF / VAPOR-PROOF ELECTRICAL JUNCTION BOX. BOX TO BE POSITIONED OVER END OF TANK TO ALLOW FOR MODIFIED CONDUIT SWEEP.
- ADVANTEX AX-20 REGRIC. MEDIA FILTER POD.
- FACTORY INSTALLED BRACKETS (1 OF 4).
- CONTRACTOR INSTALLED, FACTORY PROVIDED, ANTI-FLOATATION FLANGES (1 OF 2).
- OSI PASSIVE AIR INTAKE VENT.
- 6" x 6" P.T. TIMBER WALL (SAME CONSTRUCTION AS B.S.F.).
- OSI PUMP CHAMBER "OFF" FLOAT.
- 3" LAYER OF MULCH OR PEA GRAVEL EXTENDING FROM TOP OF COMPACTED GRANULAR FILL UP TO 1" BELOW AX COVER.
- 2 CU. FT. OF POURED CONCRETE ON EACH OF TWO ANTI-FLOATATION FLANGES.



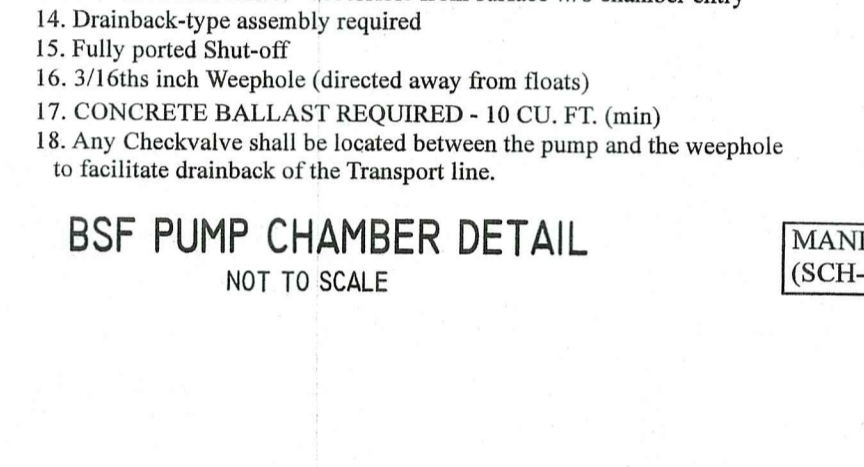
- PVC water tight basin w/ fiberglass cover
- Backfill material to be compacted (1 lift) granular (sandy) fill
- 2" SCH-40 PVC (gravity) from R.S.V. Pressure rating fittings required, DWV fittings not permitted.
- 2" x 2" x 2" SCH-40 tee with drop pipe extending to lowest floor
- Finished grade to be 1" min. below cover
- Waterproof / vapor-proof PVC junction / splice box & elec. conduit
- SCH-40 reducer (if necessary).
- Level Control Float Assembly - removable w/o entry into chamber
- "ALARM" Float
- Discharge pump ON
- Discharge pump OFF
- Discharge pump piping: Class 200 psi (SCH-40) with pressure rated fittings - DWV fittings not permitted
- Threaded Disconnect - accessible from surface w/ chamber entry
- Drainback-type assembly required
- Fully ported Shut-off
- 3/16ths inch Weepholes (directed away from floats)
- CONCRETE BALLAST REQUIRED - 10 CU. FT. (min)
- 17" CONCRETE BALLAST REQUIRED - 10 CU. FT. (min)
- Any Checkvalve shall be located between the pump and the weepholes to facilitate drainback of the Transport line.



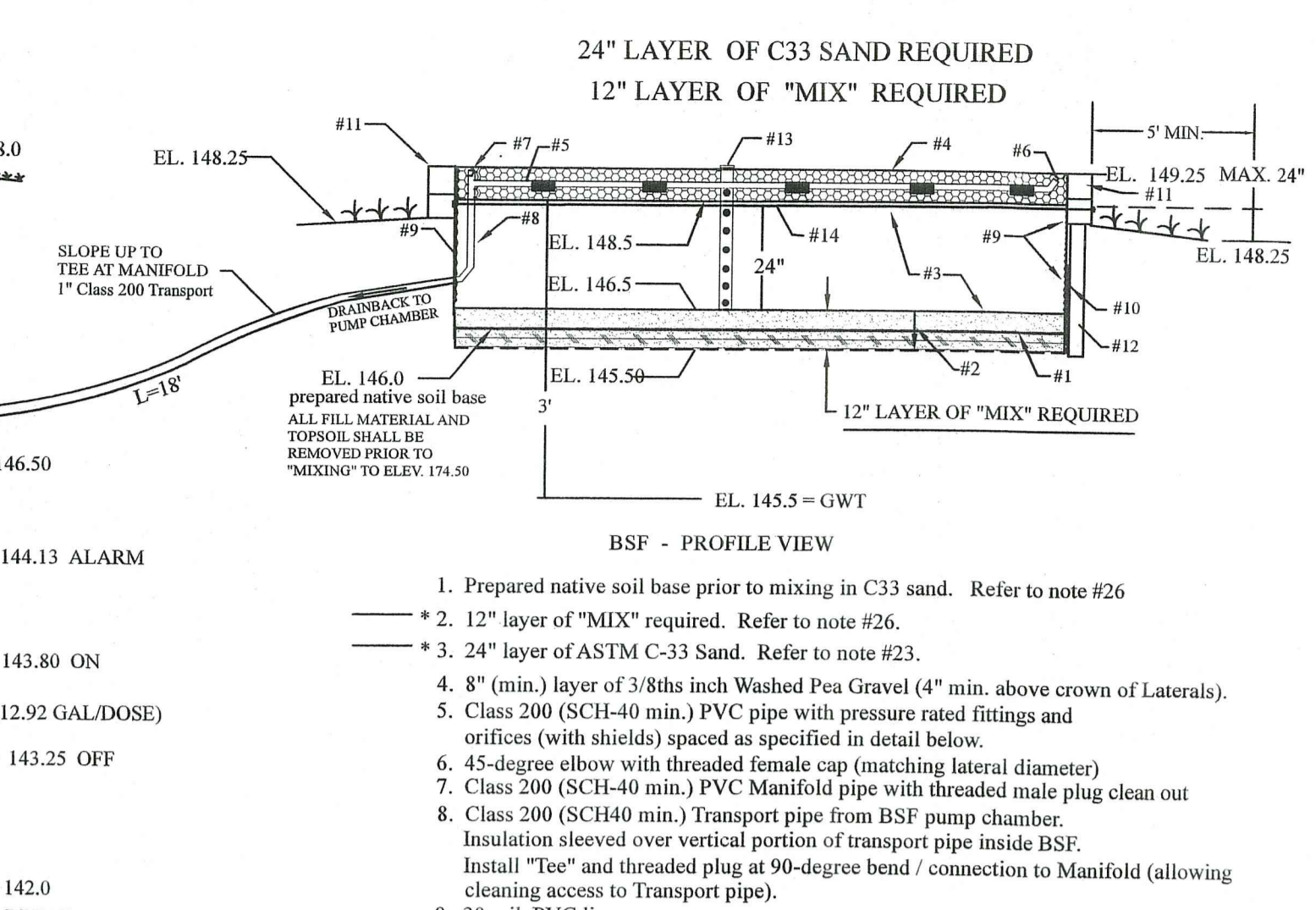
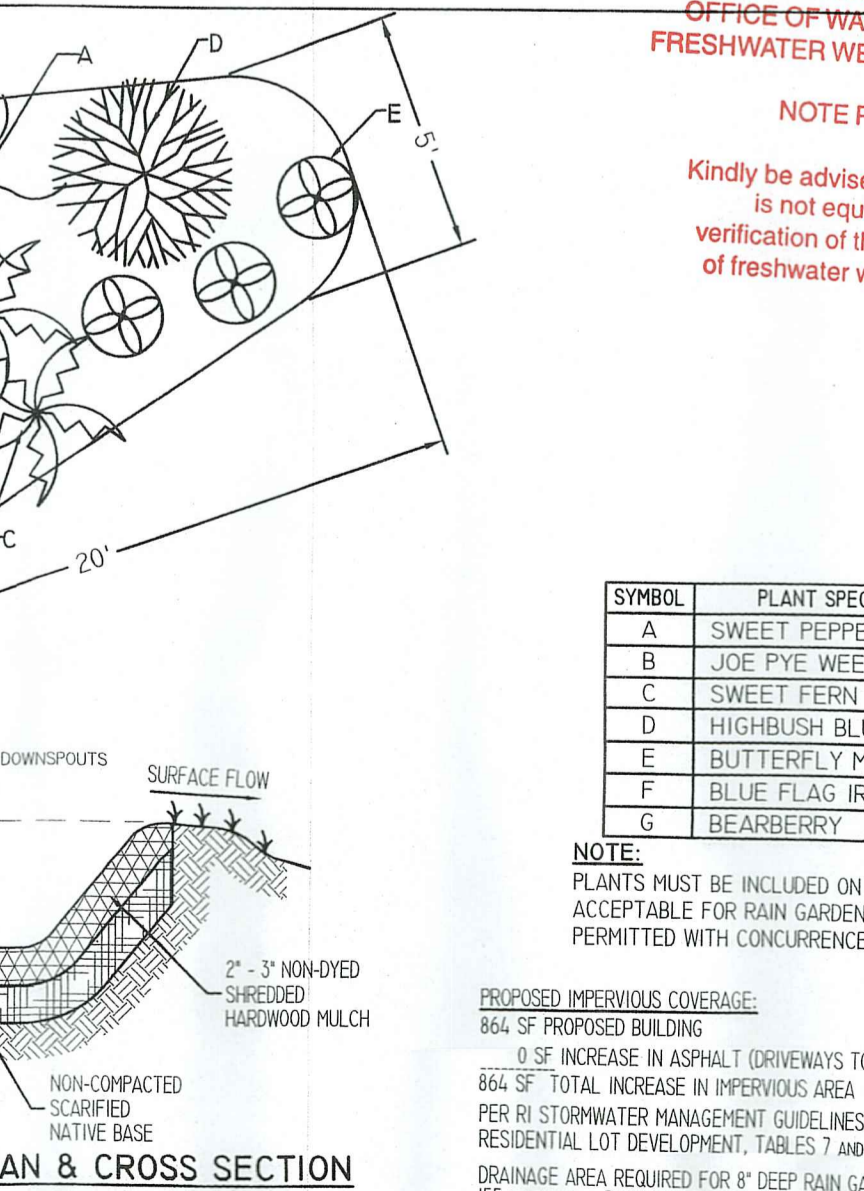
ELEVATION SCHEDULE	
TOP OF FOUNDATION	149.50
FINISH BASEMENT FLOOR	142.00
INVERT AT DWELLING	146.0
INVERT INTO SEPTIC TANK	145.02
INVERT OUT OF SEPTIC TANK	147.0
TOP OF AX-20 UNIT	149.25
INVERT INTO AX-20 UNIT	147.50
INVERT OUT OF AX-20 UNIT	146.75
INVERT AT SPLITTER VALVE	146.61
FINISH GRADE AT OSI PUMP CHAMBER	148.0
OSI PUMP CHAMBER "HIGH ALARM" FLOAT	146.50
OSI PUMP CHAMBER "OFF" FLOAT	176.24
TOP OF B.S.F. TIMBERS	149.25
INVERT INTO BSF DISTRIBUTION MANIFOLD	148.65
INVERT OF BSF LATERALS	148.65
BOTTOM OF BSF PEA STONE	148.50
BOTTOM OF BSF FILTER SAND	146.50
BOTTOM OF NATIVE SOIL AND SAND MIX.	145.0 (OR TO SUITABLE MAT.)
EXISTING AVERAGE GRADE AT OWTS	148.5
ELEVATION OF GROUNDWATER TABLE	145.5



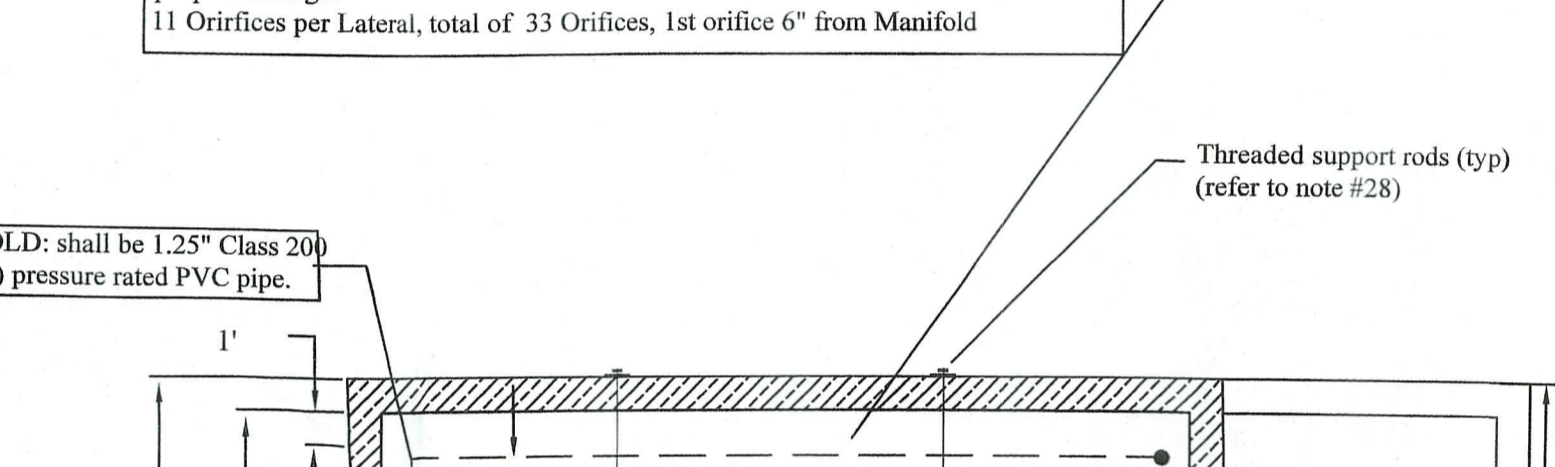
- Prepared native soil base prior to mixing in C33 sand. Refer to note #26
- 12" layer of "MIX" required. Refer to note #23.
- 24" layer of ASTM C-33 Sand. Refer to note #23.
- 8" (min.) layer of 3/8ths inch Washed Pea Gravel (4" min. above crown of Laterals).
- Class 200 (SCH-40 min.) PVC pipe with pressure rated fittings and orifices (with shields) spaced as specified in detail below.
- 45-degree elbow with threaded female cap (matching lateral diameter)
- Class 200 (SCH-40 min.) PVC Manifold pipe with threaded male plug clean out
- Class 200 (SCH-40 min.) Transport pipe from BSF pump chamber.
- Insulation sleeved over vertical portion of transport pipe inside BSF.
- Install "Tee" and threaded plug at 90-degree bend / connection to Manifold (allowing cleaning access to Transport pipe).
- 30 mil. PVC liner.
- 1/2" non-PT plywood vertical support frame below grade.
- 6" x 6" horizontal PT timbers above ground. Note: top of BSF shall be 6" minimum above finished grade. (pictorial representation - not a count of the required timbers).
- 4" x 4" P.T. vertical support timbers to brace 6" x 6" P.T. timber frame construction and non-PT plywood frame. Vertical supports required at corners and every 6' o.c.
- 4" dia. filter fabric wrapped per SDR-35 inspection well w/ removable cap
- 1/2 inch (min) dia. threaded tie rods required when well 6" x 6" timbers exceed 2 inches in height (spaced 10' max. o.c.)



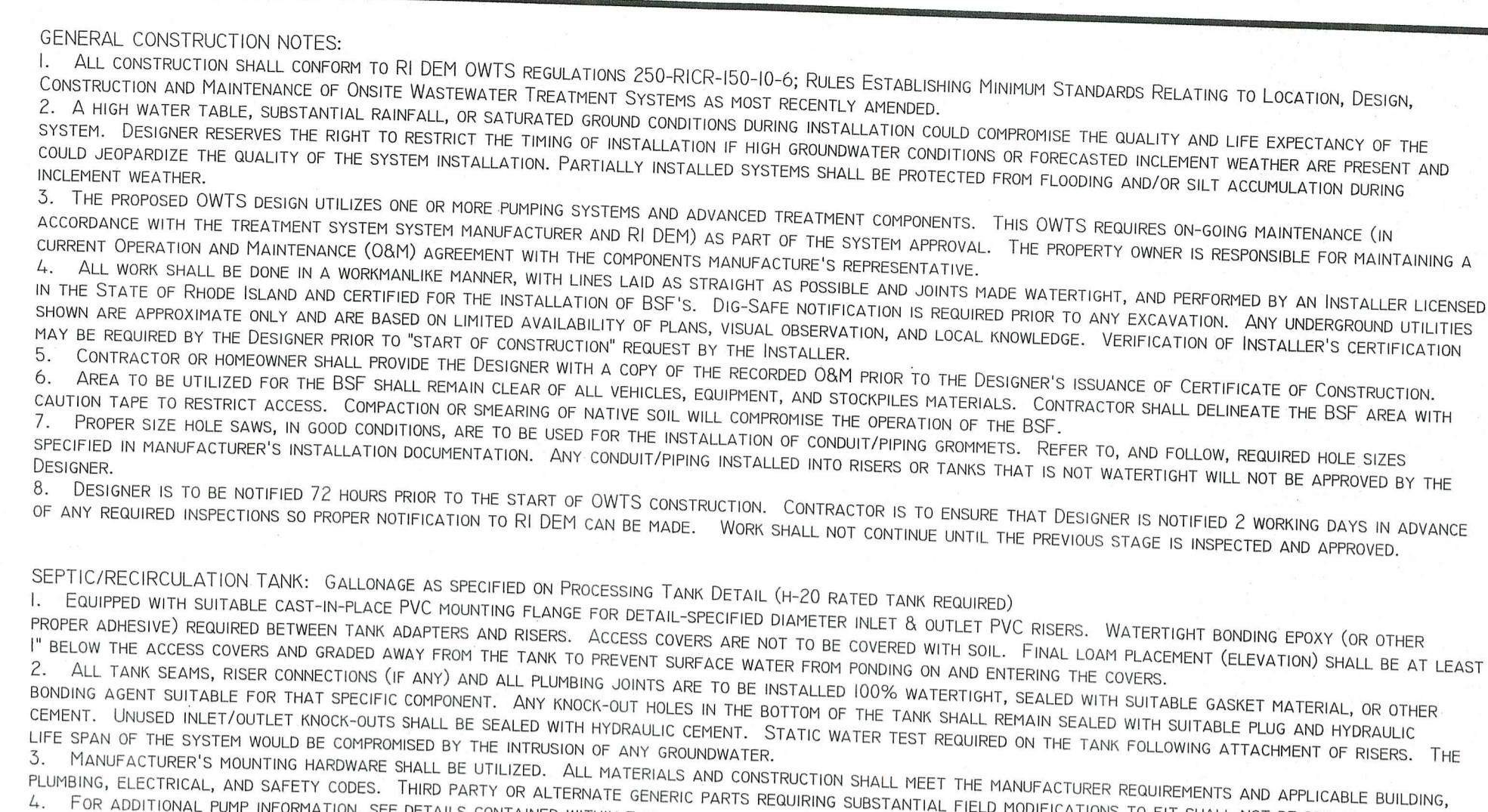
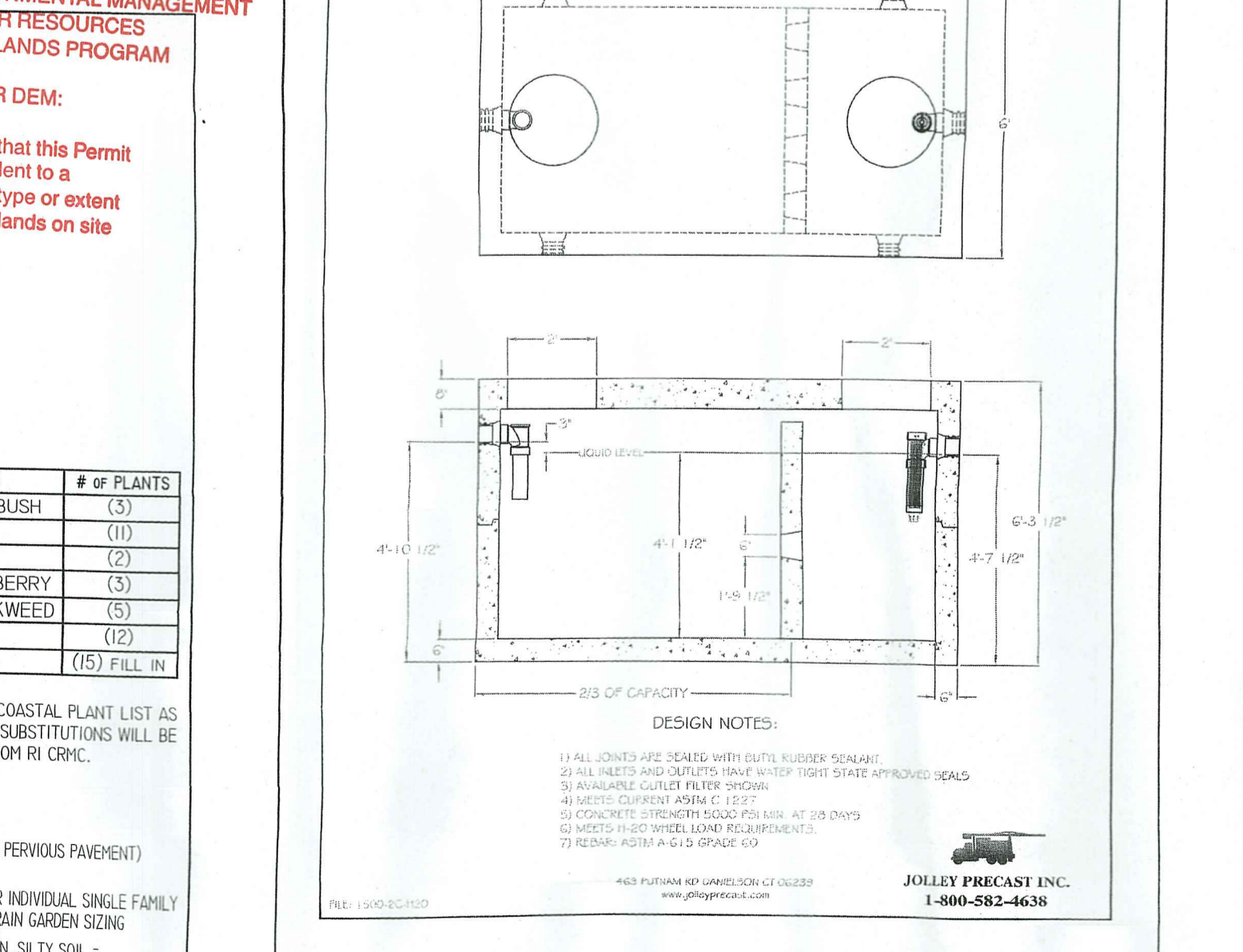
BASIS OF SANITARY DESIGN	
NUMBER OF BEDROOMS: 2	PROPOSED
DESIGN GALLONAGE: 230 GPD	GARBAGE GRINDER: NOT ALLOWED
LEACHING SYSTEM USED: BOTTOMLESS SAND FILTER	SIZE OF PROCESSING TANK: 1500 GALLONS
SECONDARY TREATMENT UNIT: ADVANTEX AX-20 MEDIA FILTER	SOIL CATEGORY: SOIL CATEGORY 8
BSF LOADING RATE: 1.9 GAL/SF/DAY, TIMED DOSE CATEGORY 1 L.R.	
TOTAL SQUARE FOOTAGE REQ'D: 7.0' x 22.0' = 154 S. F. PROVIDED	1.9 L.R. = 122 S. F. REQUIRED
PROPOSED BSF SQUARE FOOTAGE: 154 S.F. x 1.9 = 293 GAL/DAY CAPACITY PROVIDED	
DISCHARGE TO B.S.F.: 12.92 GAL/CYCLE = 0.75 GAL (GRAINBACK) = 0.39 GAL/ORIFICE/CYCLE	
DOSING QUANTITY: FLOAT SETTINGS TO BE VERIFIED BY OSI REPRESENTATIVE / SERVICE PROVIDER DURING START-UP TEST. PROVIDE MINIMUM OF ONE DOSE PER HOUR. PUMP DOSE SHALL NOT EXCEED 12.92 GALLONS.	



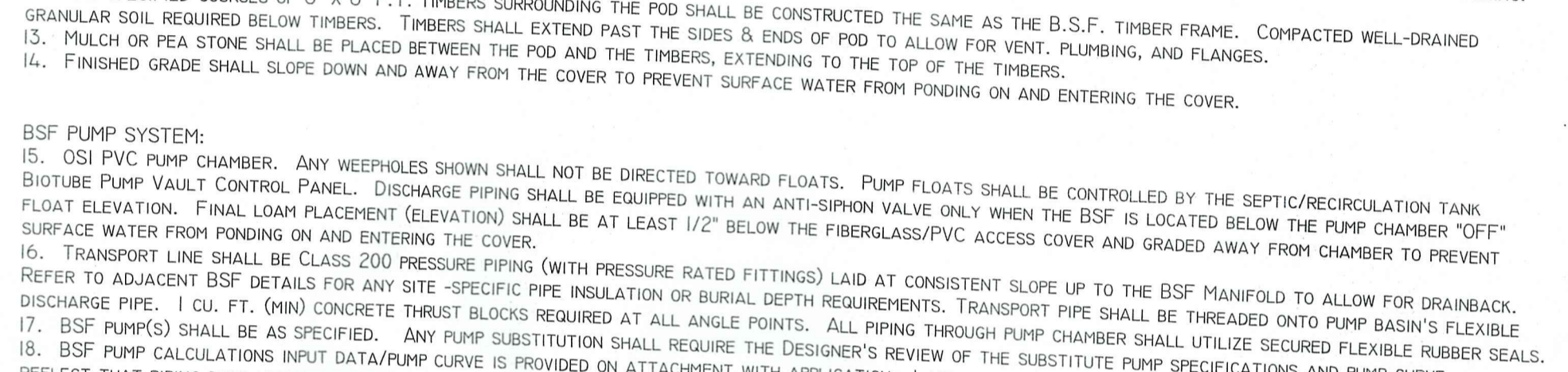
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- 4" dia. filter fabric wrapped per SDR-35 inspection well w/ removable cap
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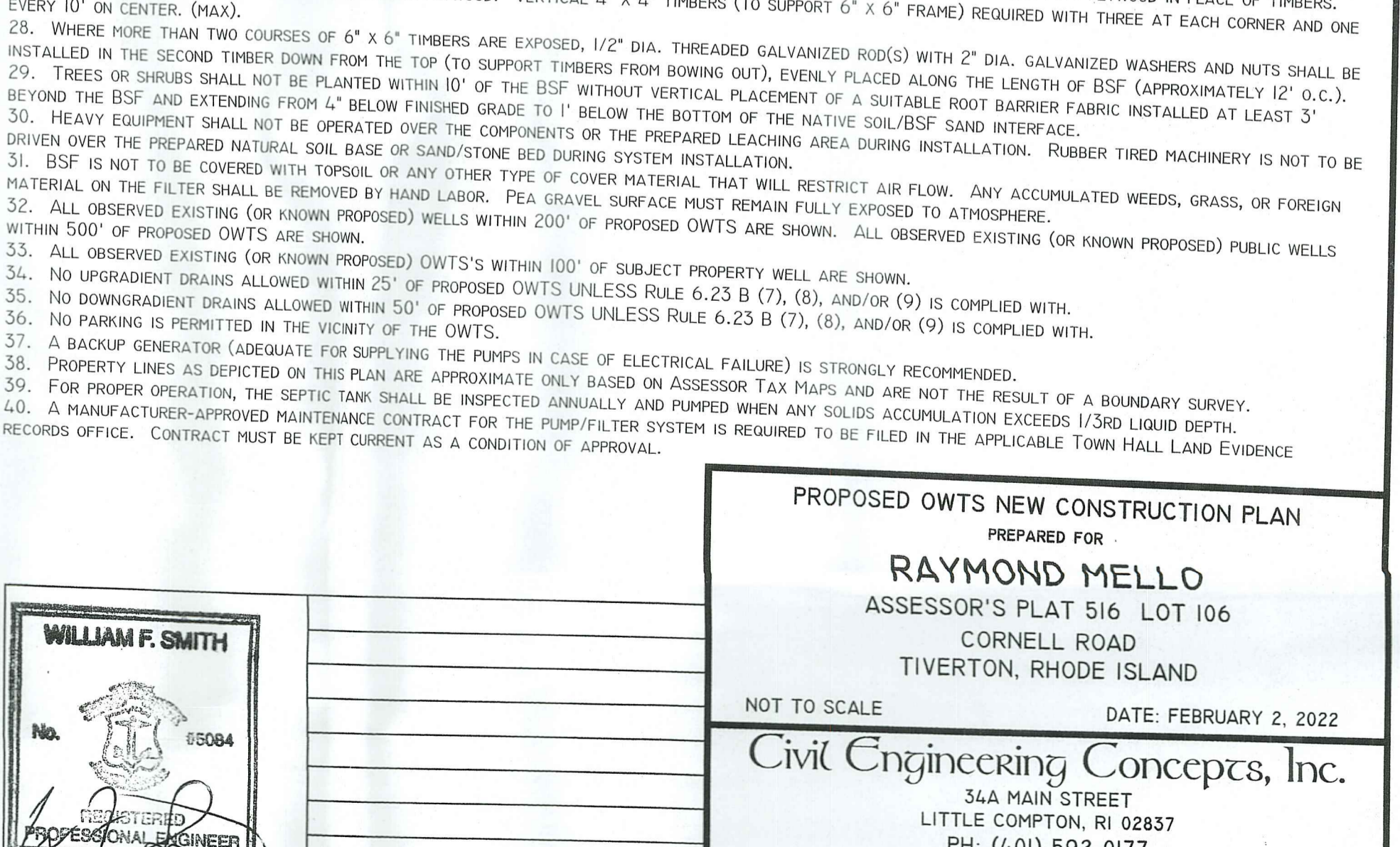
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GENERAL CONSTRUCTION NOTES:

- ALL CONSTRUCTION SHALL CONFORM TO RI DEM OWTS REGULATIONS 250-RICR-150-10-6; RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS AS MOST RECENTLY AMENDED.
- A HIGH WATER TABLE, SUBSTANTIAL RAINFALL, OR SATURATED GROUND CONDITIONS DURING INSTALLATION COULD COMPROMISE THE QUALITY AND LIFE EXPECTANCY OF THE SYSTEM. DESIGNER RESERVES THE RIGHT TO RESTRICT THE TIMING OF INSTALLATION IF HIGH GROUNDWATER CONDITIONS OR FORECASTED INCLEMENT WEATHER ARE PRESENT AND COULD JEOPARDIZE THE QUALITY OF THE SYSTEM INSTALLATION. PARTIALLY INSTALLED SYSTEMS SHALL BE PROTECTED FROM FLOODING AND/OR SILT ACCUMULATION DURING INCLEMENT WEATHER.
- THE PROPOSED OWTS DESIGN UTILIZES ONE OR MORE PUMPING SYSTEMS AND ADVANCED TREATMENT COMPONENTS. THIS OWTS REQUIRES ON-GOING MAINTENANCE (IN ACCORDANCE WITH THE TREATMENT SYSTEM MANUFACTURER AND RI DEM) AS PART OF THE SYSTEM APPROVAL. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING A CURRENT OPERATION AND MAINTENANCE (O&M) AGREEMENT WITH THE COMPONENTS MANUFACTURER'S REPRESENTATIVE.
- ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER, WITH LINES LAID AS STRAIGHT AS POSSIBLE AND JOINTS MADE WATER-TIGHT, AND PERFORMED BY AN INSTALLER LICENSED IN THE STATE OF RHODE ISLAND AND CERTIFIED FOR THE INSTALLATION OF BSF'S. DIG-SAFE NOTIFICATION IS REQUIRED PRIOR TO ANY EXCAVATION. ANY UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND ARE BASED ON LIMITED AVAILABILITY OF PLANS, VISUAL OBSERVATION, AND LOCAL KNOWLEDGE. VERIFICATION OF INSTALLER'S CERTIFICATION MAY BE REQUIRED BY THE DESIGNER PRIOR TO START OF CONSTRUCTION REQUEST BY THE INSTALLER.
- CONTRACTOR OR HOMEOWNER SHALL PROVIDE THE DESIGNER WITH A COPY OF THE RECORDED O&M PRIOR TO THE DESIGNER'S ISSUANCE OF CERTIFICATE OF CONSTRUCTION.
- AREA TO BE UTILIZED FOR THE BSF SHALL REMAIN CLEAR OF ALL VEHICLES, EQUIPMENT, AND STOCKPILES MATERIALS. CONTRACTOR SHALL DELINEATE THE BSF AREA WITH CAUTION TAPE TO RESTRICT ACCESS. COMPACTION OR SHEARING OF NATIVE SOIL WILL COMPROMISE THE OPERATION OF THE BSF.
- PROPER SIZE HOLE SAWS, IN GOOD CONDITIONS, ARE TO BE USED FOR THE INSTALLATION OF CONDUIT/PIPING GROMMETS. REFER TO, AND FOLLOW, REQUIRED HOLE SIZES SPECIFIED IN MANUFACTURER'S INSTALLATION DOCUMENTATION. ANY CONDUIT/PIPING INSTALLED INTO RISERS OR TANKS THAT IS NOT WATER-TIGHT WILL NOT BE APPROVED BY THE DESIGNER.
- DESIGNER IS TO BE NOTIFIED 72 HOURS PRIOR TO THE START OF OWTS CONSTRUCTION. CONTRACTOR IS TO ENSURE THAT DESIGNER IS NOTIFIED 2 WORKING DAYS IN ADVANCE OF ANY REQUIRED INSPECTIONS SO PROPER NOTIFICATION TO RI DEM CAN BE MADE. WORK SHALL NOT CONTINUE UNTIL THE PREVIOUS STAGE IS INSPECTED AND APPROVED.

SEPTIC/RECIRCULATION TANK: GALLONAGE AS SPECIFIED ON PROCESSING TANK DETAIL (H-20 RATED TANK REQUIRED)

- EQUIPPED WITH SUITABLE CAST-IN-PLACE PVC MOUNTING FLANGE FOR DETAIL-SPECIFIED DIAMETER INLET & OUTLET PVC RISERS. WATER-TIGHT BONDING EPOXY (OR OTHER PROPER ADHESIVE) REQUIRED BETWEEN TANK ADAPTERS AND RISERS. ACCESS COVERS ARE NOT TO BE COVERED WITH SOIL. FINAL LOAD PLACEMENT (ELEVATION) SHALL BE AT LEAST 1" BELOW THE ACCESS COVERS AND GRADED AWAY FROM THE TANK TO PREVENT SURFACE WATER FROM PONDING ON AND ENTERING THE COVERS.
- ALL TANK SEAMS, RISER CONNECTIONS (IF ANY) AND ALL PLUMBING JOINTS ARE TO BE INSTALLED 100% WATER-TIGHT, SEALED WITH SUITABLE GASKET MATERIAL, OR OTHER BONDING AGENT SUITABLE FOR THAT SPECIFIC COMPONENT. ANY KNOCK-OUT HOLES IN THE BOTTOM OF THE TANK SHALL REMAIN SEALED WITH SUITABLE PLUG AND HYDRAULIC LIFE SPAN OF THE SYSTEM WOULD BE COMPROMISED BY THE INTRODUCTION OF ANY GROUNDWATER.
- MANUFACTURER'S MOUNTING HARDWARE SHALL BE UTILIZED. ALL MATERIALS AND CONSTRUCTION SHALL MEET THE MANUFACTURER REQUIREMENTS AND APPLICABLE BUILDING, PLUMBING, ELECTRICAL, AND SAFETY CODES. THIRD PARTY OR ALTERNATE GENERIC PARTS REQUIRE DOCUMENTATION AND MANUFACTURER'S PUBLISHED INFORMATION PROVIDED AT THE TIME OF PUMP PURCHASE. THE INFORMATION CONTAINED WITHIN THIS PLAN, INCLUDING ANY MODIFICATIONS TO FIT SHALL NOT BE PERMITTED.
- FOR ADDITIONAL PUMP INFORMATION, SEE DETAILS CONTAINED WITHIN THIS PLAN, ACCOMPANYING DOCUMENTATION AND MANUFACTURER'S PUBLISHED INFORMATION PROVIDED AT THE TIME OF PUMP PURCHASE. THE INFORMATION CONTAINED WITHIN THIS PLAN IS INTENDED TO PROVIDE SUFFICIENT INFORMATION TO SUPPORT THE DESIGN OF THE SYSTEM AND TO BE COORDINATED WITH THE COMPONENT SUPPLIER, INCLUDING ALL ACCESSORIES SUCH AS ALARMS, FLOATS, ETC. THAT ARE COMPATIBLE WITH THE PUMPS.
- A SIGN SHALL BE POSTED IN THE VICINITY OF THE PUMPS, INCLUDING ALL ACCESSORIES SUCH AS ALARMS, FLOATS, ETC. THAT ARE COMPATIBLE WITH THE PUMPS.
- VENTING, AND AIR MONITORING PRIOR TO WORKING ON THE PUMP ASSEMBLY.
- ELECTRICAL WIRING IS TO BE ENCASED IN SUITABLE CONDUIT WITH PROPER FITTINGS AT EACH END TO MAINTAIN A WATERPROOF CONNECTION AND PREVENT TRANSPORT OF VAPORS/GAS FROM THE COMPONENTS TO THE CONTROL PANEL AND BUILDING. ELECTRICAL INSTALLATION SHALL CONFORM TO ALL APPLICABLE LOCAL/STATE REGULATIONS.

ADVANTEX AX RECIRCULATING MEDIA FILTER:

- THE AX POD SHALL BE LAID LEVEL ON A 5" (MIN) THICK BED OF COMPACTED SAND/GRAVEL. WHEN INSTALLED ABOVE THE PROCESSING TANK, IT IS RECOMMENDED THAT A FRAME OF NON-P.T. 2" x 6" LUMBER BE CONSTRUCTED ON TOP OF THE PROCESSING TANK TO SUPPORT THE SAND/GRAVEL, PREVENTING MATERIAL WASHOUT FROM UNDER THE AX POD. FLOOR, IF COMPACTED BALLAST IS SPECIFIED ON PLAN, COMPACTED MATERIAL UNDER AND ALONG SIDES OF THE FLANGES IS REQUIRED TO SUPPORT THE CONCRETE.
- HAND COMPACTION OF BACKFILLED MATERIAL AROUND THE AX POD AND RELATED PIPING IS REQUIRED TO PREVENT SETTLEMENT AND AIR PROCKETS THAT MAY FILL WITH WATER (PERMITTED).
- THE PASSIVE AIR VENT SHALL BE LOCATED LESS THAN 15' FROM THE AX POD. 2" SCH-40 PVC CONNECTOR PIPE SHALL SLOPE DOWN FROM VENT TO POD TO ALLOW DRAINING.
- ANY SPECIFIED COURSES OF 6" x 6" P.T. TIMBERS SURROUNDING THE POD SHALL BE CONSTRUCTED THE SAME AS THE B.S.F. TIMBER FRAME. COMPACTED WELL-DRAINED GRANULAR SOIL REQUIRED BELOW TIMBERS. TIMBERS SHALL EXTEND PAST THE SIDES & ENDS OF POD TO ALLOW FOR VENT, PLUMBING, AND FLANGES.
- MULCH OR PEA STONE SHALL BE PLACED BETWEEN THE TANK AND THE TIMBERS, EXTENDING TO THE TOP OF THE TIMBERS.
- FINISHED GRADE SHALL SLOPE DOWN AND AWAY FROM THE COVER TO PREVENT SURFACE WATER FROM PONDING ON AND ENTERING THE COVER.

BSF PUMP SYSTEM:

- OSI PVC PUMP CHAMBER. ANY WEEPHOLES SHOWN SHALL NOT BE DIRECTED TOWARD FLOATS. PUMP FLOATS SHALL BE CONTROLLED BY THE SEPTIC/RECIRCULATION TANK BIOTUBE PUMP VAULT CONTROL PANEL. DISCHARGE PIPING SHALL BE EQUIPPED WITH AN ANTI-SIPHON VALVE ONLY WHEN THE BSF IS LOCATED BELOW THE SEPTIC/RECIRCULATION TANK. SURFACE WATER FROM PONDING ON AND ENTERING THE COVER.
- PROPER COMPACTATION OF WELL-DRAINED GRANULAR MATERIAL UNDER, ALONG SIDE, AND ABOVE THE FOUR ANTI-FLOATATION FLANGES IS NECESSARY TO ENSURE THE POD WILL NOT SETTLE IN FLOATION.
- HAND COMPACTION OF BACKFILLED MATERIAL AROUND THE AX POD AND RELATED PIPING IS REQUIRED TO PREVENT SETTLEMENT AND AIR PROCKETS THAT MAY FILL WITH WATER (PERMITTED).
- THE PASSIVE AIR VENT SHALL BE LOCATED LESS THAN 15' FROM THE AX POD. 2" SCH-40 PVC CONNECTOR PIPE SHALL SLOPE DOWN FROM VENT TO POD TO ALLOW DRAINING.
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- MULCH OR PEA STONE SHALL BE PLACED BETWEEN THE TANK AND THE TIMBERS, EXTENDING TO THE TOP OF THE TIMBERS.
- FINISHED GRADE SHALL SLOPE DOWN AND AWAY FROM THE COVER TO PREVENT SURFACE WATER FROM PONDING ON AND ENTERING THE COVER.

ELECTRICAL CONTROL/ALARM PANEL: W/ TELEPHONE LINE REMOTE TELEMETRY CONNECTION AND PROGRAMMABLE TIMERS

- CONTROL PANEL SHALL BE AN OSI PUMP-MATCHED NEMA-4X RATED WATERPROOF UNIT WITH VISUAL ALARMS AND PROGRAMMABLE TIMER THAT OPERATES BOTH OSI AX MEDIA FILTER PUMP UNIT AND BSF PUMP ON SAME CIRCUIT. ELAPSED TIME METER AND CYCLE EVENT COUNTER REQUIRED.
- PANEL TO BE PLACED OUTSIDE, MOUNTED ON P.T. POSTS NEAR THE STRUCTURE THAT IT SERVES (WITHIN SIGHT OF THE APPLICABLE COMPONENT ACCESS COVERS). OUTSIDE FACE OF CONTROL PANEL SHALL BE EQUIPPED WITH HIGH-INTENSITY ALARM LIGHT AND ALARM SILENCE BUTTON THAT SHALL AUTOMATICALLY REACTIVATE AFTER 12 HOURS.
- BOTTOMLESS SAND FILTER (BSF):
- A START UP TEST IS REQUIRED TO BE PERFORMED BY THE INSTALLER/MAINTENANCE PROVIDER AND WITNESSED BY THE DESIGNER OF THE AX PUMPING SYSTEM. THE BSF PUMPING PROVIDER THAT THE PRESSURE (HEAD) TESTING OF THE BSF LATERALS. ANY SUBSEQUENT ELECTRICAL WORK SHALL INCLUDE THE ELECTRICIAN'S VERIFICATION TO THE MAINTENANCE PROVIDER THAT THE BSF SHALL BE CONSTRUCTED AS SHOWN WITH MATERIALS AS SPECIFIED IN THE DETAILS. INSTALLATION OF A 4" DIA. PERFORATED (FILTER FABRIC WRAPPED) INSPECTION WELL REQUIRED.
- SAND MEDIA MATERIAL SHALL CONFORM TO RI DEM GUIDELINES FOR THE DESIGN, USE, AND MAINTENANCE OF PRESSURIZED DRAINFIELDS (AS MOST RECENTLY AMENDED), SECTION 2.1.5.2(A) AND FIGURE 14 FOR ASTM C33 SAND AND SHALL HAVE AN EFFECTIVE SIZE (D10) OF 0.33 MM AND UNIFORMITY COEFFICIENT (D60/D10) PRIOR TO SAND DELIVERY. SAND SHALL BE INSTALLED IN 8" LIFTS, "WALKED DOWN" USING FOOT PRESSURE. (NO COMPACTION) PER RI DEM REQUIREMENTS.
- MANIFOLD AND DISTRIBUTION LATERALS: DIA. SPECIFIED ON DETAIL AND SHALL BE CLASS 200 PVC WITH 1/8" ORIFICE PER RI DEM REQUIREMENTS.
- MANIFOLD AND DISTRIBUTION LATERALS: DIA. SPECIFIED ON DETAIL AND SHALL BE CLASS 200 PVC WITH 1/8" ORIFICE PER RI DEM REQUIREMENTS. DISTAL ENDS OF LATERALS SHALL BE EQUIPPED WITH 45-DEGREE ELBOW AND 3/4" OR 1" THREADED FEMALE END CAP. SWEEP ELBOWS EXTENDING TO THE SURFACE ARE NOT TO BE INSTALLED ON ENDS. ALL FITTINGS SHALL BE PRESSURE RATED (DWV FITTINGS NOT ACCEPTABLE).
- AN INSPECTION WELL (VERTICAL, FILTER FABRIC WRAPPED 4" PERFORATED PVC W/ COVER) IS REQUIRED TO BE INSTALLED IN THE BSF.
- LEACHING AREA EXCAVATION SHALL BE LEVEL AND SCARIFIED. CARE SHALL BE TAKEN TO AVOID REMOVAL OF REMAINING SOIL. EXCAVATION OF NATIVE MATERIAL (UNSATURABLE) BELOW THE BSF SHALL ONLY BE TO THE EXTENT DESIGNATED ON THE PLAN. SOIL, VEGETATION, DEAD/DECAYING ORGANIC LITTER AND ANY ORGANIC SOIL HORIZON TO MIXING OF 3" OF HORIZON INTO THE NATIVE SOIL. MIXING SHALL EXTEND A MINIMUM OF 6" INTO THE NATIVE SOIL BASE (TOTAL OF 6" COMBINED MIXED LAYER) AT ELEV. 174.5
- ABOVE GROUND BSF SUPPORT FRAMING SHALL CONSIST OF 6" x 6" PRESSURE TREATED TIMBERS DRILLED AND PINNED TO THE SOIL WITH #3 OR #4 REBARS AND 30 ML LINER SHALL BE PLACED INSIDE TIMBERS AND PLYWOOD. VERTICAL 4" x 4" TIMBERS (TO SUPPORT 6" x 6" FRAME) REQUIRED WITH THREE AT EACH CORNER AND ONE EVERY 10' ON CENTER. (MAX).
- WHERE MORE THAN TWO COURSES OF 6" x 6" TIMBERS ARE EXPOSED, 1/2" DIA. THREADED GALVANIZED ROD(S) WITH 2" DIA. GALVANIZED WASHERS AND NUTS SHALL BE INSTALLED IN THE SECOND TIMBER DOWN FROM THE TOP (TO SUPPORT TIMBERS FROM BOWING OUT), EVENLY PLACED ALONG THE LENGTH OF BSF (APPROXIMATELY 12' O.C.). TREES OR SHRUBS SHALL NOT BE PLANTED WITHIN 10' OF THE BSF WITHOUT VERTICAL PLACEMENT OF A SUITABLE ROOT BARRIER FABRIC INSTALLED AT LEAST 3'
- HEAVY EQUIPMENT SHALL NOT BE OPERATED OVER THE COMPONENTS OR THE PREPARED LEACHING AREA DURING INSTALLATION. RUBBER TIED MACHINERY IS NOT TO BE DRIVEN OVER THE PREPARED NATURAL SOIL BASE OR SAND/STONE BED DURING INSTALLATION.
- BSF IS NOT TO BE COVERED WITH TOPSOIL OR ANY OTHER TYPE OF COVER MATERIAL THAT WILL RESTRICT AIR FLOW. ANY ACCUMULATED WEEDS, GRASS, OR FOREIGN MATERIAL ON THE FILTER SHALL BE REMOVED BY HAND LABOR. PEA GRAVEL SURFACE SHALL REMAIN FULLY EXPOSED TO ANY ACCUMULATED WEEDS, GRASS, OR FOREIGN WITHIN 500' OF PROPOSED OWTS ARE SHOWN.
- ALL OBSERVED EXISTING (OR KNOWN PROPOSED) WELLS WITHIN 200' OF PROPOSED OWTS ARE SHOWN.
- ALL OBSERVED EXISTING (OR KNOWN PROPOSED) PUBLIC WELLS
- NO UPGRADING DRAINS ALLOWED WITHIN 25' OF PROPOSED OWTS UNLESS RULE 6.23 B (7), (8), AND/OR (9) IS COMPLIED WITH.
- NO DOWNGRADING DRAINS ALLOWED WITHIN 50' OF PROPOSED OWTS UNLESS RULE 6.23 B (7), (8), AND/OR (9) IS COMPLIED WITH.
- NO PARKING IS PERMITTED IN THE VICINITY OF THE OWTS.
- A BACKUP GENERATOR (ADEQUATE FOR SUPPLYING THE PUMPS IN CASE OF ELECTRICAL FAILURE) IS STRONGLY RECOMMENDED.
- PROPERTY LINES AS DEPICTED ON THIS PLAN ARE APPROXIMATE ONLY BASED ON ASSESSOR TAX MAPS AND ARE NOT THE RESULT OF A BOUNDARY SURVEY.
- FOR PROPER OPERATION, THE SEPTIC TANK SHALL BE INSPECTED ANNUALLY AND PUMPED WHEN ANY SOLIDS ACCUMULATION EXCEEDS 1/3RD LIQUID DEPTH.
- A MANUFACTURER-APPROVED MAINTENANCE CONTRACT FOR THE PUMP/FILTER SYSTEM IS REQUIRED TO BE FILED IN THE APPLICABLE TOWN HALL LAND EVIDENCE RECORDS OFFICE. CONTRACT MUST BE KEPT CURRENT AS A CONDITION OF APPROVAL.

164 SF, 8" DEEP RAIN GARDEN PLANTING PLAN & CROSS SECTION

NOTE PER DEM: Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

SYMBOL	PLANT SPECIES	# OF PLANTS
A	SWEET PEPPER BUSH	(3)
B	JOKE PINE WEEED	(11)
C	SWEET FERN	(2)
D	HIGHBUSH BLUEBERRY	(3)
E	BUTTERFLY MILKWEED	(5)
F	BLUE FLAG IRIS	(12)
G	BEARBERRY	(15) FILL IN

NOTE: PLANTS MUST BE INCLUDED ON RI COASTAL PLANT LIST AS ACCEPTABLE FOR RAIN GARDENS. SUBSTITUTIONS WILL BE PERMITTED WITH CONCURRENCE FROM RI CRIC.

PROPOSED IMPERVIOUS COVERAGE:

- 86% OF PROPOSED BUILDING
- 0 SF INCREASE IN ASPHALT (DRIVEWAYS TO BE PERVIOUS PAVEMENT)
- 86% OF TOTAL INCREASE IN IMPERVIOUS AREA

PER RI STORMWATER MANAGEMENT GUIDELINES FOR INDIVIDUAL SINGLE FAMILY RESIDENTIAL LOT DEVELOPMENT, TABLES 7 AND 8; RAIN GARDEN SIZING DRAINAGE AREA REQUIRED FOR 6" DEEP RAIN GARDEN, SILTY SOIL = 15.3 SF REQUIRED RAIN GARDEN AREA (164 SF PROPOSED)

PROPOSED OWTS NEW CONSTRUCTION PLAN

PREPARED FOR: RAYMOND MELLO ASSESSOR'S PLAT 516 LOT 106 CORNELL ROAD TIVERTON, RHODE ISLAND

NOT TO SCALE DATE: FEBRUARY 2, 2022

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REVISIONS: 01/05/22: EDITS PER RIDEM COMMENTS (3/29/22)

SHEET 2 OF 2