

NOTES

1. THE SOLID 4" ROOF DRAIN DISCHARGE PIPE SHALL BE SLOPED AT A MINIMUM 1%.
2. ROOF DOWNSPOUTS SHALL BE CONNECTED INTO THE 4" RD PIPE AND DISCHARGE INTO PROPOSED RAIN GARDEN.
3. TOPOGRAPHIC CONDITIONS WERE SURVEYED BY CROSSMAN ENGINEERING IN JUNE 2019 & NOV. 2020.
4. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE & UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
5. THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
6. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR CALL-OUTS, DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR CALL-OUT, DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
7. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.
8. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL AN INSTALLATION INSPECTION SCHEDULE IS COORDINATED, IN WRITING, WITH THE SYSTEM DESIGNER.
9. PROVIDE A 8" CRUSHED STONE BASE LAYER BENEATH THE SEPTIC TANK AND DISTRIBUTION BOX.
10. THE INLET AND OUTLET OPENING ON THE SEPTIC TANK SHALL HAVE A WATERTIGHT CAST-IN-PLACE RUBBER BOOT WITH A STAINLESS STEEL CLAMP.
11. THE SEPTIC TANK, AND DISTRIBUTION BOX SHALL HAVE MANHOLE COVERS AND RISERS TO GRADE DESIGNED FOR AN H2O LOADING (HEAVY DUTY USE).
12. BUILDING SEWER SHALL BE SLEEVED WITH SCH. 40 PVC PIPE FROM FOUNDATION TO THE SEPTIC TANK.

FLOOD ZONE NOTE

THE SITE IS WITHIN FLOOD ZONE X, OTHER FLOOD AREAS, ACCORDING TO FLOOD INSURANCE RATE MAP, NEWPORT COUNTY, RHODE ISLAND, PANEL 113 OF 226, MAP NUMBER 44005C0113, EFFECTIVE DATE SEPTEMBER 4, 2013.

ORENCO SYSTEM NOTES

1. THE SYSTEM SHALL BE EQUIPPED WITH AN HOUR METER AND AUDIBLE & VISUAL ALARMS TO INDICATE POWER INTERRUPTION TO THE SYSTEM. THE INDICATORS SHALL BE MOUNTED ON A N.E.P.A. APPROVED CABINET ON A POST EXTERIOR TO THE BUILDING AT A LOCATION APPROVED BY OWNER AND ALARMS (AUDIBLE & VISUAL) SHALL BE LOCATED WITHIN THE HOUSE.
2. A PUBLIC OR PRIVATE ENTITY SHALL BE RETAINED CONTINUOUSLY FOR THE LIFE OF THE SYSTEM AND BE AVAILABLE TO PERFORM NEEDED MAINTENANCE AND REPAIRS. SUCH ENTITY SHALL PERFORM AN INSPECTION OF THE SYSTEM AT LEAST TWICE ANNUALLY. THE ENTITY MUST BE APPROVED BY R.I.D.E.M. AND ADHERE TO ALL R.I.D.E.M. RECOMMENDED REPORTING REQUIREMENTS.
3. ABILITY TO CONNECT TO STANDBY POWER SUPPLY IS RECOMMENDED.
4. THE SEPTIC TANK AND PUMP CHAMBERS SHALL BE WATER-TIGHT. CONCRETE ANTI-FLOTATION COLLARS SHALL BE REQUIRED DUE TO FLUCTUATING GROUNDWATER LEVELS. A MINIMUM 8" LAYER OF GRAVEL SHALL BE SET LEVEL TO FORM A STABLE BASE.
5. A HIGH LEVEL WATER ALARM (VISUAL AND AUDIBLE) POWERED BY A CIRCUIT SEPARATE FROM THE PUMP SHALL BE LOCATED IN THE HOUSE.
6. ALL PLUMBING AND ELECTRICAL WORK AND MATERIALS SHALL CONFORM TO ALL STATE, FEDERAL AND LOCAL CODES.
7. ALL PROCEDURES AND MATERIALS MUST ALSO CONFORM TO THE RECOMMENDATIONS AND REQUIREMENTS OF ORENCO SYSTEMS INCORPORATED AND ATLANTIC SOLUTIONS, LTD.
8. BOTTOMLESS SAND FILTER SHALL FOLLOW A TIMED DOSED ORENCO AX-20 ADVANCED TREATMENT SYSTEM.
9. THE CONTRACTOR AND SITE OWNER MUST BE FAMILIAR WITH AND MUST FULLY CONFORM TO THE R.I.D.E.M. "GUIDELINES FOR THE DESIGN AND USE AND MAINTENANCE OF PRESSURIZED DRAINFIELDS", NOVEMBER 2013 INCLUDING ADDENDA.
10. FILTER SAND MEDIA TO CONFORM TO ASTM 33 SAND WITH AN EFFECTIVE SIZE (D10) OF 0.3 mm AND UNIFORMITY COEF. (D80/D10) OF 3.0-4.0. MAXIMUM ALLOWABLE PERCENTAGE OF FINES PASSING NO. 200 SIEVE = 1% (ASTM D-136 AND ASTM C-117). TEST DATA SHALL BE PROVIDED TO DESIGNER PRIOR TO PURCHASE.
11. CONTROL PANEL PLACEMENT SHALL BE COORDINATED WITH THE OWNER.
12. ALL PUMP SYSTEMS, DISTRIBUTION SYSTEMS AND ADVANCED TREATMENT COMPONENTS SHALL BE MANUFACTURED BY ORENCO SYSTEMS, INC.
13. ALL PVC GRAVITY FLOW PIPING TO BE SOLID SCH. 35 OR SCH. 40 UNLESS OTHERWISE NOTED.
14. THE CONTRACTOR SHALL RETAIN THE SERVICES OF ORENCO - ADVANTECH TO INSTALL THE ADVANTECH SYSTEM INCLUDING THE TANKS, PIPING, PUMPS, WIRING AND CONTROL PANELS. CERTIFICATIONS FROM THE MANUFACTURER SHALL BE PROVIDED TO THE DESIGN ENGINEER THAT THE SYSTEM HAS BEEN INSTALLED CORRECTLY AND WILL OPERATE IN ACCORDANCE WITH RIDEM REGULATIONS AND THE MANUFACTURER'S OPERATION REQUIREMENTS.
15. TRAINING OF THE ORENCO - ADVANTECH COMPONENTS AND OPERATION REQUIREMENTS SHALL BE PROVIDED TO THE OWNER BY THE MANUFACTURER'S REPRESENTATIVE UPON INSTALLATION COMPLETION.

OWTS NOTES

1. THE EXISTING PROPERTY LINES REFERENCED ON THIS PLAN ARE APPROXIMATE. PRIOR TO CONSTRUCTION A CLASS-1 SURVEY SHOULD BE CONDUCTED. THE HOUSE AND OWTS SHALL BE STAKED IN THE FIELD BY A RHODE ISLAND LICENSED PROFESSIONAL LAND SURVEYOR.
2. REMOVE TREES, BRUSH, TOP SOIL AND SUBSOIL AND ANY UNDESIRABLES WITHIN 10' THE BOTTOMLESS SAND FILTER.
3. THE CONTRACTOR SHALL CONTACT CROSSMAN ENGINEERING AND R.I.D.E.M. TO INSPECT ALL STAGES OF CONSTRUCTION INCLUDING BOTTOM BED INSPECTIONS AND BOTTOMLESS SAND FILTER INSTALLATION.
4. DUE TO THE PRESENCE OF GROUNDWATER IN THE VICINITY OF THE SEPTIC TANK, AND THE PUMP CHAMBER, THE MANUFACTURER SHALL PROVIDE A CERTIFICATION TO THE ENGINEER TO CONFIRM THE STRUCTURE'S EMPTY BUOYANCY RESISTANCE. THE STRUCTURE SHALL NOT BE ORDERED UNTIL APPROVED BY THE ENGINEER. CONTRACTOR SHALL PROVIDE A WATER TIGHT CERTIFICATE.

GRADING NOTES

MINIMUM GROUND ELEVATION WITHIN 5' OF BSF SHALL BE 51.8.

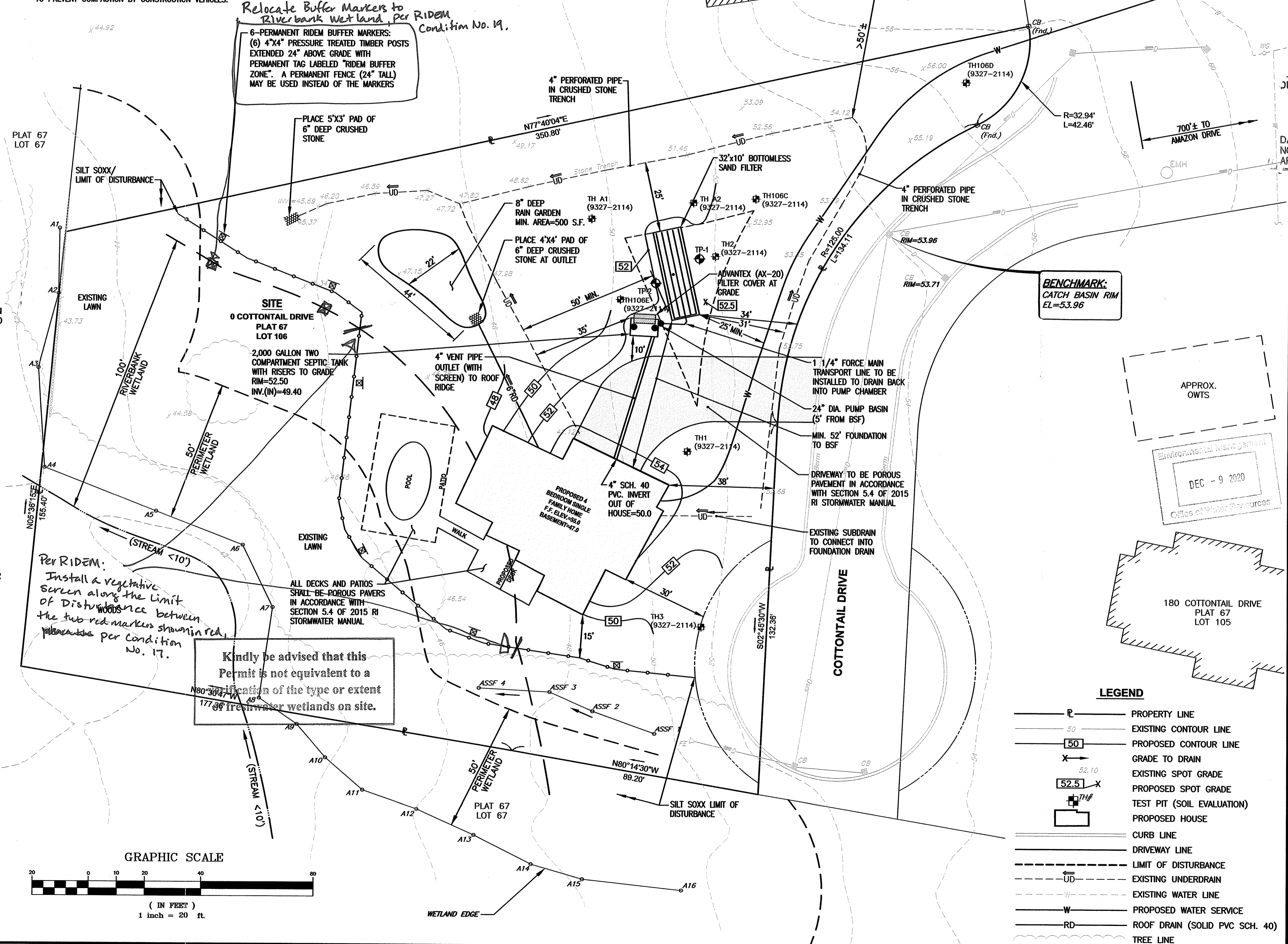
RAIN GARDEN SIZING

ROOFTOP AREA = 3,400 S.F. MAX.
WATER QUALITY VOLUME = 3,400 S.F. X 1" (1/12)" = 284 C.F.
VOLUME PROVIDED = 500 S.F. X 8" (1/12)" = 333 C.F.

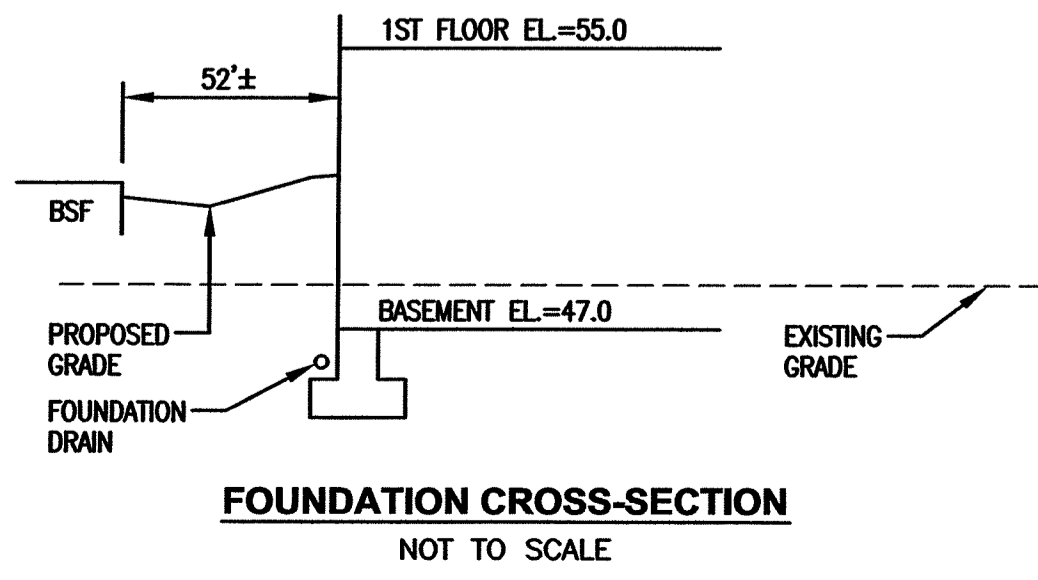
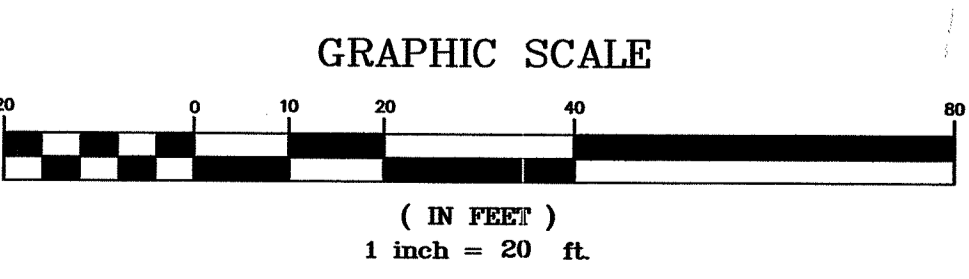
NOTE: RAIN GARDEN SHALL BE FENCED OFF PRIOR TO CONSTRUCTION TO PREVENT COMPACTION BY CONSTRUCTION VEHICLES.

Relocate Buffer Markers to Riverbank wetland, per RIDEM Condition No. 19.

6-PERMANENT RIDEM BUFFER MARKERS:
(6) 4"x4" PRESSURE TREATED TIMBER POSTS EXTENDED 24" ABOVE GRADE WITH PERMANENT TAG LABELED "RIDEM BUFFER ZONE". A PERMANENT FENCE (24" TALL) MAY BE USED INSTEAD OF THE MARKERS



Kindly be advised that this Permit is not equivalent to a location of the type or extent of freshwater wetlands on site.

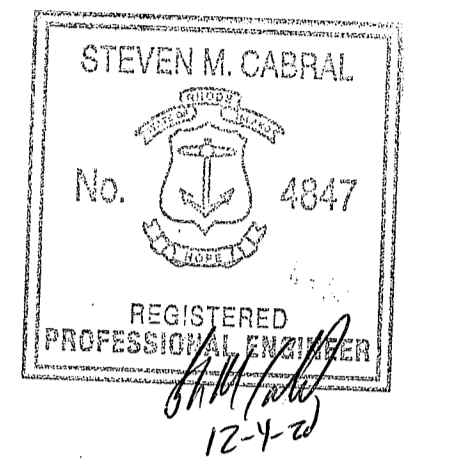


LEGEND

— P —	PROPERTY LINE
— 50 —	EXISTING CONTOUR LINE
— [50] —	PROPOSED CONTOUR LINE
— X —	GRADE TO DRAIN
— 52.10 — X	EXISTING SPOT GRADE
— [52.10] — X	PROPOSED SPOT GRADE
— TH# —	TEST PIT (SOIL EVALUATION)
— [] —	PROPOSED HOUSE
— —	CURB LINE
— —	DRIVEWAY LINE
— UD —	LIMIT OF DISTURBANCE
— —	EXISTING UNDERDRAIN
— —	EXISTING WATER LINE
— W —	PROPOSED WATER SERVICE
— RD —	ROOF DRAIN (SOLID PVC SCH. 40)
— —	TREE LINE

Crossman Engineering
 Rhode Island: 151 Contonville Road, Warwick, RI 02886, Phone: (401) 738-5660
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 995-1700
 Email: ce@crosmaneng.com

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 2/2/2021 FILE # 20-0286
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

WETLANDS PERMIT MODIFICATION PLAN

PLAT MAP 67, LOT 106
 ZONING DISTRICT R-40
 RESIDENTIAL DISTRICT 40,000 S.F.
 0 COTTONTAIL DRIVE
 PORTSMOUTH, RI

PREPARED FOR:
DAVID D. and NANCY A. ROSENBERG
 180 COTTONTAIL DRIVE
 PORTSMOUTH, RI 02871-5155

ONSITE WASTEWATER TREATMENT SYSTEM PLAN

DATE: DECEMBER 4, 2020 SCALE: 1"=20'
 DWG. NAME: 2372-C01-OWTS.dwg

REVISIONS

NUMBER	REMARKS	DATE

DRAWING NUMBER
C1
 SHEET: 1 OF 3

