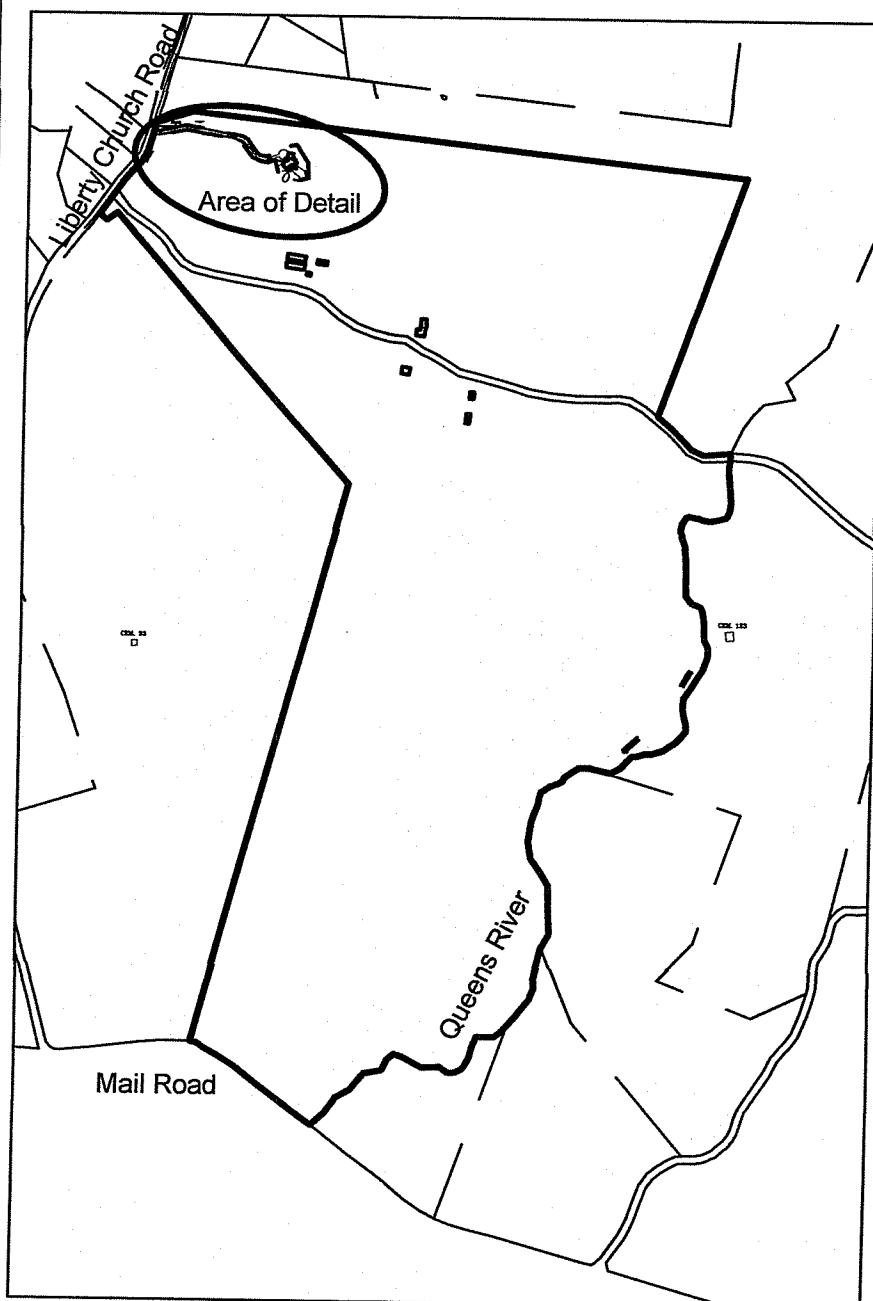


LOCUS MAP
NOT TO SCALE

BEING A.P. 66, BLOCK 3, LOT 5
AREA OF LOT = 242.5± ACRES

FEMA DETERMINATION
ZONE "X" - AREA OF MINIMAL CHANCE ANNUAL
FLOODING
PANEL NO. - 44009C0090J
EFF - APRIL 03, 2022



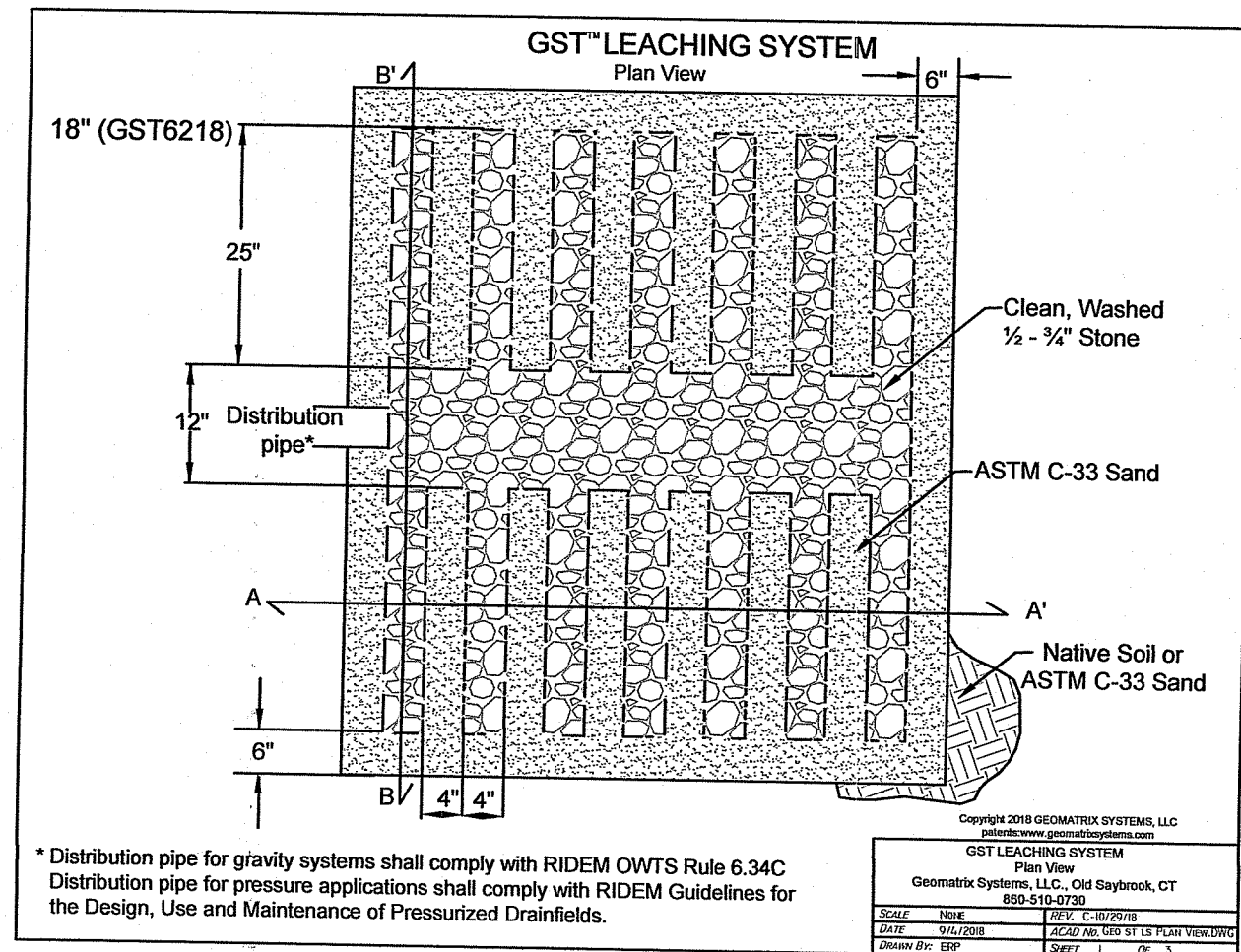
OVERALL SITE VIEW
SCALE 1" = 1000'

TESTHOLE & PERCOLATION DATA
TH 1 - VERIFIED @ 8' (2211-0566)
TH 2 - VERIFIED @ 8' (2211-0566)

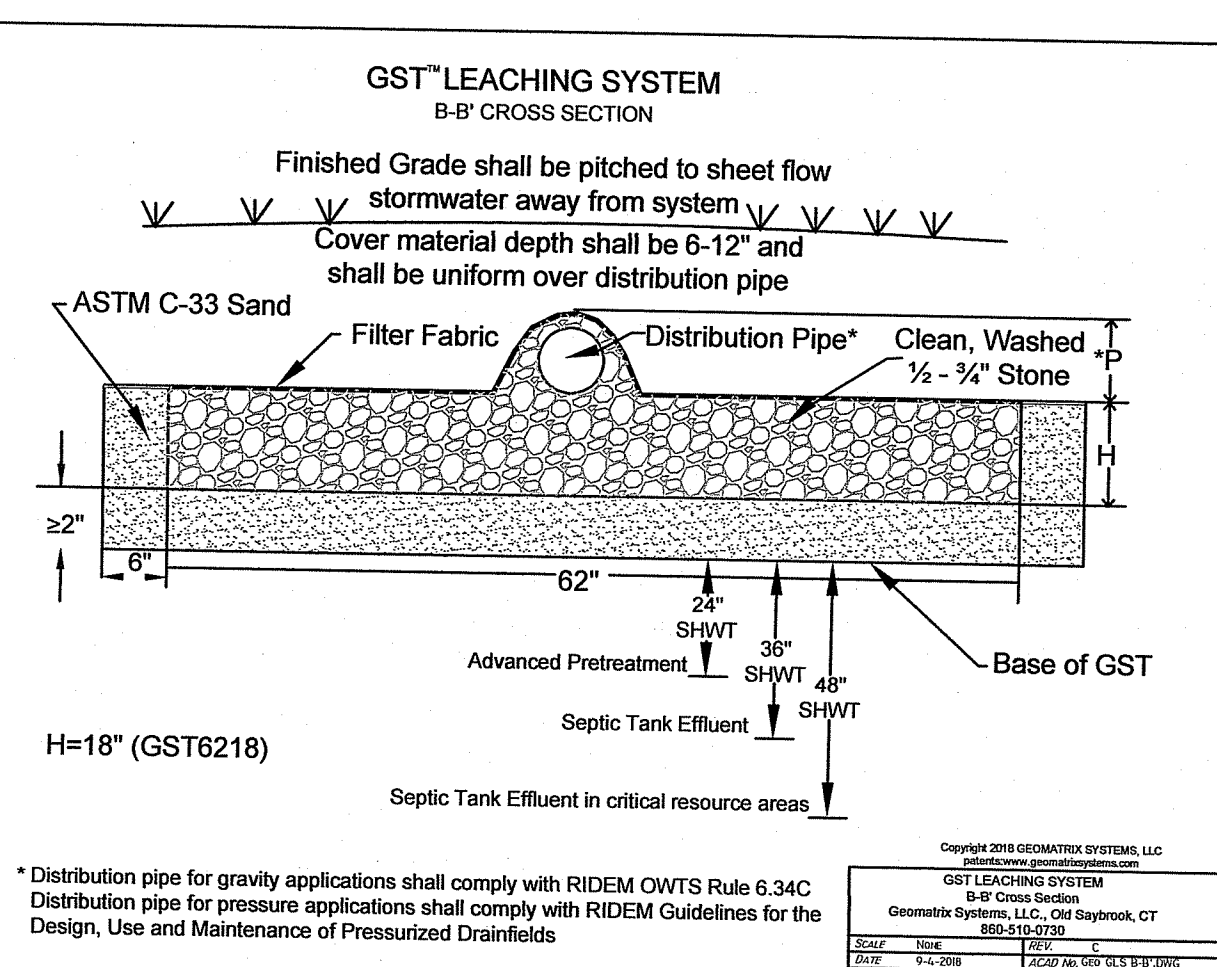
SOIL CATEGORY #6 - DESIGNED USING A LOADING RATE
FACTOR OF 0.61 GAL/SF/DAY

DESIGN CALCULATIONS:
4-Bedroom Residential Dwelling @ 115/Bedroom = 460 gal/day
Using Testhole #2 - Soil Category #6 - Loading Rate Factor = 0.61
Required: 460/0.61 754 s.f.
Provided: 34' of GST 6218 @ 24.8 s.f./l.f. = 843 s.f.

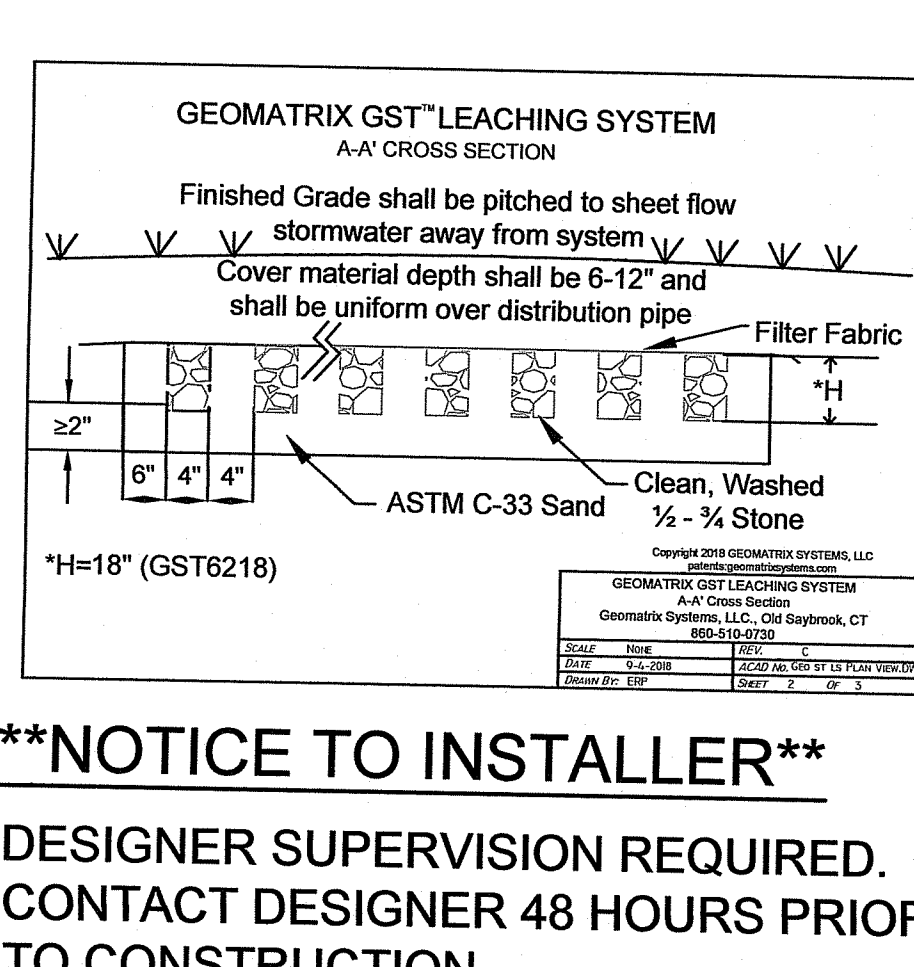
NOTE
THIS PLAN IS FOR SEPTIC PURPOSES ONLY
AND DOES NOT CONSTITUTE A SURVEY



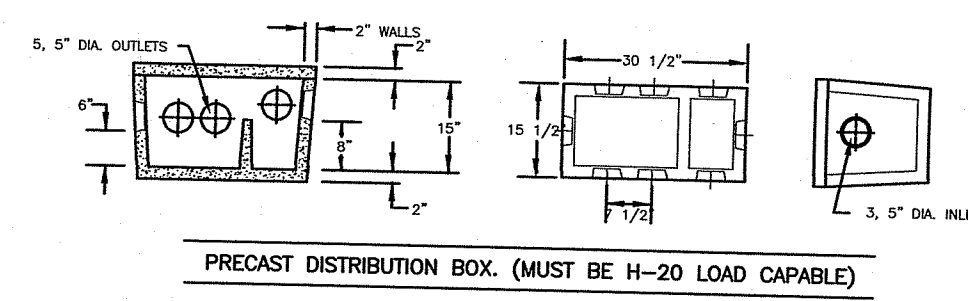
* Distribution pipe for gravity systems shall comply with RIDEM OWTWS Rule 6.34C
Distribution pipe for pressure applications shall comply with RIDEM Guidelines for
the Design, Use and Maintenance of Pressurized Drains.



* Distribution pipe for gravity applications shall comply with RIDEM OWTWS Rule 6.34C
Distribution pipe for pressure applications shall comply with RIDEM Guidelines for the
Design, Use and Maintenance of Pressurized Drains.



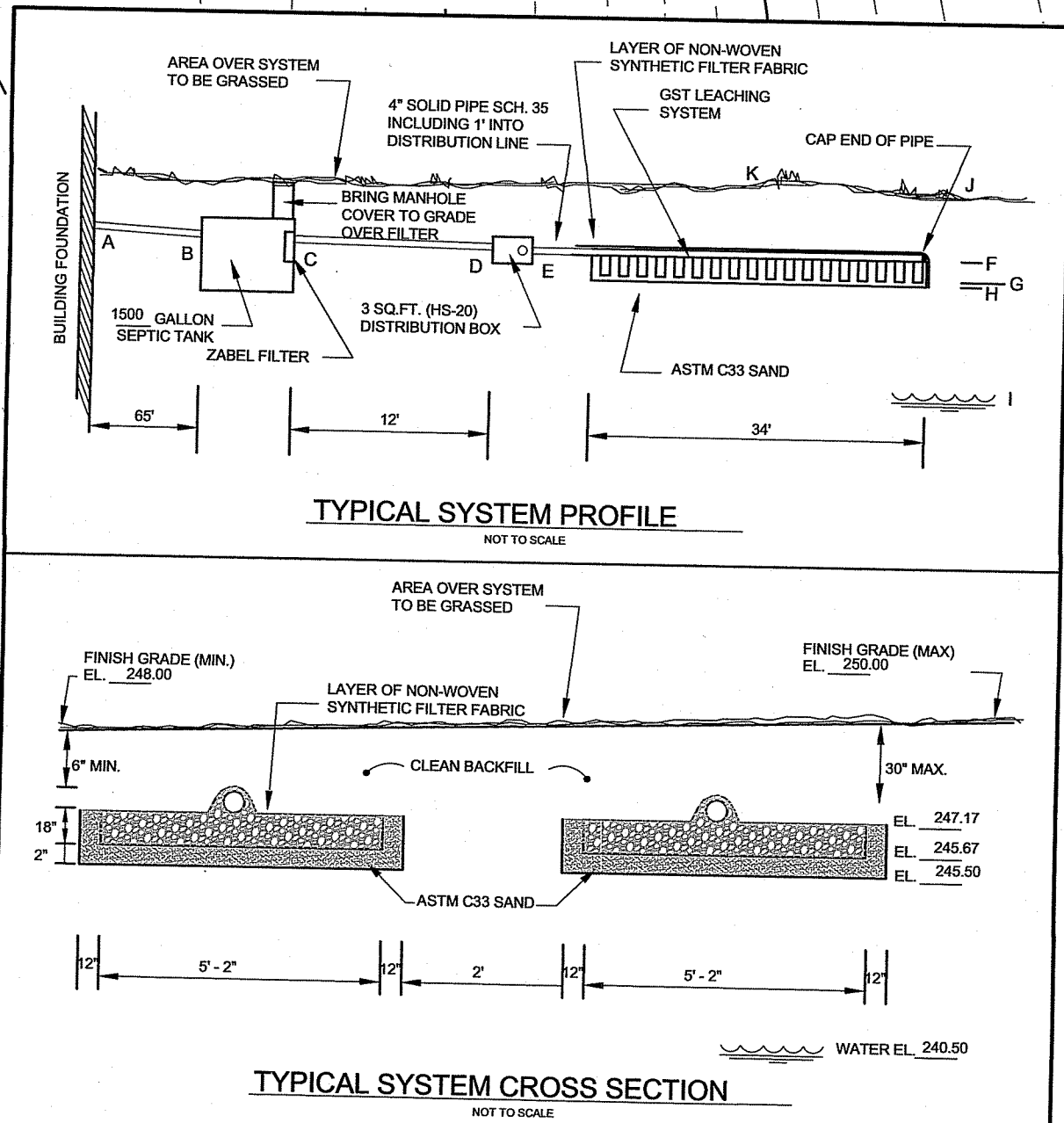
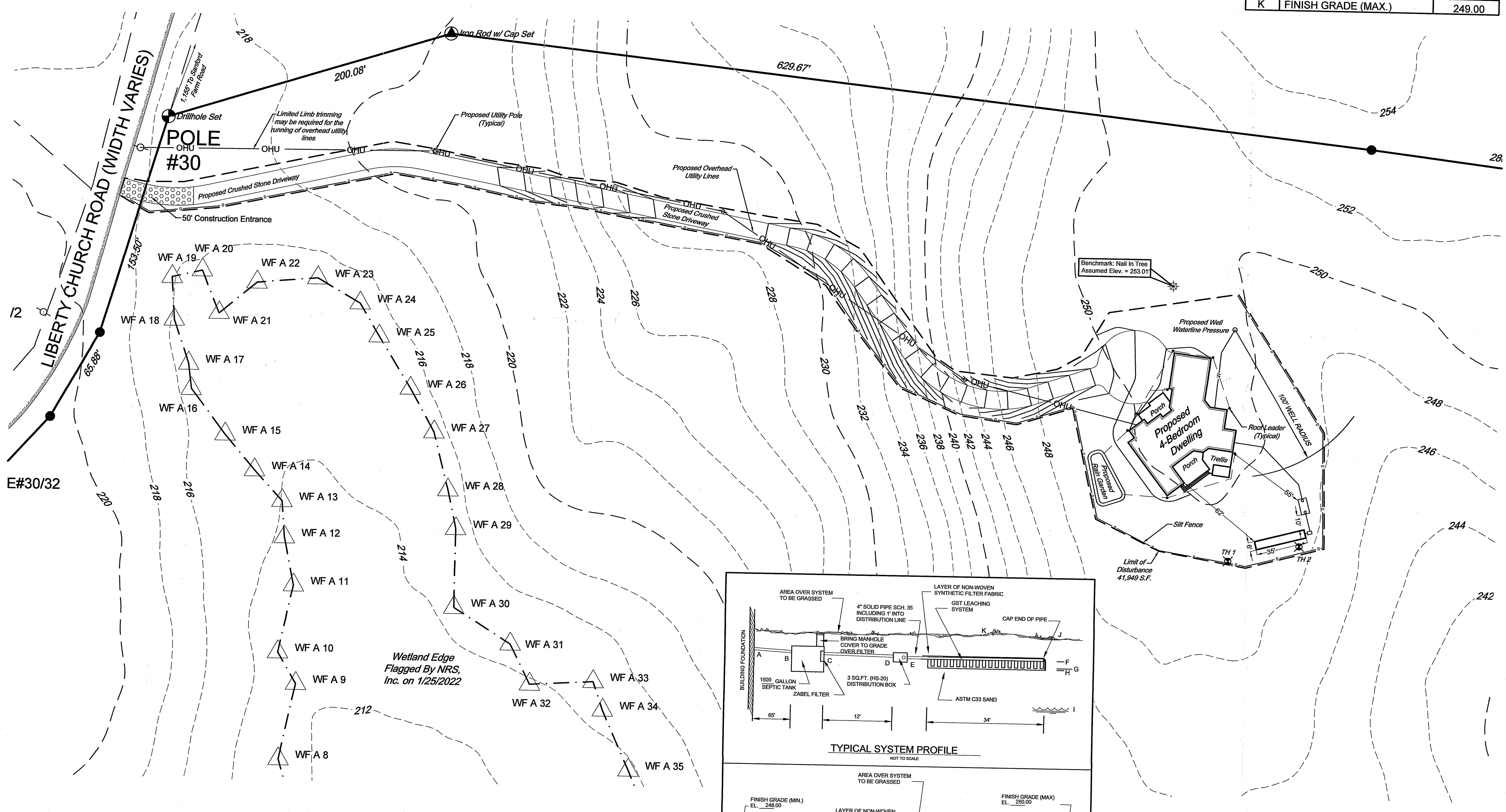
* Distribution pipe for gravity applications shall comply with RIDEM OWTWS Rule 6.34C
Distribution pipe for pressure applications shall comply with RIDEM Guidelines for the
Design, Use and Maintenance of Pressurized Drains.



INVERT TABLE

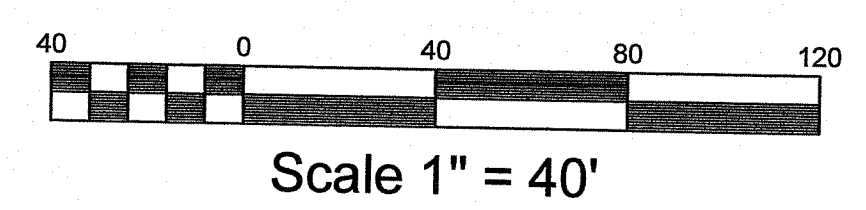
ELEVATION LOCATION	ELEVATION
A INV. AT HOUSE	248.30
B INV. AT SEPTIC TANK IN	247.00
C INV. AT SEPTIC TANK OUT	246.75
D INV. AT D-BOX IN	246.50
E INV. AT D-BOX OUT	246.33
F GST INVERT	246.17
G BOTTOM OF STONE FINGERS	244.67
H BOTTOM OF SAND	244.50
I WATER TABLE ELEVATION	240.50
J FINISH GRADE (MIN.)	247.00
K FINISH GRADE (MAX.)	249.00

****NOTICE TO INSTALLER****
DESIGNER SUPERVISION REQUIRED.
CONTACT DESIGNER 48 HOURS PRIOR
TO CONSTRUCTION.



Crushed Stone Driveway:
1. The crushed stone driveway shall use
3/4 inch to 1 1/2 inch diameter, washed,
angular crushed stone installed to a
minimum depth of 3 inches. The grade of
the finished driveway shall not be higher
than the adjacent ground elevation.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTWS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL
APPROVED: [Signature] DATE: 8/15/22
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site



RI Environmental Management
JUN 15 2022
Office of Water Resources

AMERICAN ENGINEERING, INC.
Professional Engineering & Land Surveying
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
D.Coffa@AmericanEngineeringRI.com
Phone (401) 294-4090 / Fax (401) 294-3625

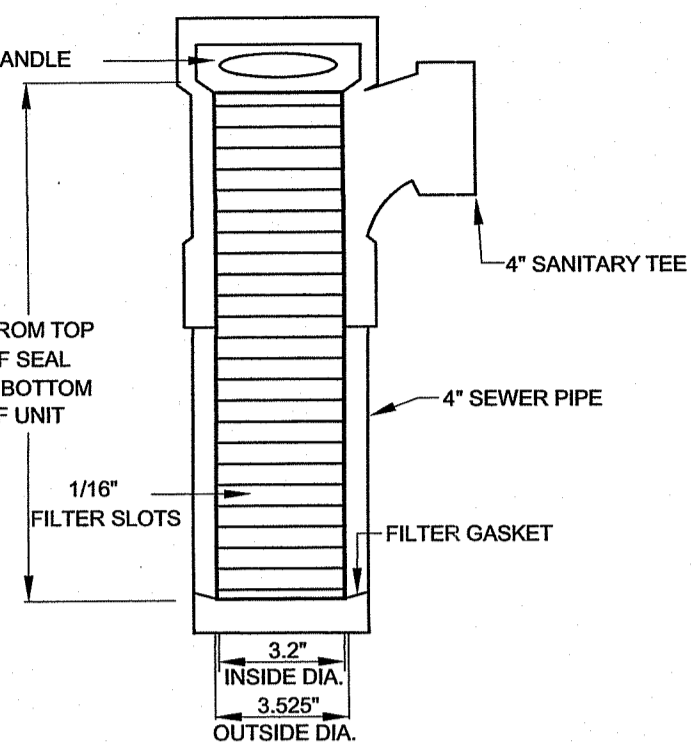
Sheet
1
of 2 sheets
Drawing No. 106154

JOINT OWTWS WETLANDS SUBMISSION
FOR
BYRON KIRK
LOCATED AT
130 LIBERTY CHURCH ROAD
EXETER, RHODE ISLAND

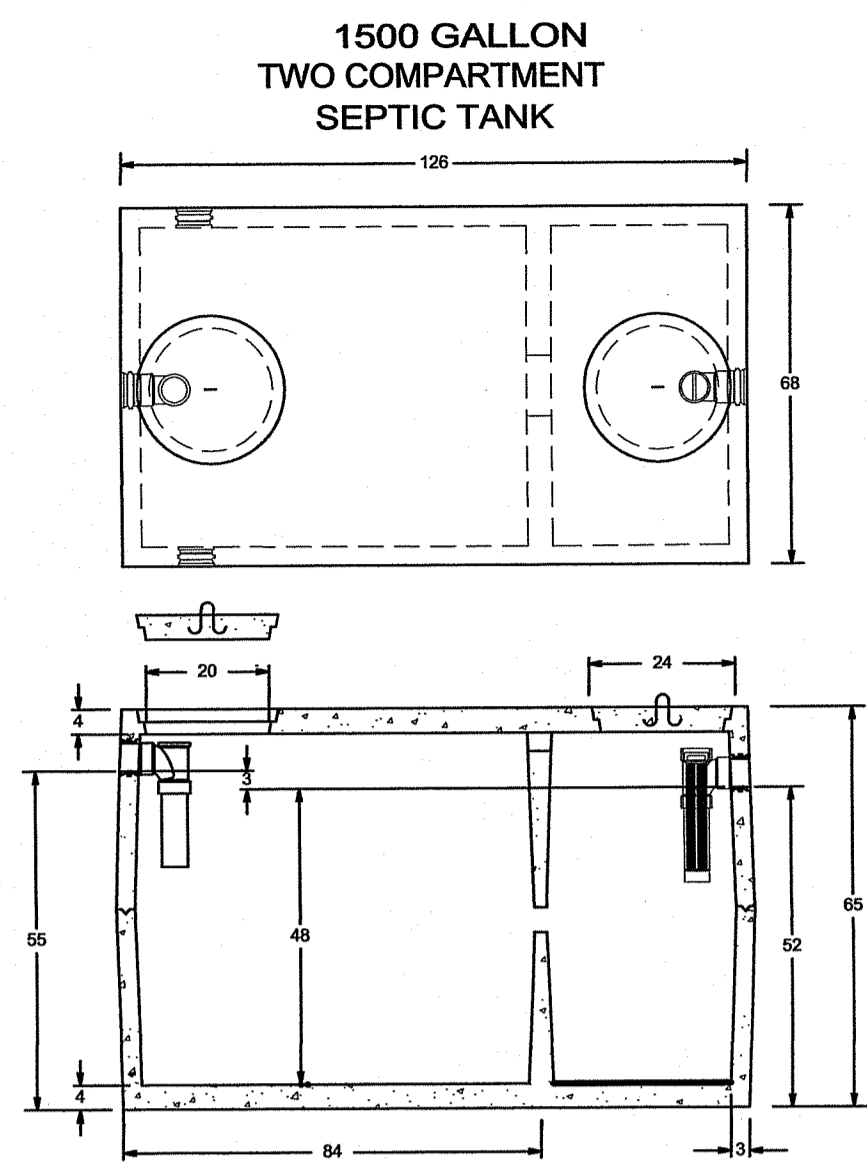
Drawn By: KLG
Checked By: PJF
Scale: 1" = 40'
Date: 06/13/2022
NO. REVISION BY DATE

PATRICK J. FREEMAN
NO. 13125
REGISTERED PROFESSIONAL ENGINEER
CIVIL
6/13/22

- GENERAL NOTES:**
- 1) D-BOX TO BE 3 SQ. FT. MINIMUM, AND BE PROVIDED WITH A SUITABLE BAFFLE. D-BOX MUST BE HS-20 RATED.
 - 2) SEPTIC TANK TO BE PROVIDED WITH AN INLET TEE AND AN OUTLET TEE. MANHOLE COVER IS TO BE BROUGHT TO FINISH GRADE WITH THE RIM SET TO DIVERT SURFACE RUNOFF.
 - 3) NO GRADE WITHIN 10 FEET OF THE PROPOSED SYSTEM SHALL BE LOWER THAN THE INVERTS.
 - 4) NO SLOPE WITHIN 25 FEET OF THE PROPOSED SYSTEM SHALL BE GREATER THAN A 3:1 SLOPE.
 - 5) THE DRAINFIELD AREA IS TO BE KEPT DEBRIS FREE AND PLANTED TO GRASS.
 - 6) TREES AND SHRUBS ARE TO BE KEPT A MINIMUM DISTANCE OF 10' FROM THE DRAINFIELD.
 - 7) THERE ARE NO PUBLIC SEWERS WITHIN 200 FEET OF THE PROPERTY OTHER THAN SHOWN ON PLAN.
 - 8) THERE ARE NO WELLS WITHIN 200 FEET OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
 - 9) THERE ARE NO OWTS WITHIN 200 FEET OF THE PROPOSED WELL OTHER THAN SHOWN ON PLAN.
 - 10) THERE ARE NO DRAINS WITHIN 200 FEET OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
 - 11) THERE ARE NO PUBLIC WELLS WITHIN 500' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
 - 12) THERE ARE NO OWTS WITH A FLOW GREATER THAN 1,000 gpd WITHIN 400' OF THE PROPOSED WELL OTHER THAN SHOWN ON PLAN.
 - 13) THERE ARE NO WATERCOURSES, WETLANDS OR DRAINS WITHIN 200' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
 - 14) AREA BETWEEN THE DISPERSAL TRENCHES SHALL REMAIN UNDISTURBED, IF INVERT IS BELOW NATURAL GRADE.
 - 15) AREA OF GST TO BE STRIPPED 10 FEET ON ALL SIDES OF ALL TREES, STUMPS, BOULDERS, AND BRUSH.
 - 16) ALL PRE-ASSEMBLED SEPTIC TANKS SHALL BE CERTIFIED WATER TIGHT BY THE MANUFACTURER. ALL TANKS ASSEMBLED ON-SITE SHALL BE CERTIFIED WATERTIGHT IN THE FIELD. CERTIFICATE BY MANUFACTURER OR FROM ON-SITE TESTING SHALL BE INCLUDED WITH BILL OF LADEN.
 - 17) IF THE INVERT IS ABOVE ORIGINAL GRADE:
PER RULE 6.34.F.1 THE LEACHFIELD AND FIVE (5) FEET BEYOND THE LEACHFIELD SHALL BE STRIPPED OF ALL TOPSOIL (A HORIZONS), IN ORDER TO AVOID COMPACTION OF THE B SOIL HORIZON, ONLY TRUCKED VEHICLES SHALL BE ALLOWED IN THIS AREA.
PER RULE 6.34.F.2 PROPERLY COMPACT GRAVEL THAT MEETS THE REQUIREMENTS OF RULE 6.33M SHALL BE PLACED THROUGHOUT THE EXCAVATION TO AN ELEVATION THAT WILL BE TWO (2) INCHES ABOVE THE TOP OF THE DISTRIBUTION LINES. DISPERSAL TRENCHES SHALL BE EXCAVATED OUT OF THE COMPACTED GRAVEL. ASTM C33 SAND SHALL BE USED TO FILL FROM NATURAL GRADE TO THE BASE OF THE GST.
 - 18) ALL GRAVITY LINES TO BE 4 INCH DIAMETER P.V.C. SCHEDULE 40 OR EQUAL. MINIMUM SLOPE OF 1%. SLOPES GREATER THAN 5% SHALL BE PROHIBITED. ALL PRESSURE LINES SHALL BE PVC (CLASS 200 MINIMUM).
 - 19) THESE PLANS ARE FOR THE SOLE PURPOSE OF DESIGN, APPROVAL AND INSTALLATION OF THE PROPOSED ON-SITE WASTEWATER TREATMENT SYSTEM ONLY, AND HAS NOTHING TO DO WITH THE CONSTRUCTION OF THE PROPOSED BUILDING SHOWN OTHER THAN THE APPROXIMATE LOCATION AND ORIENTATION.
 - 20) THE USE OF GARBAGE DISPOSALS IS STRICTLY PROHIBITED.
 - 21) THE USE OF TUBS EQUAL TO OR GREATER THAN 100 GALLONS IS TO BE SOLID.
 - 22) THE GST IS TO HAVE A MINIMUM OF 2" OF ASTM C33 SAND DIRECTLY BELOW AND AROUND THE SIDES OF EACH UNIT TRENCH.
 - 23) ALL LEACH FIELD PIPING IS TO BE 4" SDR-35 PVC OR EQUIVALENT. THE PIPING OVER THE GST SHALL MEET THE REQUIREMENTS OF RULE 6.34.C.2 (ALL OTHER PIPING IS TO BE SOLID).
 - 24) PRIOR TO BACKFILLING OVER THE GST A FILTER FABRIC IS TO BE PLACED OVER THE TOP. ALL BACKFILL MATERIAL IS TO BE FREE OF LARGE ROCKS, ETC. IN BACKFILLING THE FOLLOWING SEQUENCE IS TO BE FOLLOWED:
a) - SECURE FILTER FABRIC WITH HAND SHOVELED SAND.
b) - FIRST HEAVY LOAD MUST BE PLACED OVER COVERED (FILTER FABRIC) PIPE.
c) - SECOND AND THIRD LOADS ARE TO BE PLACED ON EITHER SIDE OF FIRST LOAD.
d) - REPEAT 1 AND 2 UNTIL ENTIRE TRENCH IS BACKFILLED.
e) - ALL BACKFILLING/GRADING SHOULD BE DONE IN 6" LIFTS. UPON COMPLETING ALL BACKFILLING COMPACT WITH A LIGHT TRACK MACHINE WITH CAUTION, AVOID CRUSHING OR SHIFTING OF PIPE ASSEMBLY. WHEN COMPACTING THE SOIL, THE LIGHT TRACK MACHINE MUST FOLLOW THE DIRECTION OF THE PIPE ASSEMBLY (PARALLEL), DO NOT RUN THE TRACK MACHINE PERPENDICULAR TO THE PIPE ASSEMBLY TO SHIFT OR IMPROPERLY SETTLE.
25) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE RIDEM ON-SITE WASTEWATER TREATMENT SYSTEMS REGULATIONS.
 - 26) BILL OF LADEN SHALL BE PROVIDED TO THE DESIGNER FOR ALL SYSTEM COMPONENTS.
 - 27) ACCESS LIDS SHALL WEIGH 99 lbs OR SHALL BE TAMPER RESISTANT AND MECHANICALLY FASTENED. EACH ACCESS OPENING SHALL HAVE A LABEL STATING "ENTRANCE INTO THE TANK COULD BE FATAL".



ZABEL A1800 RESIDENTIAL SEPTIC TANK
EFFLUENT FILTER SPECIFICATIONS



- DESIGN NOTES**
- 1) ALL JOINTS SEALED WITH BUTYL RUBBER SEALANT
 - 2) ALL INLETS AND OUTLETS HAVE STATE APPROVED SEALS
 - 3) AVAILABLE OUTLET FILTER SHOWN
 - 4) MEETS ASTM C 1277-07A
 - 5) CONCRETE STRENGTH 5000 P.S.I. MIN. 28 DAYS

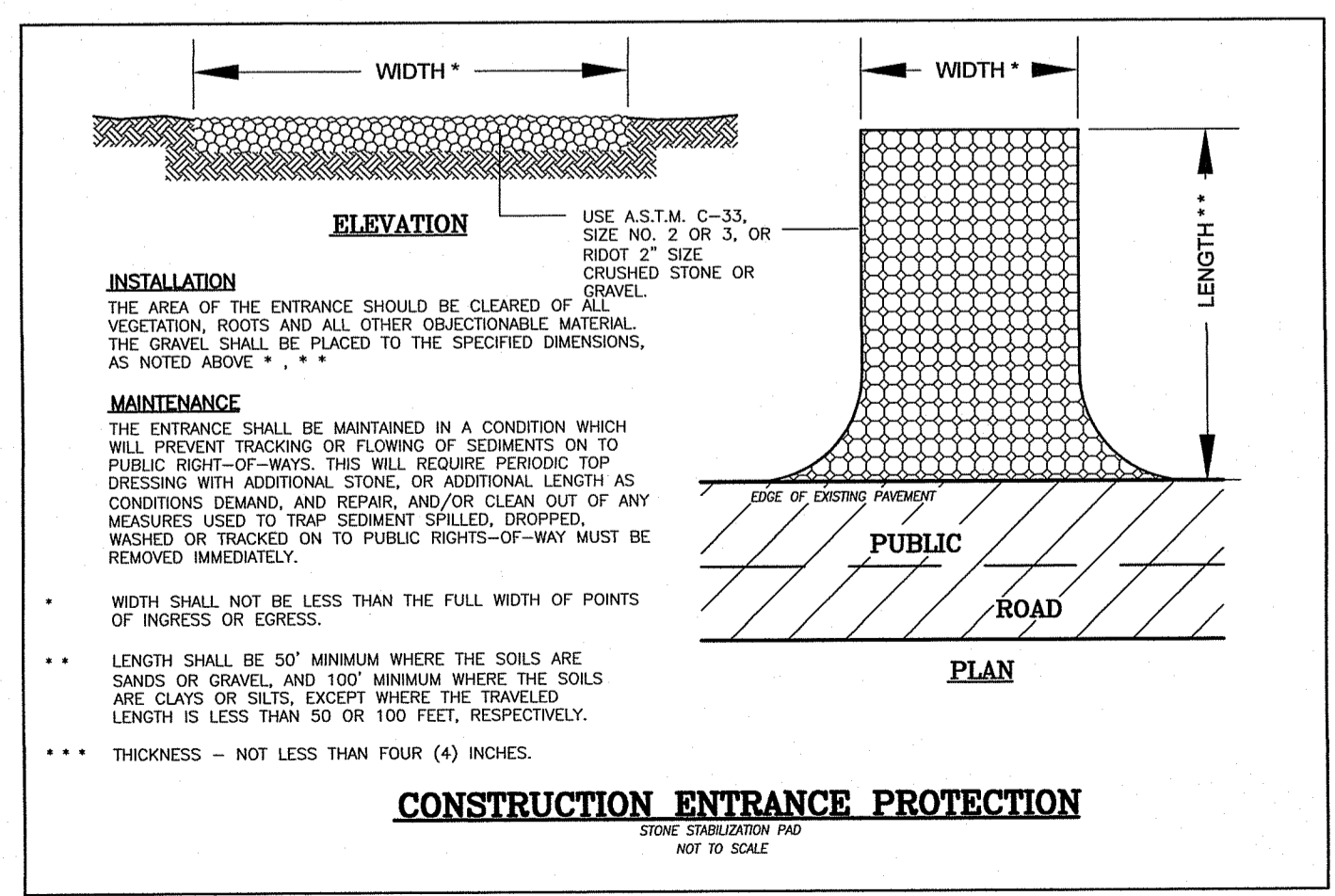
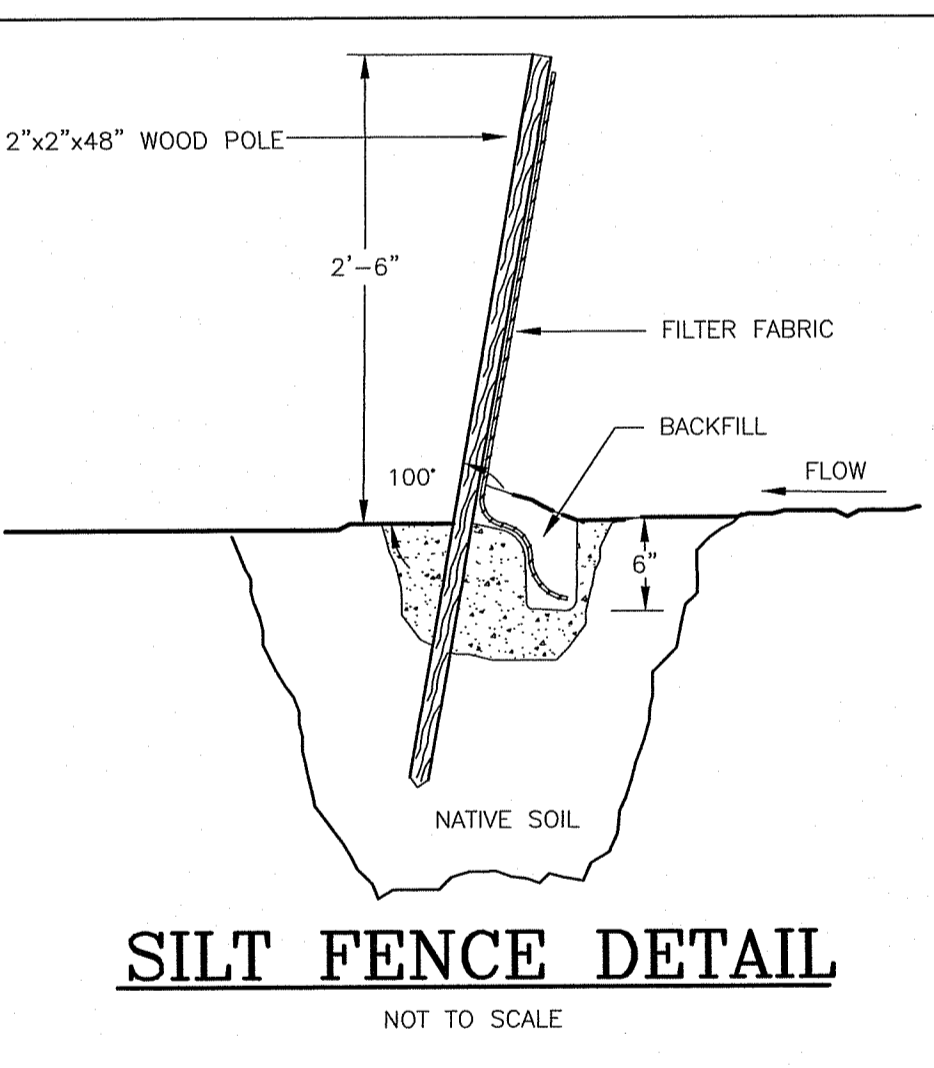
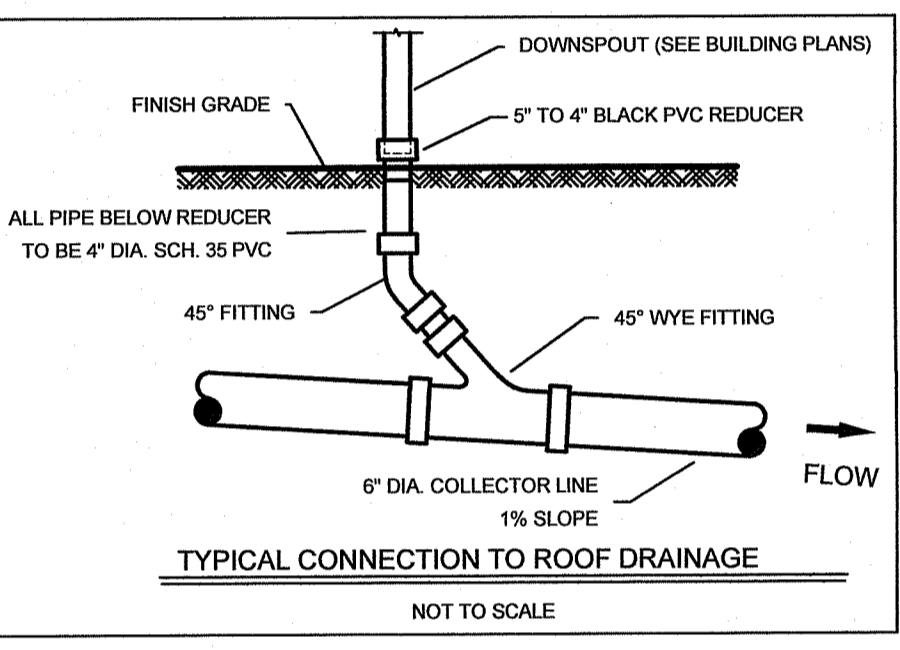
(CERTIFIED WATERTIGHT IN FIELD)

NOTE: ACCESS LIDS SHALL WEIGH 99 lbs OR SHALL BE TAMPER RESISTANT AND MECHANICALLY FASTENED. EACH ACCESS OPENING SHALL HAVE A LABEL STATING "ENTRANCE INTO THE TANK COULD BE FATAL".

ALL PRE-ASSEMBLED TANKS SHALL BE CERTIFIED WATER TIGHT BY THE MANUFACTURER. ALL TANKS ASSEMBLED ON-SITE SHALL BE CERTIFIED WATERTIGHT IN THE FIELD. CERTIFICATE BY MANUFACTURER OR FROM ON-SITE TESTING SHALL BE INCLUDED WITH BILL OF LADEN.

- MAINTENANCE AND RESPONSIBILITY**
1. THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE SOLE RESPONSIBILITY FOR THE DESIGN IMPLEMENTATION. HE SHALL ALSO BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION WORKERS AND SUB-CONTRACTORS ARE AWARE OF THE PROVISIONS OF THE PLAN AND THE ENGINEER'S REPORT.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ASPECTS OF THE DESIGN PRIOR TO FINAL APPROVAL BY THE TOWN. DURING THAT TIME, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHOULD BE CHECKED ON A WEEKLY BASIS AS WELL AS AFTER EACH SIGNIFICANT RAINFALL. ALL SUCH MEASURES SHOULD BE CLEARED OR REPLACED AS NECESSARY.
 3. REPLANTING, REGRADING OR OTHER REPAIRS NEEDED AS A RESULT OF EROSION AND SEDIMENTATION SHOULD BE DONE PROMPTLY.
- NOTES:**
1. ALL EROSION CONTROL MEASURES TO REMAIN FOR 3 CONSECUTIVE MOWINGS.
 2. CONTRACTOR TO CALL PUBLIC WORKS PRIOR TO CONSTRUCTION AND AGAIN FOR FINAL INSPECTION.
 3. THIS SITE AS DESIGNED WILL HAVE NO ADVERSE EFFECT ON ABUTTING PROPERTIES ASSUMING EROSION CONTROL PLAN IS IMPLEMENTED.
 4. FOR DRIVEWAYS SLOPING DOWN TOWARD THE ROAD HAYBALES TO BE SET ACROSS DRIVEWAY AT THE END OF DAY.
 5. CONSTRUCTION TO COMMENCE IMMEDIATELY FOLLOWING APPROVAL AND WILL TAKE APPROXIMATELY 6 MONTHS TO COMPLETE.

- ORDER OF PROCEDURE**
1. IMMEDIATELY UPON COMPLETION OF THE CLEARING AND GRUBBING OPERATION AND PRIOR TO ANY GRADING, TEMPORARY HAYBALES, SILTFENCE OR SANDBAGS SHALL BE PLACED INSIDE THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS. (E. ALONG NEW ROADWAYS, STREAMBANKS, CRITICAL AREAS, ETC.)
 2. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PERIODICALLY CLEANED AND MAINTAINED AS PER THE RESPECTIVE PROGRAMS DURING THE CONSTRUCTION.
 3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION CONTROL PROGRAMS FOR TEMPORARY CONTROL.



- GENERAL NOTES**
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE OF RHODE ISLAND AND THE MUNICIPALITY PRIOR TO COMMENCING ANY WORK.
 2. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF ALL EXISTING UTILITIES, STRUCTURES, AND ADJUTING PROPERTIES. THE COST OF ANY REPAIR OR REPLACEMENT OF DAMAGED ITEMS SHALL BE BORNE BY THE CONTRACTOR.
 3. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE MUNICIPAL ENGINEERING DEPARTMENT AND ALL UTILITY INSTALLATIONS AND INSPECTIONS WITH THE APPROPRIATE UTILITY CO. A 48 HOUR ADVANCE NOTICE IS REQUIRED BEFORE WORK COMMENCEMENT.
 4. ALL WORK WITHIN THE STATE'S ROW WILL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2013 AMENDED AUGUST 2013 AND STANDARD DETAILS, JUNE 15, 1998 AS AMENDED BY REVISION.
 5. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 2009, INCLUDING ALL REVISIONS.
 6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUANTITY TAKE OFF IN COMPUTING ANY ESTIMATES.
 7. EMBANKMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE 4" OF TOPSOIL AND SEED. SEE EROSION CONTROL PROGRAM DETAILS.
 8. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION INDICATED ON THESE PLANS. THAT INCLUDES ANY CONSTRUCTION TO BRING UTILITIES TO THE SITE, ANY REPAIRS, ANY TRENCHING REQUIRED.
 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND SOIL EROSION CONTROL MEASURES.
 10. THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANIES. CALL DIS-SAFE (888)944-7233.
 11. IN ALL EXCAVATION AND PLACEMENT OF THE R.I. CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
 12. ALL CONSTRUCTION AND UTILITY WORK SHALL CONFORM TO THE LATEST MUNICIPAL STANDARDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, COMPREHEND AND IMPLEMENT THESE REQUIREMENTS PROPERLY.

EROSION CONTROL & SOIL STABILIZATION PROGRAM

1. DENUDED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
2. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15, SHALL BE SEEDED OR PROTECTED BY THAT DATE FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION PERIOD.
3. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL CONFORM WITH R. I. STANDARD SPECIFICATION M. 20.
4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
5. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

PERMANENT SEEDING MIXTURES:

A - MOWED AREA: ALL FLAT OR SLOPES LESS THAN 3:1

MIXTURE	% BY WT.	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
KENTUCKY BLUEGRASS	15	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	5	
PERENNIAL RYEGRASS	5	

TOTAL 100%/ACRE

PERMANENT SEEDING MIXTURES:

B - UNMOWED AREA OR INFREQUENTLY MOWED: FLAT OR SLOPES GREATER THAN 3:1

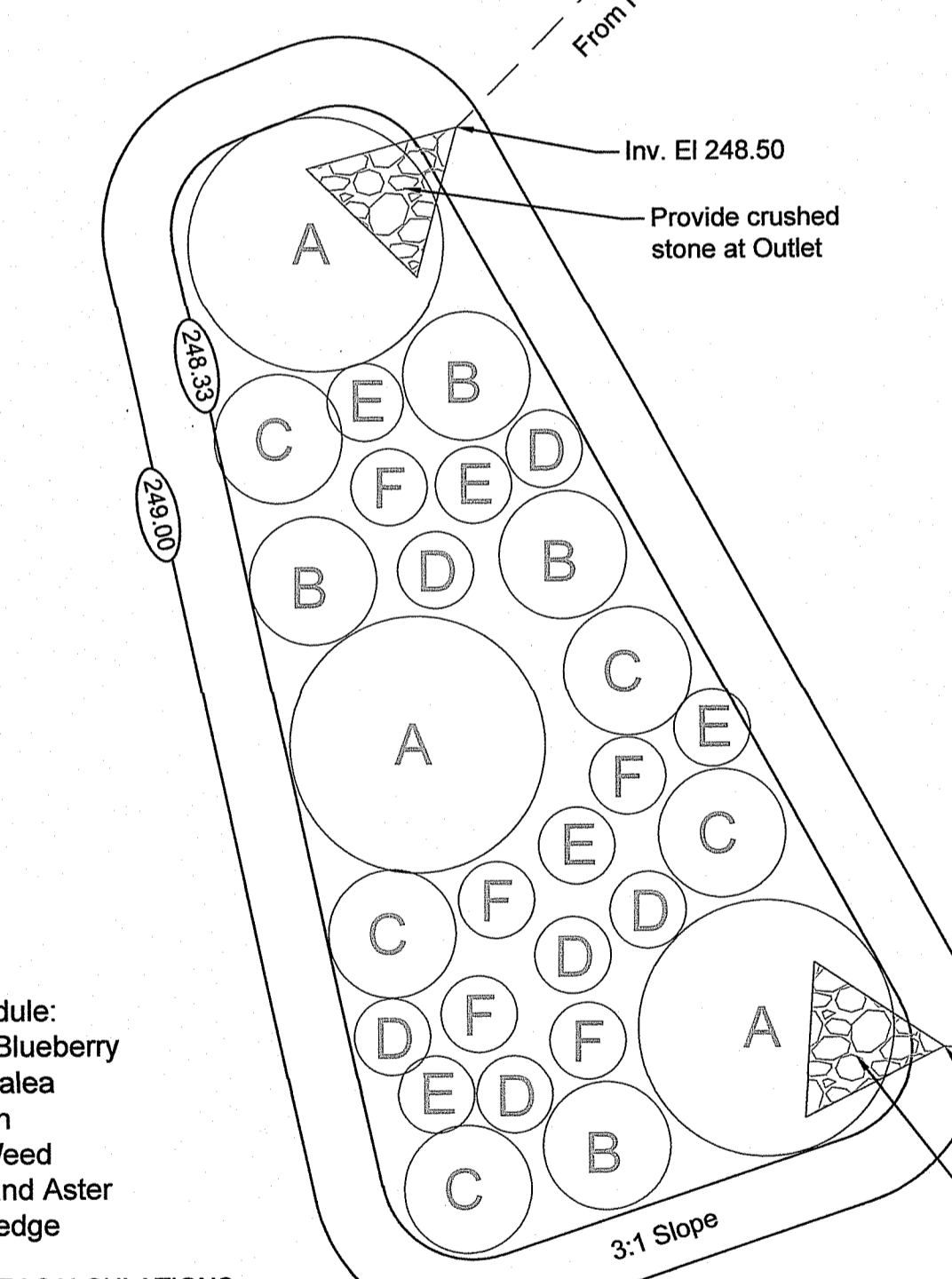
MIXTURE	% BY WT.	SEEDING DATES
RED FESCUE	75	APRIL 1 - JUNE 15
PERENNIAL RYEGRASS	5	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	5	
BIRDSFOOT TREFLOIL	15	

TOTAL 100%/ACRE

6. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
 7. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3000-4000 LBS/AC.
 8. ALL HAYBALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN BE USED TO HELP MINIMIZE EROSION. A TEMPORARY SEEDING GUIDE MUST BE INCLUDED AS A REFERENCE. THE FOLLOWING SPECIES ARE RECOMMENDED:
- | SPECIES | LBS/ACRE | LBS/1,000 SQ. FT. | SEEDING DATES |
|-----------------------|----------|-------------------|---------------------|
| ANNUAL RYEGRASS | 60 | 1.5 | MAR. 15 - JUNE 15 |
| PERENNIAL SUDAN GRASS | 40 | 1.0 | MAY 15 - AUGUST 15 |
| MILLET | 40 | 1.0 | MAY 15 - AUGUST 15 |
| WINTER RYE | 120 | 3.0 | AUGUST 15 - JUNE 15 |
| OATS | 120 | 3.0 | MAR. 15 - JUNE 15 |
| WEeping LOVEGRASS | 20 | 0.5 | MAY 1 - JUNE 30 |
9. THE CONTRACTOR MUST REPAIR AND OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE.
 10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THRU OCT. 15TH.
 11. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I.D.P.W. STANDARD SPECIFICATIONS SECTION 202.
 12. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 15 DAYS OF FINAL GRADING.
 13. STOCKPILES OF TOPSOILS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES SHALL ALSO BE SEEDED AND/OR STABILIZED.
 14. ON BOTH STEEP AND LONG SLOPES CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
 15. REFERENCE THE SEDIMENTATION CONTROL PROGRAM AND ORDER OF PROCEDURE FOR PROPER COORDINATION.

- SEDIMENTATION CONTROL PROGRAM**
1. ALL DISTURBED AREAS SUBJECT TO EROSION TENDENCIES WHETHER THEY ARE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SUITABLE SLOPE PROTECTION.
 2. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
 3. CARE SHALL BE TAKEN SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING EITHER EXISTING OR PROPOSED DRAINAGE OR SEWER STRUCTURES.
 4. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER PERIODS OF RAINFALL. SUCH DEVICES SHALL BE REPAIRED OR REPLACED AS NEEDED.
 5. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECT TO STORM WATER FLOW.
 6. ADDITIONAL HAYBALES, SILT FENCE OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
 7. REFERENCE THE "RHODE ISLAND EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1989, WITH ANY AMENDMENTS OR REVISIONS, AS A GUIDE.

RAIN GARDEN DETAIL
NOT TO SCALE



- Rain Garden Notes:**
1. The bottom of the rain gardens should be level to encourage the even distribution of stormwater and increase infiltration capacity.
 2. The rain gardens should have a 2-4 inch amended soil layer and a 2-3 inch layer of non-dyed aged shredded hardwood mulch. The mulch should be removed and replenished to original depth every year.
 3. The amended soil layer should be a 50/50 mixture of the excavated native soil and mature organic compost.
 4. A crushed stone entrance should be installed at the inflow to prevent channeling.
 5. A berm to detain stormwater should be constructed along the downhill side perpendicular to the slope.
 6. Be sure that the soil within the rain gardens does not become compacted by construction activity. If soil becomes severely compacted it may need to be tilled and amended to maintain proper drainage.
 7. Rain gardens should be inspected following at least the first two precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, the rain garden shall be monitored and maintained by the property owner or designee to assure proper functioning, plant growth and survival. Plants shall be replaced on an as-needed basis during the growing season.
 8. Silt/sediment shall be removed from the rain garden when the accumulation exceeds one inch, or when water ponds on the surface for more than 48 hours. The top few inches of material shall be removed and shall be replaced with fresh soil mixture and mulch.
 9. Pruning or replacement of woody vegetation shall occur when dead or dying vegetation is observed.
 10. Soil erosion gullies shall be repaired when they occur.
 11. Fertilizer or pesticides shall not be applied to plants within the rain garden.
 12. Perennial plants and ground cover shall be replaced as necessary to maintain an adequate vegetated ground cover.
 13. All roof leaders are to be diverted into the proposed rain gardens.
 14. The rain garden should be inspected annually by the property owner or designee and maintenance provided by self or professional if needed.

- Planting Schedule:**
- A - Highbush Blueberry
 - B - Swamp Azalea
 - C - Sweet Fern
 - D - Joe Pye Weed
 - E - New England Aster
 - F - Tussock Sedge

WATER QUALITY CALCULATIONS:
PROPOSED IMPERVIOUS AREAS=3,833 s.f
3,833 s.f X 1" = 319 C.F. REQUIRED
329 C.F. PROVIDED

Rain Garden:
Top of Garden Elev. 249.00
Bottom of Garden Elev. 248.33
Storage Volume Provided
585 s.f. Top of Garden + 398 s.f.
Bottom of Garden / 2 x 8" = 329 c.f.

JOINT OWTWETLANDS SUBMISSION
FOR
BYRON KIRK
LOCATED AT
130 LIBERTY CHURCH ROAD
EXETER, RHODE ISLAND

Drawn By: MJC
Checked By: PUF
Scale: AS SHOWN
Date: 06/13/2022

NO.	REVISION	BY	DATE

PATRIK J. FREEMAN
NO. 13125
REGISTERED PROFESSIONAL ENGINEER
CIVIL
6/13/22

AMERICAN ENGINEERING, INC.
Professional Engineering & Land Surveying
400 South County Trail - Suite A 201
Exeter, Rhode Island 02822
DCotta@AmericanEngineeringRI.com
Phone (401) 294-4090 / Fax (401) 294-3625