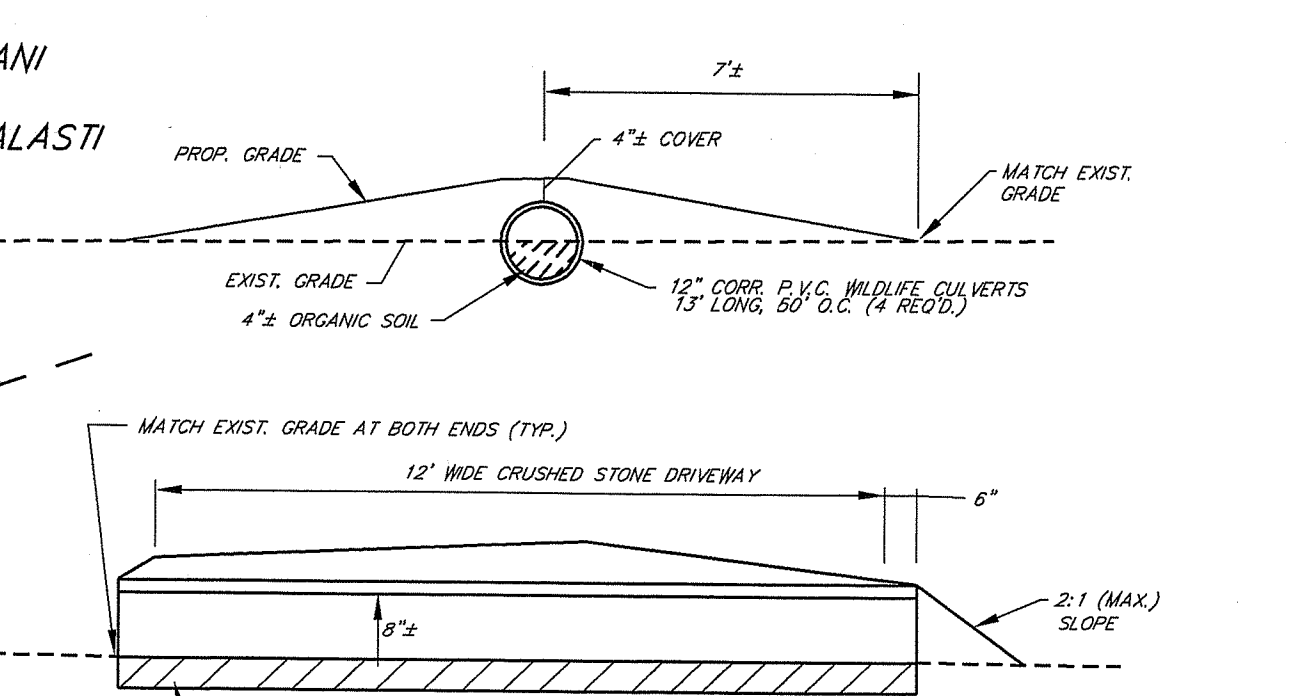
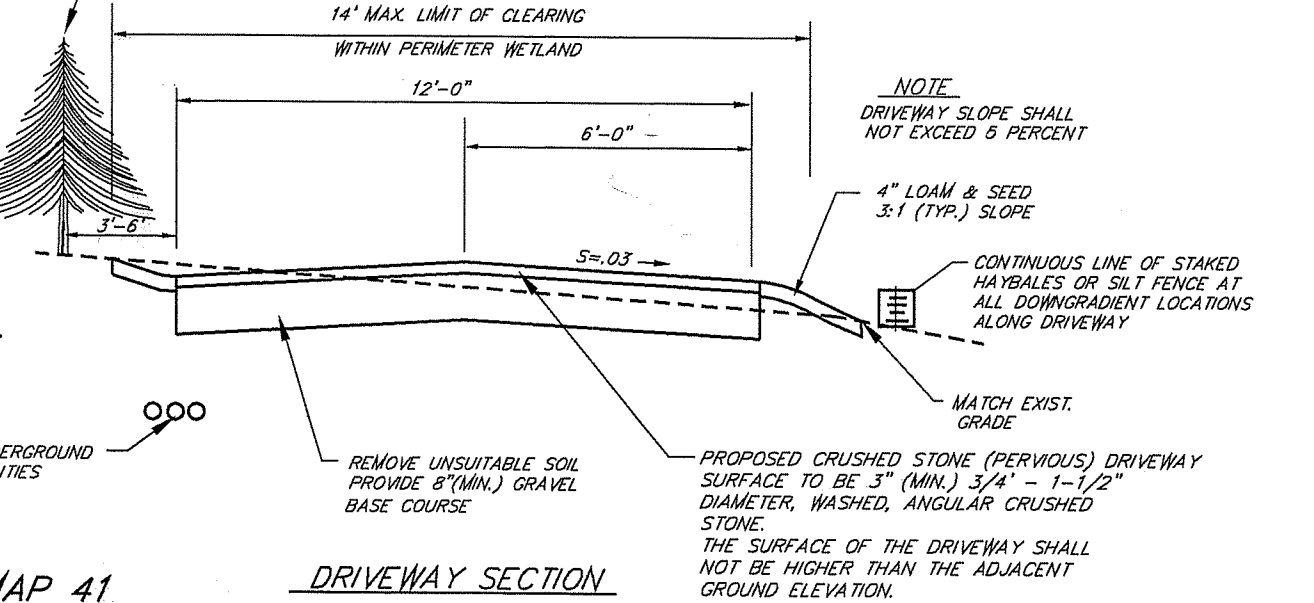
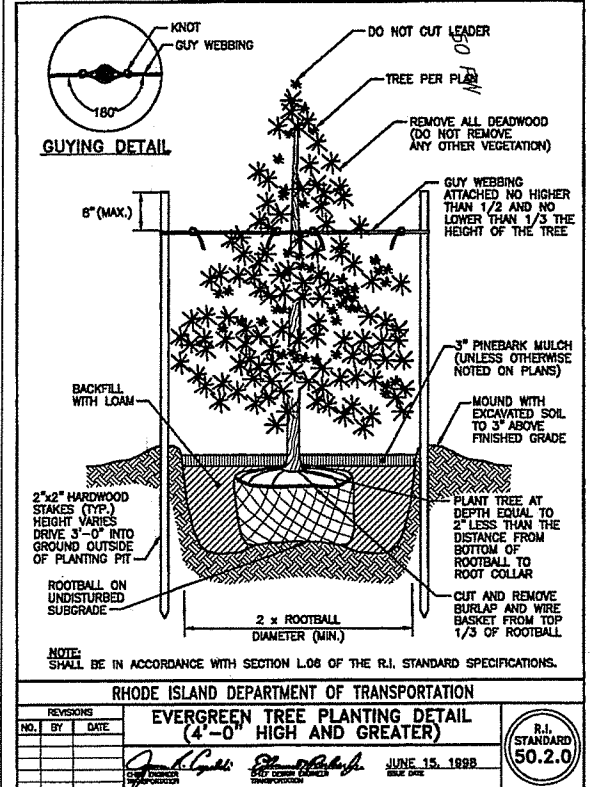
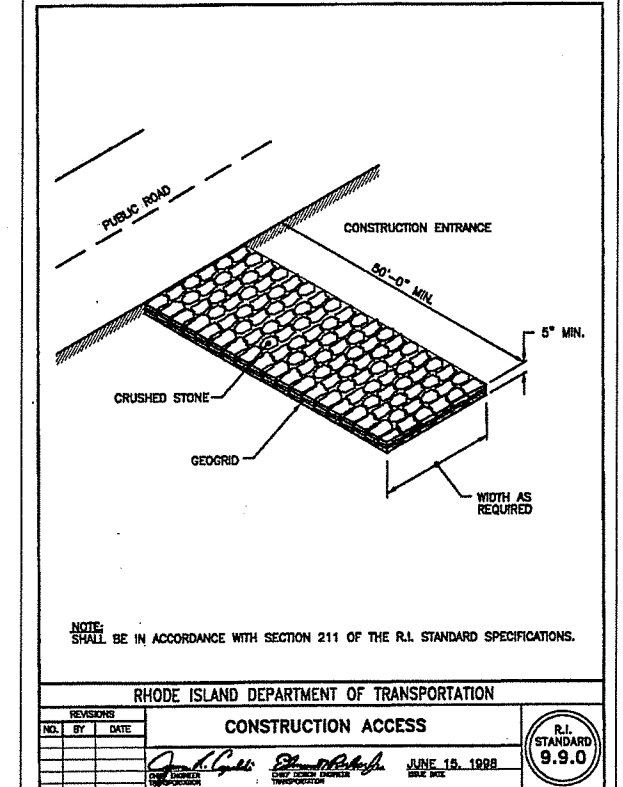
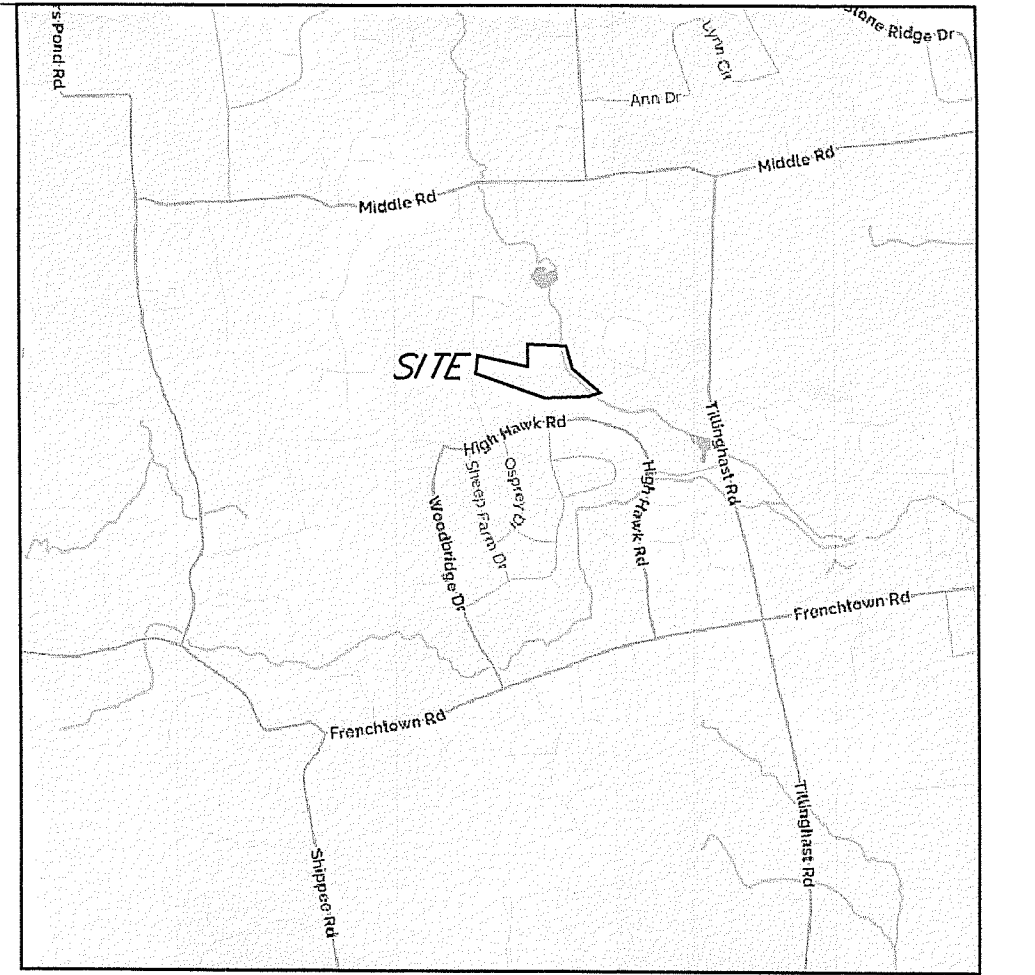


- LEGEND**
- EXISTING CONTOUR
  - - - PROPOSED CONTOUR
  - EXISTING EDGE OF PAVEMENT
  - EXISTING FLAGGED WETLAND EDGE
  - 50' PERIMETER WETLAND
  - RIVERBANK WETLAND
  - LIMITS OF DISTURBANCE
  - COMPOST FILTER SOCK
  - FLOOD ZONE LIMITS
  - EXISTING TREELINE
  - EXISTING UTILITY POLE
  - EXISTING GRANITE BOUND
  - EXISTING SOIL EVALUATION
  - PROPOSED ROOFDRAIN DRYWELL



- EROSION CONTROL & SOIL STABILIZATION PROGRAM**
1. DISTURBED SLOPES SHALL NOT BE UNPROTECTED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON.
  2. ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR EXPOSED PRIOR TO OBTAINING THIS PERMIT, SHALL BE SEEDING OR PROTECTED BY MAT DATE FOR ANY WORK COMPLETED DURING EACH CONSTRUCTION YEAR.
  3. THE TOP SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RI STANDARD SPECIFICATION 4.20.
  4. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS BEFORE LAYING AND PLANTING WITH APPROPRIATE NODULUM FOR EACH VARIETY.
  5. THE DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING PERMANENT SEEDING MIXTURES:
    - A. MOIST AREA (ALL PLATS OF SLOPES LESS THAN 5%)
 

MATERIAL	BY WT. %	SEEDING DATES
RED FESCUE	10	APRIL 1 - JUNE 15
INDIANVALE BLUEGRASS	10	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	10	
PERENNIAL RYEGRASS	10	
TOTAL	200 LBS./AC	
    - B. UNMOIST AREA OR INFREQUENTLY MOIST (PLAT OF SLOPES GREATER THAN 5%)
 

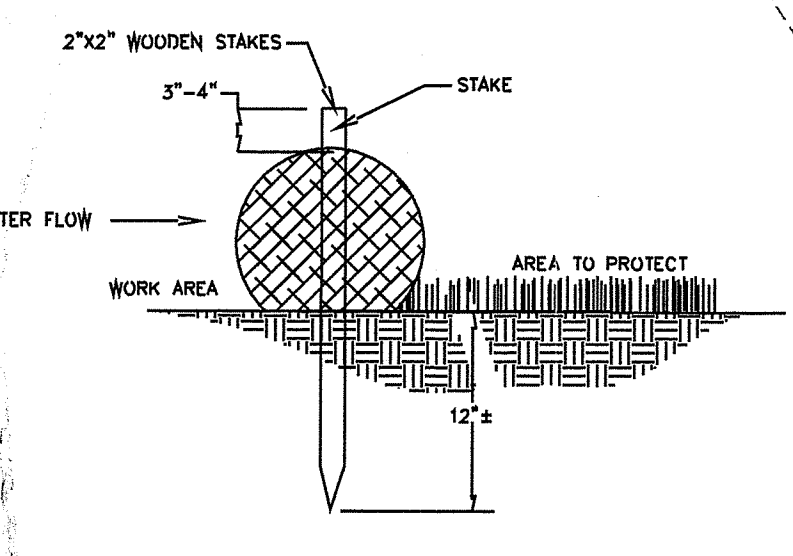
MATERIAL	BY WT. %	SEEDING DATES
RED FESCUE	10	APRIL 1 - JUNE 15
INDIANVALE BLUEGRASS	10	AUG. 15 - OCT. 15
COLONIAL BENTGRASS	10	
PERENNIAL RYEGRASS	10	
BRODSKI TIFIN	10	
TOTAL	200 LBS./AC	
    - C. CONSERVATION SEEDING AREAS
 

MATERIAL	BY WT. %	SEEDING DATES
TALL FESCUE	10	APRIL 1 - JUNE 15
RED FESCUE	10	AUG. 15 - OCT. 15
PERENNIAL RYEGRASS	10	
INDIANVALE BLUEGRASS	10	
RED CANARY GRASS	10	
RESTIOP	10	
TOTAL	200 LBS./AC	
  6. TEMPORARY TREATMENTS SHALL CONSIST OF A MAX. STRAW, OR FIBER MATS OR PROTECTIVE COVERS SUCH AS A MAT OF FIBER LAMING (GULBARK, AITE, FIBERGLASS NETTING, EXCESSION BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
  7. MAT OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 3,000-4,000 LBS./AC.
  8. ALL NURSERIES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED SOIL COVER IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN HELP TO MANAGE EROSION. A TEMPORARY SEEDING GUIDE MUST BE INCLUDED AS A REFERENCE. THE FOLLOWING SPECIES ARE RECOMMENDED:
 

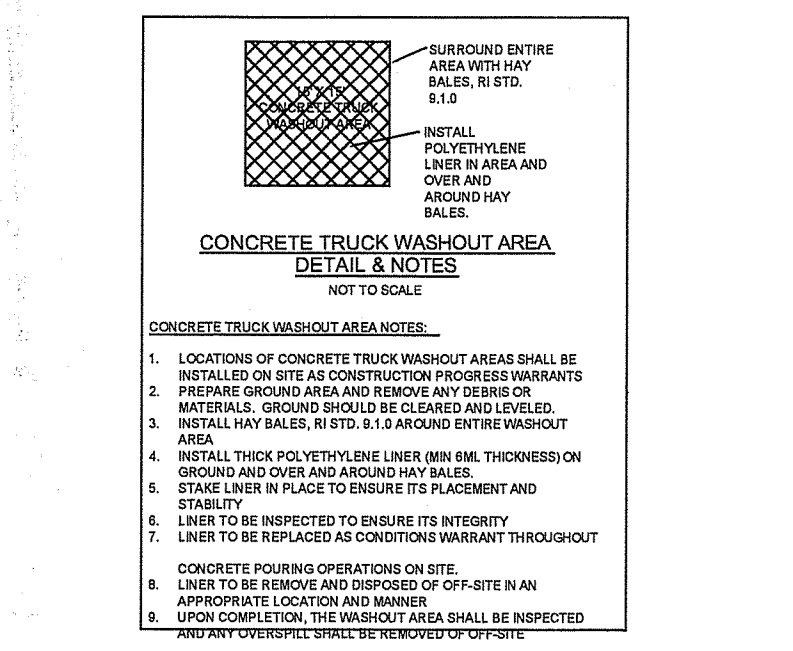
SPECIES	SEEDING DATES	SEEDING DATES
ANNUAL PERGRASS	1.0 - 1.5	4/1 - 6/15
PERENNIAL RYEGRASS	1.0 - 1.5	5/1 - 8/1
INDIANVALE BLUEGRASS	1.0 - 1.5	8/15 - 10/15
MALLET	0.7 - 1.0	1/15 - 6/15
WINTER RYE	.50	4/15 - 6/15
  9. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL CHARGE.
  10. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1 - OCTOBER 15.
  11. ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH THE R.I.D.P. 510. SPECIFICATIONS SECTION 202.
  12. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 16 DAYS OF FINAL GRADING.
  13. STOODPLES OF TOPSOILS SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES GREATER THAN 5% AND STOODPLES SHALL ALSO BE SEEDING AND/OR STABILIZED.
  14. ON BOTH STEEP AND LONG SLOPES, CONSERVATION SHOULD BE GIVEN TO "CONTRACTOR'S CHOICE" TO PICK DOWN WASHOUT APPLICATIONS.
  15. REFERENCE THE SEDIMENTATION CONTROL PROGRAM AND ORDER OF PROCEDURE FOR PROPER COORDINATION.

- GENERAL NOTES**
1. ALL WORK PERFORMED HEREIN SHALL BE GOVERNED BY THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (EDITION OF 2007) WITH ALL CORRECTIONS AND ADDENDUMS AND THE 2008 R.I. STANDARD DETAILS WITH ALL CORRECTIONS AND ADDENDUMS.
  2. ENHANCEMENT SLOPES AND ALL DISTURBED AREAS ARE TO RECEIVE 4" OF TOPSOIL AND SEEDING SEE EROSION CONTROL PROGRAM.
  3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
  4. IN ALL EXCAVATION AND REPLACEMENT OF FILL, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
  5. ALL EXCESS SOIL, STUMPS, TREES, ROCKS, BouldERS AND OTHER DEBRIS SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE AND IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
  6. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF ALL STATE AND TOWN REGULATIONS AND PERMITS.
- SEDIMENTATION CONTROL PROGRAM**
1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY SEDIMENTS FROM ENTERING THE STATE HIGHWAY OR ADJACENT PROPERTIES.
  2. BANKS OF SLOPES OVER 6 PERCENT SHALL BE SEEDING AS SOON AS POSSIBLE AND SHALL BE PROTECTED WITH A MAX. STRAW OR FIBER MATS.
  3. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
  4. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROPERLY AFTER EACH RAINFALL.
  5. CARE SHALL BE TAKEN SO NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED INTERCOURSES OF THOSE AREAS SUBJECTED TO STORM WATER FLOW.
  6. ADDITIONAL NURSERIES, SILT FENCE OR SANDBARRS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
  7. REFERENCE THE "RI" SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PUBLISHED BY THE U.S. DEPT. OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1988, AS A GUIDE.
- ORDER OF PROCEDURE**
1. PRIOR TO ANY CONSTRUCTION OR EXCAVATION, NURSERIES OF SILT FENCE SHALL BE INSTALLED AT THE PROPERTY LINE OR LIMIT OF DISTURBANCE. TEMPORARY NURSERIES OF SILT FENCE SHALL BE INSTALLED AT THE LIMITS OF WORK ACTIVITY IF CONSTRUCTION IS TO BE DONE IN PHASES.
  2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERMANENTLY MAINTAINED AS PER THE RESPECTIVE PROGRAMS FOR TEMPORARY CONTROL.
  3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
  4. TEMPORARY NURSERIES AND SANDBARRS ALONG AND AT THE ENDS OF ROADWAYS MAY ALSO BE REMOVED AFTER FINAL SOIL STABILIZATION HAS BEEN ACHIEVED AND APPROVED.
  5. NURSERIES LOCATED AT DRAINAGE NEETS OR OUTLETS MUST REMAIN UNTIL SUCH THAT THE DESIGN OF GRASS COVER HAS BEEN ESTABLISHED AND THE PROJECT RECEIVES A FAVORABLE APPROVAL FOR FINAL ACCEPTANCE FROM THE ENGINEER.

ASSESSORS MAP 33, PLAT 15, LOT 479  
N/F  
JOSEF & KATHRYN BLAZER



COMPOST FILTER SOCK  
NOT TO SCALE



PARCEL APPLICANT/OWNER  
JAMES MALM  
10 BARTON MEADOW  
EAST GREENWICH, RI 02818

SYSTEM DESIGNER  
HARRY A. MILLER, JR.  
ALPHA ASSOCIATES, LTD.  
35 ROCKY HOLLOW ROAD  
EAST GREENWICH, RI 02818  
PH. 401.84.8506 / F.401.884.7747

PROJECT BIOLOGIST  
ECOTONES, INC  
KEVIN FEITZER  
P.O. BOX 1131  
EAST GREENWICH, RI 02818  
PH. 401.256.5199 / F.401.256.5191

ASSESSORS MAP 33  
PLAT 15, LOT 390  
N/F  
ROBERT & ERIN  
TETREAU

ASSESSORS MAP 34  
PLAT 15, LOT 134  
N/F  
DANIEL BRYANT  
& ELIZABETH BURK

ASSESSORS MAP 34  
PLAT 15, LOT 133  
N/F  
STEFAN GRAVENSTEIN

ASSESSORS MAP 34  
PLAT 15, LOT 132  
N/F  
CAROL M. MCHUGH  
REVOCABLE TRUST

ASSESSORS MAP 34  
PLAT 15, LOT 131  
N/F  
CAROL M. MCHUGH  
REVOCABLE TRUST

ASSESSORS MAP 34, PLAT 15, LOT 300  
N/F  
ROBERT B. & JOYCE D. PACITTI

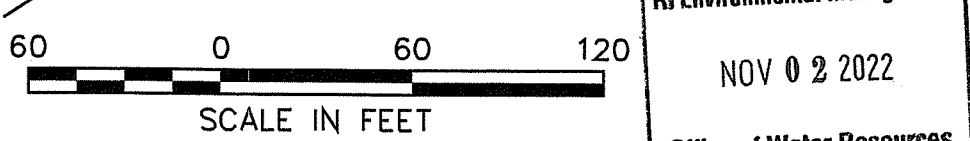
ASSESSORS MAP 41  
PLAT 15, LOT 302  
N/F  
JOSEPH N. &  
JACQUELINE ESPAT

ASSESSORS MAP 41  
PLAT 15, LOT 303  
N/F  
MAJID AMANI  
& FARKONDEH ALASTI

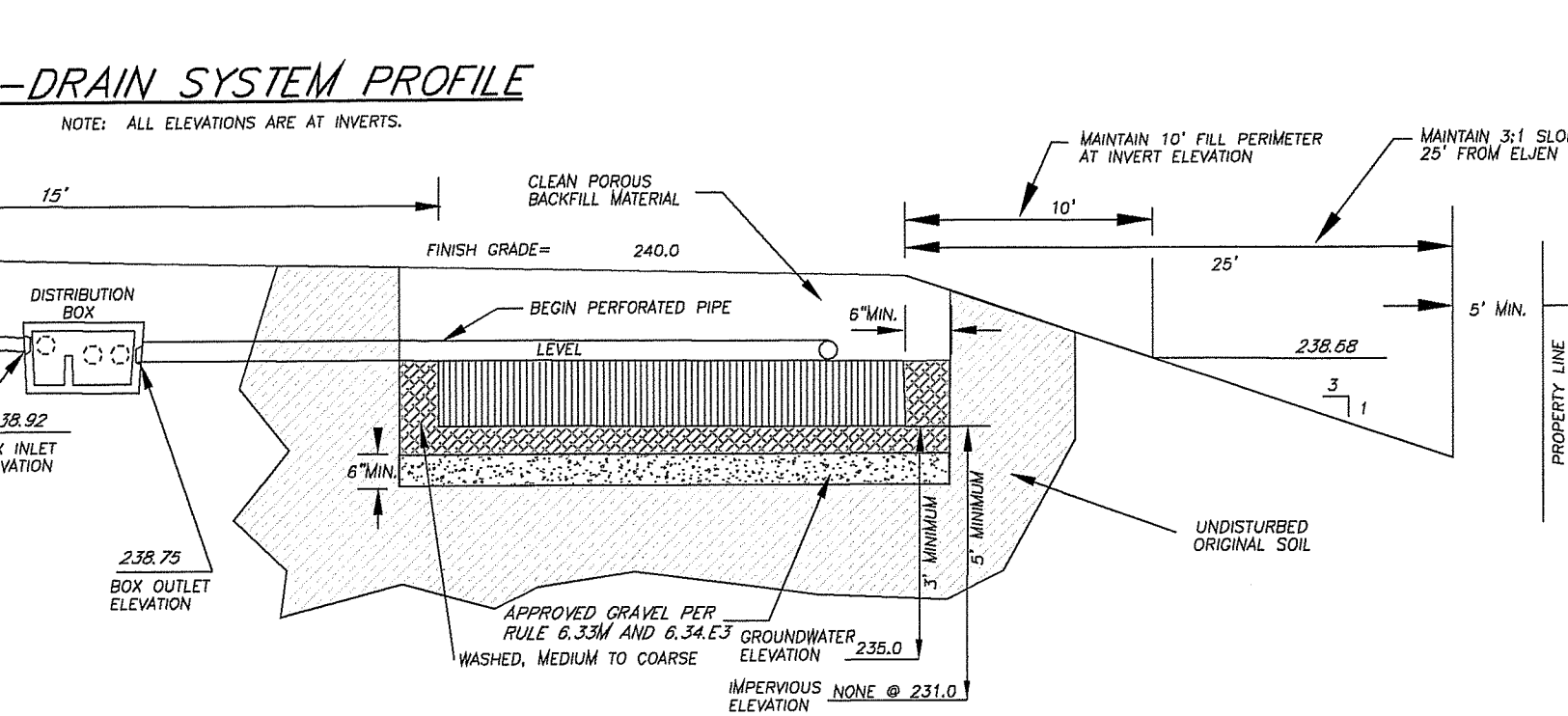
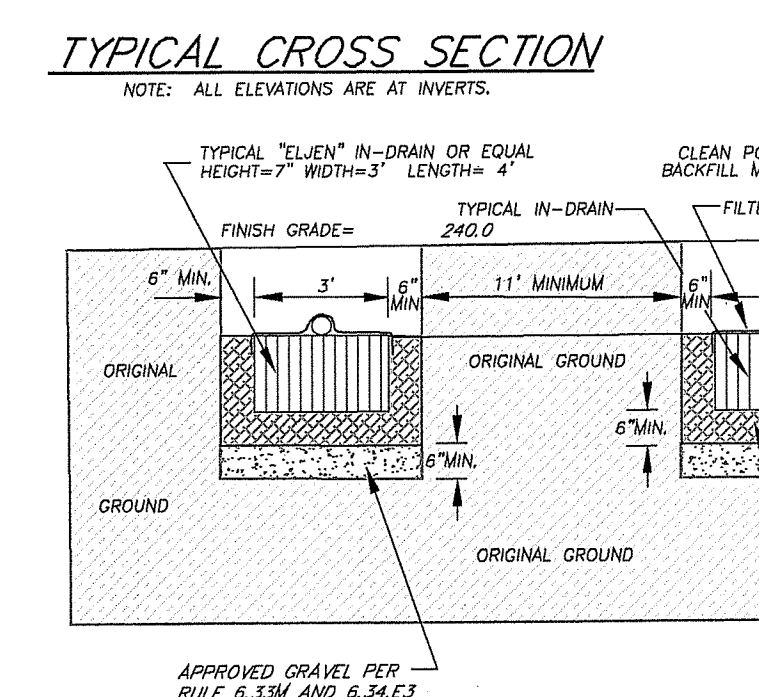
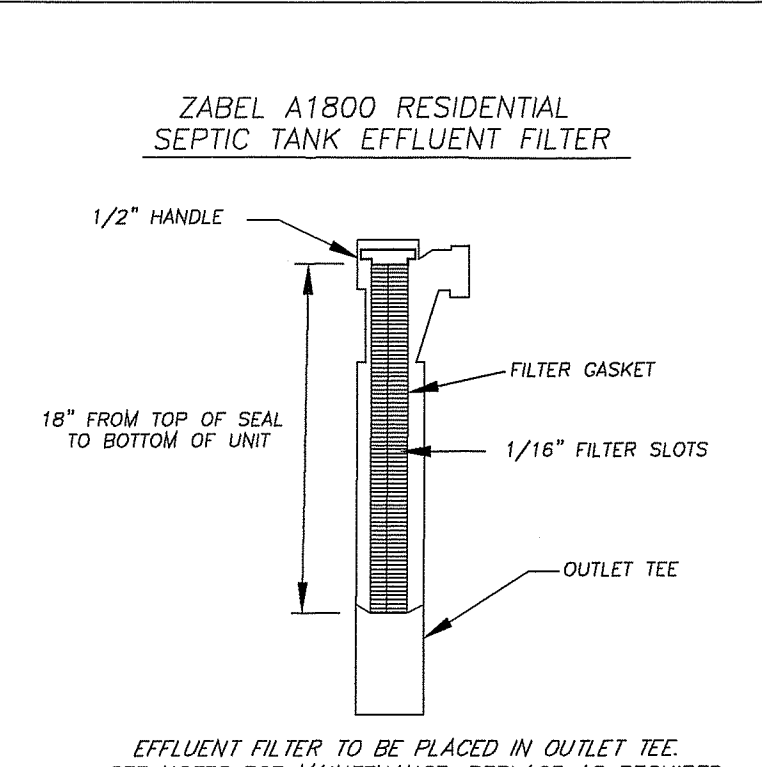
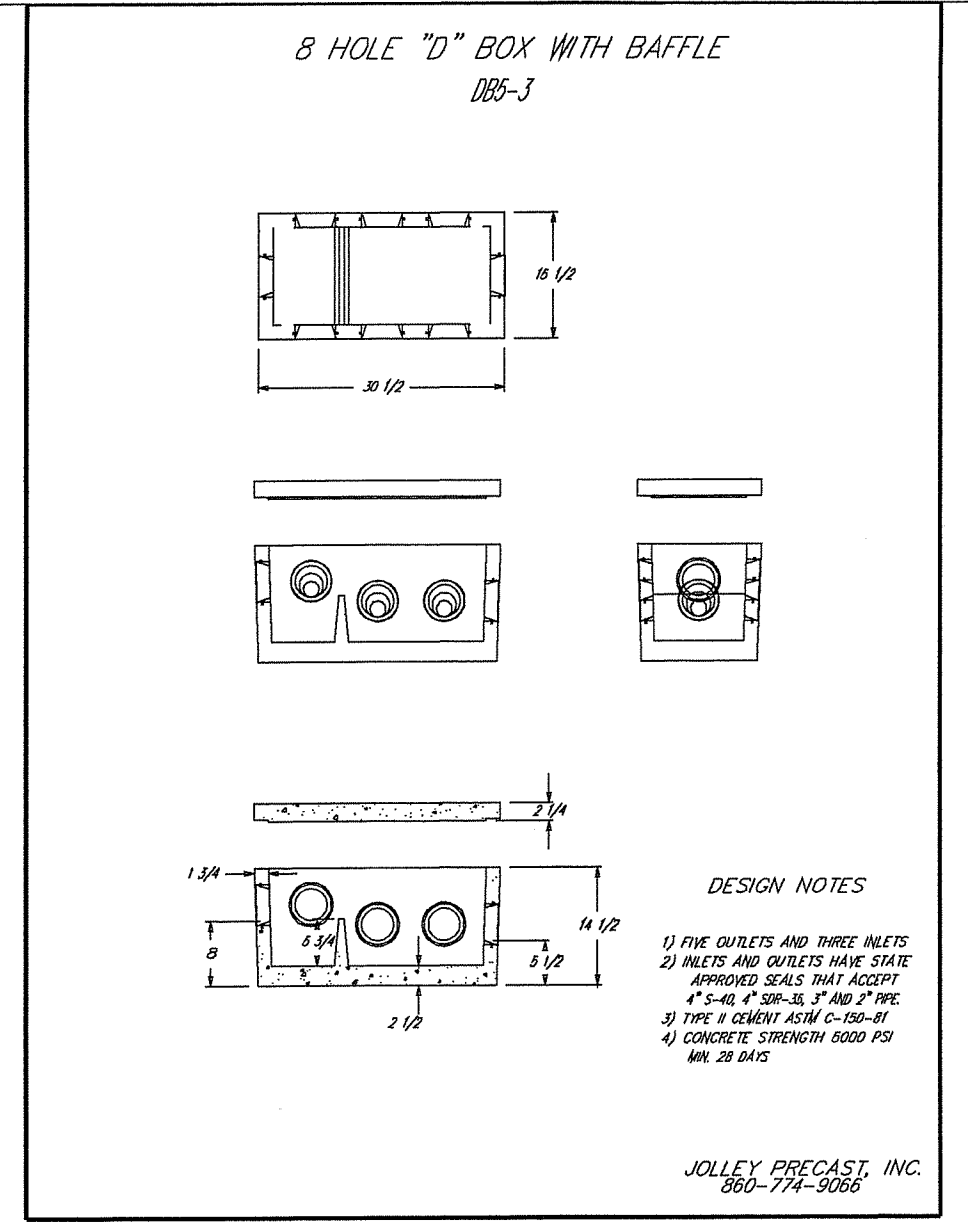
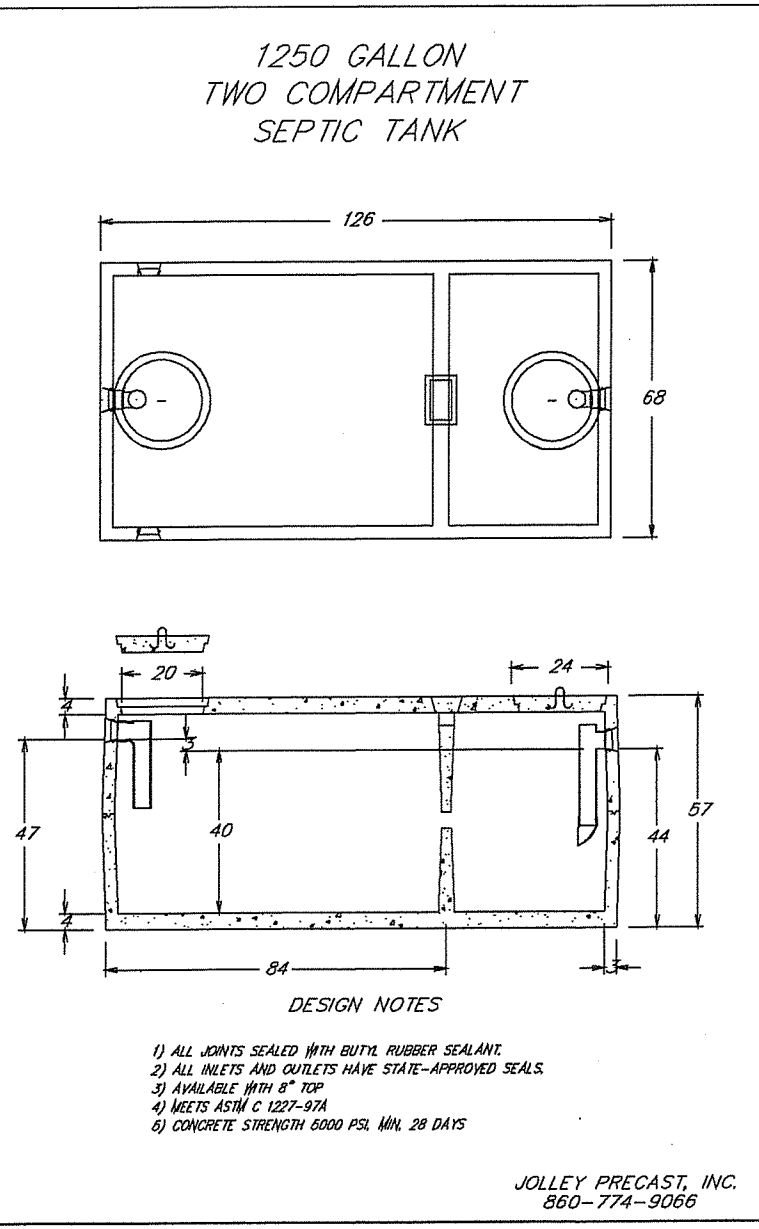
ASSESSORS MAP 41  
PLAT 15, LOT 304  
N/F  
THOMAS & DONNA M.  
AMARAL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
OWTS & FRESHWATER WETLANDS  
JOINT PERMIT APPROVAL  
DATE: 12/18/22

HARRY A. MILLER, JR.  
No. 967  
PROFESSIONAL  
LAND SURVEYOR  
D2101  
RI Environmental Management  
NOV 02 2022  
Office of Water Resources



**PROPOSED JOINT PERMIT PLAN**  
ASSESSORS MAP 40, PLAT 15, LOT 478  
PHEASANT DRIVE  
EAST GREENWICH, RHODE ISLAND  
PREPARED FOR: JAMES MALM  
PREPARED BY: ALPHA ASSOCIATES, LTD.  
35 ROCKY HOLLOW ROAD  
EAST GREENWICH, RI 02818  
SCALE: 1"=60' MAY, 2022 SHEET 1 OF 3



**EFFLUENT FILTER TO BE PLACED IN OUTLET TEE.**  
SEE NOTES FOR MAINTENANCE, REPLACE AS REQUIRED.

**RESTRICTIONS & MAINTENANCE NOTE:**  
GARBAGE DISPOSALS SHALL NOT BE PERMITTED BY THIS DESIGN. OWNER IS REQUIRED TO INSPECT SEPTIC SYSTEM QUARTERLY, WITH 2 YEAR MINIMUM PUMPING INTERVAL.

EFFLUENT FILTER SHALL BE INSPECTED AND CLEANED AT MINIMUM BIENNIAL INTERVALS.

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING EDGE OF PAVEMENT
- EXISTING FLAGGED WETLAND EDGE
- 50' PERIMETER WETLAND
- RIVERBANK WETLAND
- LIMITS OF DISTURBANCE
- COMPOST FILTER SOCK
- EXISTING TREELINE
- EXISTING UTILITY POLE
- EXISTING GRANITE BOUND
- EXISTING SOIL EVALUATION
- PROPOSED ROOFDRAIN DRYWELL

**OWTS NOTES & CONDITIONS:**

NOT A PUBLIC WATER SERVICE AREA; WELL REQUIRED.

THERE ARE NO PROPOSED OR EXISTING SEPTIC SYSTEMS WITHIN 200' OF PROPOSED WELL, EXCEPT AS SHOWN.

THERE ARE NO PROPOSED OR EXISTING WELLS, FOR HUMAN CONSUMPTION, WITHIN 200 FEET OF PROPOSED SEPTIC SYSTEM UNLESS SHOWN HEREON.

THERE ARE NO EXISTING OR PROPOSED PUBLIC WELLS WITHIN 300 FEET OF THIS PROPOSED SEPTIC SYSTEM.

ALL PROPOSED AND EXISTING DRAINS WITHIN 200 FEET OF PROPOSED TRENCHES ARE SHOWN.

THERE ARE NO EXISTING OR PROPOSED DRAINS WITHIN 15 FEET OF PROPOSED TRENCHES.

ALL PIPING TO BE SCHEDULE 35, UNLESS OTHERWISE NOTED.

1,250 GALLON SEPTIC TANK, MANHOLES (2) PLACED TO GRADE. ALL SEPTIC TANKS SHALL BE CERTIFIED WATER TIGHT BY MANUFACTURER. DISTRIBUTION BOX H-20 WHEEL LOADING. ACCESS COVER TO GRADE. REFER TO PROFILE AND TYPICALS FOR ADDITIONAL DATA.

THIS DESIGNER IN NO WAY GUARANTEES SOIL CONDITIONS BEYOND THE LOCATION OF SHOWN TESTING. ANY SOIL CHANGES, FILL, LEDGE OR DISCREPANCIES IN REPORTED DATA SHALL BE FORWARDED TO THIS DESIGNER AND THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT ISDS DIVISION, IN WRITING, PRIOR TO COMMENCING CONSTRUCTION OF THE SHOWN SYSTEM.

THE INSTALLER SHALL NOTIFY DESIGNER OF RECORD 10 (TEN) DAYS PRIOR TO INSTALLATION OF THIS SYSTEM IF ITEM E. OF ISDS APPLICATION IS CIRCLED. HE SHALL NOTIFY DESIGNER 24 HOURS PRIOR TO REQUIRED INDIVIDUAL INSPECTIONS.

THE INSTALLER SHALL REMIT ALL DEM ISDS INSPECTOR REQUESTS (INSPECTION REPORTS) TO DESIGNER OF RECORD WITHIN 24 HOURS OF RECEIPT. HE SHALL NOT COVER SYSTEM UNTIL AN AGENT OF DESIGNER HAS GIVEN COVER ORDER.

THE OWNER SHALL BE RESPONSIBLE FOR PAYMENT OF ALL INSPECTIONS, AS-BUILT WORK AND AS-BUILT SUBMISSIONS.

DISCHARGE OF ANY SOLID OR LIQUID MATERIAL INCLUDING: BACKWASH FROM WATER SOFTENERS, PURIFIERS, FILTERING SYSTEMS, CHEMICAL DISCHARGES OR ANY OTHER CAUSTIC SUBSTANCE OR LIQUID DISCHARGE NOT MEETING THE DEFINITION OF "WASTEWATER" AS DEFINED IN SECTION 7 OF RULES ESTABLISHED BY MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, REVISED NOVEMBER 23, 2018, IS STRICTLY PROHIBITED.

**CONSTRUCTION NOTES:**

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH RIDEM RULES AND REGULATIONS OF NOVEMBER 25, 2018, AS AMENDED.

HEAVY EQUIPMENT SHALL NOT PASS OVER OWTS AREA, PAVEMENT, PARKING AND VEHICULAR TRAFFIC ARE PROHIBITED OVER OWTS UNLESS SPECIFIED BY DESIGNER. NO TRACKED VEHICLES ALLOWED OVER SYSTEM AREA.

**RESTRICTIONS & MAINTENANCE NOTES**

1. GARBAGE DISPOSALS SHALL NOT BE PERMITTED BY THIS DESIGN. OWNER IS REQUIRED TO INSPECT SEPTIC SYSTEM QUARTERLY, WITH 2 YEAR MINIMUM PUMPING INTERVAL.

2. EFFLUENT FILTER SHALL BE INSPECTED AND CLEANED AT MINIMUM BIENNIAL INTERVALS.

**SEPTIC SYSTEM NOTE:**

2 COMPARTMENT SEPTIC SYSTEM TO BE PLACED ON STABLE, LEVEL BASE WITH INLET & OUTLET TEES WITH MANHOLES PLACED TO GRADE.

WELL TO SEPTIC TANK MINIMUM SEPARATION 75 FEET WATERLINE TO SEPTIC TANK MINIMUM SEPARATION TO FEET.

**DISTRIBUTION BOX NOTES:**

H-20 WHEEL LOADING DISTRIBUTION BOX WITH BAFFLE TO BE PLACED ON STABLE, LEVEL BASE WITH ACCESS COVER TO GRADE.

3 S.F. MINIMUM BOTTOM AREA REQUIRED.

WELL TO DISTRIBUTION BOX MIN. SEPARATION 75 FEET. WATERLINE TO DISTRIBUTION BOX MIN. SEPARATION 10 FEET. PIPING TO BE SOLID 4" SDR 35 PVC 2' MINIMUM TO OWTS.

**LEACHFIELD AREA CALCULATIONS:**

TOTAL # OF BEDROOMS = 4  
4 x 115 GAL./BEDROOM = 460 TOTAL GAL./DAY

SOIL CATEGORY: B = LOADING RATE: 0.52  
460 / 0.52 = 885 S.F. REQUIRED

TOTAL L.F. OF IN-DRAIN = 132' x 7 S.F./FT. = 924 S.F.

**CLASS II DESIGNER REQUIREMENTS**

A. THE APPLICANT IS REQUIRED TO NOTIFY THIS DESIGNER OF INTENTION TO START CONSTRUCTION OR GRADING OF THIS SITE 10 DAYS PRIOR TO START OF SITE WORK. THE CONTRACTORS TELEPHONE & INSTALLER NUMBER SHALL BE FURNISHED TO THIS DESIGNER FOR COORDINATION OF PROPOSED WORK. THE FOLLOWING MINIMUM REQUIRED ITEMS ARE AS FOLLOWS:

- 24 HOUR NOTICE OF START OF CONSTRUCTION.
- NOTICE FOR INSPECTION OF OWTS BOTTOM LEACHING AREA PRIOR TO 12 NOON THE DAY BEFORE DESIRED DESIGNER/DEM INSPECTION.
- NOTICE FOR INSPECTION OF COMPONENTS & PERIMETER GRADING PRIOR TO 12 NOON THE DAY BEFORE DESIRED DESIGNER/DEM INSPECTION.
- ALL DEM INSPECTION SHEETS ARE TO BE FAXED TO THIS DESIGNER WITHIN 24 HOURS OF RECEIPT.

B. SITE LAYOUT AND REQUIRED INSPECTIONS TO BE MADE BY THIS DESIGNER FOR THE FOLLOWING WORK ITEMS:

- FOUNDATION & OWTS LOCATION AND ELEVATION.
- INSPECTION OF OWTS BOTTOM LEACHING AREA.
- INSPECTION OF OWTS COMPONENTS & PERIMETERS.
- FINAL COVER & WELL LOCATION INSPECTION.

C. THE APPLICANT SHALL BE RESPONSIBLE FOR ANY CHANGES IN THE SHOWN DESIGN AND INCLUDE ANY OF THE FOLLOWING:

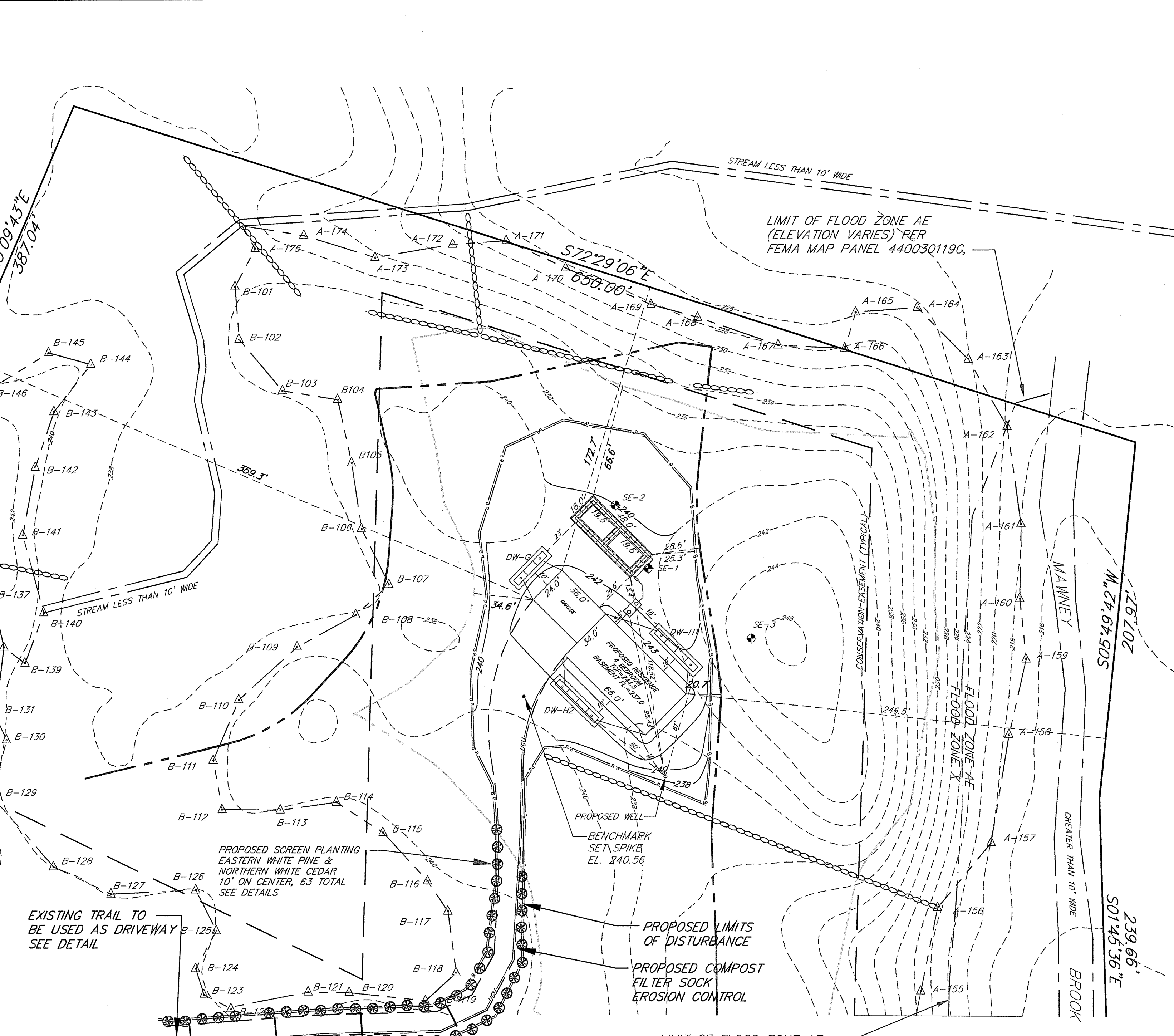
- NEW APPLICATIONS AS REQUIRED BY DEM GUIDELINES.
- AS-BUILT LOCATIONS AND REQUIRED PLANS.
- COMMUNICATIONS OR COORDINATION WITH DEM STAFF.
- CHANGES IN INSTALLATION NOT MEETING DEM REQUIRED GUIDELINES.

D. THE APPLICANT SHALL PROVIDE DESIGNER WITH MATERIALS RECEIPTS FOR ALL CONSTRUCTION MATERIALS PRIOR TO DESIGNER ISSUING CERTIFICATE OF CONSTRUCTION.

E. THE OWNER SHALL FURNISH ORIGINAL APPLICATION (PINK COPY) AND ACCOMPANYING PLAN APPROVAL TO INSTALLER PRIOR TO START OF CONSTRUCTION. SAID INFORMATION SHALL REMAIN ON SITE DURING CONSTRUCTION PERIOD AND RETURNED TO THE OWNER UPON COMPLETION OF OWTS INSTALLATION.

F. OWNER / APPLICANT'S SIGNING OF APPLICATION SHALL BE CONSIDERED PERMISSION TO INSPECT THE ABOVE SITE AT ANY TIME AFTER START OF CONSTRUCTION BEGINS TO ENSURE PROPER INSTALLATION PROCEDURES & FUNCTIONING OF OWTS SYSTEM.

G. THE ABOVE INFORMATION ARE MINIMUM REQUIREMENTS AND SHALL BE REVISED AS THE DESIGNER DEEMS NECESSARY FOR PROPER FUNCTIONING OF THE SHOWN OWTS DESIGN.



**IN-DRAIN NOTES**

- ALL BRUSH AND TREES TO BE REMOVED A MINIMUM 10 DISTANT FROM LEACHING AREA.
- STRIP INDIVIDUAL TRENCHES TO EL. 237.0 AND PLACE A (6) INCH GRAVEL BASE MEETING THE REQUIREMENTS OF RULE 32.12 TO EL. 237.5.
- PLACE A 6" MINIMUM LEVEL RAKED CONCRETE SAND BED OVER APPROVED GRAVEL BACKFILL TO ELEVATION 238.0.
- PLACE 4" PERFORATED PIPE OVER STRIPE ON IN-DRAINS. CONNECT MID-POINTS ON ROWS 40' OR LONGER.
- SECURE PIPE WITH ONE ELIEN CLAMP PER IN-DRAIN. FORCE CLAMP THROUGH IN-DRAIN AND INTO THE SAND BED.
- INSTALL ELIEN COVER FABRIC (FILTER FABRIC) OVER ROWS OF IN-DRAINS. DRAPE FABRIC STRAIGHT DOWN OVER PIPE AND SIDES OF IN-DRAINS SECURE WITH HAND SHOVELLED SAND. DO NOT BLOCK HOLES IN PERFORATED PIPE.
- PLACE CONCRETE SAND BETWEEN ROWS AND A MINIMUM OF 6 INCHES AROUND THE SIDES OF THE IN-DRAINS.
- BACKFILL WITH CLEAN MATERIAL DEVOID OF LARGE ROCKS TO A MINIMUM OF 1'0" AND MAXIMUM OF 1'5" ABOVE INVERT (NO VENT).
- MAINTAIN INVERT ELEVATION 10 FEET DISTANT TO LEACHING AREA IN ALL DIRECTIONS TO EL. 238.58 MINIMUM UNLESS NOTED.
- INSTALL ZABEL A1800 RESIDENTIAL SEPTIC TANK EFFLUENT FILTER (OR EQUAL) INSIDE SEPTIC TANK OUTLET TEE.

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

GWTS# 2009-0587 PWW# 22-0303

APPROVED: [Signature] DATE 12/16/20

No Changes Allowed Without RIDEM Approval  
Approved Plans/Permit Must Be Kept at Construction Site

**HARRY A. MILLER, JR.**  
No. [Signature] 967  
PROFESSIONAL LAND SURVEYOR  
D2101

**PROPOSED WILDLIFE CULVERT (TYPICAL)**  
12" CORR. PVC  
13' LONG, 50" O.C.  
4 REQUIRED

**PROPOSED LIMITS OF DISTURBANCE**

**PROPOSED COMPOST FILTER SOCK EROSION CONTROL**

**CERTIFICATION:**

THIS PLAN, AND UNDERLYING SURVEY PRODUCT, WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY NAMED IN THIS CERTIFICATION. SAID CERTIFICATION DOES NOT EXTEND TO ANY UN-NAMED PERSON, PERSONS, OR ENTITY WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR OF RECORD NAMING SAID PERSON, PERSONS, OR ENTITY.

TO JAMES MALM, IT IS HEREBY CERTIFIED THAT THIS SURVEY AND BEEN CONDUCTED AND THIS PLAN HAS BEEN PREPARED PURSUANT TO SECTION 9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

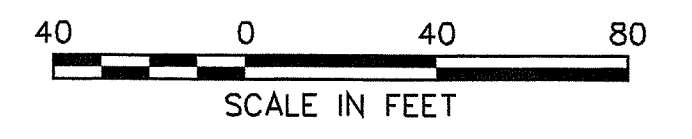
LIMITED CONTENT BOUNDARY SURVEY CLASS 'Y' TOPOGRAPHIC SURVEY T-3

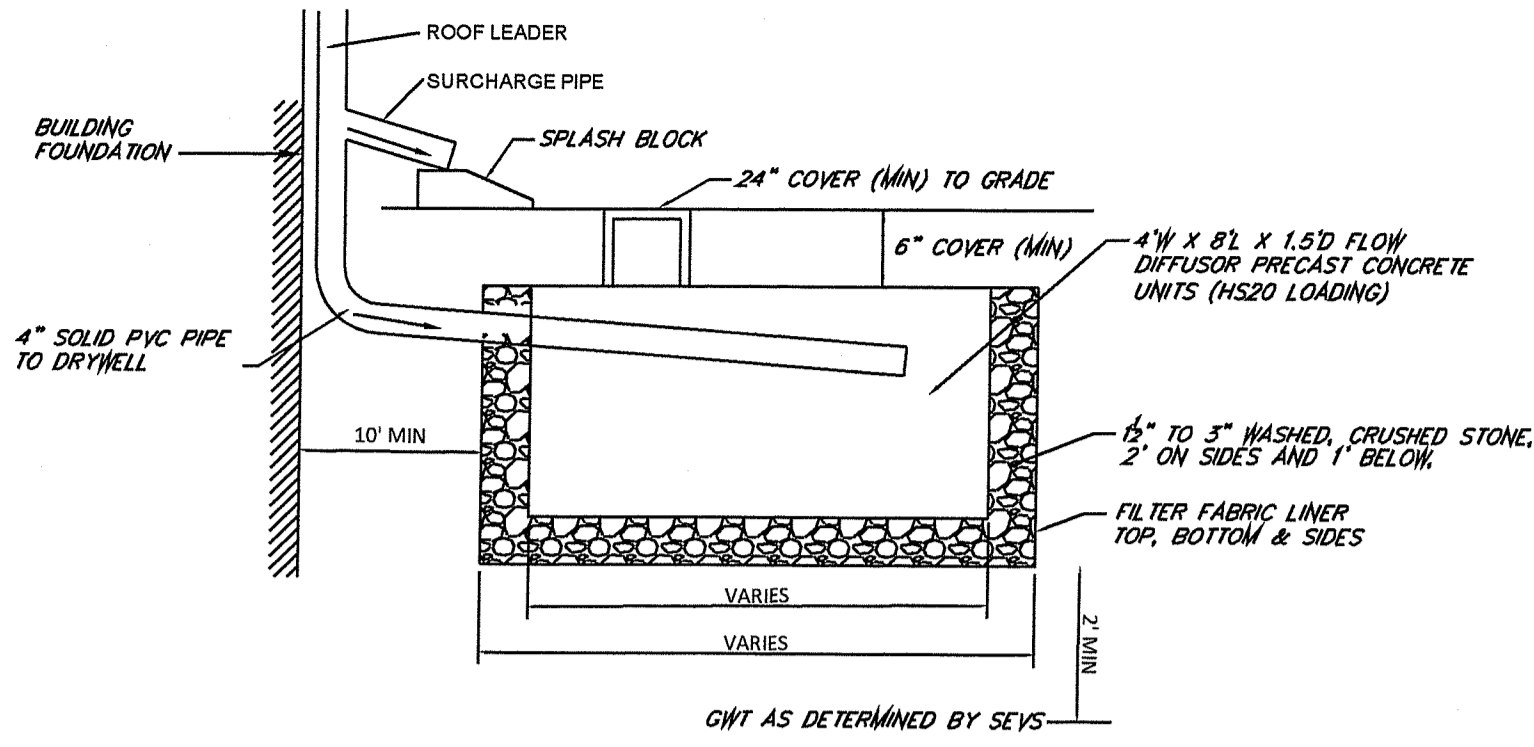
FURTHER, THE INFORMATION DEPICTED ON HEREON WAS OBTAINED FROM FIELD OBSERVATIONS MADE ON THE SITE IN FOR THE PURPOSE OF THE CONDUCT OF A SURVEY FOR THE PREPARATION OF AN ENGINEER'S DESIGN.

**HARRY A. MILLER, JR.**  
No. [Signature] 967  
PROFESSIONAL LAND SURVEYOR  
D2101

**SYSTEM DESIGNER:**  
HARRY A. MILLER, JR.  
ALPHA ASSOCIATES, LTD.  
35 ROCKY HOLLOW ROAD  
EAST GREENWICH, RI 02818  
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**PROPOSED OWTS PLAN**  
PHEASANT DRIVE  
ASSESSORS PLAT 40, MAP 15, LOT 47B  
EAST GREENWICH, RHODE ISLAND  
prepared for: JAMES MALM  
prepared by: ALPHA ASSOCIATES, LTD.  
35 ROCKY HOLLOW ROAD  
EAST GREENWICH, RI 02818  
SCALE: 1"=40' MAY, 2022 SHEET 2 OF 3 REV: 10/14/22





DRY WELL / FLOW DIFFUSER DETAIL  
NOT TO SCALE

**DRY WELLS / FLOW DIFFUSOR NOTES**

1. THE DRY WELLS ARE DESIGNED ONLY TO ACCEPT ROOF RUNOFF FROM THE ROOF RUNOFF FROM THE RESIDENCE
2. EACH DRY WELL SYSTEM CONSISTS OF 4 W X 8 X 1.5 D FLOW DIFFUSOR UNITS SURROUNDED WITH 2 FEET OF STONE ON SIDES AND 1 FOOT OF STONE ON THE BOTTOM
3. DW-G CONSISTS OF 3 FLOW DIFFUSOR UNITS. DW-H & 2 CONSISTS OF 4 FLOW DIFFUSOR UNITS
4. THE DRY WELLS SHALL BE VERIFIED IN FIELD DURING CONSTRUCTION AND BE LOCATED A MINIMUM OF 10 FEET FROM THE BUILDING FOUNDATION  
15 FEET FROM ALL OWTS COMPONENTS  
50 FEET FROM PRIVATE DRINKING WELL  
2 FEET MINIMUM SEPARATION FROM BOTTOM OF DRY WELL AND SHGW  
10 FEET FROM PROPERTY LINE
5. THE BOTTOM OF THE STONE SHALL BE COMPLETELY FLAT OR NEARLY SO IN ORDER THAT INFILTRATED RUNOFF WILL BE ABLE TO INFILTRATE THROUGH THE ENTIRE BOTTOM SURFACE AREA
6. THE BOTTOM OF THE DRY WELL SHALL BE LOCATED A MINIMUM OF 2 FEET VERTICALLY FROM THE SEASONAL HIGH GROUNDWATER TABLE (SHGW) PER RISDSM
7. THE BOTTOM OF THE DRY WELL MUST BE LOCATED IN THE SOIL PROFILE
8. GREAT CARE MUST BE TAKEN TO PREVENT THE INFILTRATION AREA FROM COMPACTION BY MARKING OFF THE LOCATION BEFORE CONSTRUCTION AT THE SITE AND CONSTRUCTING THE DRY WELL LAST
9. AN ACCESS COVER SHALL BE INSTALLED IN THE DRY WELL SYSTEM INSTALLED FLUSH WITH THE GROUND SURFACE

**DRY WELLS MAINTENANCE NOTES**

1. THE DRY WELL SHALL BE INSPECTED ANNUALLY AND REPAIRED IF NECESSARY TO ENSURE PROPER DRAINAGE
2. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE SURFACE OF THE DRYWELL ANNUALLY

**100-YEAR FLOOD PLAIN NOTES**

1. THE SITE IS CONTAINED ON FEMA PANEL 440030119G, EFFECTIVE DATE 12-3-2010 AND IDENTIFIED AS ZONE AE AND X - AREA OF MINIMAL FLOOD HAZARD.
2. MAWNEY BROOK IS LOCATED WITHIN A REGULATED FLOODWAY. THE AE ELEVATIONS HAVE BEEN DETERMINED AND ARE SHOWN ON THE PLANS
3. THE STREAMS LESS THAN 10 FEET WIDE ARE FEEDER STREAMS TO MAWNEY BROOK AND EACH HAS A 100-YEAR FLOOD PLAIN IN EXISTENCE PER LATEST RIDEM FRESHWATER WETLAND RULES.
4. ALL WORK IS LOCATED OUTSIDE ANY FLOOD PLAIN AREAS AND AT A MINIMUM ARE LOCATED AS FOLLOWS AS SHOWN ON PLANS 1 AND 3 OF 3:
  - 149' +/- FROM LOD TO AE ZONE
  - 130' +/- FROM LOD TO NORTHERN STREAM BANK
  - 172' +/- FROM LOD TO SOUTHERN STREAM BANK

**100-YEAR FLOOD PLAIN IMPACT NOTES**

1. ALL WORK IS LOCATED OUTSIDE THE 200-FOOT RIVERBANK WETLAND ASSOCIATED WITH MAWNEY BROOK AND ITS REGULATED FLOOD WAY
2. ALL WORK IS LOCATED OUTSIDE THE 100-FOOT RIVERBANK WETLAND ASSOCIATED WITH THE TWO (2) LESS THAN 10' WIDE STREAMS
3. ALL WORK IS LOCATED OUTSIDE ANY 50-FOOT PERIMETER WETLAND AREAS ASSOCIATED WITH THE WETLANDS DELINEATION AND FLAGGING BY ECOTONES, INC.
4. ALL WORK IS CONTAINED WITHIN THE LIMITS OF DISTURBANCE (LOD) LOCATED OUTSIDE ALL JURISDICTIONAL WETLAND AREAS, AND NO ADVERSE IMPACT WILL RESULT TO THE 100-YEAR FLOOD PLAIN ASSOCIATED WITH THE STREAMS OR MAWNEY BROOK.
5. A CONSERVATION EASEMENT IS ALSO PROVIDED OUTSIDE OF THE LOD AND GENERALLY AROUND THE PERIMETER OF THE PARCEL AS SHOWN

**GENERAL STORMWATER MANAGEMENT SYSTEM OPERATION & MAINTENANCE PLAN**

THE STORMWATER MANAGEMENT SYSTEM OPERATION & MAINTENANCE PLAN DESCRIBED HEREIN IS FOR THE PROPOSED SINGLE FAMILY RESIDENCE LOCATED ON ASSESSOR'S MAP 40, PLAT 15, LOT 478

**RESPONSIBLE PARTY FOR MAINTENANCE**

- THE APPLICANT/DEVELOPER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE ASSOCIATED WITH THE STORMWATER SYSTEM UNTIL ALL CONSTRUCTION IS COMPLETED.
- ONCE THE PROPERTY IS SOLD, THE PROPERTY OWNER SHALL ASSUME ALL RESPONSIBILITY FOR MAINTENANCE DURING CONSTRUCTION
- PRIOR TO THE START OF ANY CONSTRUCTION, THE EROSION CONTROLS SHALL BE INSTALLED AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION UNTIL A STABLE GROUND COVER IS ESTABLISHED.
- DURING CONSTRUCTION, THE SOIL EROSION AND SEDIMENTATION PROGRAMS FOUND ON THE SITE PLANS PREPARED SHALL BE FOLLOWED AND BE THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR AS APPLICABLE.
- PREPARATION OF THE AREA FOR THE PROPOSED STORMWATER MEASURES SHALL CONFORM TO THE PROCEDURES DESCRIBED AS PART OF THIS PLAN SET PREPARED.
- CONSTRUCTION VEHICLES SHALL NOT BE ALLOWED TO DRIVE OVER THE AREAS OF PROPOSED STORMWATER MEASURES DURING CONSTRUCTION. IF THE AREA BECOMES COMPACTED, SOIL MUST BE SUITABLY AMENDED, TILLED, AND REVEGETATED ONCE CONSTRUCTION IS COMPLETE TO RESTORE INFILTRATION CAPACITY.

**DESCRIPTION OF ANNUAL MAINTENANCE TASKS**

- YARD / LAWN AREA**
- THE YARD AREA (LAWN AREA) SHALL BE CREATED AROUND THE PROPOSED RESIDENCE AND ITS ASSOCIATED AMENITIES.
  - THE FLOW DIFFUSOR DRY WELLS SHALL BE MAINTAINED THROUGHOUT THE YEAR. SAID MAINTENANCE SHALL INCLUDE ANNUALLY INSPECTING THE DRY WELL AND REPAIR IF NECESSARY TO ENSURE PROPER DRAINAGE, AND TO REMOVE ANY ACCUMULATED SEDIMENT AND DEBRIS FROM THE SURFACE OF THE DRYWELL ANNUALLY
  - THE DRIVEWAY WILDLIFE CULVERTS SHALL BE MAINTAINED AS SITE CONDITIONS WARRANT INCLUDING REMOVING DEBRIS AT ITS INLET AND OUTLET
  - ANY AREA SUBJECT TO EROSION TENDENCIES SHALL BE REPLACED IN KIND TO ENSURE THAT A STABLE GROUND COVER IS MAINTAINED AT ALL TIMES.
  - MOWING AND OTHER RELATED MAINTENANCE SHALL BE PERFORMED AS SITE CONDITIONS WARRANT THROUGHOUT THE YEAR.
- DESCRIPTION OF APPLICABLE EASEMENTS**
- NO EASEMENTS ARE REQUIRED TO PERFORM ANNUAL MAINTENANCE.
- DESCRIPTION OF FUNDING SOURCES**
- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND OPERATION OF THE STORMWATER SYSTEMS. AS SUCH, THE OWNER'S FUNDS SHALL BE USED AS REQUIRED.
- MINIMUM VEGETATIVE COVER REQUIREMENTS**
- THE VEGETATIVE COVER REQUIREMENTS ARE PROVIDED AS PART OF THE LANDSCAPE DESIGN PROVIDED ON THE PLANS.
  - ALL VEGETATION PROPOSED SHALL BE MAINTAINED AT ALL TIMES AND BE REPLACED IN KIND SHOULD IT BECOME DISEASED OR DIE.
- ACCESS & SAFETY ISSUES**
- THERE ARE NO SAFETY ISSUES RELATED TO THE MAINTENANCE AND OPERATION OF THE STORMWATER SYSTEM.

**POLLUTION PREVENTION MEASURES**

- ANY SEDIMENTATION THAT MAY ENTER THE STORMWATER SYSTEMS SHALL BE REMOVED OF PROMPTLY.

FLOW DIFFUSOR DRY WELL FOR GARAGE ROOF (DW-G)  
3 - 4' X 8' X 1.5' FLOW DIFFUSORS SURROUNDED BY 2' STONE ON SIDES & 1' STONE ON BOTTOM  
CONTRIBUTING AREA = 964 SF  
GROUND ELEV = 241 +/-  
TOP OF FLOW DIFFUSOR EL = 240.5  
BOTTOM OF FLOW DIFFUSOR EL = 239  
BOTTOM OF STONE EL = 238  
SHGW EL = 235 +/-

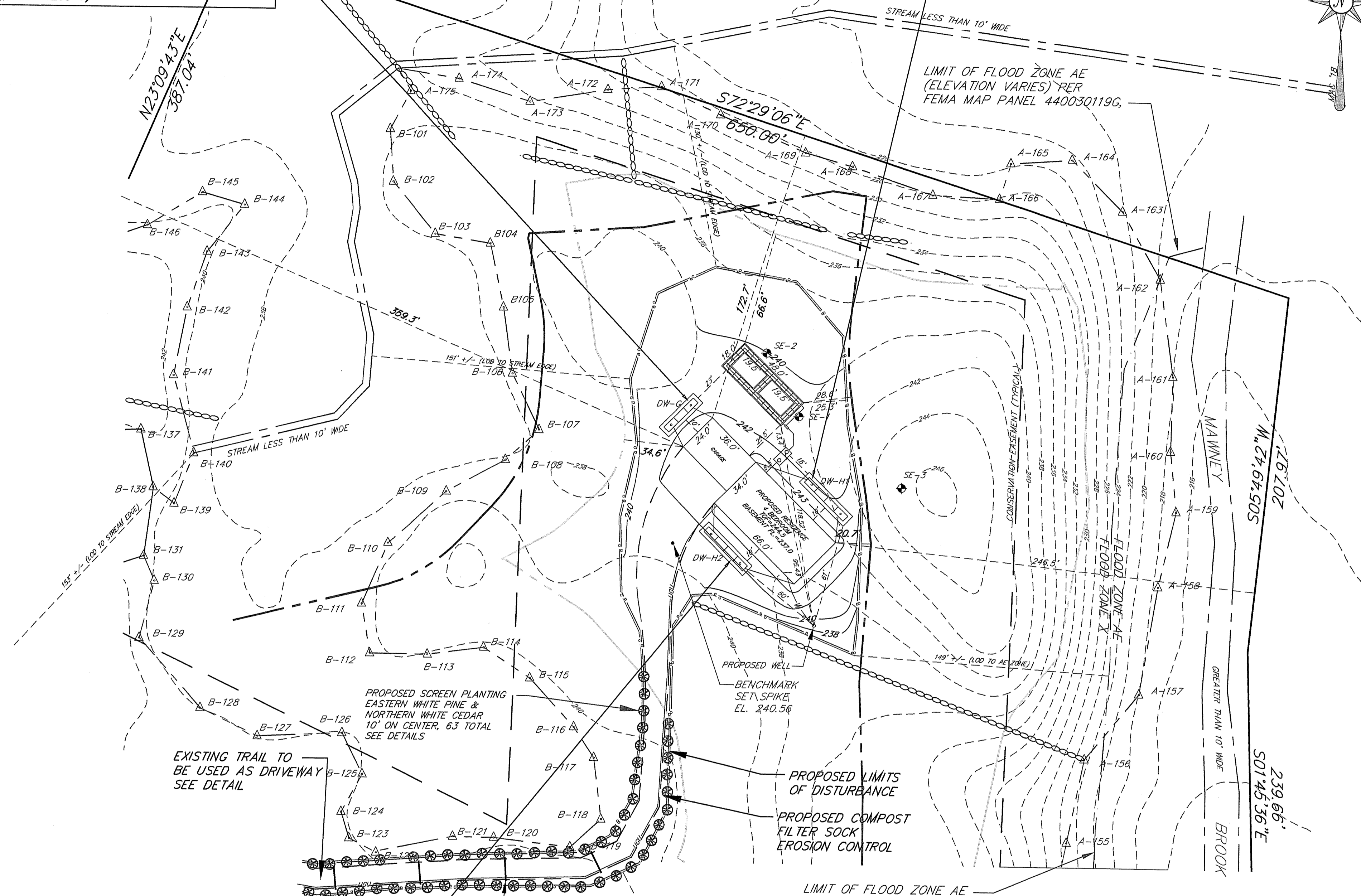
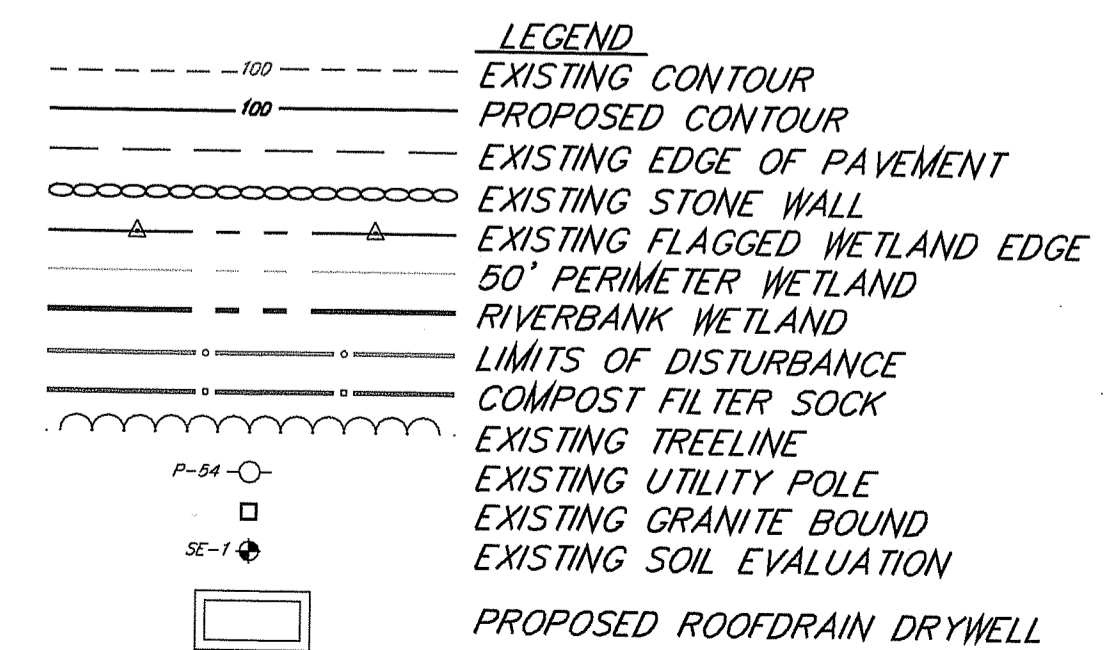
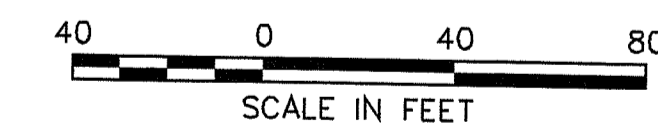
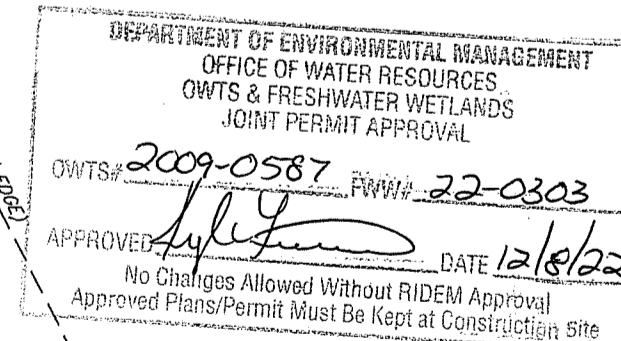
FLOW DIFFUSOR DRY WELL FOR 1/2 HOUSE ROOF (DW-H1)  
4 - 4' X 8' X 1.5' FLOW DIFFUSORS SURROUNDED BY 2' STONE ON SIDES & 1' STONE ON BOTTOM  
CONTRIBUTING AREA = 1122 SF  
GROUND ELEV = 242 +/-  
TOP OF FLOW DIFFUSOR EL = 241.5  
BOTTOM OF FLOW DIFFUSOR EL = 240  
BOTTOM OF STONE EL = 239  
SHGW EL = 236.5 +/-

FLOW DIFFUSOR DRY WELL FOR 1/2 HOUSE ROOF (DW-H2)  
4 - 4' X 8' X 1.5' FLOW DIFFUSORS SURROUNDED BY 2' STONE ON SIDES & 1' STONE ON BOTTOM  
CONTRIBUTING AREA = 1122 SF  
GROUND ELEV = 242 +/-  
TOP OF FLOW DIFFUSOR EL = 241.5  
BOTTOM OF FLOW DIFFUSOR EL = 240  
BOTTOM OF STONE EL = 239  
SHGW EL = 234.5 +/-

**STORMWATER NOTES DURING CONSTRUCTION**

1. ANY DRAINAGE STRUCTURES SHALL BE CLEANED AND FLUSHED AS REQUIRED.
2. STORMWATER MEASURES DESIGNED FOR THE CHANGED CONDITIONS OF THE PROPOSED SITE IMPROVEMENTS PER STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL DEVELOPMENT REQUIREMENTS AND TOWN OF EAST GREENWICH REQUIREMENTS FOR A 25-YEAR, 24 HOUR STORM EVENT.
3. THE CONTRACTOR AND/OR OWNER SHALL BE RESPONSIBLE FOR MAINTAINING THE DRAINAGE SYSTEMS IN ACCORDANCE WITH THE RI STORMWATER MANUAL AND TOWN OF EAST GREENWICH REQUIREMENTS.
4. THE DRAINAGE SYSTEMS SHALL BE PROPERLY MAINTAINED AT ALL TIMES.
5. ALL DRAINAGE SYSTEM AREAS SHALL BE KEPT CLEAR OF DEBRIS AT ALL TIMES.
6. NO FOREIGN SUBSTANCES SHALL BE DUMPED INTO THE DRAINAGE SYSTEM AT ANY TIME.
7. ANY AREAS EXPERIENCING EROSION TENDENCIES SHALL BE REPAIRED AND RESEEDED IMMEDIATELY.
8. NO DRAINAGE MEASURES SHALL BE LOCATED WITHIN 15 FEET OF ANY COMPONENTS OF THE PROPOSED ONSITE WASTEWATER TREATMENT SYSTEM (OWTS).
9. THE DRAINAGE STRUCTURES SHALL BE CLEANED ON AN ANNUAL BASIS AND AS CONDITIONS MAY WARRANT.
10. MAINTENANCE OF THE SYSTEM SHALL BE PERFORMED ON AN ANNUAL BASIS UNDER NORMAL FUNCTIONING OF THE SYSTEM AT A MINIMUM. ANY OBSERVED BLOCKAGE, OVERFLOW OF ANY DRAINAGE SYSTEM COMPONENT OR OTHER OBSERVED ISSUES IN THE FIELD SHALL WARRANT AN INSPECTION AND CLEANOUT AS MAY BE REQUIRED OF ANY PORTION OF THE SYSTEM. MAINTENANCE OF THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO A PROFESSIONAL SERVICER AS CONDITIONS WARRANT.
11. ANY AREAS EXPERIENCING EROSION TENDENCIES SHALL BE REPAIRED AND RESEEDED IMMEDIATELY.

PARCEL APPLICANT/OWNER  
JAMES MALM  
10 BARTON MEADOW  
EAST GREENWICH, RI 02818



REVISIONS	DESCRIPTION
DATE	

PATRICIA K. WALKER  
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REGISTERED PROFESSIONAL ENGINEER

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STORMWATER DESIGN PLAN

ASSESSOR'S MAP 40 / PLAT 15 / LOT 478 PHEASANT DRIVE, EAST GREENWICH, RI

DATE: OCTOBER 2022

SHEET: SD - 1

SHEET 3 OF 3