

General Notes:

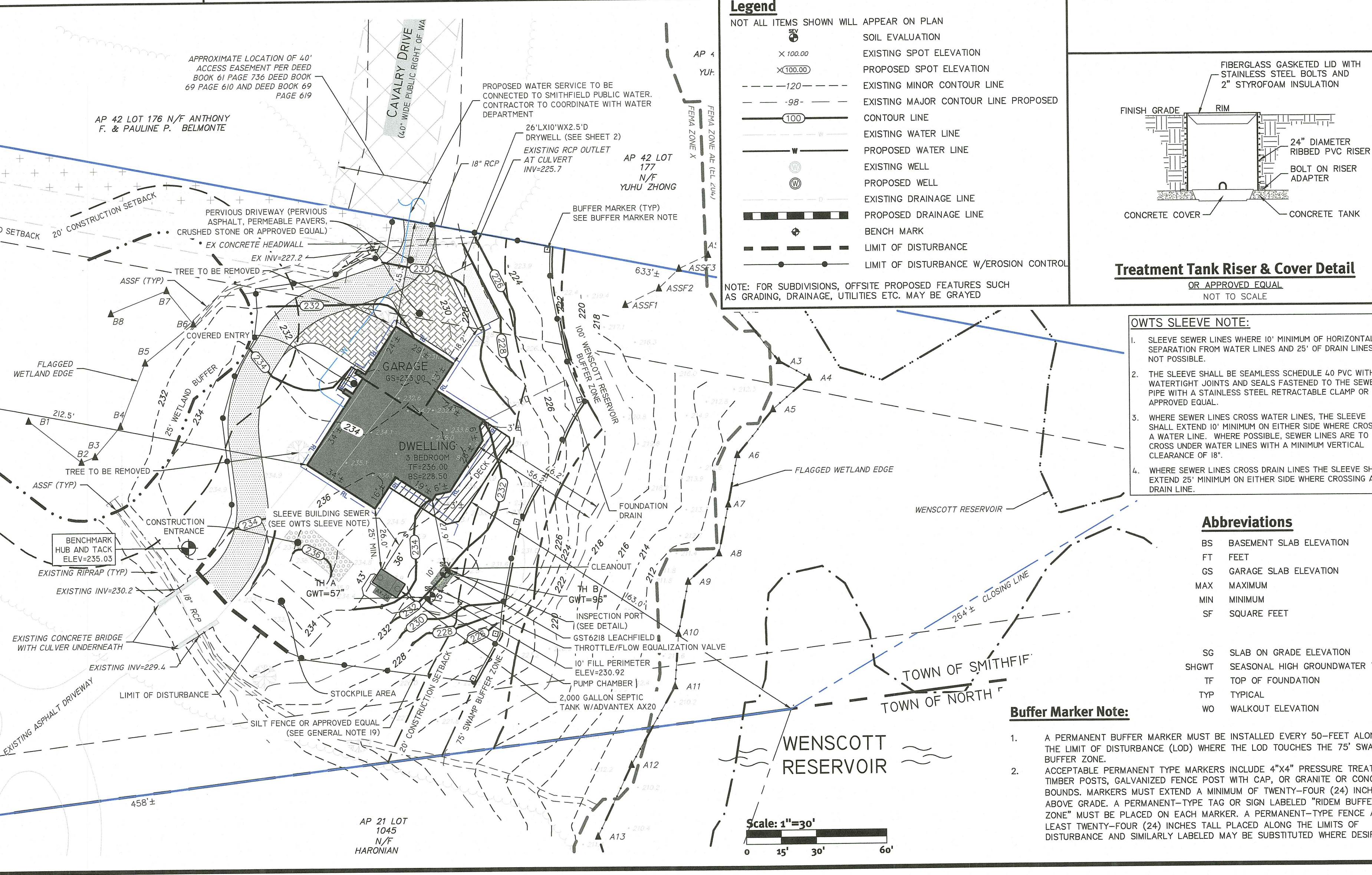
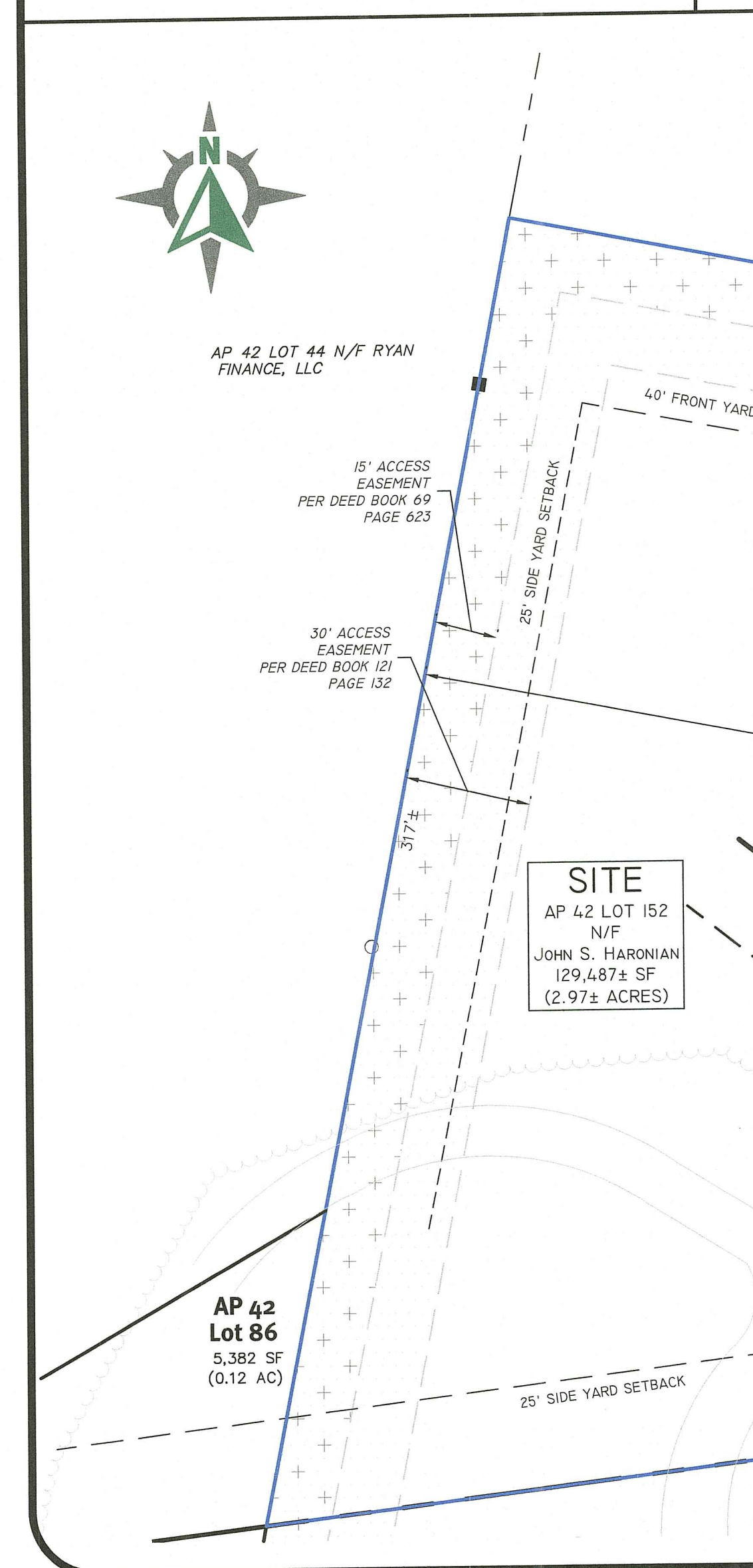
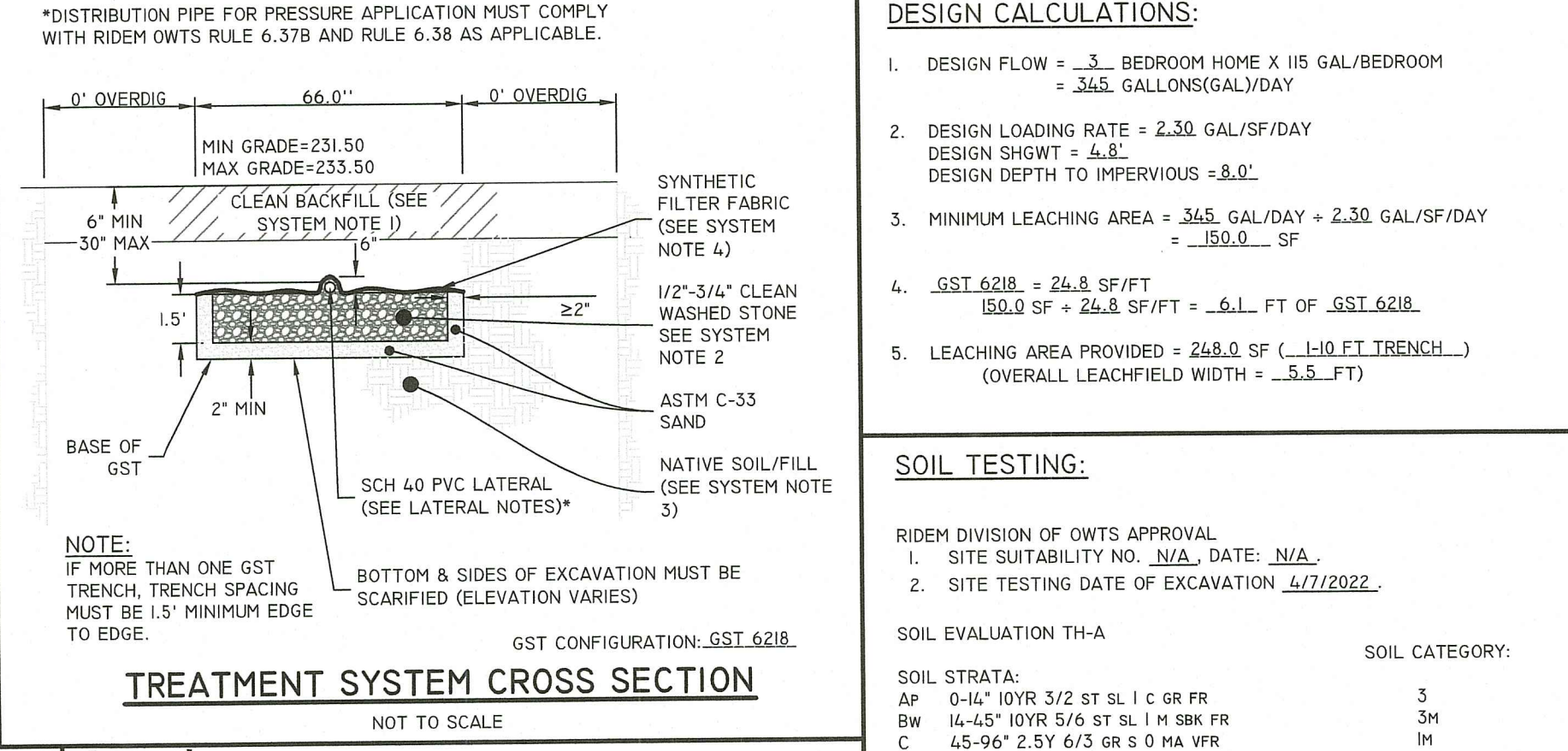
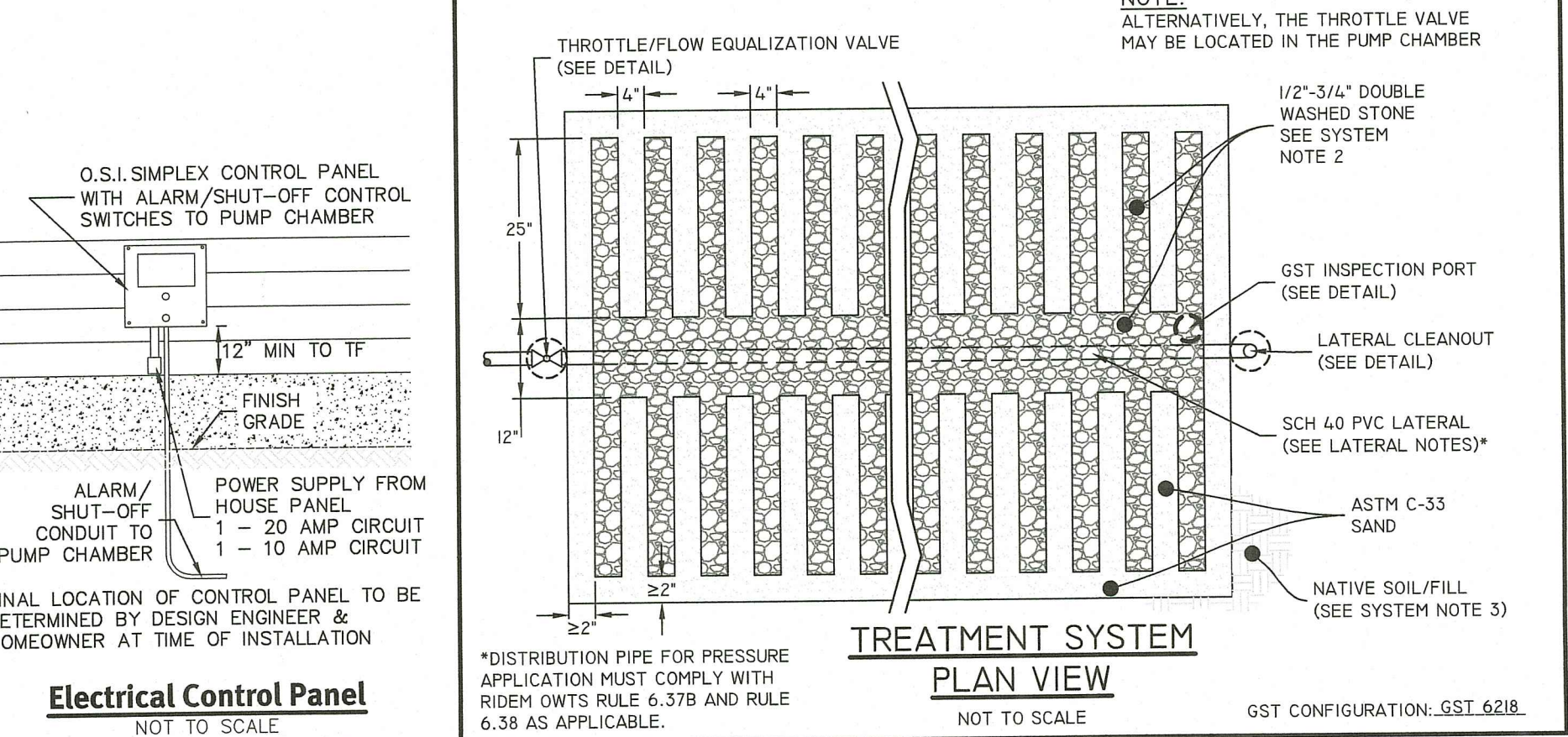
- DIPRETE ENGINEERING CERTIFIES TO THE SOIL CONDITIONS AND LOADING RATE ONLY IN AREA TESTED. INSTALLER OR DESIGNER IF SOIL CONDITIONS ARE FOUND DIFFERENT THAN STATED ON OWTS APPLICATION.
- THE BOUNDARY LINES DEPICTED HEREON ARE APPROXIMATE ONLY UNLESS OTHERWISE NOTED. THIS PLAN DOES NOT REPRESENT A BOUNDARY OPINION.
- TOPOGRAPHY OBTAINED FROM REAL TIME KINEMATIC G.P.S. OBSERVATIONS. ELEVATIONS IN U.S. SURVEY FEET ARE REFERENCED TO THE NAVD 83 DATUM.
- NO DRAINS OR WATERLINES TO BE INSTALLED WITHIN 25' OF LEACHING AREA. NO GARBAGE GRINDERS SHALL BE INSTALLED.
- THERE ARE NO KNOWN EXISTING OR PROPOSED PRIVATE WELLS WITHIN 200' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
- THERE ARE NO KNOWN EXISTING OR PROPOSED DRAINS WITHIN 200' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
- THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500' OF THE PROPOSED OWTS OTHER THAN SHOWN ON PLAN.
- CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUNDWATER ARE DIRECTED AWAY FROM THE STRUCTURE. THIS PLAN SHOWS GENERAL GRADING ONLY AND ADDITIONAL DETAIL MAY BE REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, SAFETY PRECAUTIONS AND REQUIREMENTS, AND OSHA COMPLIANCE IN THE IMPLEMENTATION OF THIS PLAN AND DESIGN.
- THE FINAL LANDSCAPING, SOIL STABILIZATION AND EROSION CONTROL IS TO BE COMPLETED BY THE OWNER PER THE APPROVED PLAN. ALTERATIONS TO THIS DESIGN ARE TO BE IDENTIFIED BY THE HOMEOWNER IN WRITING TO THE DESIGN ENGINEER FOR APPROVAL AND POSSIBLE RESUBMISSION TO THE RIDEM.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENT TO SERVICE THE PROPOSED BUILDING. THIS SHALL BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING THAT UTILITY SERVICE IS AVAILABLE.
- ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS BY OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. NO ONE SHOULD RELY ON THE UTILITY LOCATIONS SHOWN FOR CONSTRUCTION AND DIG SAFE MUST BE NOTIFIED PRIOR TO ANY WORK.
- THIS SITE IS REVIEWED UNDER RIDEM WETLANDS APPLICATION NO. TBD.
- THIS SITE IS LOCATED IN FEMA FLOOD ZONES X AND AE (EL. 204). REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C0301H AND 44007C0302H, MAPS REVISED OCTOBER 02, 2015.
- ALL OWTS SHOULD BE MAINTAINED BY THE HOMEOWNER ON AN ANNUAL BASIS OR MORE FREQUENTLY IF REQUIRED BY LOCAL REGULATIONS.
- OWTS DESIGNER REQUIRES A MINIMUM OF THREE INSPECTIONS: BOTTOM INSPECTION, COVER INSPECTION AND INLET INSPECTION.
- SILT FENCE (R1DOT STD 9.2.0) OR APPROVED EQUAL EROSION CONTROL BARRIER SHALL BE INSTALLED AT THE LIMIT OF DISTURBANCE AND INLET PROTECTION SHALL BE INSTALLED AT IMMEDIATELY ADJACENT CATCH BASINS, WHERE DOWNGRADE OF LAND DISTURBING ACTIVITIES.

SEPTIC TANK BUOYANCY CALCULATION:
 SHGWT = 229.3
 BOTTOM OF TANK = 227.31
 BUOYANT EFFECT = (0.97 X 6.5 FT X 1.94 FT) / 62.4 LB/CF = 9426.1 LB < 20000 LB
 THE BUOYANT FORCE IS NEGATED BY TANK & SOIL WEIGHTS

PUMP CHAMBER BUOYANCY CALCULATION:
 SHGWT = 228.8
 BOTTOM OF CHAMBER = 228.47
 BUOYANT EFFECT = ((2 FT X 2 FT X 1 FT) X 0.28 FT) / 62.4 LB/CF = 55.54 LB < 1162.5 LB
 BUOYANT FORCE < 3 CONCRETE #8 BARS

LATERAL NOTES:

- 1.00" Ø SCH 40 PVC LATERAL
- 3/16" Ø ORIFICES DRILLED AT 12.0" ON CENTER IN THE 6 O'CLOCK POSITION*
- GEOMETRIX QUICKSNAP (TM) OR GEOGARD (TM) ORIFICE SHIELDS MUST BE INSTALLED OVER ORIFICE HOLES AND GLUED IN PLACE WITH PVC PRIMER AND GLUE.
- *UPWARD FACING ORIFICES/ORIFICE SHIELDS MUST BE LOCATED 1/3 AND 2/3 FROM THE MANIFOLD.



Construction Notes:

- CONSTRUCTION SHALL CONFORM TO THE RHODE ISLAND SPECIFICATIONS SET FORTH IN THE "DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - RULES AND REGULATIONS" ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION & CONSTRUCTION OF ONSITE WASTEWATER TREATMENT SYSTEMS, LATEST EDITION.
- THE FILL AROUND THE SYSTEM SHALL BE COARSE SAND, OR BANK RUN GRAVEL. INSTALLER TO REMOVE ALL TREES, BRUSH AND STUMPS WITHIN THE AREA OF THE LEACHFIELD AND WITHIN 10 FEET OF THE LEACH FIELD.
- BUILDING SEWER PIPE TO BE MINIMUM 4" SCH 40 PVC. ALL OWTS PIPING TO BE MINIMUM 4" SCH 40 PVC.
- TREATMENT TANK RISERS TO BE AT FINISH GRADE.
- INSTALLER TO MAINTAIN OWTS INVERT ELEVATION OF 230.92 FOR 10' FILL PERIMETER.
- MAXIMUM 3:1 SLOPE FOR 25' FROM LEACHFIELD.
- BENCHMARK = SURV AND TAG... ELEVATION = 235.03
- ALL STAGES OF THE OWTS INSTALLATION MUST BE SUPERVISED BY THE DESIGN ENGINEER.
- DIG SAFE IS REQUIRED TO BE NOTIFIED PRIOR TO START OF ANY CONSTRUCTION.

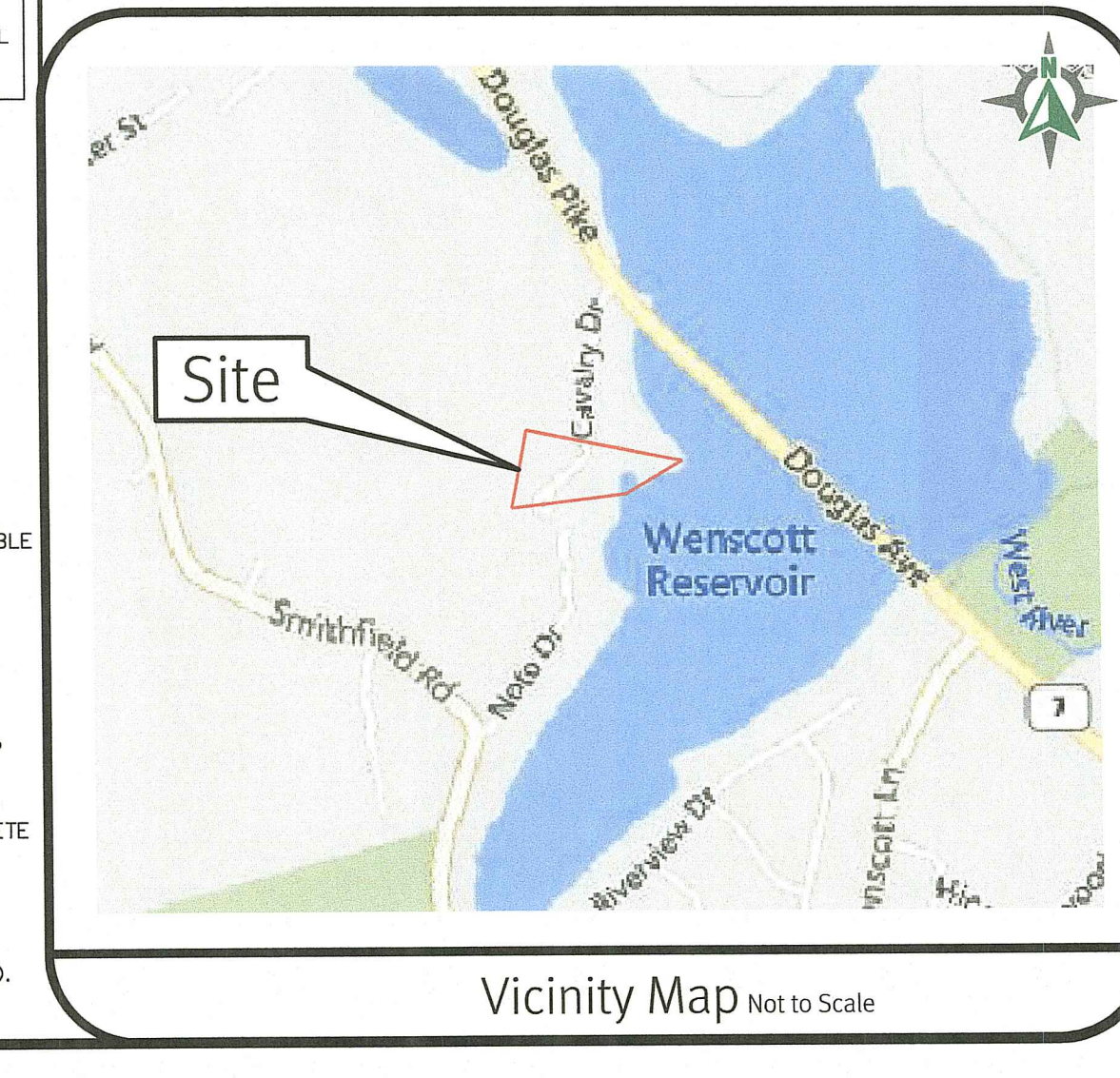
Sequence of Construction:

- CONTRACTOR TO OBTAIN ALL REQUIRED FEDERAL, STATE AND MUNICIPAL PERMITS, AND TO NOTIFY "DIG SAFE" PRIOR TO CONSTRUCTION.
- SET EROSION CONTROL BARRIER AT LIMIT OF DISTURBANCE. MAINTAIN CONTINUOUS EROSION CONTROL BARRIER DURING CONSTRUCTION AND REPAIR AS NEEDED.
- CONTACT DESIGNER 24 HOURS PRIOR TO OWTS CONSTRUCTION.
- BEGIN OWTS BOTTOM EXCAVATION.
- CONTACT DESIGNER 24 HOURS PRIOR TO OWTS BOTTOM EXCAVATION COMPLETION FOR INSPECTION.
- BEGIN OWTS CONSTRUCTION.
- CONTACT DESIGNER 24 HOURS PRIOR TO OWTS COMPLETION FOR INSPECTION.
- COVER OWTS COMPONENTS AND COMPLETE FINISH GRADING.
- CONTACT DESIGNER 24 HOURS PRIOR TO OWTS FINAL GRADING FOR INSPECTION.
- COMPLETE SOIL STABILIZATION BY LOAM AND SEEDING DISTURBED AREAS.

Zoning Notes:

- THE PARCEL IS ZONED RS12 (NORTH PROVIDENCE) AND R80 (SMITHFIELD) PER THE ASSESSOR'S ONLINE DATABASE.
- THE ZONING ORDINANCE SECTION EXHIBIT A (NORTH PROVIDENCE) AND SECTION 5.1 TABLE 1 (SMITHFIELD) LISTS THE DIMENSIONAL REGULATIONS AS FOLLOWS:

MINIMUM LOT AREA	RS12	R80
12,000 SQUARE FEET	80,000 SQUARE FEET	
MINIMUM FRONTAGE AND LOT WIDTH	100 FEET	200 FEET
MINIMUM FRONT YARD	25 FEET	40 FEET
MINIMUM SIDE YARD	20 FEET	25 FEET
MINIMUM REAR YARD	25 FEET	75 FEET
MAXIMUM HEIGHT	35 FEET	39 FEET
MAXIMUM LOT COVERAGE	N/A	10%



z:\deman\projects\2659-001 not to drive the view at twin river\hatched drawings\2659-001_spc.dwg Plotter: 7/10/2023

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JASON P. CLOUGH
 No. [Signature]
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL

RI Environmental Management
 FEB 13 2023
 Office of Water Resources

THIS PLAN SET MUST BE USED FOR CONSTRUCTION PERMITS UNLESS STATED OTHERWISE FOR CONSTRUCTION AND STAMPED BY DIPRETE ENGINEERING, A REGISTERED PROFESSIONAL ENGINEER OF DIPRETE ENGINEERING. DIPRETE ENGINEERING ONLY WARRANTS PLANS ON A DIPRETE ENGINEERING DESIGN. DIPRETE ENGINEERING DOES NOT WARRANT PLANS BY ANY OTHER PARTY. THE CONTRACTOR IS RESPONSIBLE FOR ALL OF THE MEANS, METHODS, SAFETY PRECAUTIONS AND REQUIREMENTS, AND OSHA COMPLIANCE IN THE IMPLEMENTATION OF THIS PLAN AND DESIGN. ONLY DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DESIGN. UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. ONLY DIPRETE ENGINEERING ASSUMES NO RESPONSIBILITY FOR LOCATIONS INCURRED DUE TO LOCATIONS OF EXISTING UTILITIES.

DESIGN BY: J.P.C.
 DRAWN BY: S.R.
 CHECKED BY: S.R.
 DATE: 2-10-2023
 PROJECT: 2659-001

ONSITE WASTEWATER TREATMENT SYSTEM
 CALVARY DRIVE
 ASSESSOR'S PLAT 42 LOT 82
 SMITHFIELD, RHODE ISLAND
 PREPARED FOR:
 MR. JOHN HARONIAN
 15 NOTO DRIVE, NORTH PROVIDENCE, RHODE ISLAND 02904

FEB 13 2023
 Office of Water Resources

Vicinity Map Not to Scale

SHEET 1 OF 2

ESTABLISHMENT OF VEGETATIVE COVER

- SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED.
- THE TOPSOIL 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 RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, M.20.
- THE TEMPORARY SEEDING DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT
ANNUAL RYEGRASS	40
PERENNIAL RYEGRASS	60
- THE NEW ENGLAND EROSION CONTROL/RESTORATION SEED MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT
UPLAND BENTGRASS	1.0
CREeping BENTGRASS	1.0
BIG BLUESTEM	8.0
NEW ENGLAND ASTER	1.0
FOX SEDGE	8.0
VIRGINIA WILD RYE	28.0
BONSET	1.0
GRASS LEAVED GOLDENROD	1.0
CREeping RED FESCUE	24.0
SOFT RUSH	0.5
SENSITIVE FERN	1.0
SWITCH GRASS	8.0
IMPROVED KENTUCKY BLUEGRASS	15.0
GREEN BULLRUSH	1.0
WOOL GRASS	0.5
BLUE VERVAIN	1.0
- THE GENERAL PURPOSE SEED MIX SHALL BE COMPRISED URI #2 OF THE FOLLOWING:

TYPE	% BY WEIGHT
CREeping RED FESCUE	40
IMPROVED PERENNIAL RYE GRASS	20
IMPROVED KENTUCKY BLUEGRASS	50
KENTUCKY BLUEGRASS	10

- EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. SEEDING SCHEDULE SHOULD CONFORM WITH RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, I.O.2.03. J SEEDING DATES. PERMANENT SEEDING SHALL BE DURING THE APRIL 1 TO MAY 31 OR AUGUST 15 TO OCTOBER 15. TEMPORARY SEEDING MAY BE DONE ANYTIME BETWEEN MARCH 15 AND NOVEMBER 15 WITH THE APPROVAL OF THE ENGINEER OF RECORD. FERTILIZE AS REQUIRED BY SOIL TESTING TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS AND BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULANTS FOR EACH VARIETY.
- TEMPORARY TREATMENTS SHALL CONSIST OF STRAW OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING. TEMPORARY STRAW MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING. SIDE SLOPES OF BASINS SHALL BE TREATED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKETS SUCH AS SISO OR APPROVED EQUAL. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.
 - ALL SILT FENCE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
 - ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PART 200.
 - STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED.
 - ALL AREAS PROPOSED TO BE VEGETATED THAT ARE DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDING AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDING AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STANDARD IS MAINTAINED. WELL ESTABLISHED VEGETATION SHALL BE MAINTAINED. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEDED BY THE CONTRACTOR. ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.
 - MAXIMUM PERMANENT GRADED SLOPE WITHIN THE SITE IS TO BE 3:1 UNLESS NOTED OTHERWISE.
 - THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
 - REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE, REVISED 2014, AS A GUIDE.

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: FEB 27 2023 FILE #: 22-0493
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

MAINTENANCE: SHORT TERM / LONG TERM

- THE STONE STABILIZATION PADS AT THE SITE ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP PRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ON THE PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- ALL SILT FENCE, TEMPORARY TREATMENTS (STRAW, ETC.), AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION. SILT FENCE SHALL BE INSPECTED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH STORM EVENT OR EVERY 7 DAYS, WHICHEVER COMES FIRST, FOR UNDERMINING AND DETERIORATION. A STORM EVENT SHALL BE DEFINED AS 0.25 INCHES OF RAIN WITHIN A 24-HOUR PERIOD. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS WARRANTED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE SILT FENCE BECOMES FILLED IN WITH SEDIMENT. THE SILT FENCE SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. FOLLOWING CONFIRMATION FROM THE OWNER AND OR THE PROJECT ENGINEER THAT AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER HAS BEEN ESTABLISHED THE SILT FENCE SHALL BE REMOVED.
- THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER. SILT FENCE SHALL BE STAKED AROUND THE STOCKPILES.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED, AND MAINTAINED BY THE CONTRACTOR FOLLOWING FINISH GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL CHECK ALL SEEDING AREAS REGULARLY TO SEE THAT A GOOD STAND OF VEGETATION IS MAINTAINED. THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE DRAINAGE BMPs DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION AND ACCEPTANCE BY THE OWNER. THE OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE THEREAFTER. THE DRAINAGE BMPs SHALL BE INSPECTED/MAINTAINED AS DETAILED BELOW.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE AND REPAIR TO ALL DRAINAGE STRUCTURES AND RELATED APERTURES ON SITE DURING CONSTRUCTION AND IMMEDIATELY FOLLOWING CONSTRUCTION FOR A MAXIMUM OF ONE YEAR, OR UNTIL ACCEPTANCE BY THE ENGINEER AND THE OWNER. THE OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE THEREAFTER.
- A LEGALLY BINDING AND ENFORCEABLE MAINTENANCE AGREEMENT SHALL BE EXECUTED BETWEEN THE OWNER AND THE RESPONSIBLE AUTHORITY TO ENSURE THE FOLLOWING MAINTENANCE SCHEDULES ARE FOLLOWED:
 - DURING THE FIRST SIX (6) MONTHS OF OPERATIONS, INSPECTIONS SHALL BE ACCOMPLISHED IN EACH DRAINAGE BMP AFTER EVERY RAINFALL EVENT, TO CHECK FOR CLOGGING OR, CONVERSELY, TOO RAPID A STORMWATER RELEASE. FOLLOWING THE SIX (6) MONTHS, INSPECTIONS SHALL BE CONDUCTED, AT A MINIMUM, ANNUALLY.
 - IF STANDING WATER IS OBSERVED WITHIN THE DRAINAGE BMPs FOR MORE THAN THREE (3) DAYS AFTER A RAINFALL, THEN FAILURE OF THE SYSTEM MAY HAVE OCCURRED AND SHALL BE ADDRESSED THROUGH REPAIR OR REPLACEMENT.
 - THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE AND FOR A PERIOD OF ONE YEAR AFTER CONSTRUCTION. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
 - AFTER ACCEPTANCE OF THE SITE BY THE OWNER, THE OWNER SHALL HAVE OVERALL RESPONSIBILITY FOR IMPLEMENTING THE MAINTENANCE PROGRAM FOR THE STORMWATER MANAGEMENT PLAN.
 - THE RESPONSIBLE PARTY FOR THE STORMWATER MANAGEMENT PROGRAM IS THE OWNER OF THE SITE. THE FUNDING FOR THE STORMWATER MANAGEMENT PROGRAM IS BY THE OWNER. IF THE PROPERTY IS SOLD, THE RESPONSIBILITY OF THE STORMWATER MANAGEMENT PROGRAM WILL BE TRANSFERRED TO THE NEW OWNER.

THE FOLLOWING MAINTENANCE PROCEDURES MUST BE FOLLOWED FOR THE DRYWELLS:

- INFILTRATION PRACTICES SHALL BE INSPECTED ANNUALLY AND REPAIRED IF NECESSARY TO ENSURE PROPER DRAINAGE.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION AND ACCEPTANCE BY THE OWNER. THE OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE THEREAFTER. THE CONTRACTOR'S MAINTENANCE/INSPECTION RESPONSIBILITIES SHALL INCLUDE REPLACING THE STONE WITHIN THE DRYWELL IF STORMWATER REMAINS IN THE DRYWELL LONGER THAN 48 HOURS. THE CONTRACTOR SHALL INSPECT DRYWELLS AFTER EACH STORM GREATER THAN 0.5 INCHES AND REPAIR AS NECESSARY. THE OWNER SHALL INSPECT THE DRYWELL SEMIANNUALLY AND AFTER RAIN FILL EVENTS GREATER THAN ONE INCH. IF REPAIRS ARE NEEDED, THEY SHALL BE CARRIED OUT IMMEDIATELY. REPAIRS ARE NECESSARY IF STORMWATER REMAINS IN THE DRYWELL LONGER THAN 48 HOURS.

THE FOLLOWING MAINTENANCE PROCEDURES SHALL BE FOLLOWED FOR THE PERVIOUS DRIVEWAYS:

- THE SURFACE OF PERVIOUS DRIVEWAY SHALL BE MONITORED AFTER STORMS TO ENSURE IT DRAINS PROPERLY. THE SURFACE SHALL BE INSPECTED ANNUALLY FOR DETERIORATION AND REPAIRED AS NEEDED.
- USE OF SAND AND SALT ON PERVIOUS DRIVEWAYS SHALL BE MINIMIZED.

SEQUENCE OF CONSTRUCTION OF CONSTRUCTION AND STAGING OF LAND DISTURBING ACTIVITIES

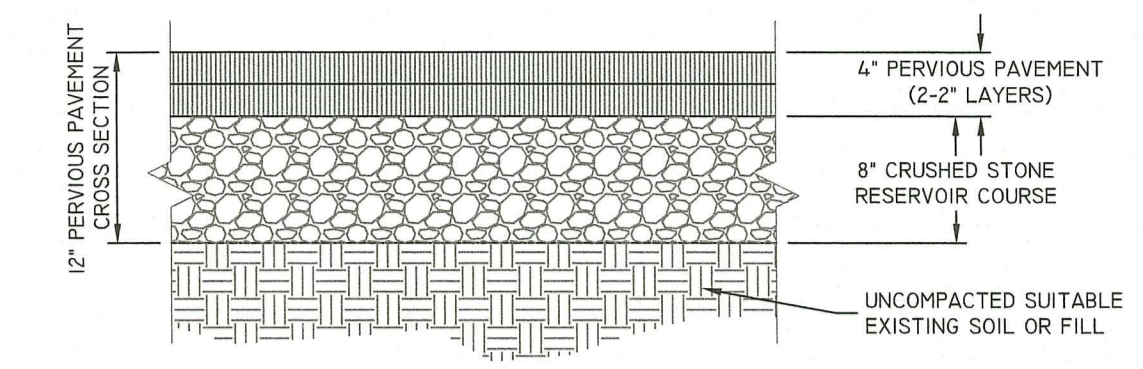
- CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL (SE & SC) ON SITE. SEQUENCE OF CONSTRUCTION PROVIDED MAY BE MODIFIED AS FIELD CONDITIONS WARRANT WITH PRIOR APPROVAL FROM OWNER OR THEIR REPRESENTATIVE.
- CONSTRUCTION TO BEGIN IN THE FALL 2022 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.
- SURVEY AND STAKE THE DRAINAGE BMPs (DRYWELLS AND/OR OTHER DRAINAGE FEATURES), DRAIN LINES, AND LIMIT OF SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE.
- PLACE SEDIMENTATION BARRIERS (SILT FENCE OR APPROVED EQUAL) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS. PLACE BARRIERS AROUND VEGETATED SWALE. NO CONSTRUCTION TRAFFIC IS PERMITTED IN THESE AREAS.
- INSTALL TEMPORARY SEDIMENTATION CONTROL MEASURES AND DEVICES AS WARRANTED. ALL TEMPORARY CONTROL DEVICES SHALL BE INSTALLED PER THE RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK.
- BEGIN DEMOLITION AND CLEARING AND GRUBBING IN AREA OF THE BUILDING, DRAINAGE BMPs, AND OTHER AREAS AS INDICATED ON THE PLANS. TOPSOIL IS TO BE STRIPPED AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS AND COVERED OR TEMPORARILY SEED.
- BEGIN CONSTRUCTION OF THE BUILDING FOUNDATION AND STRUCTURE.
- BEGIN CONSTRUCTION OF DRAINAGE BMPs.
- ONCE THE SITE IS STABILIZED THE DRAINAGE BMPs AND DRAINAGE NETWORK MAY BE BROUGHT ONLINE WITH THE APPROVAL OF THE DESIGN ENGINEER.
- REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS.

STRUCTURAL MEASURES

- RUNOFF WATER QUALITY IS IMPROVED UTILIZING A DRYWELL AND A PERVIOUS DRIVEWAY. CONSTRUCTION OF THE BMPs SHALL BE SUPERVISED BY THE PROJECT ENGINEER.
- A STONE STABILIZATION PAD IS LOCATED AT THE SITE ENTRANCE TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT OF WAY.
- SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATION.
- IF NECESSARY TEMPORARY BERMS AND / OR SWALES SHALL BE USED DURING CONSTRUCTION TO DIRECT SURFACE TO TEMPORARY SEDIMENTATION TRAPS TO CAPTURE AND TREAT THE MAXIMUM AMOUNT OF STORMWATER.
- THE BMP AREAS ARE NOT TO BE USED AS SEDIMENTATION TRAPS DURING CONSTRUCTION AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES (I.E. HEAVY MACHINERY) TO PREVENT COMPACTION. THE CONTRACTOR SHALL CONSTRUCT ANY SEDIMENTATION TRAPS WHICH ARE REQUIRED TO MEET ALL GUIDELINES IN THE RHODE ISLAND SOIL EROSION SEDIMENT CONTROL HANDBOOK.
- THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURE IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDS SOIL CONSERVATION SERVICE, REVISED 2014, AS A GUIDE.
- INSTALL ROOF LEADERS TO DIRECT STORMWATER TOWARDS THE DRYWELL.

NON-STRUCTURAL MEASURES

- CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE ACCESS ROAD, UTILITY EASEMENTS AND AREAS TO BE GRADED.
- TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHALL SURROUND ALL TOPSOIL STOCKPILES.
- ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND TOWN REGULATIONS. CONSTRUCTION DEBRIS SHALL BE DISPOSED OF DAILY TO AVOID EXPOSURE TO PRECIPITATION.
- THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
- REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE, REVISED 2014, AS A GUIDE.

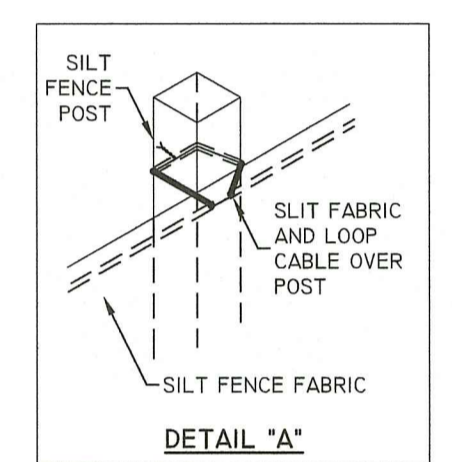


NOTE:
TYPICAL PERVIOUS ASPHALT DESIGN SHOWN. ALTERNATIVE PERVIOUS OPTIONS INCLUDE PERMEABLE PAVERS, AND 3\"/>

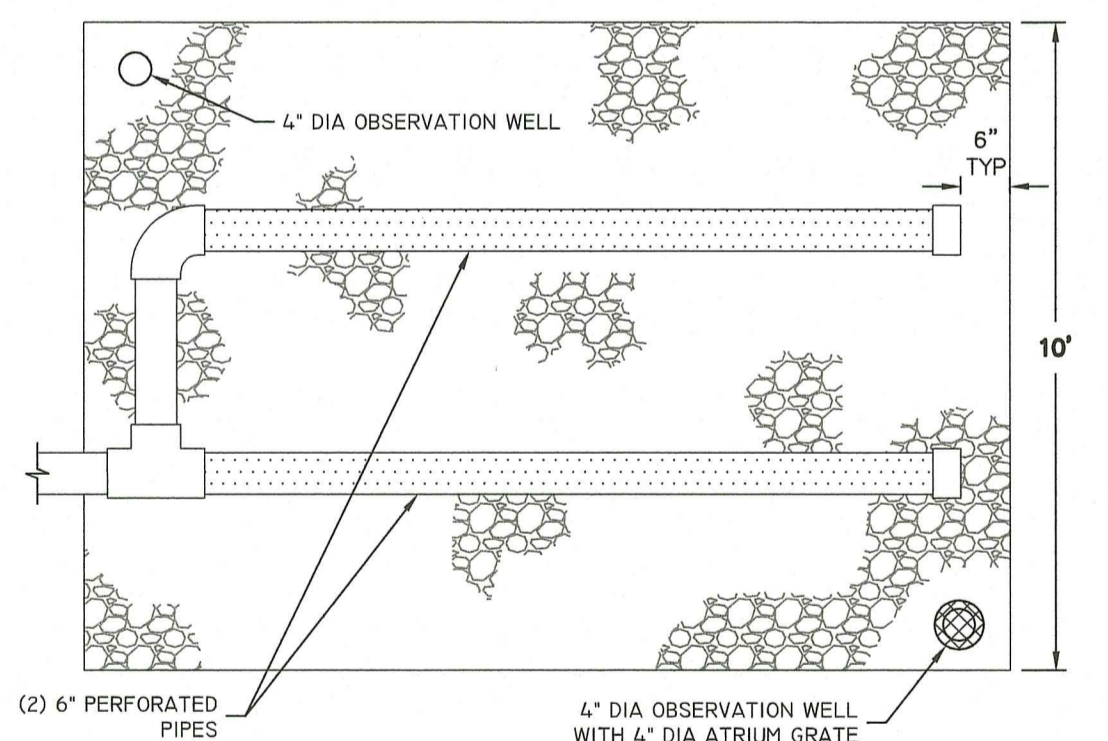
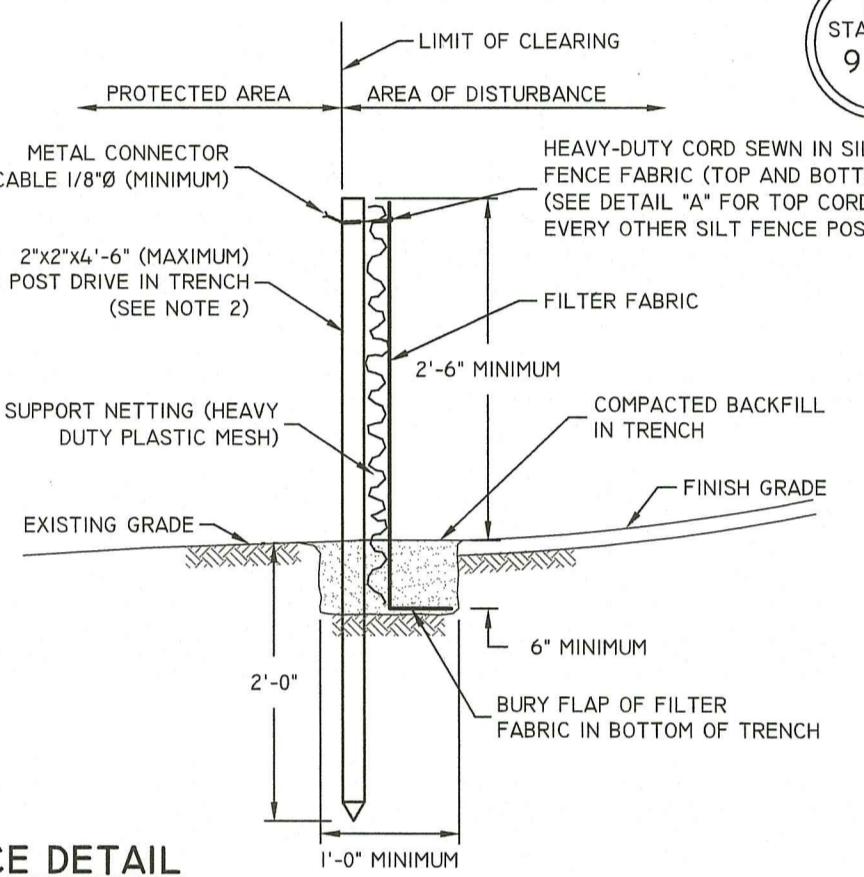
TYPICAL PERVIOUS PAVEMENT CROSS SECTION
NOT TO SCALE

NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
- 2"x2"x4'-6" (MAXIMUM) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAXIMUM) O.C. IN WETLAND AREAS AND 4'-0" (MAXIMUM) O.C. IN WETLAND RAVINE. GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
- 1"x4'-4" (MINIMUM) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
- SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



SILT FENCE DETAIL
NOT TO SCALE



HOUSE DRYWELL DETAIL (PLAN)
NOT TO SCALE

CONSTRUCTION, MAINTENANCE & INSPECTION NOTES:

- ROOF LEADERS ARE TO TIE INTO PROPOSED DRYWELLS.
- DRYWELL AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON DESIGNATED AREA PRIOR TO CONSTRUCTION.
- DRYWELLS TO BE LOCATED DOWNGRADIENT OF THE BUILDING WITH A MINIMUM OF 10' SEPARATION TO THE FOUNDATION.
- UNDER NO CIRCUMSTANCES MAY DRYWELLS BE INSTALLED UPGRADIENT OF A BUILDING.
- PLACE FILTER FABRIC ON SIDES OF TRENCH AND FILL WITH CRUSHED, WASHED STONE.
- OVERLAP FILTER FABRIC ON THE TOP OF THE FILTER STONE. BACK FILL WITH CLEAN FILL TO FINISH GRADE.
- MONITORING OF WATER LEVELS WITHIN THE INSPECTION PORT AT VARIOUS TIME INTERVALS AFTER A RAINFALL EVENT WILL INDICATE THE EFFECTIVENESS OF THE SYSTEM. IF WATER IS STANDING IN DRYWELL SYSTEM 72 HOURS AFTER A STORM EVENT, SYSTEM FAILURE HAS OCCURRED AND WILL REQUIRE FLUSHING MAINTENANCE, REPAIR OR REPLACEMENT OF THE SYSTEM.
- MAINTENANCE OF ALL DRYWELL AND DRAINAGE COMPONENTS IS THE RESPONSIBILITY OF THE OWNER, INCLUDING MONITORING OF WATER LEVELS AS NECESSARY.

SIZING NOTES:
1. DRYWELLS SIZED USING TABLE 10 OF THE STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT

SIZING DATA
SOIL CONDITIONS: SANDY
DRYWELL DEPTH: 30 INCHES

DRYWELL SIZING CALCULATION:
TOTAL IMPERVIOUS AREA = 5,233 SF

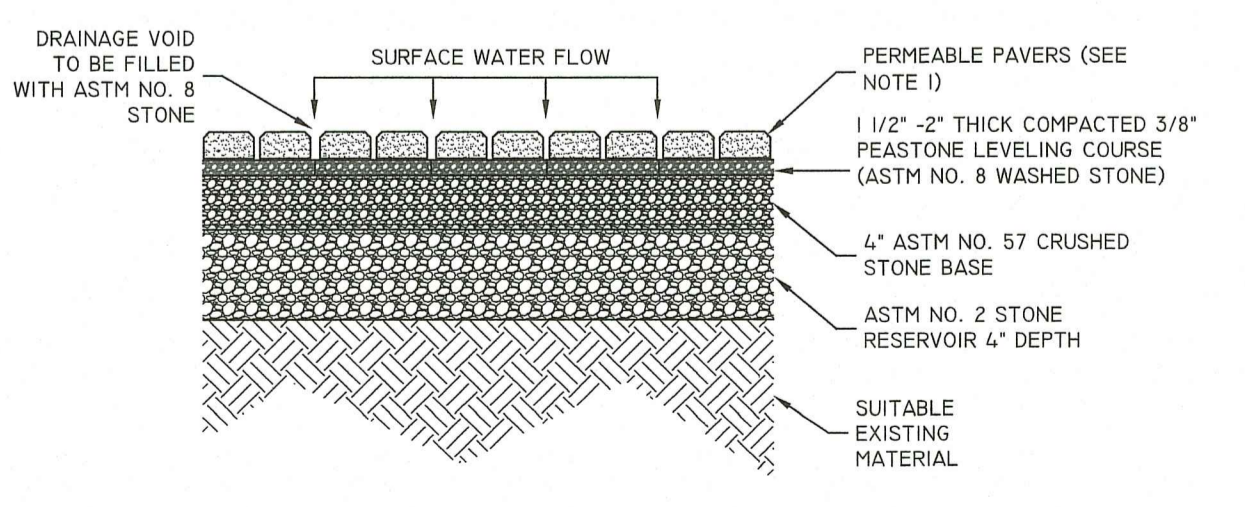
DRYWELL SIZING RATIO = $\frac{80 \text{ SF (DRYWELL SURFACE AREA)}}{1,000 \text{ SF (IMPERVIOUS SURFACE AREA)}}$

$\frac{80 \text{ SF}}{1,000 \text{ SF}} \times \text{X SF} = 3,233 \text{ SF}$

DRYWELL AREA PROVIDED = 260 SF

PROPOSED GRADING ELEVATION	TOP OF DRYWELL	ELEVATION AT BOTTOM STONE OF DRYWELL	SEASONAL HIGH GWL ELEVATION	SEPARATION DISTANCE (FEET)
228	227.5	225	223	2

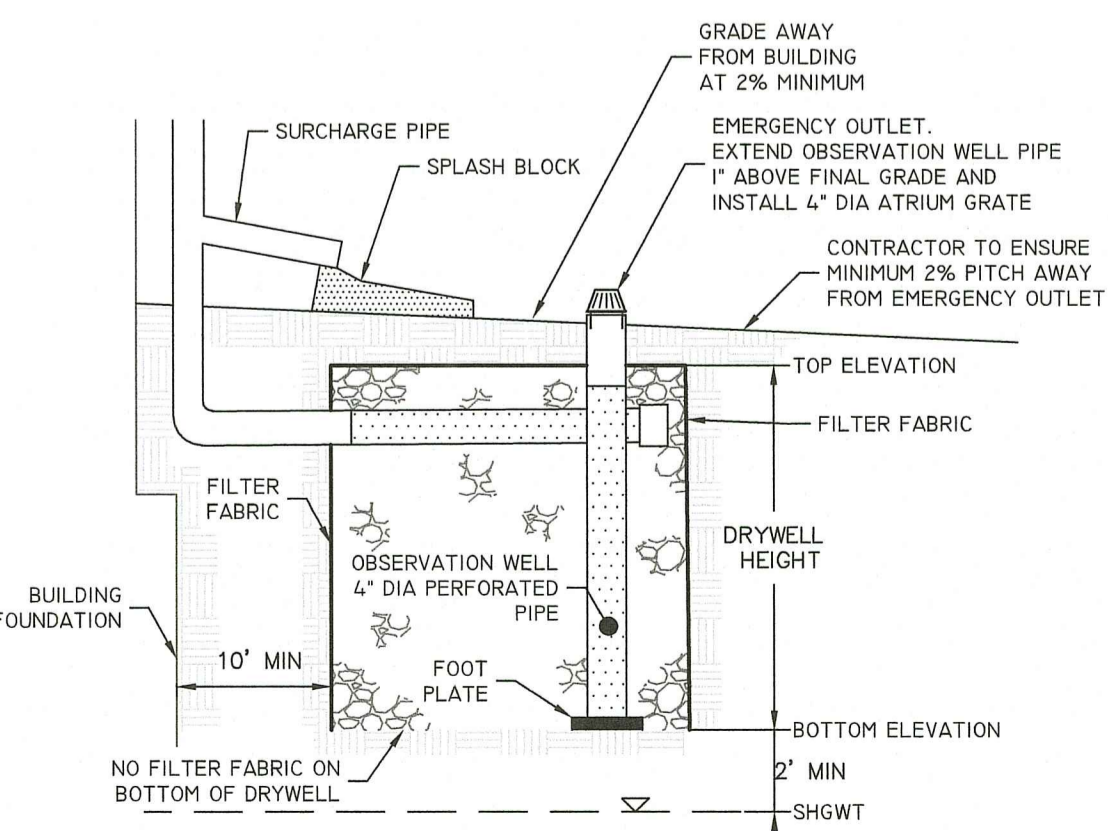
HOUSE DRYWELL DETAIL
NOT TO SCALE



- NOTE:
1. PERMEABLE PAVERS CAN BE ANY OF THE FOLLOWING:
• PERMEABLE SOLID BLOCK WITH A MINIMUM VOID RATIO OF 15% WITH OPEN-CELL GRIDS
• SOLID BLOCK WITH OPEN-CELL JOINTS 15% OF SURFACE
2. ALL PERMEABLE PAVERS ARE TO BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

STANDARD SIEVE SIZE (INCHES)	AASHTO NO. 57	AASHTO NO. 8	AASHTO NO. 2
3	-	-	100
2 1/2	-	-	90-100
2	-	-	35-70
1 1/2	100	-	0-15
1	95-100	-	-
3/4	-	-	-
1/2	25-60	100	-
3/8	-	85-100	-
#4	0-10	10-30	-
#8	0-5	0-10	-
#16	-	0-5	-
#200	0	0-2	-

PERMEABLE PAVER DETAIL
NOT TO SCALE



HOUSE DRYWELL DETAIL (PROFILE)
NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER CIVIL

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NO.	DATE	REVISION / DESCRIPTION	BY	DESIGN BY: J.P.C.
1	2-10-2023	ISSUED RESPONSE TO COMMENTS	J.P.C.	
2	2-10-2023	ISSUED SUBMISSION	J.P.C.	
3	2-10-2023	ISSUED SUBMISSION	J.P.C.	

DETAIL SHEET
CALVARY DRIVE
ASSESSOR'S PLAT 42 LOT 152
SMITHFIELD, RHODE ISLAND

PREPARED FOR:
MR. JOHN HARONIAN
15 NOTO DRIVE, NORTH PROVIDENCE, RHODE ISLAND 02904

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