

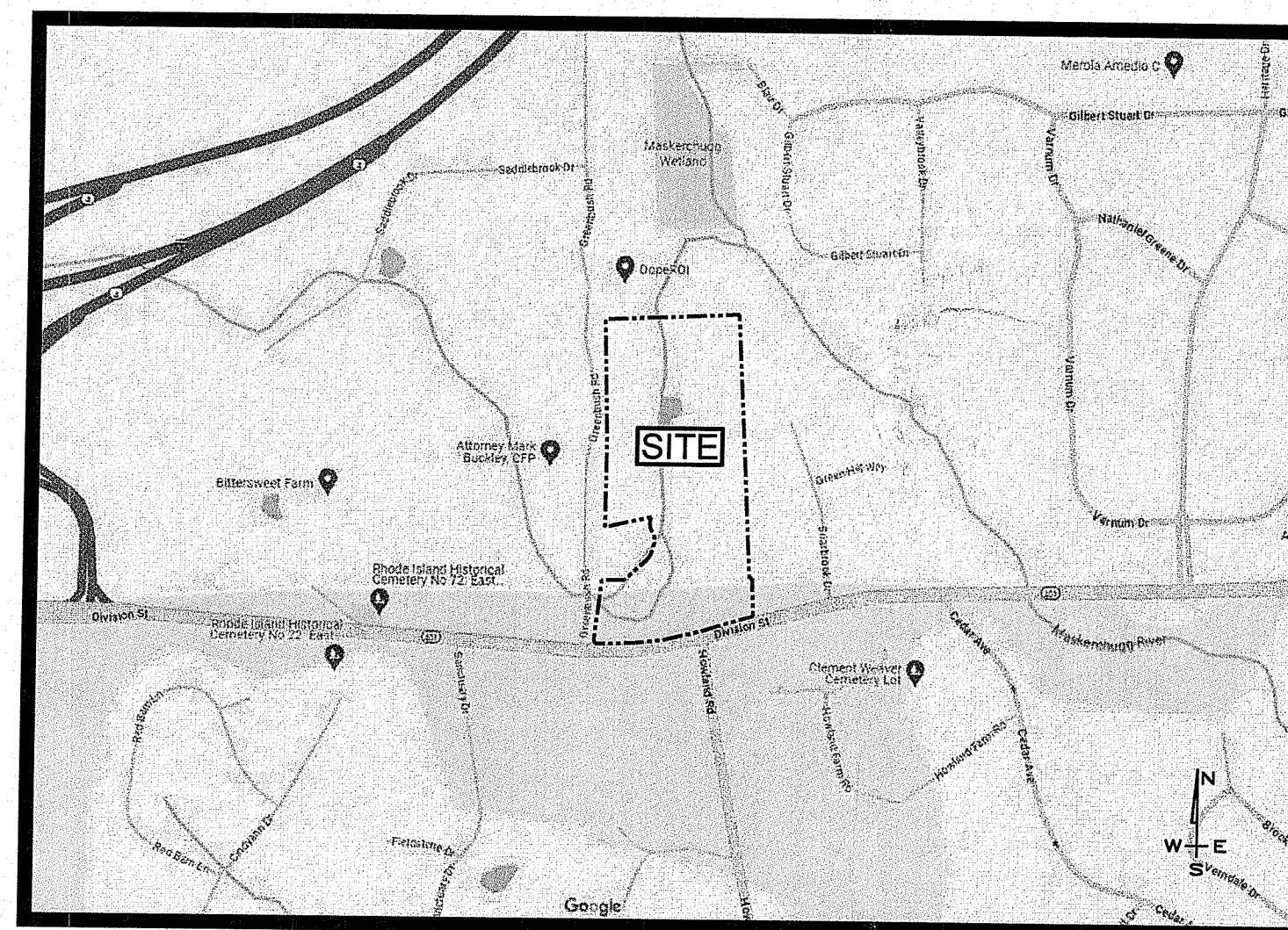
RIDEM SUBMISSION

SITE PLANS

FOR

GREEN BUSH ACRES

(PHASE 1)



LOCUS MAP
NOT TO SCALE

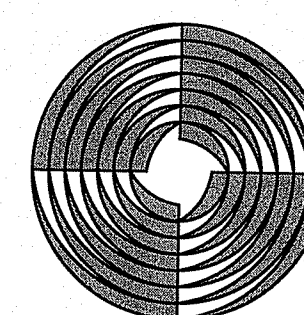
A.P. 217, LOTS 2&3
GREEN BUSH ROAD
WARWICK, RI

PREPARED FOR:
MIDDLEBERRY ASSOCIATES
2224 PAWTUCKET AVE
EAST PROVIDENCE, RI 02914

PLAN SHEET LEGEND

SHEET	PLAN TITLE	LATEST REVISION
ECS	COVER SHEET	
C-1	EXISTING CONDITIONS PLAN	
C-2	GENERAL NOTES & LEGEND	01/09/2025
C-3	DEVELOPMENT PLAN	01/09/2025
C-4	GRADING, DRAINAGE & UTILITIES PLAN	01/09/2025
C-5	SOIL EROSION & SEDIMENT CONTROL PLAN	01/09/2025
C-6	OWTS NOTES & DETAILS - 1	
	CONSTRUCTION DETAILS - 2	12/16/2024

PREPARED BY:



GAROFALO

GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS \ SURVEYORS
LAND PLANNERS \ ENVIRONMENTAL SCIENTISTS
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(PH) 401-273-6000 (FX) 401-273-1000

DATED:
JULY, 2024
(REVISED DATE: 01/09/2025)

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

NOTE PER DEM:

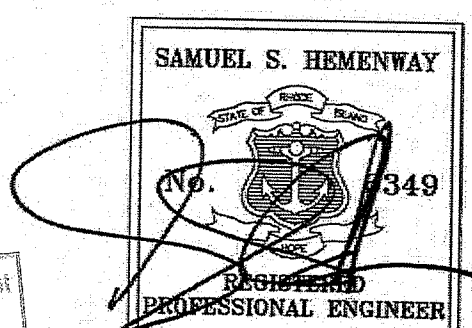
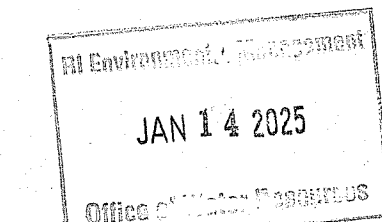
Kindly be advised that this Permit
is not equivalent to a
verification of the type or extent
of freshwater wetlands on site

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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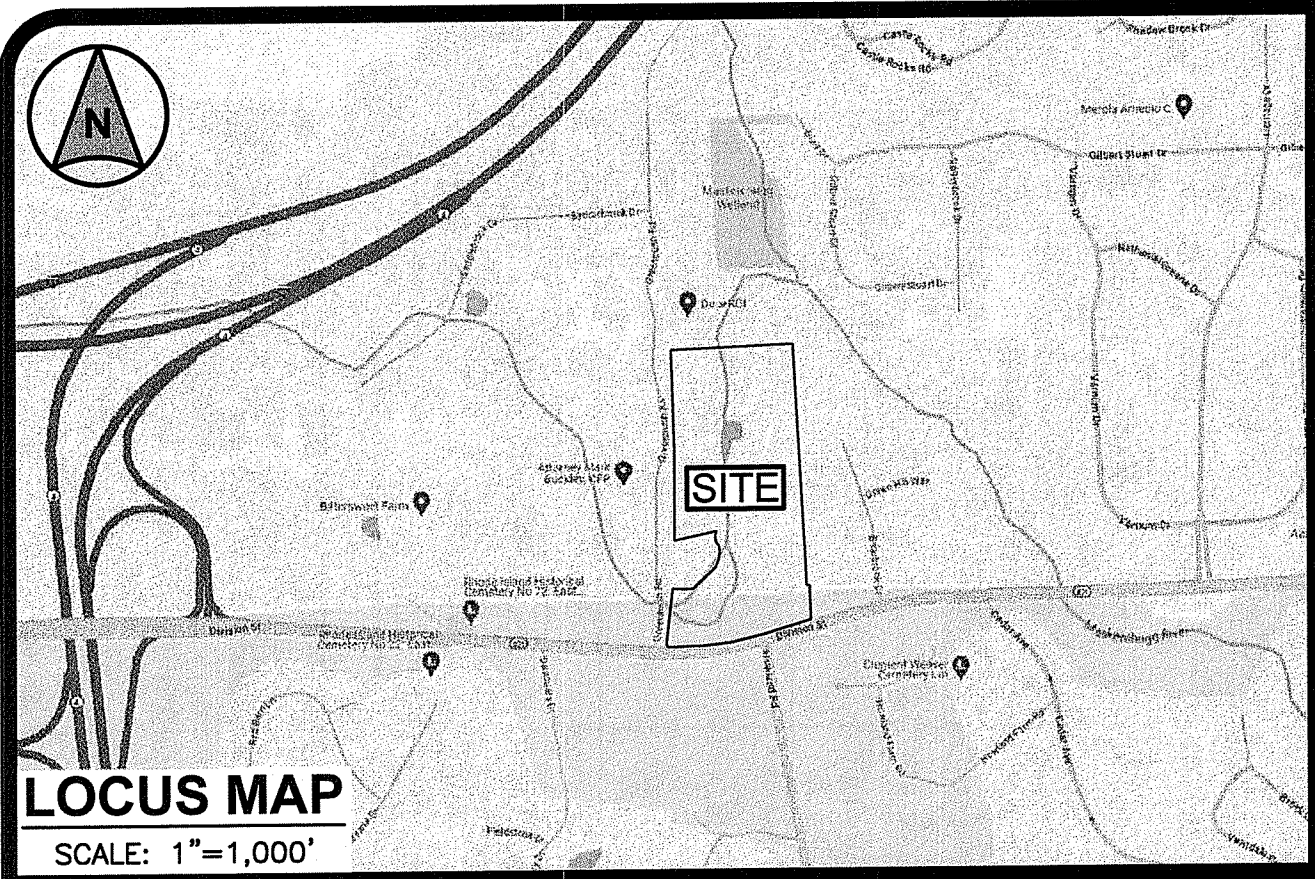
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Andy Clayton

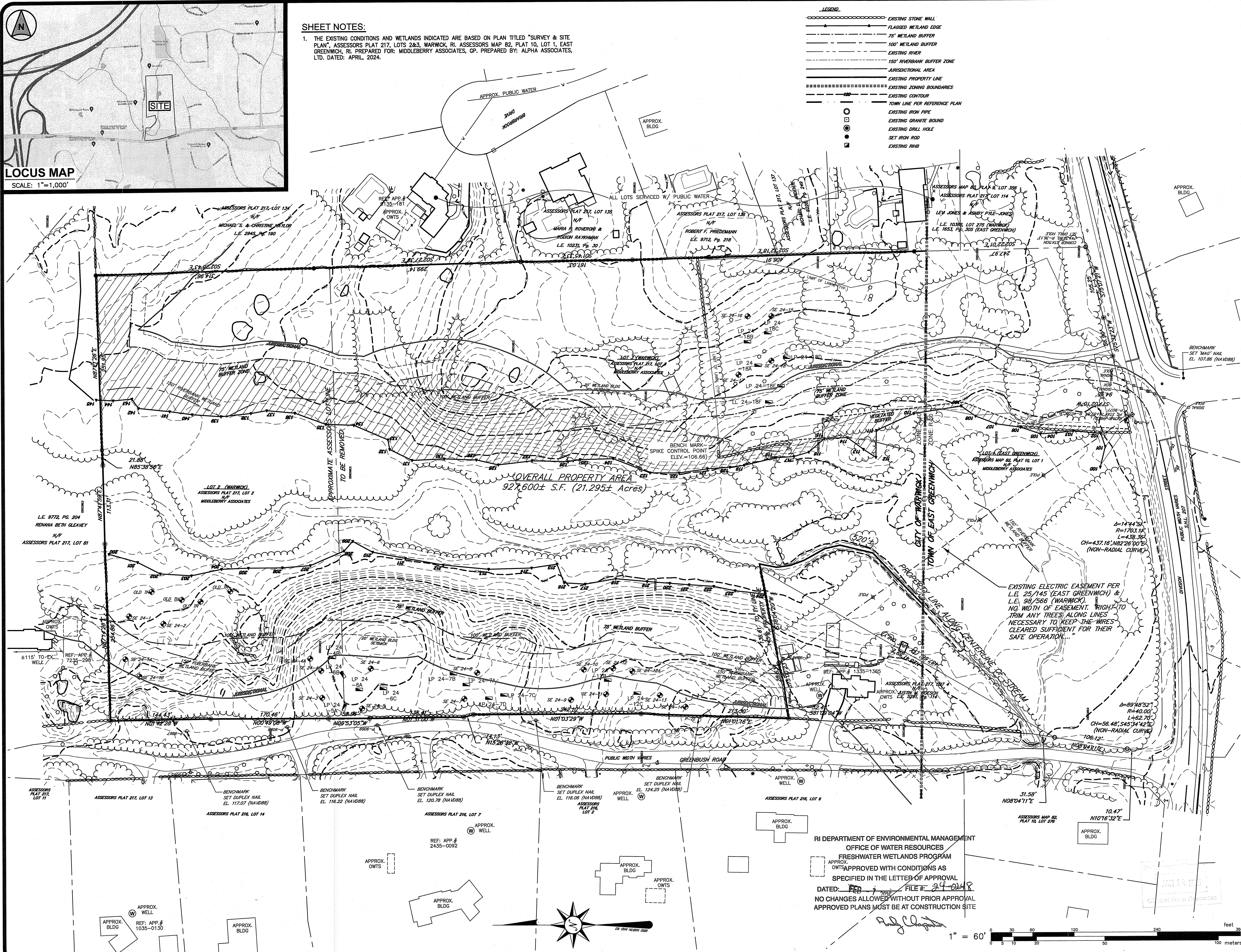
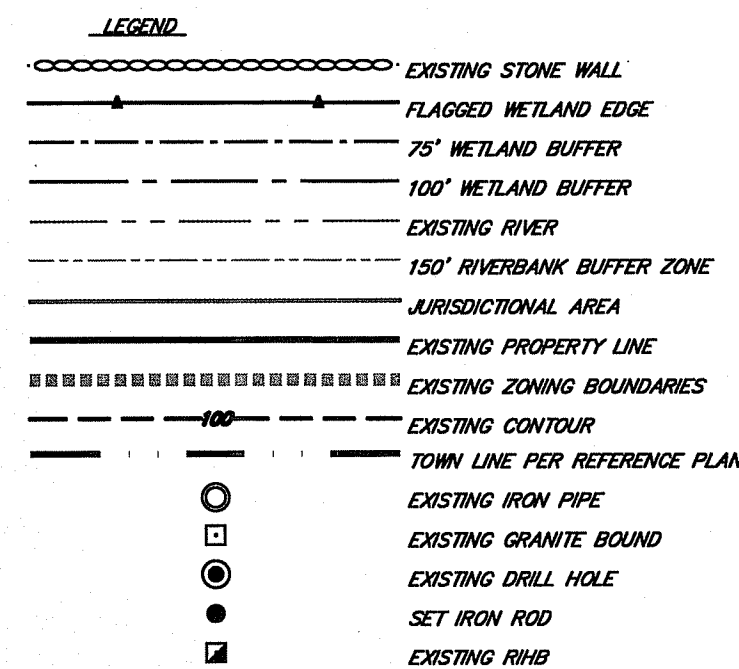


JOB NO. 7491-00
1 OF 8 SHEETS



SHEET NOTES:

1. THE EXISTING CONDITIONS AND WETLANDS INDICATED ARE BASED ON PLAN TITLED "SURVEY & SITE PLAN", ASSESSORS PLAT 217, LOTS 2&3, WARWICK, RI. ASSESSORS MAP 82, PLAT 10, LOT 1, EAST GREENWICH, RI. PREPARED FOR: MIDDLEBERRY ASSOCIATES, GP. PREPARED BY: ALPHA ASSOCIATES, LTD. DATED: APRIL, 2024.



EXISTING CONDITIONS PLAN
FOR
GREEN BUSH ACRES
A.P. 217 LOTS 2 & 3
GREENBUSH ROAD
WARWICK, RI
PREPARED FOR
MIDDLEBERRY ASSOCIATES

NO.	REVISION	BY	DATE

GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

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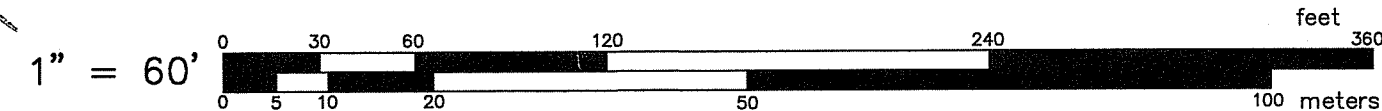
JOB NO. 7491.00	DRAWN BY K.Y.Y.
DWG. NO. 7491-00_ECS	CHECK BY S.E.H.
SCALE: AS SHOWN	APPROVED S.S.H.
	DATE: JULY, 2024

SHEET

ECS

2 OF 8 SHEET

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: FEB 7 2024 FILE # 24-048
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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GENERAL CONSTRUCTION NOTES:

- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE TRAILER AT ALL TIMES. DEVIATIONS OR CHANGES WILL NOT BE ALLOWED UNLESS BY WRITTEN APPROVAL FROM THE ENGINEER.
- SITWORK CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL APPROVALS FROM THE CITY OF WARWICK HAVE BEEN SECURED. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS OBTAINED FOR ALL SITE WORK.
- ALL IMPROVEMENTS INDICATED HEREON MUST COMPLY WITH THE 'AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINE (ADAAG)'. NOTE THAT THE DETAIL CONTAINED WITHIN THIS PLAN MAY NOT SHOW THE DETAIL NECESSARY TO CONSTRUCT WALKWAYS, RAMPS AND SPACES TO COMPLY WITH THE ADAAG REQUIREMENTS BUT THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LEVEL OF CARE NECESSARY TO BE CERTAIN THAT THE CONSTRUCTED PRODUCT MEETS THESE STANDARDS.
- THE CONTRACTOR MUST RETAIN THE SERVICES OF A REGISTERED LAND SURVEYOR IN THE STATE OF RHODE ISLAND TO LAYOUT ON THE GROUND ALL NEW ELEMENTS OF WORK. IF ANY WORK IS INSTALLED PRIOR TO THE ABOVE REQUIREMENT AND IF ANY WORK IS NOT SATISFACTORY TO THE ENGINEER, THE CONTRACTOR MUST REPLACE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING, INSTALLING OR PROCEEDING WITH WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER NECESSARY MEASURES NEEDED TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING UNDERGROUND UTILITIES AND FACILITIES ON THE DRAWINGS; HOWEVER, THE INFORMATION SHOWN IS FOR THE CONTRACTORS CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION, VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIALS. THE CONTRACTOR MUST CONTACT THE LOCAL UTILITY COMPANIES FOR EXACT LOCATION OF UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE START OF ANY WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR.
- THE CONTRACTOR MUST NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITIES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION OR BLASTING AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION, EXCAVATION OR BLASTING. ALL WATER, SEWER, GAS AND ALL OTHER UTILITIES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR THE CITY OF WARWICK AND THE STATE OF RHODE ISLAND DEPARTMENT OF TRANSPORTATION. THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2024 EDITION WITH ALL REVISIONS AND ADDENDA, AND THE RHODE ISLAND STANDARD DETAILS 1998 EDITION (AMENDED JUNE 2019) WITH ALL REVISIONS ARE MADE A PART HEREOF, AS IF ATTACHED HERETO.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2023 INCLUDING ALL REVISIONS.
- ALL WORK TO BE DONE WITHIN THE STATE RIGHT OF WAY (ROW) SHALL CONFORM TO THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2024 EDITION WITH ALL REVISIONS AND ADDENDA, AND THE RHODE ISLAND STANDARD DETAILS 1998 EDITION (AMENDED JUNE 2019) WITH ALL REVISIONS ARE MADE A PART HEREOF, AS IF ATTACHED HERETO).
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT, DRIVEWAYS, SIDEWALKS, WALL, CURBS, ETC. DAMAGED DURING CONSTRUCTION WITH MATCHING MATERIALS.
- THE CONTRACTOR AGREES THAT HE WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE PROJECT SITE CONDITIONS THROUGHOUT CONSTRUCTION INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONJUNCTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- ALL MATERIALS USED FOR CONSTRUCTION MUST BE NEW AND FREE OF DEFECTS. USED OR SALVAGED MATERIAL WILL NOT BE ALLOWED UNLESS WRITTEN APPROVAL FROM THE OWNER IS OBTAINED BY THE CONTRACTOR.
- AT ALL TIMES THE CONTRACTOR MUST MAINTAIN ACCESS FOR EMERGENCY VEHICLES AROUND AND TO ALL BUILDINGS. (I.E. IN TIMES OF RAIN OR SNOW, ROADS MUST BE ABLE TO CARRY A FIRE TRUCK BY BEING PAVED OR HAVING A CRUSHED STONE BASE, ETC.). WIDTH OF EMERGENCY VEHICLE ACCESS MUST BE A MINIMUM OF 20 FEET WIDE. ACCESS TO BUILDINGS THAT HAVE A FIRE SPRINKLER SYSTEM OR STANDPIPE MUST BE WITHIN 40 FEET OF THE FIRE DEPARTMENT CONNECTION (FDC). NFPA 1141 3-1.
- NECESSARY BARRICADES, LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC MUST BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR.
- HIGH INTENSITY LIGHTING FACILITIES MUST BE SO ARRANGED THAT THE SOURCE OF ANY LIGHT IS CONCEALED FROM PUBLIC VIEW AND FROM ADJACENT RESIDENTIAL PROPERTY AND DOES NOT INTERFERE WITH TRAFFIC.
- ALL RI HIGHWAY BOUNDS AND PERMANENT SURVEY MARKERS SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.
- REFER TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL PLANS FOR ALL BUILDING INFORMATION, AND FOR SITWORK WITHIN 5'-0" OF BUILDING. .
- ALL CURB RADII ARE 3' UNLESS OTHERWISE NOTED ON THE SITE PLAN.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR IS REQUIRED TO DEVELOP AND IMPLEMENT A PLAN FOR THE TEMPORARY CONTROL OF VEHICULAR AND PEDESTRIAN TRAFFIC FOR WORK WITHIN PUBLIC STREET RIGHT-OF-WAY AT THE SITE EGRESS. CONTRACTOR SHALL OBTAIN APPROVAL OF SAID PLAN FROM APPROPRIATE STATE AND COMMUNITY PUBLIC SAFETY OFFICIALS.
- WHEN IT IS NECESSARY TO CLOSE OFF A STREET, THE FIRE DEPARTMENT AND POLICE DEPARTMENT SHALL BE NOTIFIED BY THE CONTRACTOR.
- SHOP DRAWINGS OF PRECAST STRUCTURES SHALL BE REVIEWED BY THE ENGINEER AND APPROVED BEFORE USE.
- IF ANY EXISTING STRUCTURES AND/OR UTILITIES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, EITHER ON THE PROJECT SITE, ADJACENT PROPERTIES, OR WITHIN STATE RIGHT-OF-WAY, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

SURVEY REFERENCE :

- THE EXISTING CONDITIONS AND WETLANDS INDICATED ARE BASED ON PLAN TITLED "SURVEY & SITE PLAN", ASSESSORS PLAT 217, LOTS 2&3, WARWICK, RI, ASSESSORS MAP 82, PLAT 10, LOT 1, EAST GREENWICH, RI. PREPARED FOR: MIDDLEBERRY ASSOCIATES, GP. PREPARED BY: ALPHA ASSOCIATES, LTD. DATED: APRIL, 2024.

GENERAL UTILITY NOTES (WHEN APPLICABLE):

- THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) AND ALL LOCAL AUTHORITIES & UTILITY COMPANIES TO VERIFY LOCATIONS OF UTILITIES WITHIN THE AREA 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION OR DEMOLITION FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES. LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY, LOCATE AND PROTECT EXISTING UTILITIES IN THE FIELD WHETHER OR NOT SHOWN ON THE DRAWINGS.
- ALL WORK SHALL BE IN COMPLETE ACCORDANCE WITH ALL APPLICABLE STATE, FEDERAL AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.
- THE CONTRACTOR SHALL COORDINATE LOCATION AND INSTALLATION OF ALL UNDERGROUND UTILITIES AND APPURTENANCES TO MINIMIZE DISTURBANCE OF CURBING, PAVING AND COMPACTED SUBGRADE. THE CONTRACTOR SHALL NOTIFY THE TOWN ENGINEER & ALL LOCAL UTILITY COMPANIES 48 HOURS BEFORE EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE PLANS.
- BEDDING REQUIREMENTS SPECIFIED HEREIN ARE TO BE CONSIDERED AS MINIMUMS FOR RELATIVELY DRY, STABLE EARTH CONDITIONS. ADDITIONAL BEDDING SHALL BE REQUIRED FOR ROCK TRENCHES AND WET AREA. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO PROVIDE SUCH ADDITIONAL BEDDING AS MAY BE REQUIRED TO PROPERLY CONSTRUCT THE WORK.
- THE CONTRACTOR SHALL REMOVE ANY ABANDONED FOUNDATIONS, UTILITY STRUCTURES, BURIED DEBRIS ETC. WHICH INTERFERE WITH THE INSTALLATION OF THE UTILITY WORK. ALL SUCH STRUCTURES SHALL BE COMPLETELY REMOVED AND THE EXCAVATED AREA SHALL BE BACKFILLED WITH COMPACTED GRAVEL IN 6" LIFTS TO 95% COMPACTION TO 6" BELOW THE BOTTOM OF THE UTILITY AND PIPE.
- COMPACTION OF THE BACKFILL OF ALL TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THE THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN LIFTS NOT TO EXCEED ONE FOOT IN COMPACTED FILL THICKNESS. CORRECTION OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF PROJECT APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PIPING LAYOUT INDICATED ON THESE PLANS IS DIAGRAMMATIC ONLY AND DOES NOT SHOW ALL THE REQUIRED FITTINGS FOR PROPER ALIGNMENT. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS TO OBTAIN PROPER ALIGNMENT AND FOR EXISTING UTILITY CONNECTIONS BASED UPON FIELD CONDITIONS.
- IF DURING EXCAVATION THE TRENCH WIDTH EXCEEDS THE SUM OF THE PIPE O.D. PLUS 2'-0", PLACE AND COMPACT THE FILL TO 12" ABOVE THE PIPE AND RE-EXCAVATE TO REQUIRED GRADE.
- WHENEVER UTILITIES ARE TO BE INSTALLED WITHIN THE CITY OF WARWICK PUBLIC OR PRIVATE RIGHT OF WAYS, THE TRENCH MUST BE BACKFILLED WITH GRANULAR FILL. ALL AREAS OF ROADWAY PAVEMENT & WALKWAYS DISTURBED DURING CONSTRUCTION SHALL BE RE-PAVED PER THE TOWN OF WARWICK AND STATE STANDARDS AND SPECIFICATIONS.
- INDIVIDUAL LOTS SHALL BE PROVIDED WITH ONSITE WASTEWATER TREATMENT SYSTEMS (OWTS) WHICH ARE TO BE DESIGNED AND PERMITTED UNDER SEPARATE COVER.
- WHENEVER SEWER LINES MUST CROSS WATER LINES, THE SEWER SHALL BE INSTALLED SO THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, WHERE 18 INCH VERTICAL SEPARATION AND 10 FOOT HORIZONTAL SEPARATION CAN NOT BE MET AT WATER AND SEWER CROSSINGS, THE SEWER PIPE SHALL BE ENCASED IN CONCRETE OR BE EITHER DUCTILE IRON OR C900 BLUE BRUTE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF CROSSING.
- GAS SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE UTILITY INSTALLATIONS AS REQUIRED TO ENSURE ADEQUATE GAS SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE GAS COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION.
- ELECTRIC SERVICE FACILITIES SHALL BE DESIGNED BY OTHERS. ELECTRIC SERVICE AND TRANSFORMER PAD SHALL CONFORM TO THE REQUIREMENTS OF THE ELECTRIC COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE ELECTRIC SERVICE IS PROVIDED AND SHALL BE RESPONSIBLE FOR ALL INSTALLATION PROCEDURES (TRENCHING, LAYING PIPE, ETC.) AS ARE REQUIRED BY THE ELECTRIC COMPANY FOR COMPLETE AND IN PLACE CONSTRUCTION. REFER TO ELECTRICAL DRAWINGS FOR ALL UNDERGROUND ELECTRIC.

SUBDIVISION SUITABILITY O.W.T.S. NOTES

- ALL ON-SITE WASTEWATER TREATMENT SYSTEMS SHOWN HAVE BEEN SIZED TO MEET ANTICIPATED FLOWS.
- ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS, OR ADDITIONAL TERMS OF APPROVAL WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH: RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTE WATER TREATMENT SYSTEMS, NOVEMBER 25, 2018 BY THE R.I. DEPT. OF ENVIRONMENTAL MANAGEMENT, AUTHORITY IN ACCORDANCE WITH PART 6, SUB-CHAPTER 10 PURSUANT TO CHAPTER 150 TITLE 250 OF THE GENERAL LAWS OF RHODE ISLAND, 1956 AS AMENDED.
- THERE SHALL BE NO FOUNDATIONS W/BASEMENTS, WATER SUPPLY LINES, UPGRADIENT SUBSURFACE, FOUNDATION OR STORM DRAINS WITHIN 25' OF THE LEACH FIELD, NOR ANY DOWN GRADIENT OR SIDE GRADIENT DRAINS WITHIN 50' OF THE LEACH FIELD, UNLESS OTHERWISE PERMITTED BY THE REQUIREMENTS OF RULE 6.23 MINIMUM SETBACK DISTANCES. WHERE THE MINIMUM SEPARATION BETWEEN THE BUILDING SEWER AND EITHER A WATERLINE OR DRAIN CANNOT BE MAINTAINED, THE BUILDING SEWER MUST BE SLEEVED FOR 25' MINIMUM.
- THERE SHALL BE NO INGROUND POOLS WITHIN 25' OR ANY ABOVE GROUND POOLS WITHIN 10' OF THE PROPOSED DISPOSAL AREA.
- THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC DRINKING WATER SUPPLY WELLS WITHIN 500' OF THE PROPOSED DISPOSAL SYSTEM.
- THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC SEWERS WITHIN 200' OF THE PROPOSED DISPOSAL SYSTEM UNLESS OTHERWISE NOTED.
- ON-SITE WASTEWATER TREATMENT SYSTEMS SHOWN HEREON CONSIST OF "GST 6212 & GST 6218" GEOMATRIX LEACHING SYSTEMS.
- ALL SEWAGE TANKS AND APPURTENANCES SHALL BE CONSTRUCTED SUCH THAT ALL ELEMENTS ACT AS A SINGLE WATERTIGHT UNIT, WHICH SHALL DEVELOP A FACTOR OF SAFETY AGAINST BUOYANT UPLIFT. CONTRACTOR SHALL SUITABLY COMPACT COHESIVE OVERBURDEN MATERIAL AND/OR PROVIDE SUITABLE BALAST SURCHARGE AND/OR ANCHORING MEASURES WHEN NEEDED TO MEET THIS REQUIREMENT.
- THE SUBJECT PROPERTY DOES NOT FALL WITHIN ANY CRITICAL RESOURCE AREAS AS DETERMINED BY R.I.D.E.M.
- REFERENCE OWTS APPLICATION No. 2435-0472 FOR WATER TABLE AND SOILS DATA.
- THERE SHALL BE NO FOUNDATION DRAINS ALLOWED WITHIN 25' MIN. OF THE OWTS OR SEPTIC TANK (SEE RULE 6.23(B)).

STORMWATER SYSTEM MAINTENANCE NOTES:

- THE DRAINAGE SYSTEMS ARE TO BE MONITORED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD BY THE CONTRACTOR. UPON COMPLETION OF THE PROJECT THE CONTRACTOR MUST DO A FINAL FULL MAINTENANCE & CLEAN UP OF THE STORMWATER MANAGEMENT SYSTEM AND THE SITE. UPON COMPLETION OF THE CONTRACTOR'S FINAL MAINTENANCE & CLEAN UP OF THE PROJECT, MONITORING OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE THE RESPONSIBILITY OF THE OWNER.
- CONSTRUCTION MONITORING/MAINTENANCE PROCEDURES SHALL BE AS FOLLOWS: (RESPONSIBILITY OF CONTRACTOR)
 - SILT BARRIER:
MONITOR SILT BARRIER ON A WEEKLY BASIS AND AFTER EVERY RAIN STORM EVENT AND REPAIR OR REPLACE ANY DAMAGED AREAS IMMEDIATELY. IMMEDIATELY CLEAN THE SILT BARRIER IF SIX INCHES OR MORE OF SEDIMENT HAS ACCUMULATED ON THE HAYBALE & SILT BARRIER.
 - PAVED AREAS:
PARKING LOTS, PUBLIC & PRIVATE ROADWAYS AND GUTTERS SHALL BE SWEEPED CLEAN OF ALL SEDIMENT & DEBRIS. SWEEPING & REMOVAL OF DEBRIS SHALL BE PERFORMED ON A WEEKLY BASIS AT A MINIMUM.
 - STORMWATER BMPS:
NO CONSTRUCTION RUNOFF SHALL BE DIRECTED TO STORMWATER BMPS UNTIL UPGRADIENT AREAS ARE STABILIZED.

POST CONSTRUCTION MONITORING/MAINTENANCE PROCEDURES SHALL BE AS FOLLOWS: (RESPONSIBILITY OF OWNER)

- STORMWATER MANAGEMENT FACILITIES – REFER TO OPERATIONS AND MAINTENANCE PLAN UNDER SEPARATE COVER. (NOTE: A LEGALLY ENFORCEABLE MAINTENANCE AGREEMENT SHALL BE EXECUTED IF THE PROPERTY OWNER IS NOT THE PARTY RESPONSIBLE FOR BMP MAINTENANCE AS PRESCRIBED)

INFILTRATION AREA CONSTRUCTION PROTECTION

FOR THE LONG-TERM FUNCTION OF THE INFILTRATING SYSTEMS, CARE MUST BE TAKEN IN THIS AREA DURING CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY THE FOLLOWING MINIMUM BEST MANAGEMENT PRACTICES (BMP'S):

- THE INFILTRATION AREAS SHALL NOT BE USED AS A CONSTRUCTION SEDIMENTATION SYSTEM.
- CONSTRUCTION EQUIPMENT, VEHICULAR TRAFFIC, PARKING OF VEHICLES, AND STOCKPILING OF CONSTRUCTION AND EARTH MATERIALS SHALL BE OUTSIDE THE LIMITS OF THE INFILTRATION AREA UNTIL INSTALLATION IS COMPLETED. THE SUBGRADE BENEATH THE SYSTEM SHALL NOT BE COMPACTED.
- EXCAVATION FOR CONSTRUCTION OF THE INFILTRATION AREAS SHALL BE PERFORMED MANUALLY OR BY HYDRAULIC EXCAVATOR OR SOME OTHER SIMILAR MEANS TO ENSURE THAT THE EQUIPMENT IS NOT IN DIRECT CONTACT WITH THE NATURAL INFILTRATION EARTH MATERIAL AND DOES NOT CAUSE COMPACTION OF THE MATERIAL AND THE ENTIRE AREA IS TO BE SCARIFIED PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCING AND EROSION CONTROLS AROUND THE PERIMETER OF THE INFILTRATION AREA TO PREVENT THE USE OF THIS AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE INFILTRATION CAPABILITIES OF THE AREA. THIS FENCING MAY BE REMOVED FOR BACKFILLING AND FINAL CONSTRUCTION.

GENERAL GRADING NOTES:

- THE MAXIMUM RUNNING SLOPE ALONG ANY SIDEWALK SHALL BE 5% THE MAXIMUM CROSS SLOPE ACROSS ANY SIDEWALK SHALL BE 2%. A MINIMUM 5'x5' LANDING SHALL BE PROVIDED IN FRONT OF ALL BUILDING ENTRANCES.
- ALL ADAAG PARKING SPACES AND LOADING SPACES SHALL BE 2% MAXIMUM SLOPE IN ANY DIRECTION.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- ALL GRATES AND COVERS IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 3" ABOVE FINISH GRADE.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH THE CITY OF WARWICK SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

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SITE LEGEND

EXISTING	NEW	DESCRIPTION
		PROPERTY LINE
		ASSESSOR LOT LINE
		BLDG SETBACK LINE
		WETLAND FLAG
		WETLAND EDGE
		WETLAND BUFFER LINE
		RIVERBANK WETLAND BUFFER LINE
		JURISDICTIONAL LINE
		CONTOUR
		SPOT GRADE
		STOCKADE FENCE (STKF)
		CATCH BASIN
		UTILITY POLE
		SIGN
		SOIL EVALUATION LOCATION
		LEDGE PROBE
		LIMIT OF CLEARING
		BUILDING
		WELL
		SEWER LINE
		WATER LINE
		LIMIT OF DISTURBANCE
		COMPOST SILT SOCKS
		CONSTRUCTION ENTRANCE
		OWTS SYSTEM
		INFILTRATION CHAMBERS
		GRASS FILTER STRIP

ABBREVIATIONS

D.I.	DUCTILE IRON PIPE
ESHWT	ESTIMATED SEASONAL HIGH WATER TABLE
ETR	EXISTING TO REMAIN
EX	EXISTING
F.H.	FIRE HYDRANT
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INV.	INVERT ELEVATION
HP	HIGH POINT
MTE	MATCH TO EXISTING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
TF	TOP OF FOUNDATION
VF	VERIFY IN FIELD
WQS	WATER QUALITY STRUCTURE

GENERAL NOTES & LEGEND
FOR
GREEN BUSH ACRES
A.P. 217 LOTS 2 & 3
GREENBUSH ROAD
WARWICK, RI
PREPARED FOR
MIDDLEBERRY ASSOCIATES

NO.	REVISION	BY	DATE
4	LOTS, HOUSES & OWTS'S RECONFIGURATION	KYY	01/09/25

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LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

85 CORLISS STREET

P.O. BOX 6145

PROVIDENCE, R.I. 02940

TEL. 401-273-6000

JOB NO. 7491.00	DRAWN BY K.Y.Y.
DWG. NO. 7491-00_COVER_R4	CHECK BY S.E.H.
SCALE: AS SHOWN	APPROVED S.S.H.
	DATE: JULY, 2024

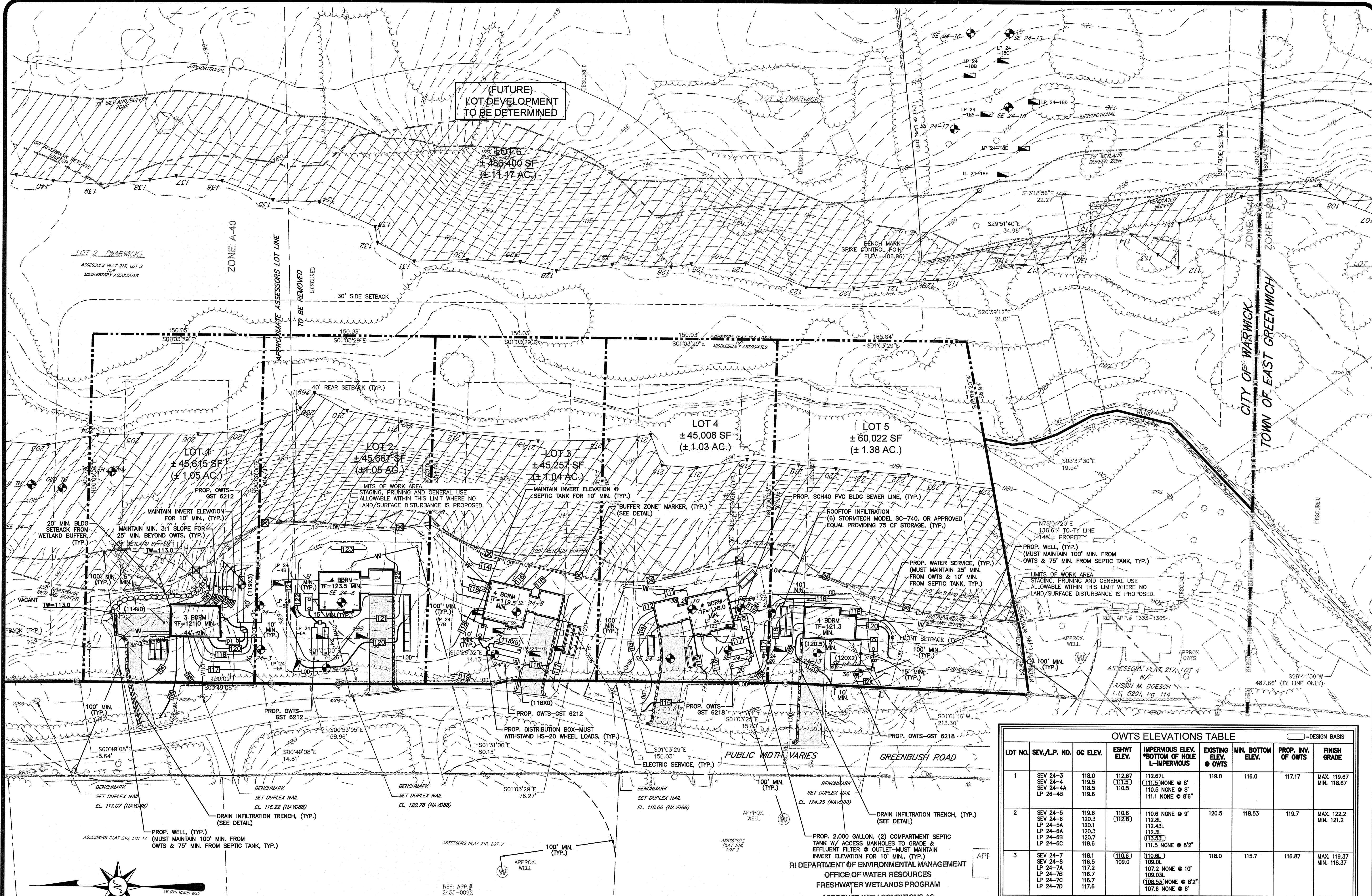
SHEET

C-1

TABLE NOTES:

1. DATA INDICATED IS DEVELOPED FOR SUBDIVISION PURPOSES ONLY AND SUBJECT TO CHANGE AT TIME OF BUILDING PERMIT SUBMISSION.
2. DIMENSIONAL PER SECTION 300. TABLE 2A. DIMENSIONAL REGULATION: R-40

L:\7491-00 Green Bush and Division Road - Residential Development (Primeau) - Warwick and East Greenwich, RI\dwg\01-Current\Phase 1\Drawings\7491-00_g&d_r4.dwg 01/13/2025 kyangong 14:58



BMP ELEVATIONS TABLE								
LOT NO.	ROOFTOP INFILTRATION				DRIVEWAY INFILTRATION TRENCH			
	SEV	SHGW	MIN. BOTTOM	DESIGN BOTTOM	SEV	SHGW	MIN. BOTTOM	DESIGN BOTTOM
1	24-3	112.7	114.7	114.7	24-3	112.7	114.7	114.7
2	24-6	112.8	114.8	114.8	24-6	112.8	114.8	115.0
3	24-8	109.0	111.0	112.0	24-8	109.0	111.0	112.4
4	24-10	110.4	112.4	112.4	24-9	110.4	112.4	112.4
5	24-12A	108.5	110.5	116.0	24-13	110.6	112.6	116.0

OWTS DESIGN PARAMETERS:

SYSTEM LOADING
4 BEDROOMS @ 115 GPD/BEDROOM=460 GPD
460 GPD/0.61 (CATEGORY 6 SOILS)=754 S.F. REQUIRED
3 BEDROOMS @ 115 GPD/BEDROOM=345 GPD
345 GPD/0.61 (CATEGORY 6 SOILS)=566 S.F. REQUIRED

NOTE:
THERE SHALL BE NO FOUNDATION DRAINS ALLOWED WITHIN 25'
OF THE OWTS OR SEPTIC TANK (SEE RULE 6.23(B)).

SHEET NOTES:

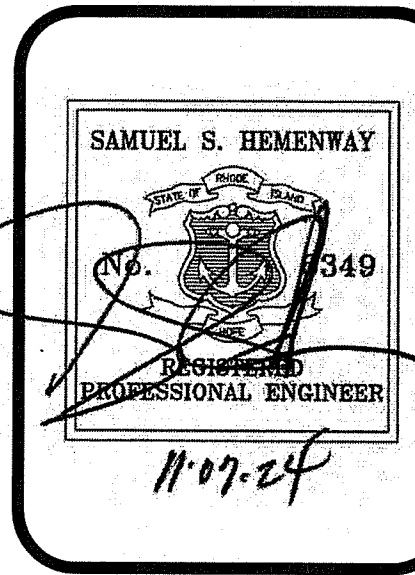
- SEE SHEET C-1 FOR GENERAL NOTES & LEGEND.
- SEE SHEET C-5 FOR OWTS TYPICAL DETAILS.
- OWTS COMPONENTS ARE INDICATED ON LOT 6 FOR PURPOSES OF LAND SUBDIVISION ONLY - FINAL LOT DEVELOPMENT PROGRAM NOT DETERMINED OR PROPOSED AT THIS TIME.
- ALL LOTS SHALL DEVELOPED TO MEET THE STANDARDS OUTLINED WITHIN THE STATE OF RHODE ISLAND STORMWATER MANAGEMENT GUIDANCE FOR INDIVIDUAL SINGLE-FAMILY RESIDENTIAL LOT DEVELOPMENT. SPECIFICALLY, DRAINAGE AND STORMWATER IMPROVEMENTS INCORPORATE ROOFTOP INFILTRATION AND THE DRIVEWAYS WILL BE PERVIOUS AND/OR INCLUDE RECHARGE TRENCHES.
- WETLAND AREAS HAVE BEEN IDENTIFIED ON THE PROPERTY. THE WORK DEPICTED AND DESCRIBED PRACTICES WHOLLY MEET THE MINIMUM GROUNDWATER RECHARGE AND WATER QUALITY TREATMENT STANDARDS PRESCRIBED BY THE RULES AND REGULATIONS GOVERNING THE ADMINISTRATION OF THE RI FRESHWATER WETLANDS ACT AND EACH LOT DEVELOPMENT SHALL OBTAIN A WETLANDS PERMIT FROM THE RIDEM OR RECEIVE COVERAGE UNDER THE WETLANDS GENERAL PERMIT.

OWTS ELEVATIONS TABLE									
LOT NO.	SEV./LP. NO.	OG ELEV.	ESHWIT ELEV.	IMPERVIOUS ELEV. BOTTOM OF HOLE L-IMPERVIOUS	EXISTING ELEV. @ OWTS	MIN. BOTTOM ELEV.	PROP. INV. OF OWTS	FINISH GRADE	
								MAX.	MIN.
1	SEV 24-3 SEV 24-4 LP 24-4A LP 24-4B	118.0 119.5 118.5 118.6	112.67 111.5 110.5	112.67 111.5 NONE @ 8' 110.5 NONE @ 8' 111.1 NONE @ 8'6"	118.0	116.0	117.17	119.67	118.67
2	SEV 24-5 SEV 24-6 LP 24-5A LP 24-6A LP 24-6B LP 24-6C	119.6 120.3 120.1 120.3 120.7 119.6	110.6 112.8 120.1 120.3 120.7 119.6	110.6 NONE @ 9' 124.3L 112.3L 113.3L 111.5 NONE @ 8'2"	120.5	118.53	119.7	122.2	121.2
3	SEV 24-7 SEV 24-8 LP 24-7A LP 24-7B LP 24-7C LP 24-7D	118.1 116.5 117.2 116.7 116.7 117.6	110.8 108.0 107.2 108.03 108.33 107.6	110.8 109.0 107.2 NONE @ 10' 108.03 108.33 NONE @ 8'2" 107.6 NONE @ 8'	118.0	115.7	116.87	119.37	118.37
4	SEV 24-9 SEV 24-10 SEV 24-11 SEV 24-12 SEV 24-12A LP 24-12B LP 24-12C	112.4 112.4 115.5 114.9 115.7 115.2 117.6	110.4 110.4 110.0 107.4 108.53 108.53 117.6	108.4L 105.4L 107.5 NONE @ 8' 107.4L 108.53 107.03 NONE @ 8'2" 108.1 NONE @ 8'6"	116.5	113.0	114.67	117.67	116.67
5	SEV 24-13 SEV 24-14	119.1 120.7	110.6 110.7	110.6 NONE @ 8'6" 110.7 NONE @ 10'	120.0	116.3	118.0	120.5	119.5
6	SEV 15 SEV 16 SEV 17 SEV 18 LP 24-18A LP 24-18B LP 24-18C LP 24-18D LP 24-18E LP 24-18F	114.9 116.7 110.7 110.0 110.3 110.4 113.5 113.4 110.1 108.6 107.0	108.23 110.7 110.4 103.5 102.97 102.4 106.0 105.73 102.27 100.6 100.5	108.23 110.7 110.4 103.5 102.97 102.4 106.0 105.73 102.27 100.6 100.5	111.5	109.0	110.17	112.67	111.67

REFERENCE: APPL NO. 2435-0472

GRADING, DRAINAGE &
UTILITIES PLAN
FOR
GREEN BUSH ACRES
A.P. 217 LOTS 2 & 3
GREENBUSH ROAD
WARWICK, RI
PREPARED FOR
MIDDLEBERRY ASSOCIATES

NO.	REVISION	BY	DATE
1	SCALE PER RIDEM COMMENT	KYY	09/03/24
2	FWW COMMENT	SSH	11/07/24
3	FWW COMMENT	KYY	12/16/24
4	LOTS, HOUSES & OWTS'S RECONFIGURATION	KYY	01/09/25



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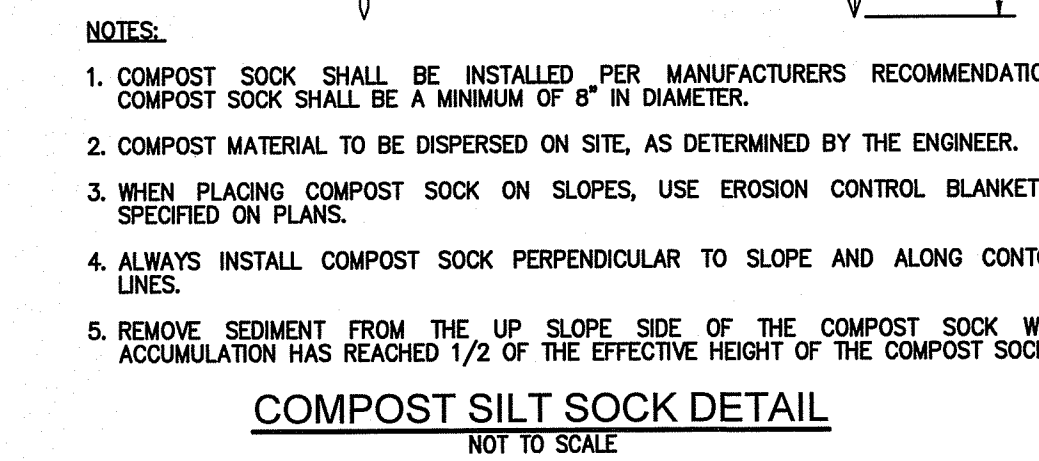
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7491.00	DRAWN BY K.Y.Y.
DWG. NO. 7491-00_G&D_R4	CHECK BY S.E.H.
SCALE: AS SHOWN	APPROVED S.S.H.
	DATE: JULY, 2024

SHEET

C-3

5 OF 8 SHEETS



NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.																	
RHODE ISLAND DEPARTMENT OF TRANSPORTATION																	
CONSTRUCTION ACCESS																	
REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">NO.</th> <th style="width: 10%;">BY</th> <th style="width: 10%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	BY	DATE													<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div> CHIEF ENGINEER <small>MANAGEMENT DIVISION</small> </div> <div> CHIEF DESIGN ENGINEER <small>DESIGN DIVISION</small> </div> </div>	<div style="border: 2px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;"> R.I. STANDARD 9.9.0 </div> </div>
NO.	BY	DATE															
DATE: JUNE 15, 1998 ISSUE DATE:																	

6 OF 8 SHEETS

L:\7491-00 Green Bush and Division Road - Residential Development (Primeau) - Warwick and East Greenwich, RI\dwg\01-Current\Phase 1\Draw\7491-00_Det_3.dwg 01/13/2025 kyngang 14:53

O.W.T.S. NOTES: CIRCLE APPLICABLE NUMBERS

- All other design, construction and maintenance requirements, or additional terms of approval whether noted herein or not, shall be in conformance with, Rules Establishing Minimum Standards Relating To Location, Design, Construction And Maintenance Of Onsite Waste Water Treatment Systems, January 4, 2022 by the R.I. Dept. Of Environmental Management, Authority in accordance with Part 6, Sub Chapter 10 pursuant to Chapter 150 Title 250 of the General Laws Of Rhode Island, 1956 as amended.
- Maintain invert elevation see sheet 3 for 10' minimum around OWTs, beyond 10' a 3:1 slope or flatter must be maintained to 25' minimum or until the toe of slope returns to the elevation of the original grade. The toe must be 5' min. from any property line.
- See O.W.T.S. specifications attached. Comply with any additional terms of approval as required by RIDEM.
- Clear all trees and stumps within 10' of OWTs.
- There shall be no foundations w/basements, water supply lines, upgradient subsurface, foundation or storm drains within 25' of the leach field, nor any down gradient or side gradient drains within 50' of the leach field, unless otherwise permitted by the requirements of Rule 6.23 Minimum Setback Distances.
- There shall be no inground pools within 25' or any above ground pools within 10' of the proposed disposal area.
- Schedule 40 PVC pipe or equal from building to septic tank. SDR35 PVC pipe to be used in OWTs unless otherwise noted.
- All soil containing fines, at least 1BD below the proposed disposal system, and 1BD on all sides, shall be stripped and backfilled with a coarse free draining soil to at least 2' above the top of the distribution pipes in the leach field. Strip to elevation 1BD or as requested by D.E.M. No part of the leach field excavation shall be into ground water, the bottom and all sides shall be scarified.
- Bench mark to be set within 150' of the proposed O.W.T.S. in an area where it will not be disturbed during construction.
- There are no known drinking water wells either existing or proposed within the setback distances from the leaching area specified in Rule 6.23 plus one hundred (100') feet, except as shown.
- Proposed wells are shown in suggested location. Placement of wells shall conform to applicable R.I.D.E.M., O.W.T.S. and Well Regulations.
- The well proposed on the subject property requires a variance from the R.I.D.E.M.'s "Rules and Regulations Governing the Enforcement of Chapter 46-13.2 relating to the Drilling of Drinking Water Wells".
- There are no known existing or proposed public drinking water supply wells within 500' of the proposed disposal system.
- There are no known existing or proposed public sewers within 200' of the proposed disposal system unless otherwise noted.
- There are no known water courses, wetlands or drains within two hundred (200') feet of the proposed OWTs unless otherwise shown.
- All stages of OWTs installation must be supervised by system designer.
- Any proposed silts/fence/staked haybales/soil erosion control shall be installed prior to any site disturbance associated with OWTs installation.
- There shall be no foundation drains allowed except where Rule 6.23(B) can be met.

GENERAL NOTES:

- The two compartment septic tank shall be provided with an inlet tee or baffle, an approved effluent filter and access manholes to grade over the inlet and outlet tees, all other access manholes shall be brought to within 12" of grade. Set cover to divert runoff.
- All piping shall be SDR35 PVC or approved equal, except as noted and shown on plan.
- The distribution box shall have a minimum bottom area of 3 s.f. and shall withstand HS-20 wheel loads and shall have an inlet tee or baffle. The invert of the outlet piping must be 4" above the floor of the distribution box.
- When a tipping distribution box is used it must have a 10" ø access opening brought to grade.
- It is recommended that a suitable marker be placed over d-box & access manhole @ grade.
- Sand media shall meet ASTM C-33 Specifications.
- Maximum length of dispersion line without dosing is 50', 75' with a tipping distribution box and 100' when pumped.
- A 4" dia. solid pvc distribution line shall be installed at the midpoint between rows of in-drains when the length of the rows exceeds thirty (30') feet, and shall be interconnected to the trenches using 45 degree bends, or flatter. Crushed stone or equal should be placed below and around pipe to assure pipe remains level.
- The minimum cover over the septic tank outlet pipe invert shall be 18" with a maximum cover of 42" unless otherwise documented in accordance with Rule 6.27 (N).
- The septic tank is to have inspection covers over the inlet and outlet at finish grade. The covers are to be installed so as to divert surface water runoff away from the cover. The outlet of the septic tank is to be fitted with a Zabel A1800 effluent filter or equal in lieu of a standard tee. The tank is to be pumped out as needed and upon pumping out the tank the effluent filter is to be removed, rinsed off and reinstalled.
- There shall be no water filter backwash, toxic cleaners, wax removers, degreasing agents, medical wastes or similar type by products disposed of into the OWTs.

Table 2
Effective Leaching Credit (ELC)

Product Name	Dimensions (W x L)	Effective Leaching Credit (SF/LF)	Edge to Edge Spacing (inches)
GST 3706	37" x 6"	6.2	6
GST 3712	37" x 12"	10.3	6
GST 3718	37" x 18"	14.4	12
GST 6206	62" x 6"	10.3	6
GST 6212	62" x 12"	17.5	6
GST 6218	62" x 18"	24.8	12

Table 3
Sand and Stone Volume Guide

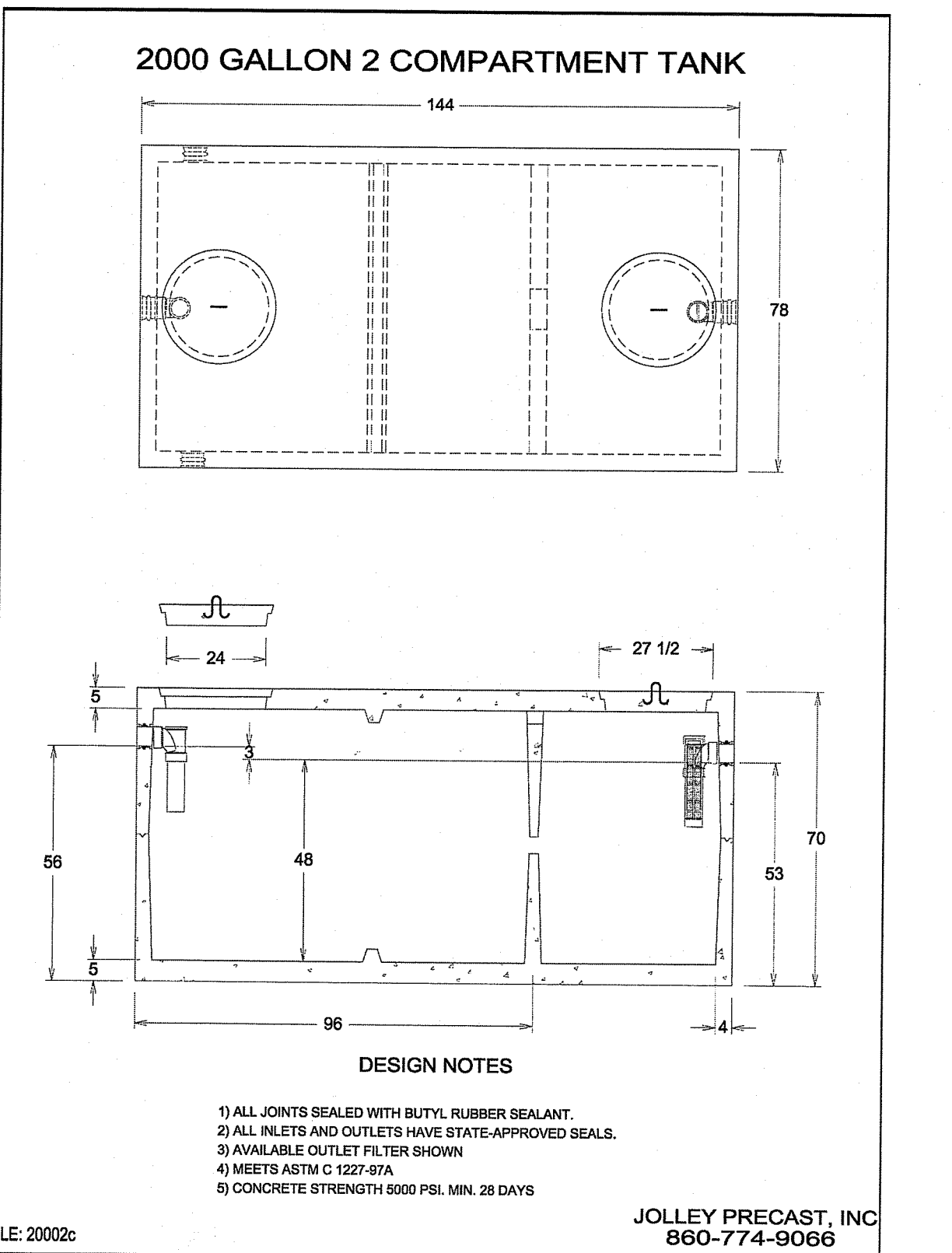
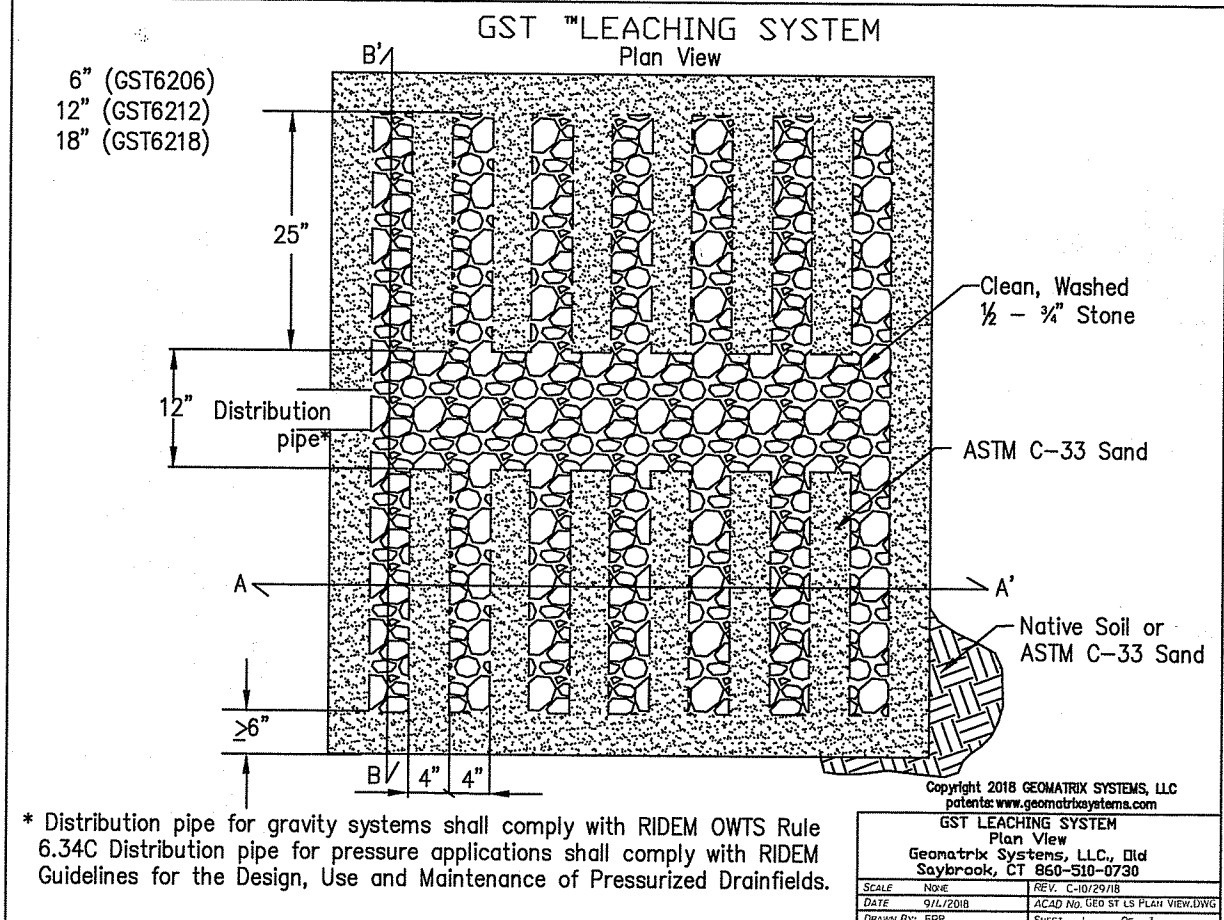
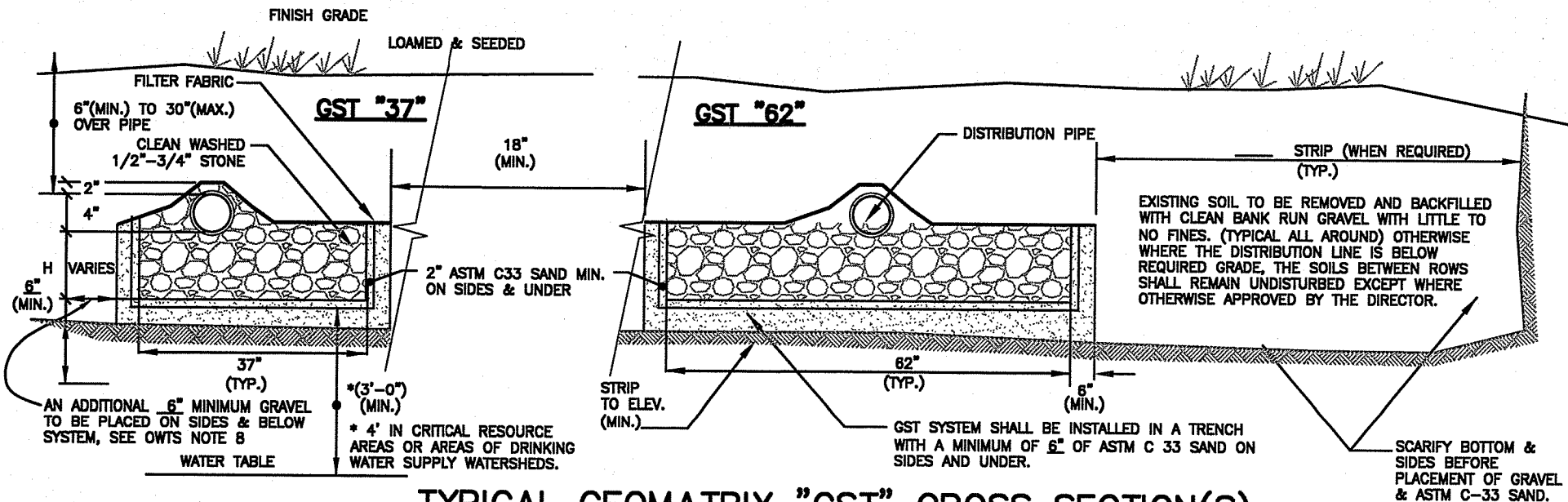
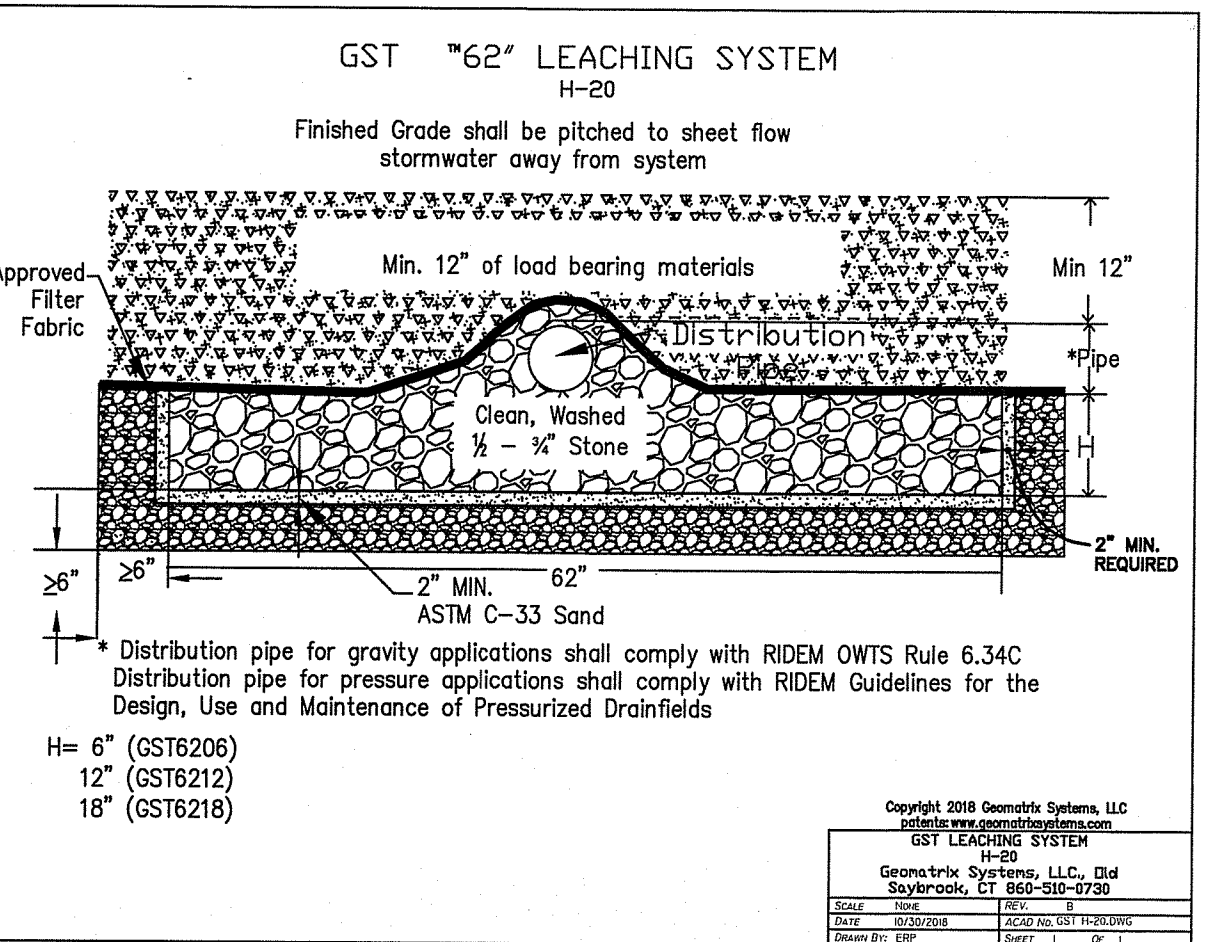
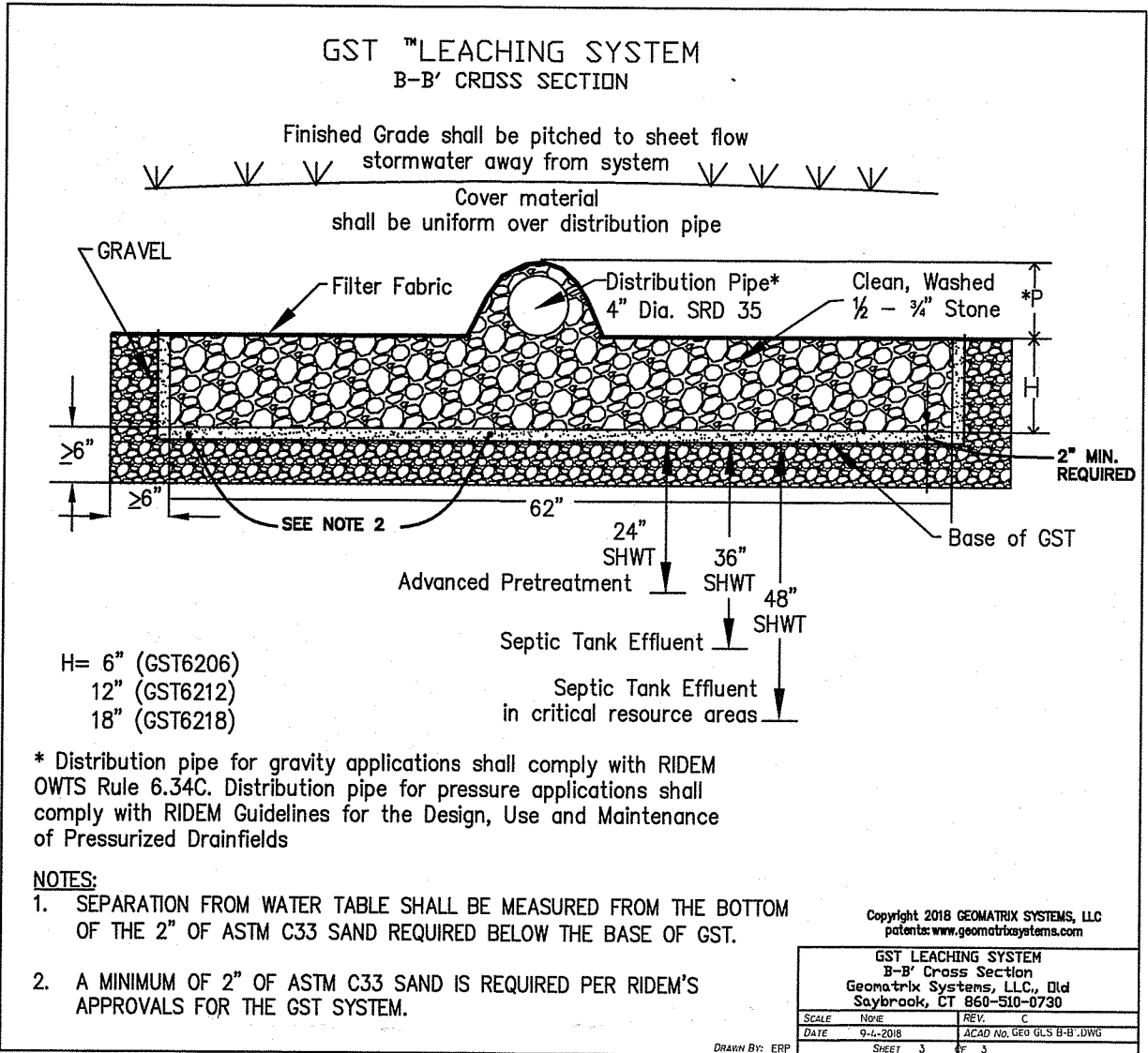
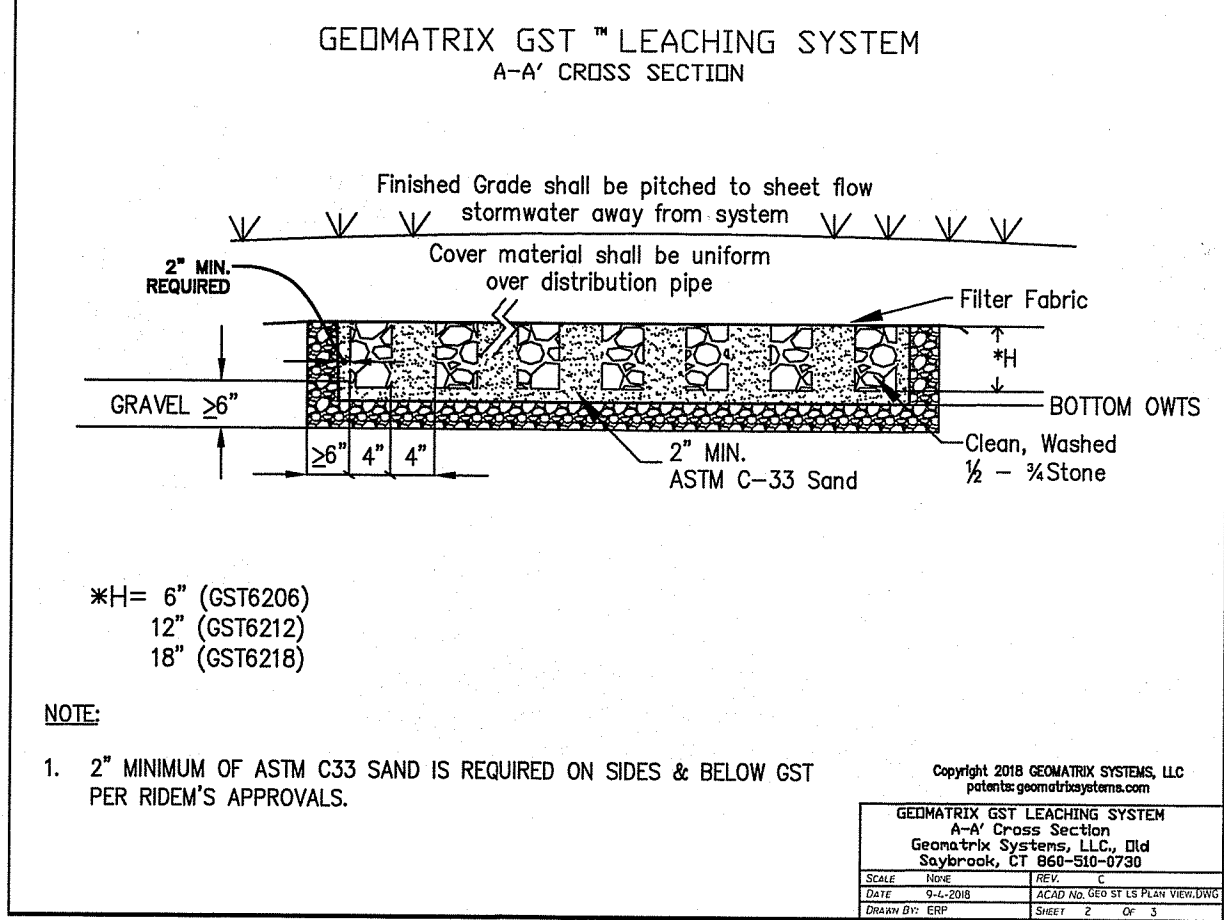
62" Series		
Product Name	Amount of 3/4" Stone Required Cubic Yards per Linear Foot	Amount of ASTM C-33 Sand Required Cubic Yards per Linear Foot
GST 6206	0.39	0.25
GST 6212	0.27	0.35
GST 6218	0.35	0.45

37" Series		
Product Name	Amount of 3/4" Stone Required Cubic Yards per Linear Foot	Amount of ASTM C-33 Sand Required Cubic Yards per Linear Foot
GST 3706	0.16	0.16
GST 3712	0.19	0.25
GST 3718	0.22	0.32

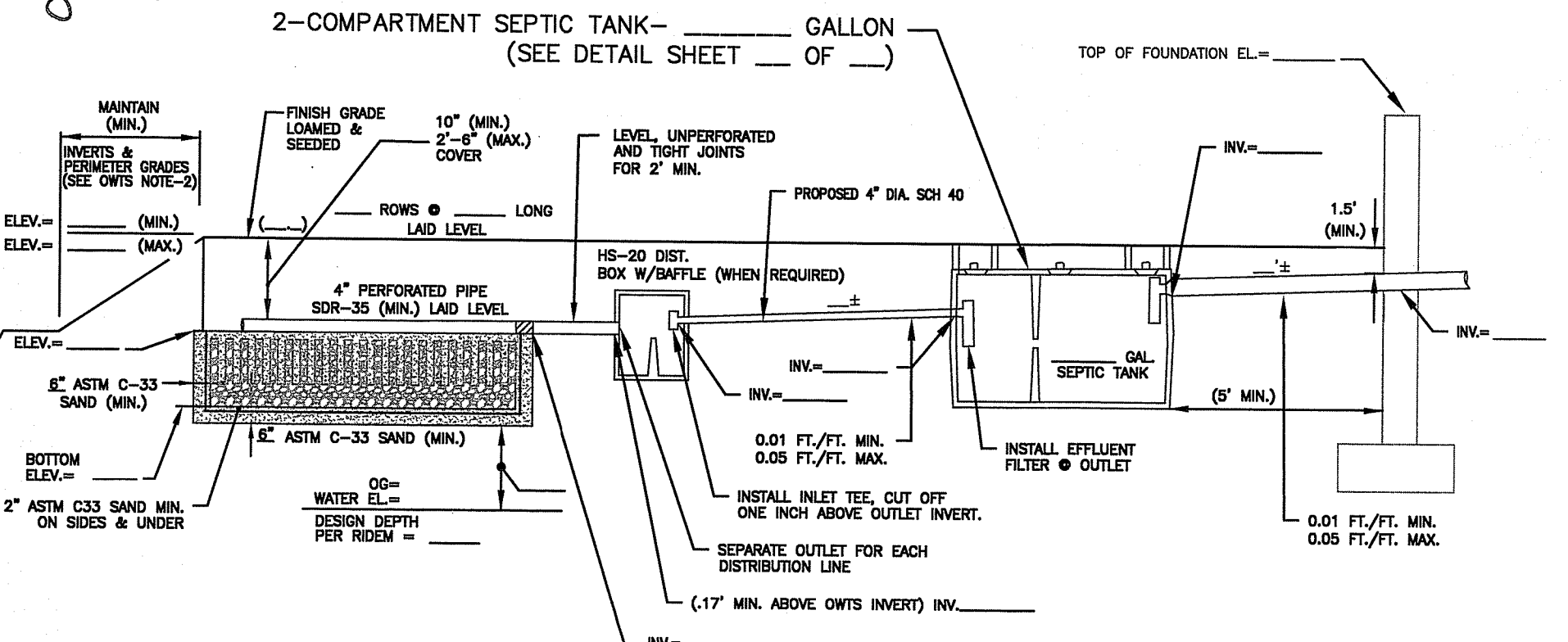
GEOMATRIX

GST Leaching System

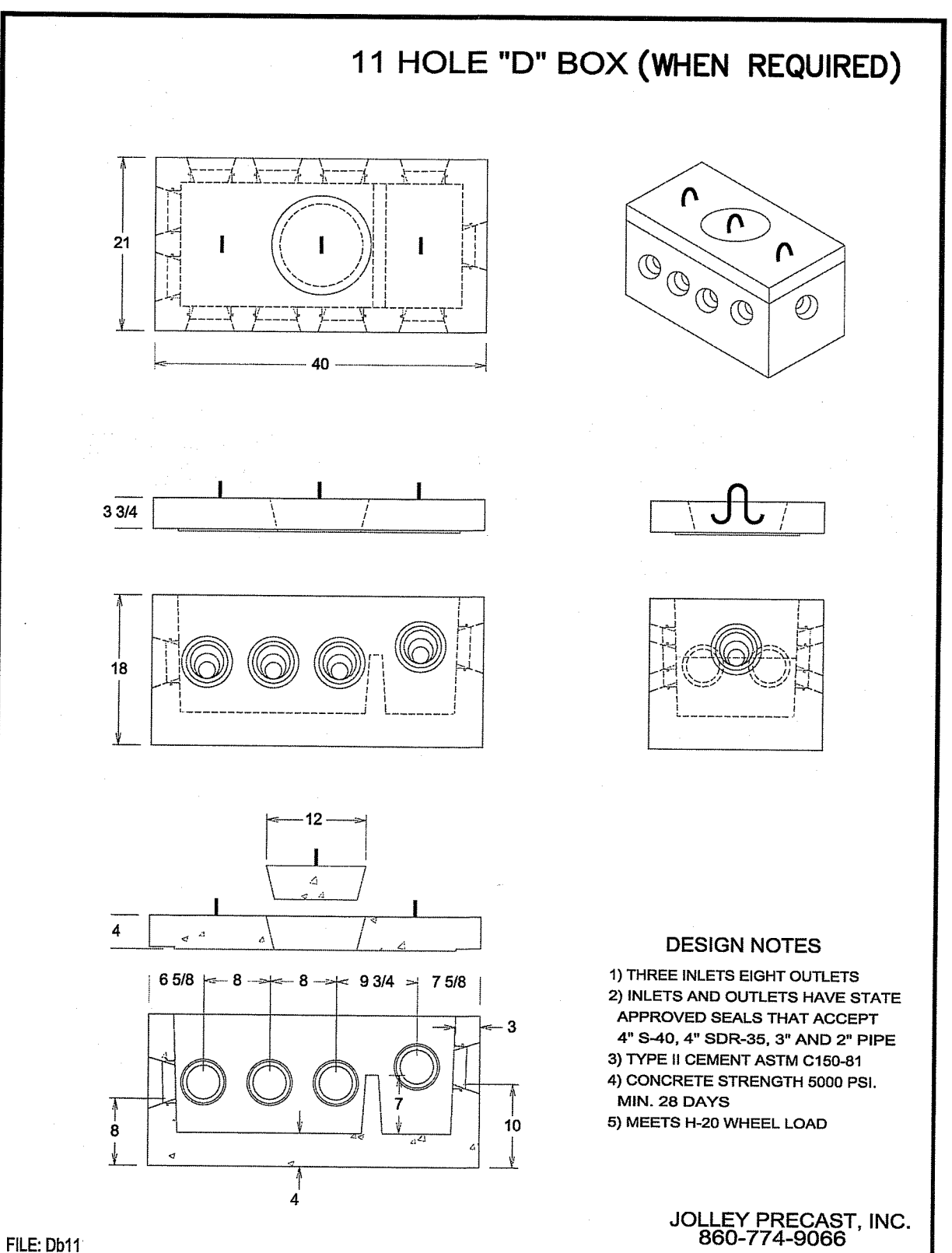
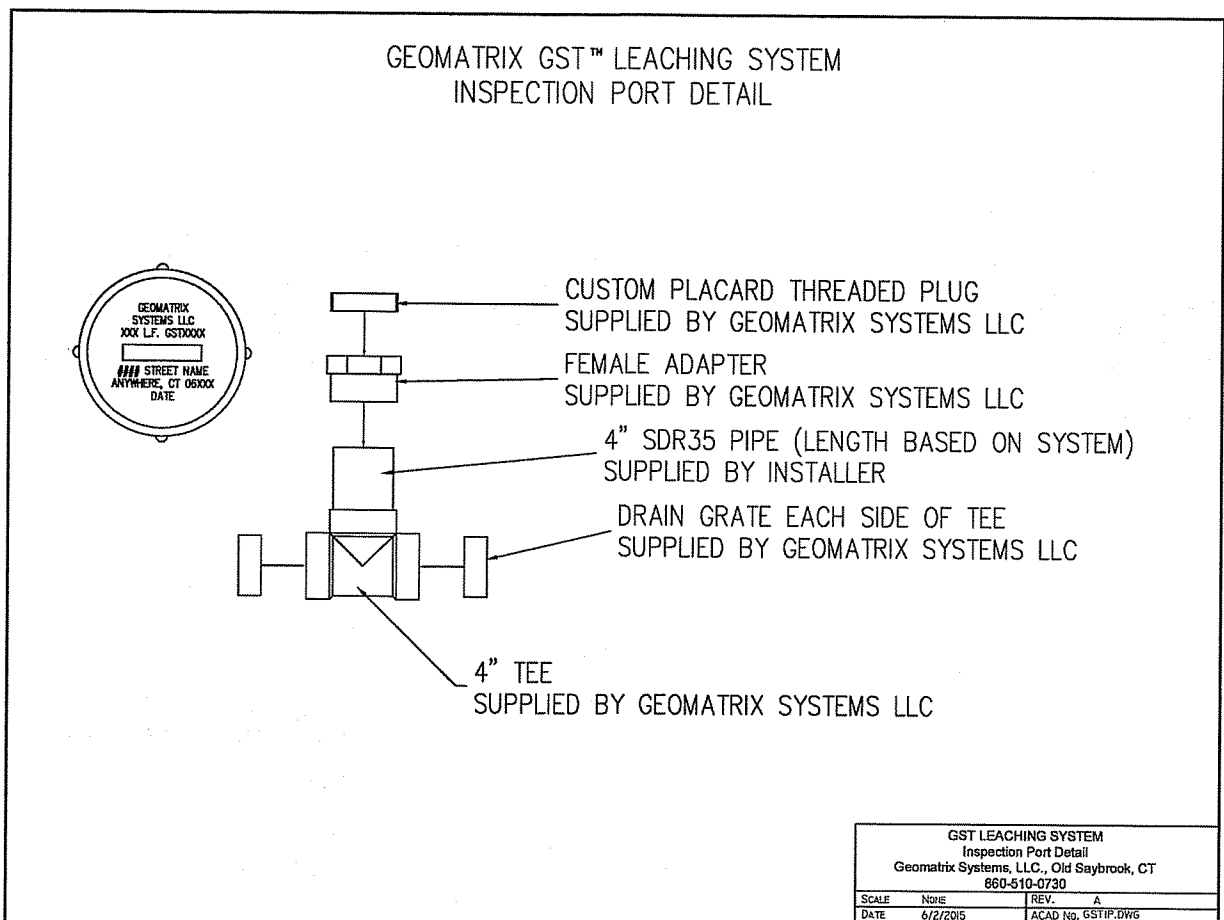
37" Series			62" Series		
Product Name	Dimensions (W x L)	Storage Volume Gallons per LF	Product Name	Dimensions (W x L)	Storage Volume Gallons per LF
GST 3706	37" x 6"	3.05	GST 6206	62" x 6"	4.52
GST 3712	37" x 12"	6.11	GST 6212	62" x 12"	9.23
GST 3718	37" x 18"	9.16	GST 6218	62" x 18"	13.84
GST 3724	37" x 24"	12.22	GST 6224	62" x 24"	19.45
GST 3730	37" x 30"	15.27	GST 6230	62" x 30"	23.06
GST 3736	37" x 36"	18.32	GST 6236	62" x 36"	27.68



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: FEB - 1 2025 FILE # 24-0248
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

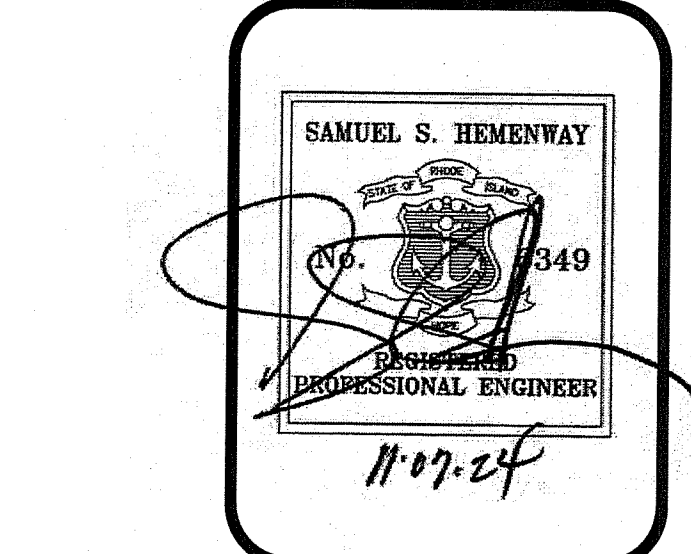


TYPICAL GEOMATRIX "GST" PROFILE
NOT TO SCALE



ON-SITE WASTEWATER TREATMENT
SYSTEM (OWTS) NOTES & DETAILS - 1
FOR
GREEN BUSH ACRES
A.P. 217 LOTS 2 & 3
GREENBUSH ROAD
WARWICK, RI
PREPARED FOR
MIDDLEBERRY ASSOCIATES

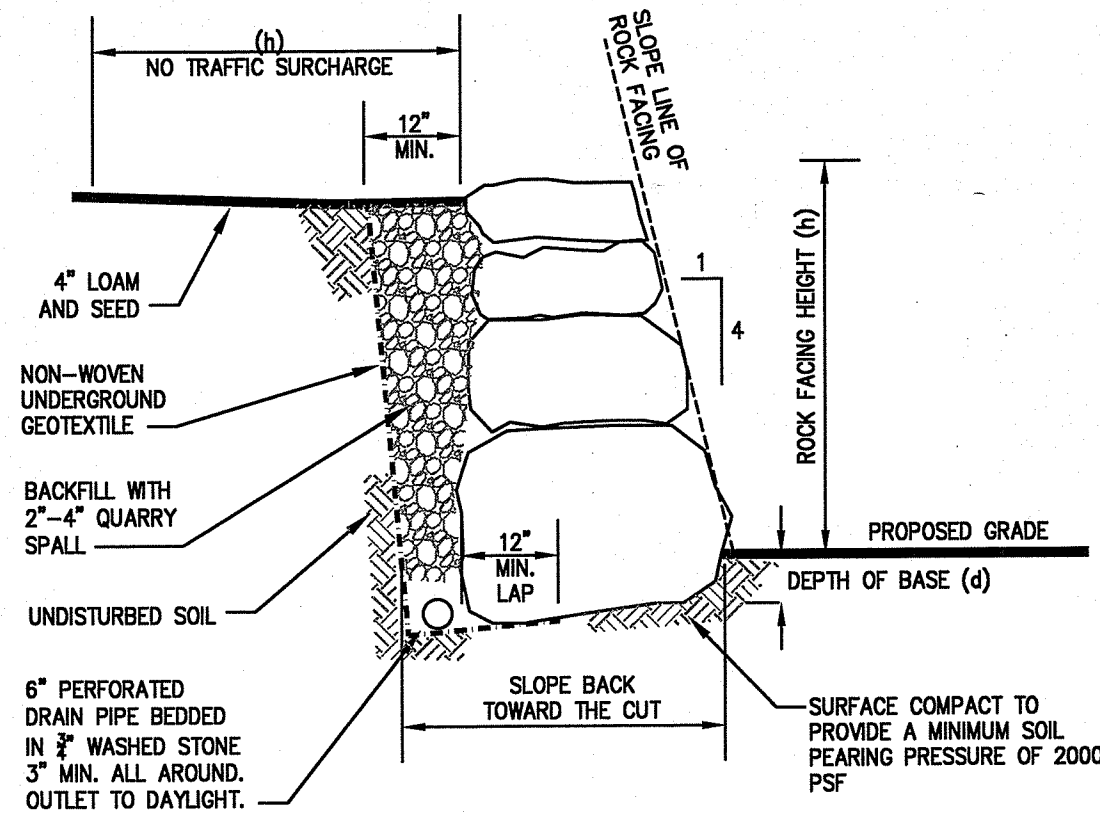
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JOB NO. 7491.00
DWG. NO. 7491-00_DET_R3
SCALE: AS SHOWN
DRAWN BY K.Y.Y
CHECK BY S.E.H.
APPROVED S.S.H.
DATE: JULY, 2024

SHEET
C-5
7 OF 8 SHEETS



DIMENSIONAL TABLE			
(h)	(d)	SIZE (BASE)	SIZE (TOP)
2 FEET	3 INCHES	2-MAN	1-MAN
4 FEET	6 INCHES	3-MAN	2-MAN
6 FEET	9 INCHES	4-MAN	2-MAN
8 FEET	12 INCHES	5-MAN	2-MAN

NOTES:

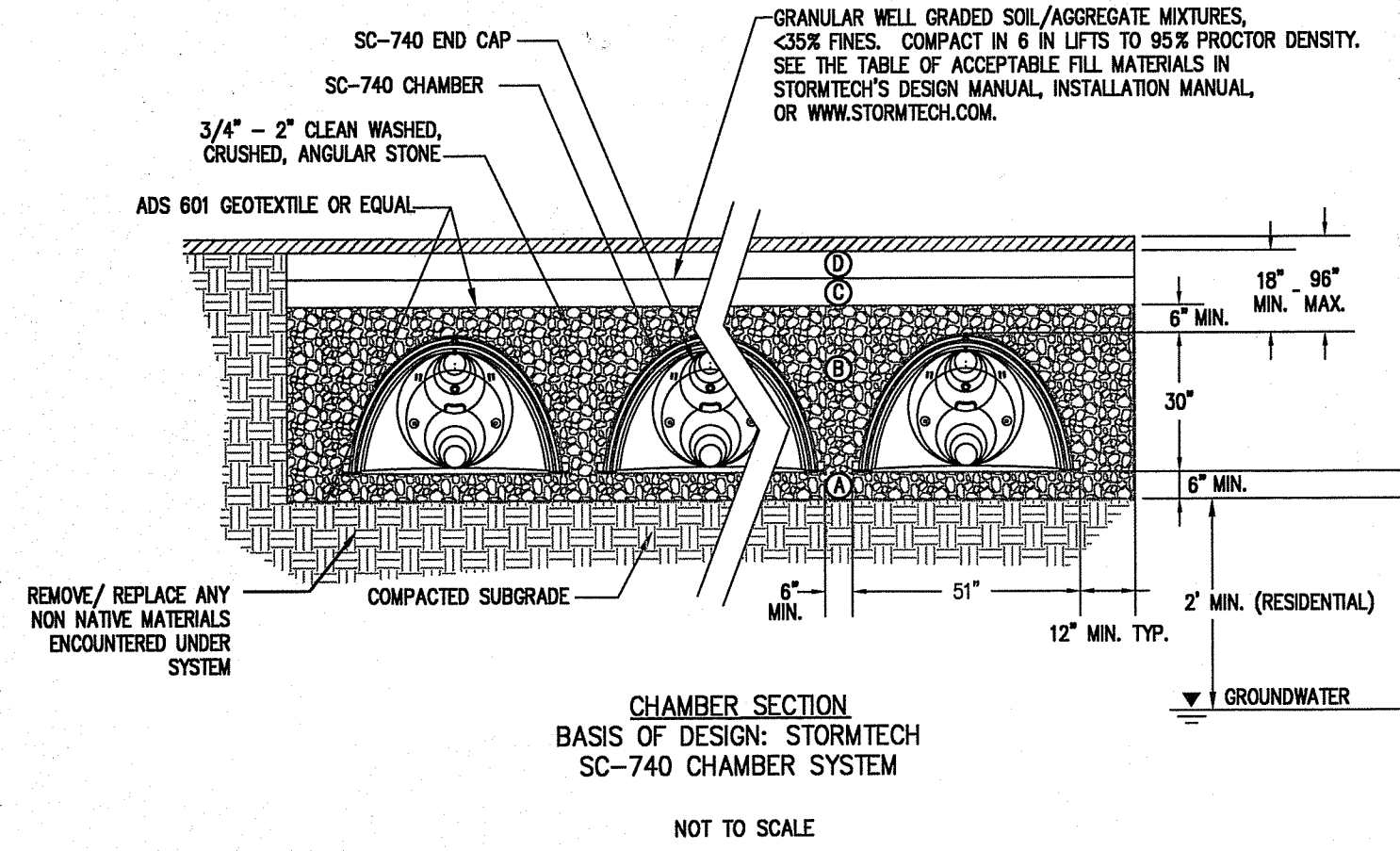
- USE THE FOLLOWING TABLE WHEN REFERRING TO LARGER SIZE ROCKS AND BOULDERS.

ROCK SIZE	ROCK WEIGHT	AVG. DIMENSIONS
ONE MAN	50 - 200LBS	12" - 18"
TWO MAN	200 - 700LBS	18" - 28"
THREE MAN	700 - 2,000LBS	28" - 36"
FOUR MAN	2,000 - 4,000LBS	36" - 48"
FIVE MAN	4,000 - 6,000LBS	48" - 54"

- FOR HEIGHTS LESS THAN OR EQUAL TO 3', PERFORATED DRAIN MAY BE ELIMINATED WHERE FREE DRAINING BACKFILL PROVIDES FOR WATER FLOW THROUGH WALL.

BOULDER WALL

NOT TO SCALE



ACCEPTABLE FILL MATERIALS: SC-740 CHAMBER SYSTEMS

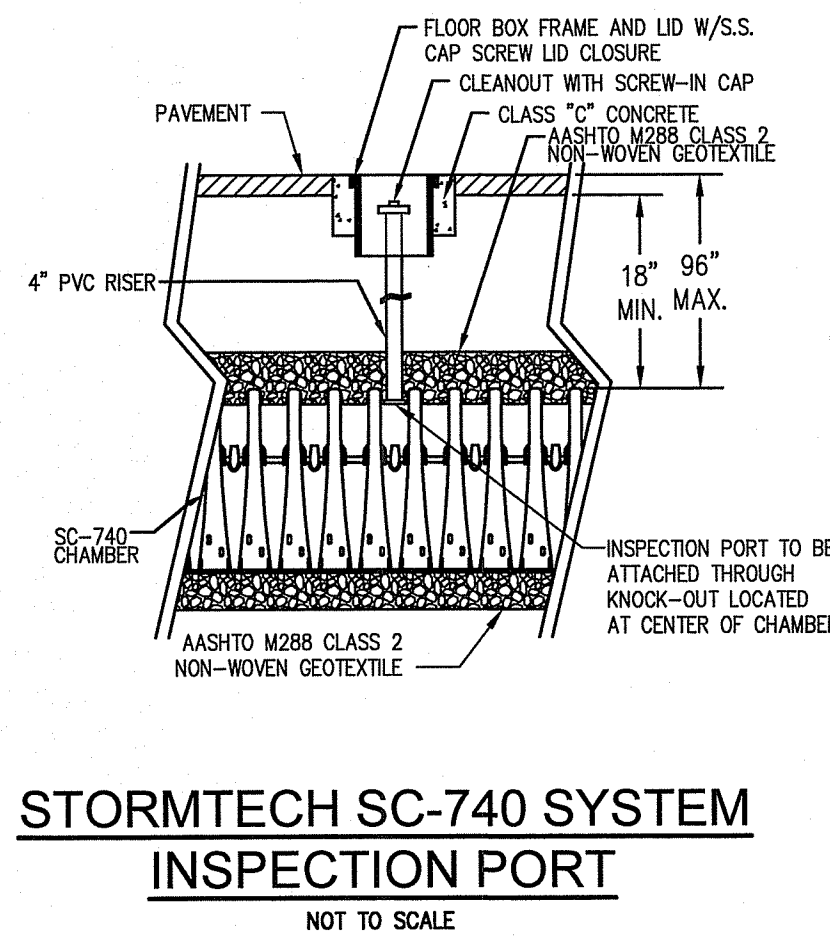
MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
① FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THIS LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
② FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	3, 357, 4, 467, 5, 56, 57, 6, 57, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" (305 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (152 mm) LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
③ EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN WASHED, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm]	3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
④ FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm]	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (229 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.

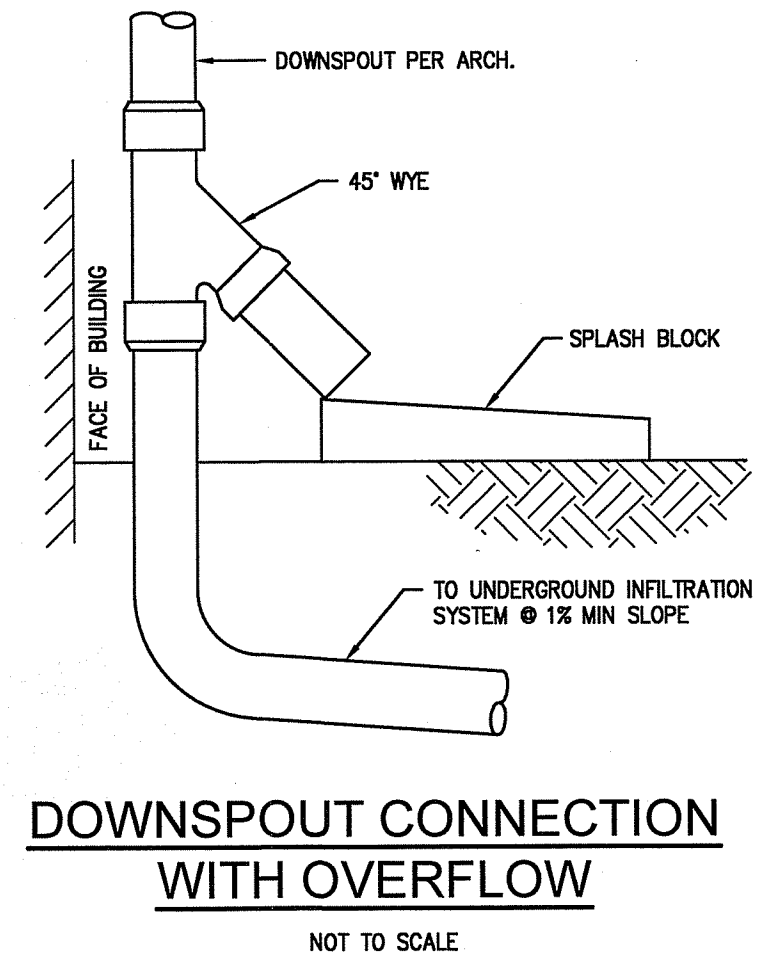
ROOFTOP INFILTRATION SYSTEM

NOT TO SCALE



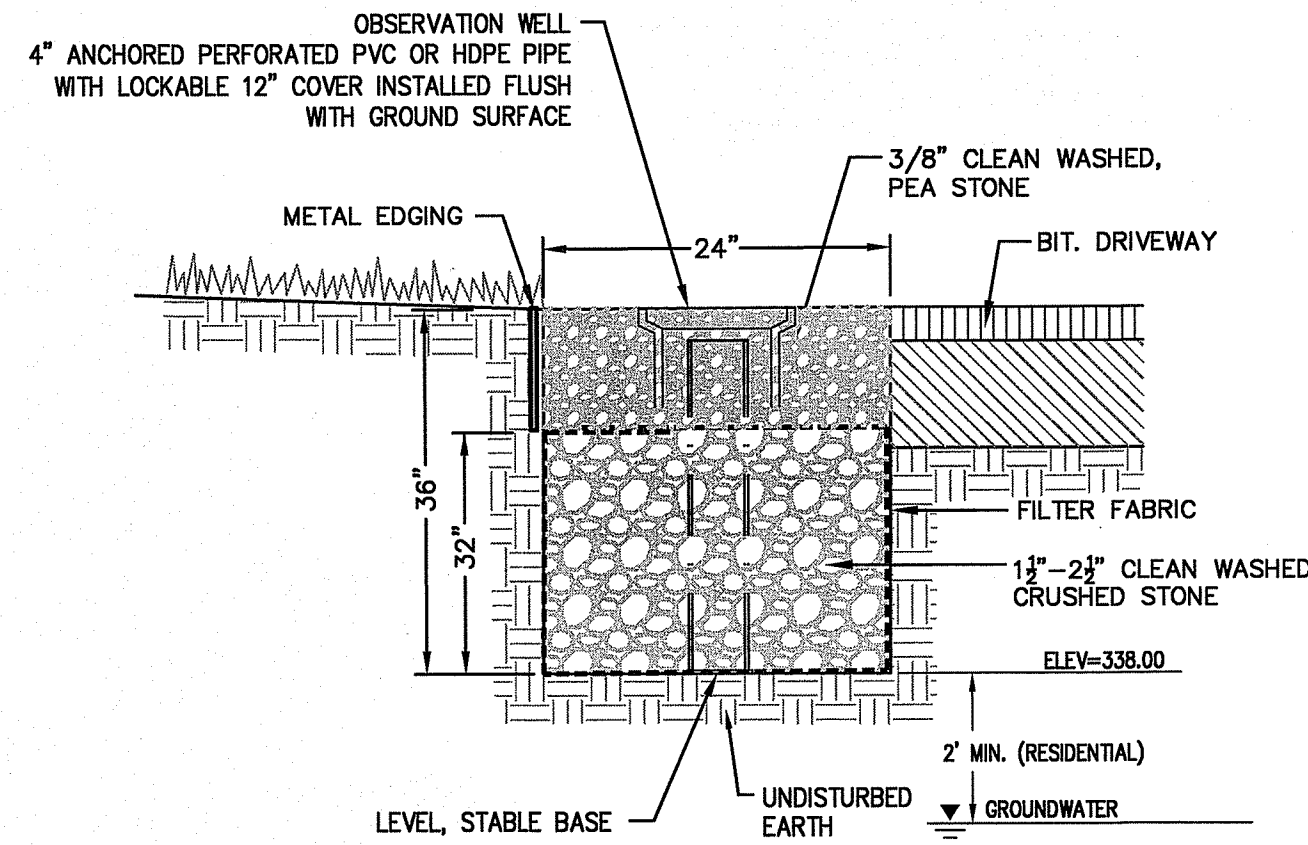
STORMTECH SC-740 SYSTEM INSPECTION PORT

NOT TO SCALE



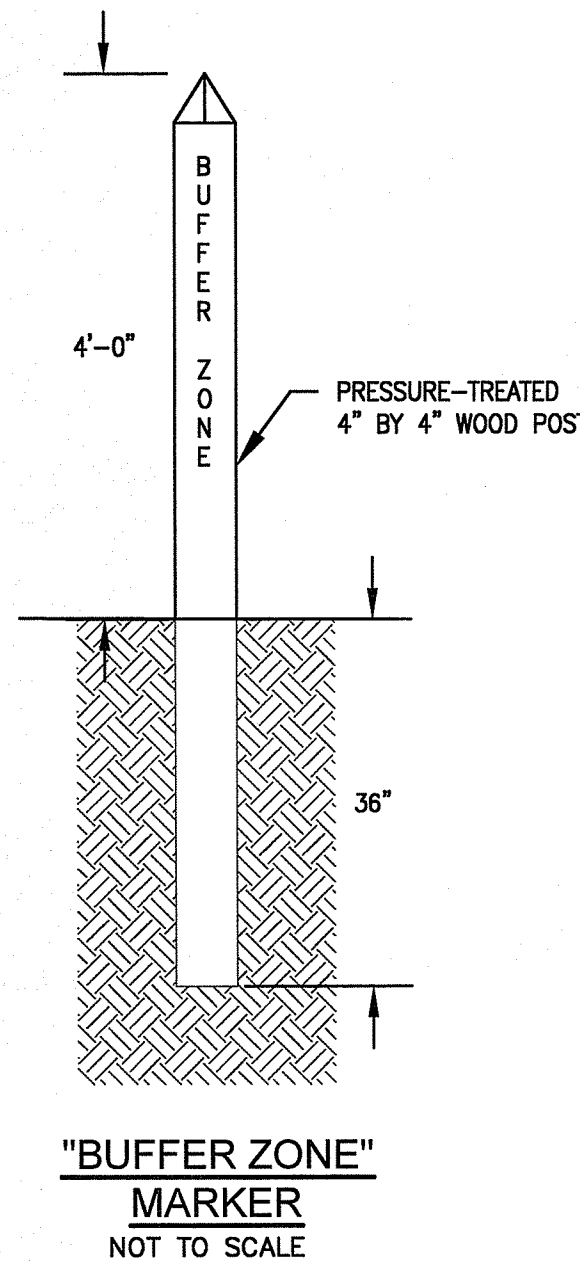
DOWNSPOUT CONNECTION WITH OVERFLOW

NOT TO SCALE



INFILTRATION TRENCH

NOT TO SCALE



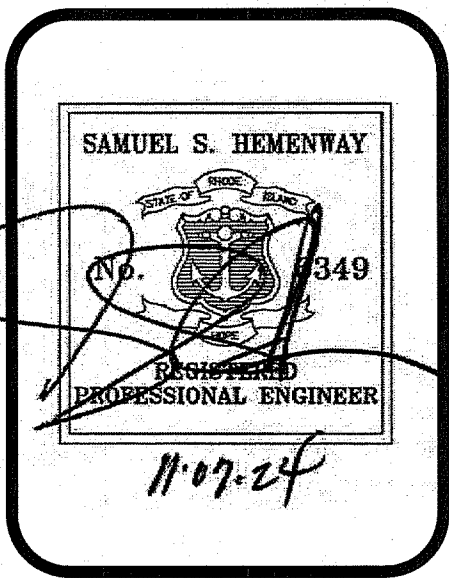
"BUFFER ZONE" MARKER

NOT TO SCALE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: FEB 7 2025 FILE #: 24-0248
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

CONSTRUCTION DETAILS - 2
FOR
GREEN BUSH ACRES
A.P. 217 LOTS 2 & 3
GREENBUSH ROAD
WARWICK, RI
PREPARED FOR
MIDDLEBERRY ASSOCIATES

NO.	REVISION	BY	DATE
1	FWW COMMENT	KYY	11/07/24
3	FWW COMMENT	KYY	12/16/24



GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS

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These drawings are the property of the engineer/surveyor and have been prepared for the specific project and location of this site and are not to be used for any other purpose, location or project without written consent of the engineer or directors.

85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

JOB NO. 7491.00 DWG. NO. 7491-00_DET_R3	DRAWN BY K.Y.Y. CHECK BY S.S.H. APPROVED S.S.H. DATE: JULY, 2024
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SHEET

C-6

8 OF 8 SHEETS