

LEGEND

- AIR CONDITIONING UNIT
- BUSH/SHRUB
- DRAIN MANHOLE
- DRAIN PIPE
- FENCE (CHAIN LINK)
- IRRIGATION CONTROL VALVE
- LANDSCAPED AREA
- PROPERTY LINE
- SEWER CLEAN OUT
- SEWER MANHOLE
- SEWER PIPE
- SPOT ELEVATION
- STONE BOUND W/DRILL HOLE
- TEST PIT
- TOPOGRAPHIC CONTOUR
- TREE
- UTILITY POLE

DESIGN CALCULATIONS

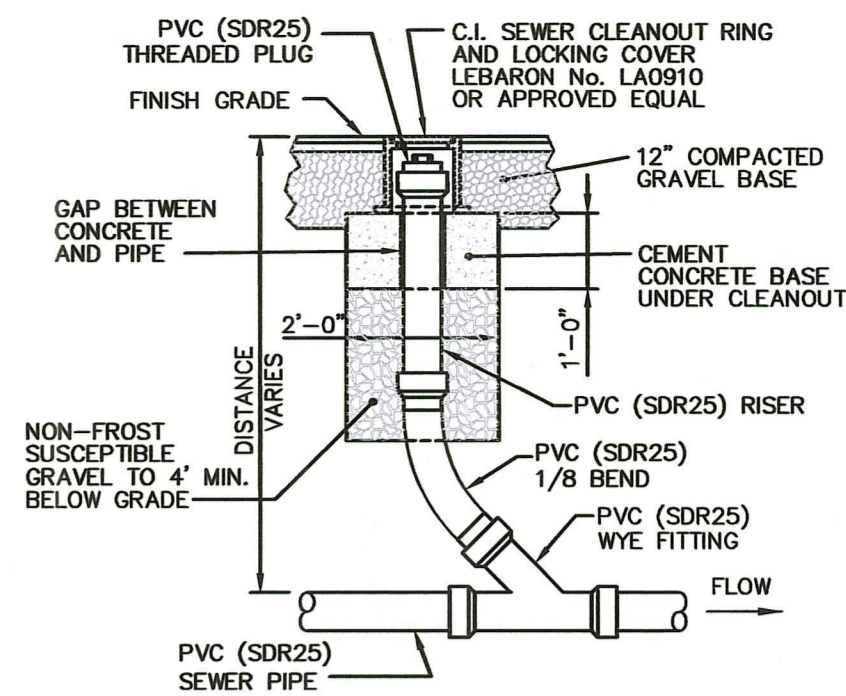
APPLICATION: NEW CONSTRUCTION
 TYPE OF ESTABLISHMENT: RESIDENTIAL
 PROPOSED 4 BEDROOM RESIDENCE

DESIGN FLOW
 3 BEDROOMS x 115 GPD/BDRM = 460 GPD

SEPTIC TANK
 PROPOSED 2-COMPARTMENT 2,000 GAL. TANK WITH PUMP CHAMBER

SIZE OF LEACHING FACILITY
 DESIGN GROUNDWATER ELEVATION = 110.0± (96" BELOW EXIST. GROUND)
 USE GST LEACHING SYSTEM (CLASS 1)
 DESIGN LOADING RATE = 0.70 GAL./DAY/S.F. (CLASS 1)
 460 GPD / 0.70 GPD/SF = 657.14 SF
 657.14 SF / LF (GST 6206): 657.14 / 10.3 = 63.8 LF
 2 TRENCHES OF 32' LONG = 64 LF > 63.8 LF
 64 LF X 10.3 SF/LF = 659.2 SF > 657.14 SF

NOTE: SYSTEM HAS NOT BEEN DESIGNED FOR USE WITH A GARBAGE GRINDER.



TYPICAL SEWER CLEANOUT DETAIL

NOTES:

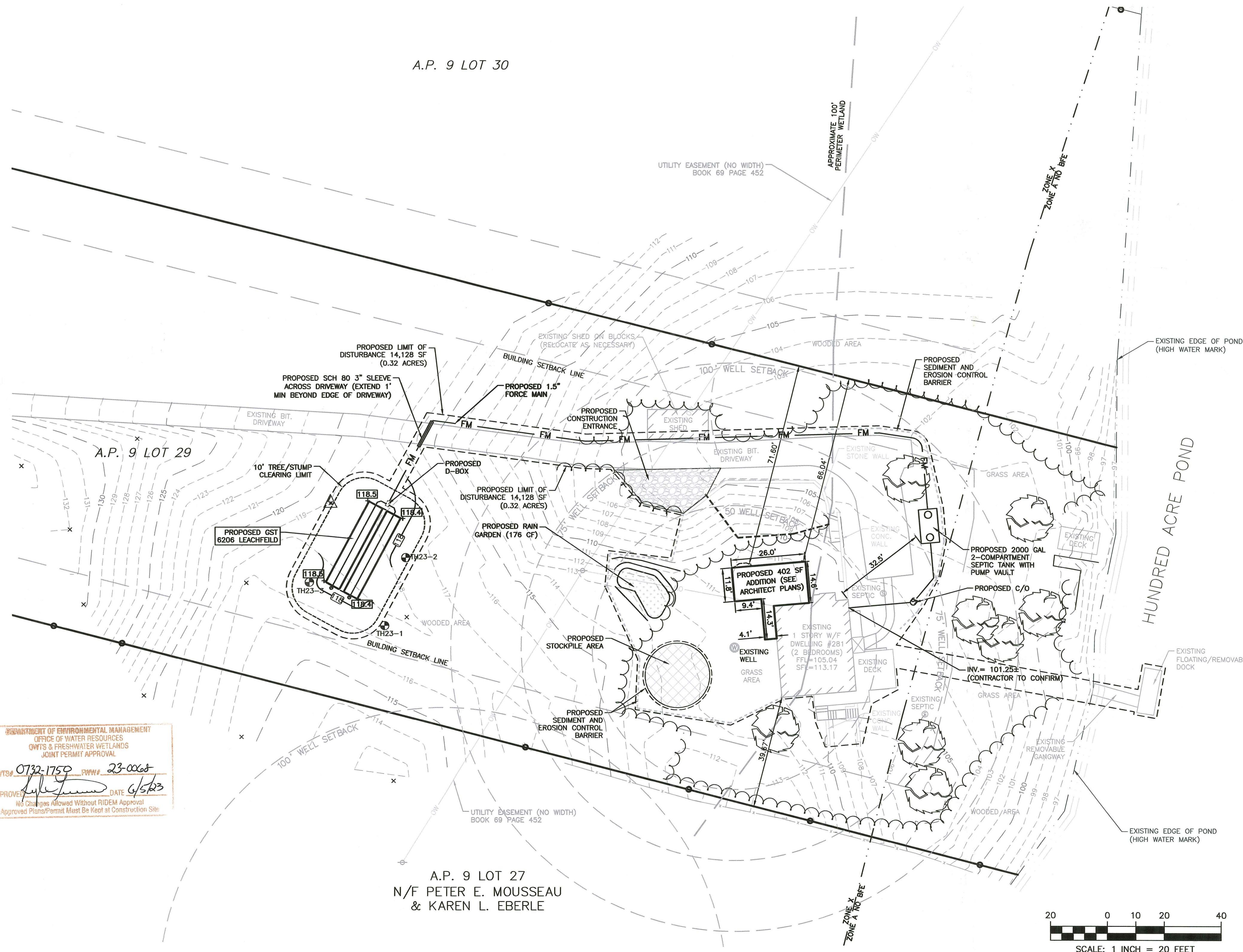
- EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY CHRISTOPHER G. PALMER, PLS WITH EXISTING CONDITIONS PLAN DATED MAY 9, 2022.
- ELEVATIONS ARE REFERENCED TO NAVD88.
- THE SITE IS PARTIALLY LOCATED WITHIN A ZONE "X" AND A ZONE "A" AS DETERMINED FROM THE TOWN OF SOUTH KINGSTOWN FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 44009 C 0093 H (EFFECTIVE DATE OCTOBER 10, 2010).
- THIS PLAN AND ANY ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF TITLE TO THE PROPERTY DISPLAYED HEREON. THE OWNER OF LOCUS AND ADJUTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
- EXISTING UTILITY LINES SHOWN ON THIS PLAN ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. LAND DEVELOPMENT ENGINEERING & CONSULTING, LLC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER PUBLIC UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.

LOCUS NOT TO SCALE

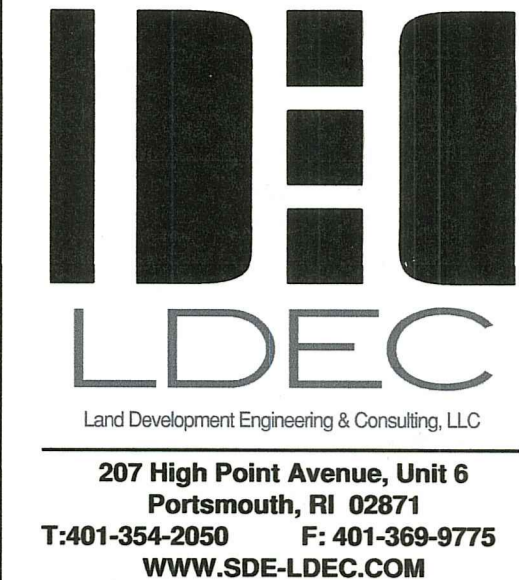
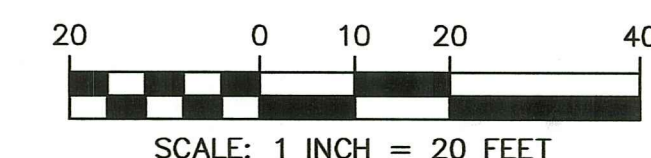
GENERAL CONSTRUCTION NOTES

- ALL OTHER DESIGN, CONSTRUCTION AND MAINTENANCE REQUIREMENTS WHETHER NOTED HEREON, OR NOT, SHALL BE IN CONFORMANCE WITH RULES & REGULATIONS ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF INDIVIDUAL SEWAGE DISPOSAL SYSTEMS, NOVEMBER 25, 2018, BY THE RIDEM, WITH CHAPTER 42-35, CHAPTERS 42-17.1, 5-56, 5-56.1, 23-19.5, 23-24.3, 46-13.2, AND 23-19.15 OF THE GENERAL LAWS OF RI, 1956 (1977 RE-ENACTMENT) AS AMENDED.
- SEE OWTS SPECIFICATIONS SHOWN ON THIS PLAN SET.
- CLEAR ALL TREES AND STUMPS WITHIN 10' OF SYSTEM.
- THERE SHALL BE NO SUBSURFACE, FOUNDATION OR STORM DRAINS WITHIN 25' OF THE SYSTEM.
- COMPLY WITH ALL ADDITIONAL TERMS OF APPROVAL AS MAY BE REQUIRED BY RIDEM.
- EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY CHRISTOPHER G. PALMER, PLS WITH EXISTING CONDITIONS PLAN DATED MAY 9, 2022.
- BENCHMARK IS SET WITHIN 150' OF PROPOSED OWTS PRIOR TO CONSTRUCTION. (SEE SITE PLAN.)
- THERE ARE NO EXISTING OR PROPOSED PRIVATE DRINKING WATER WELLS WITHIN 200' OF THE PROPOSED OWTS OR ALTERNATE AREA EXCEPT AS SHOWN.
- OTHER THAN WHAT IS SHOWN HERE IN ON THESE PLANS, THERE ARE NO OTHER KNOW DRAINS WITHIN THE SETBACK LIMITS TO THE PROPOSED OWTS.
- THERE ARE NO EXISTING OR PROPOSED PUBLIC WATER SUPPLY WELLS WITHIN 500' OF THE PROPOSED OWTS OR ALTERNATE AREA EXCEPT AS SHOWN.
- THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLAN ON-SITE AT ALL TIMES.
- SCHEDULE 40 PVC PIPE OR EQUAL FROM BUILDING TO SEPTIC TANK.
- THE PROPOSED SEPTIC TANK SHALL BE PROVIDED WITH A PVC INLET TEE AND A SCREENED PUMP VAULT IN THE OUTLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE INLET TEE AND BALL VALVE, AND THE SCREENED PUMP VAULT.
- THE SEPTIC TANK SHALL BE A WATERTIGHT, 2000 GAL. 2-COMPARTMENT TANK WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURED FIBERGLASS LID. IF CONCRETE TANK IS USED, ABS TANK ADAPTOR SHALL BE CAST INTO PLACE. TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED OR WATER TESTED/VACUUM TESTED ON SITE.
- THE CONTRACTOR MUST FOLLOW ALL ITEMS CIRCLED IN THE LOWER RIGHT HAND AREA OF THE OWTS APPLICATION LABELED-IMPORTANT AND NOTIFY ENGINEER DURING THE DIFFERENT STAGES OF CONSTRUCTION TO ALLOW THE ENGINEER TO OBSERVE COMPLIANCE WITH THE APPROVED PLANS (AS REQUIRED BY DEM).
- THE CONTRACTOR MUST NOTIFY LICENSED DESIGNER 48 HOURS PRIOR TO START OF CONSTRUCTION WITH VALID INSTALLERS LICENSE NUMBER. DESIGNER MUST NOTIFY DEM 24 HOURS PRIOR TO START OF CONSTRUCTION IN ACCORDANCE WITH SD 27.00 (g).
- IF CONTRACTOR ENCOUNTERS UNANTICIPATED CONDITIONS DURING CONSTRUCTION WHICH INDICATE THAT THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, INSTALLER SHALL STOP CONSTRUCTION AND NOTIFY THE LICENSED DESIGNER RESPONSIBLE FOR WITNESSING AND INSPECTING THE INSTALLATION.
- THE LICENSED DESIGNER SHALL WITNESS AND INSPECT ALL ASPECTS OF THE INSTALLATION, KEEP RECORDS, PREPARE THE CERTIFICATE OF COMPLETION AND PROVIDE O & M INFORMATION AND RECOMMENDATIONS TO THE OWNER.
- THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF A USER OF AN OWTS, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE OWTS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- SMALL DIAMETER, PRESSURIZED PVC PIPE SHALL BE SCHEDULE 40 OR EQUAL, WITH SOLVENT WELDED CONNECTIONS.
- CONTRACTOR TO NOTIFY ENGINEER DURING DIFFERENT STAGES OF CONSTRUCTION TO ALLOW THE ENGINEER TO OBSERVE COMPLIANCE WITH THE APPROVED PLANS (AS REQUIRED BY DEM).
- ALL TANKS AND APPURTENANCES SHALL BE CONSTRUCTED SUCH THAT ALL ELEMENTS ACT AS A SINGLE WATERTIGHT UNIT & SHALL BE CONSTRUCTED ACCORDING TO ASTM STANDARD C-1227-97A OR ANY SUPERCEDING UPGRADING OF THIS STANDARD. ALL RISER ADAPTORS SHALL BE CAST IN PLACE DURING TANK MANUFACTURING. ALL INLETS AND OUTLETS SHALL BE CAST IN PLACE WITH CAST-A-SEAL.
- EXISTING SEPTIC TANK, CESSPOOL (IF APPLICABLE) SHALL BE PUMPED, CRUSHED AND BACKFILLED WITH CLEAN SOIL IN ACCORDANCE WITH RULE 6.56.
- EFFLUENT PIPE SHALL BE CUT & CAPPED.
- THE CONTRACTOR SHALL PROVIDE DESIGNER WITH MATERIAL RECEIPTS FOR ALL CONSTRUCTION MATERIALS PRIOR TO DESIGNER ISSUING CERTIFICATE OF CONSTRUCTION.
- GROUNDWATER TABLE WAS DETERMINED BY A SOIL EVALUATION PERFORMED BY SUSAN B. CAPASSO, INC. ON 1/17/2023.
- CONTRACTOR TO COMPACT SOIL BENEATH ALL PRESSURE AND GRAVITY LINES.
- CONTRACTOR TO COORDINATE START-UP WITH MAINTENANCE CONTRACTOR, ELECTRICIAN, AND ENGINEER PRIOR TO COMPLETION.
- GROUNDWATER TABLE FLUCTUATES ANNUALLY. NO GUARANTEE OF A DRY BASEMENT IS EXPRESSED OR IMPLIED.
- THE OWTS IS NOT DESIGNED TO ACCOMMODATE A GARBAGE DISPOSAL.
- ALL APPLICANTS OBTAINING AN OWTS PERMIT FOR A RIDEM APPROVED ALTERNATIVE OR EXPERIMENTAL TECHNOLOGY REQUIRING SPECIAL OPERATION AND MAINTENANCE PROCEDURES SHALL: A) FILE A COPY OF THE INITIALLY EXECUTED CONTRACT FOR THE OWTS'S OPERATION AND MAINTENANCE, (INCLUDING ALL REQUIRED MAINTENANCE PROCEDURES AND MONITORING SCHEDULES) WITH THE LAND EVIDENCE RECORDS OF THE MUNICIPALITY IN WHICH THE OWTS IS LOCATED, AND B) SUBMIT TO THE DEPARTMENT A CERTIFIED COPY OF THE RECORDED PERMIT SETTING FORTH THE DATE OF THE RECORDATION AND THE BOOK AND PAGE WHERE THE PERMIT IS LOCATED IN THE RECORDS OF THE MUNICIPAL LAND EVIDENCE OFFICE.

A.P. 9 LOT 30



A.P. 9 LOT 27
 N/F PETER E. MOUSSEAU
 & KAREN L. EBERLE



NO.	DATE	DESCRIPTION
1.	4/7/2023	GENERAL REVISIONS PER RIDEM COMMENTS

DATE: MARCH 2, 2023

DRAWN BY: SJE DESIGN BY: SJE CHECK BY: MER

PROJECT NO. 23007

ISSUED FOR: PERMITTING



OWTS SITE PLAN
 281 HUNDRED ACRE POND ROAD
 ASSESSOR'S MAP 9, PARCEL 29
 SOUTH KINGSTOWN, RHODE ISLAND

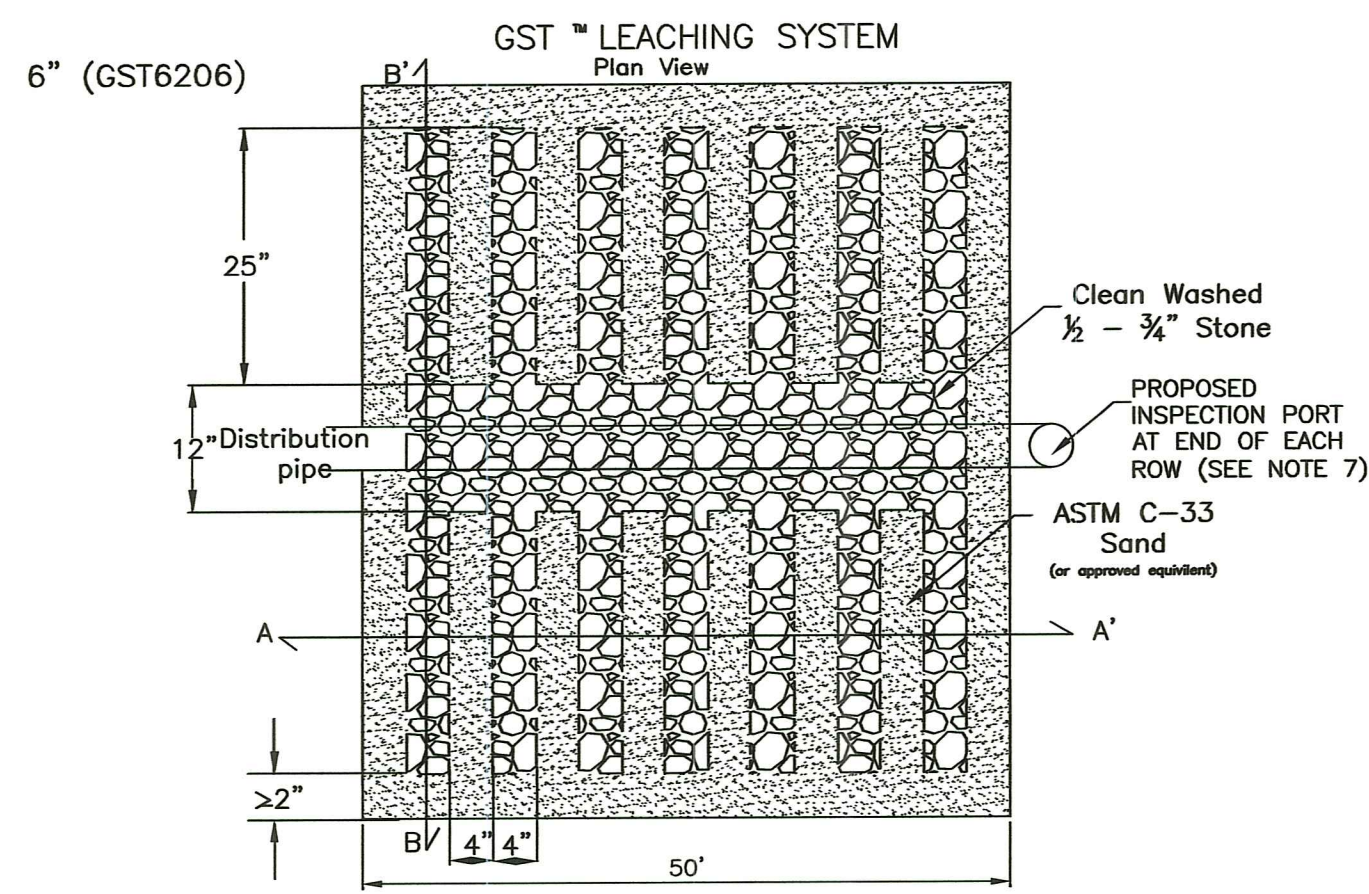
DATE: MAY 11 2023
 Office of Water Resources

DRAWING TITLE:
OWTS SITE PLAN

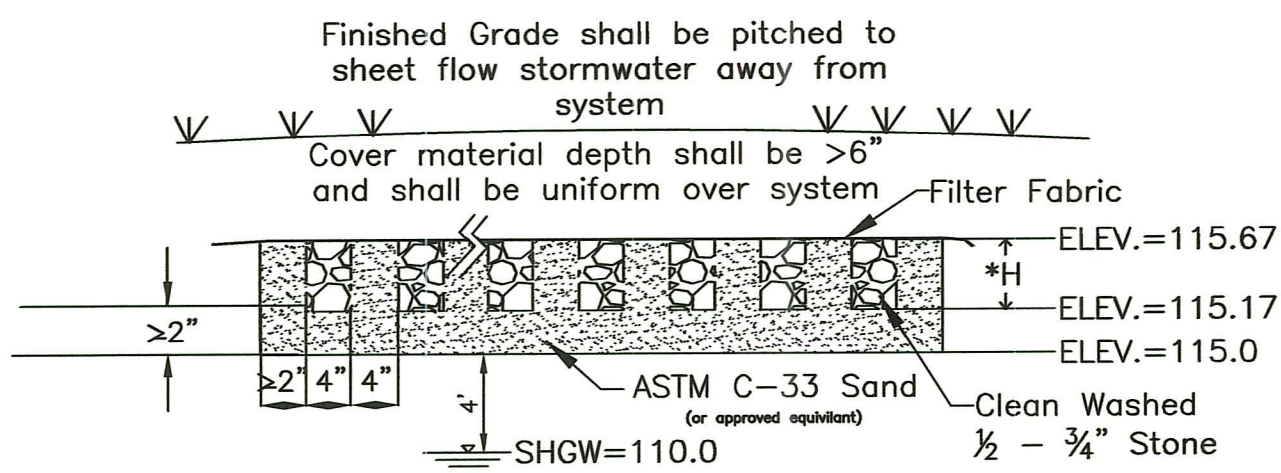
SCALE: 1"=20'
 SHEET NO.

1 of 2

PREPARED FOR LISA BEALL



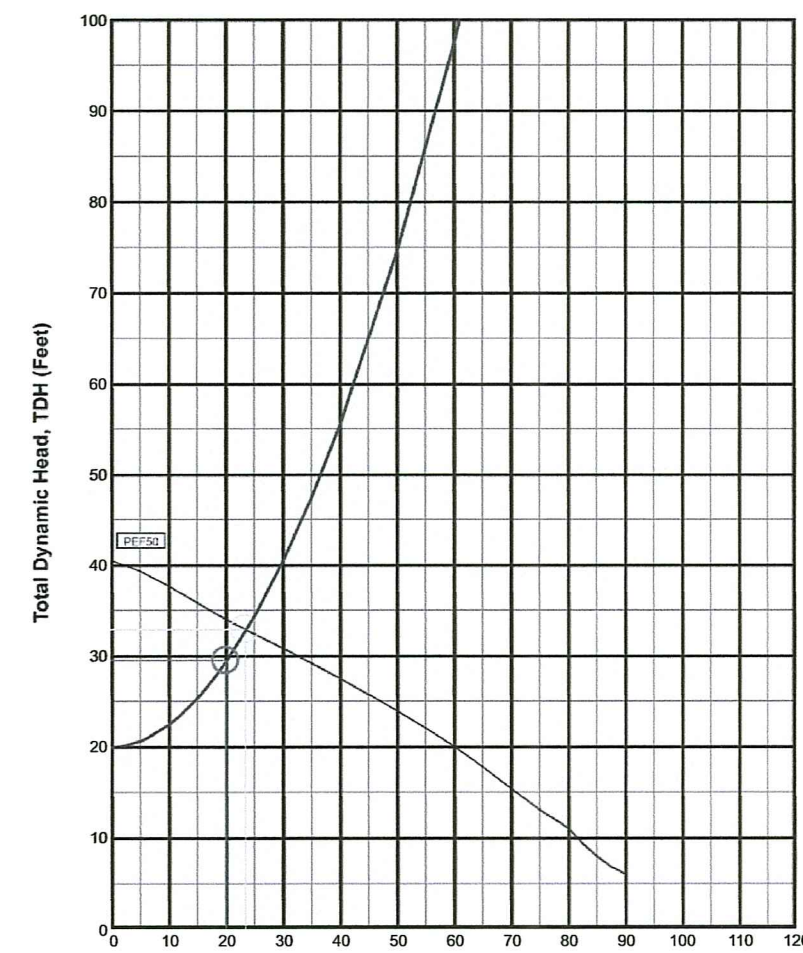
GEOMATRIX GST™ LEACHING SYSTEM
A-A' CROSS SECTION



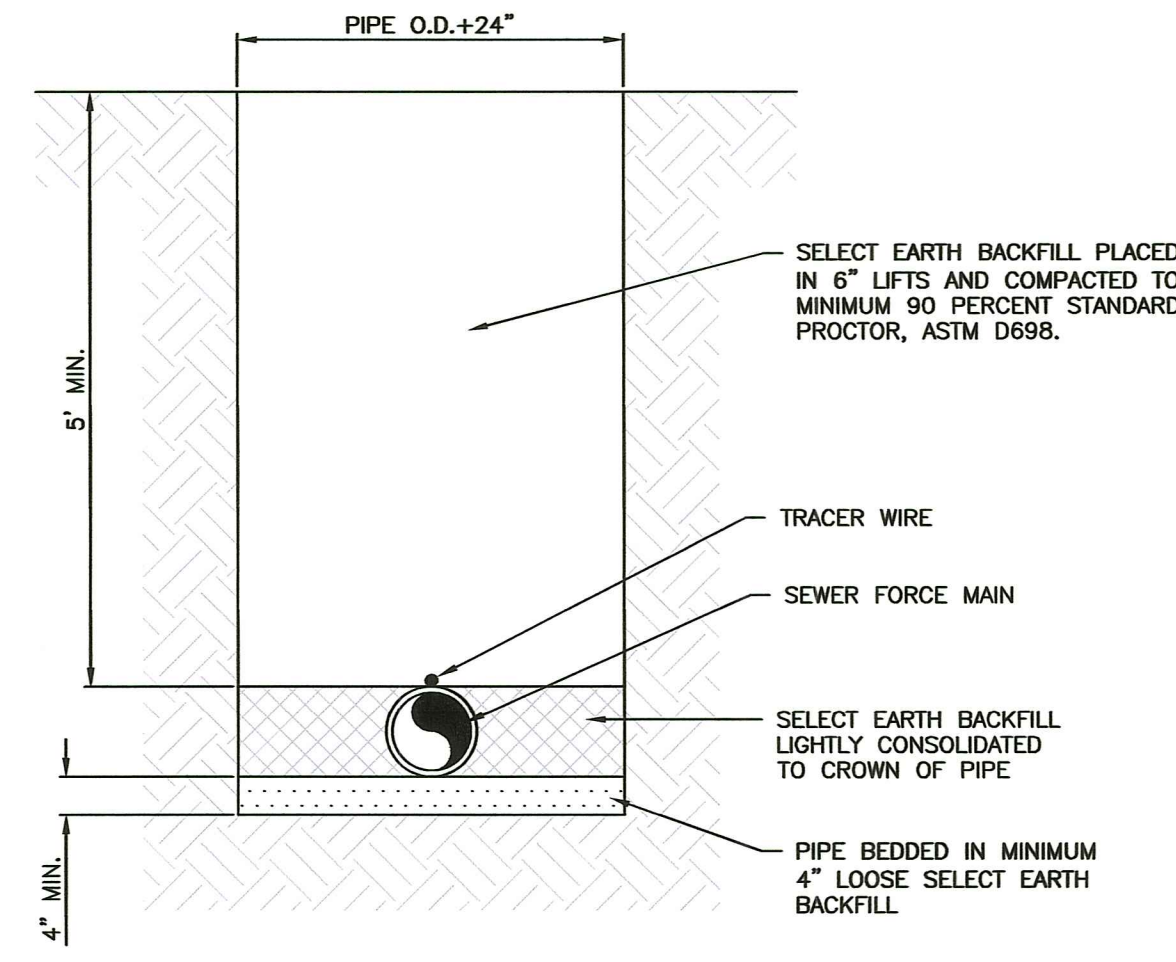
*H= 6" (GST6206)

Pump Selection for a Non-Pressurized System - Single Family Residence Project
23007 Pump / 281 Hundred Acre Pond Road

Parameters	Value	Units
Discharge Intensity (Flow)	2.50	inches
Transport Pipe Class	230	feet
Transport Line Size	48	inches
Discharge Valve Model	None	
Max. Discharge Lift	25	feet
Design Flow Rate	29	gpm
Flow Meter	None	
Adjust Friction Losses	3	feet
Calculations		
Transport Velocity	3.2	ft/s
Frictional Head Losses		
Loss through Discharge	0.6	feet
Loss in Transport	5.7	feet
Loss through Valve	0.0	feet
Loss through Pipe/Fittings	0.0	feet
Adjust Friction Losses	3.0	feet
Pipe Volumes		
Vol of Transport Line	24.3	gal
Minimum Pump Requirements		
Design Flow Rate	29.0	gpm
Total Dynamic Head	25.5	feet

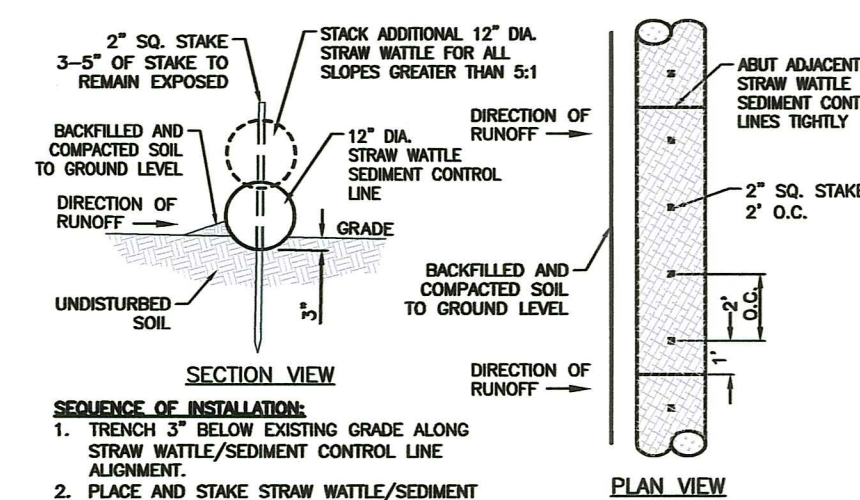


Pump Data	Legend
PEF20 Electric Pump 120V/120/18	Spring/Curve
	Pump Curve
	Pump Optimization
	Operating Point
	Design Point



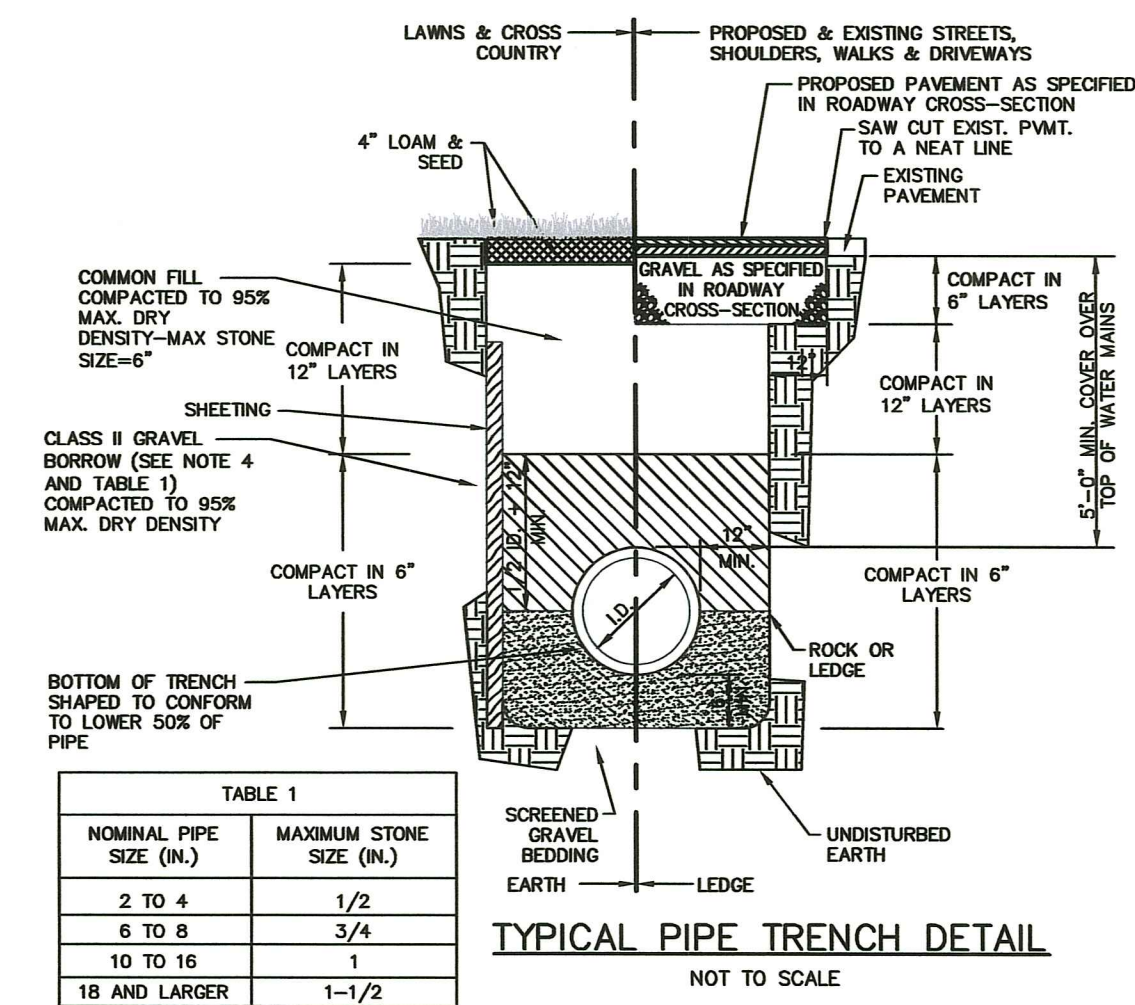
NOTES:
PIPING LESS THAN 4'-FEET BELOW THE PROPOSED GROUND ELEVATION SHALL BE INSULATED.

PVC SANITARY SEWAGE FORCE MAIN TRENCH DETAIL
NOT TO SCALE



SEQUENCE OF INSTALLATION:
1. TRENCH 3" BELOW EXISTING GRADE ALONG STRAW WATTLE/SEDIMENT CONTROL LINE ALIGNMENT.
2. PLACE AND STAKE STRAW WATTLE/SEDIMENT CONTROL LINES AS SHOWN.
3. FIT ADJACENT CHAIR JOGS TIGHTLY.
4. BACKFILL AND COMPACT EXCAVATED MATERIAL.

TYPICAL EROSION/SEDIMENT CONTROL STRAW WATTLE DETAIL
NOT TO SCALE

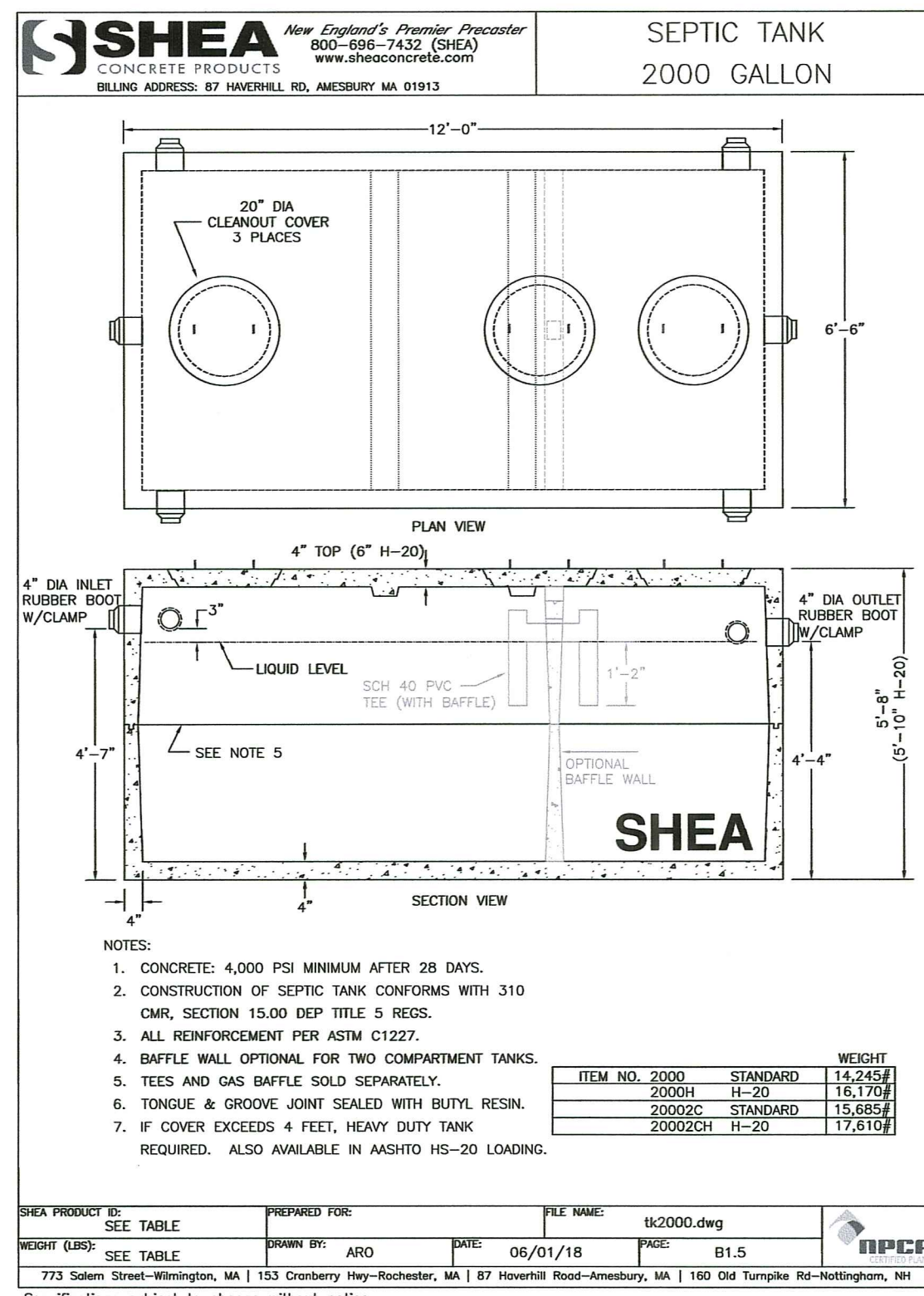
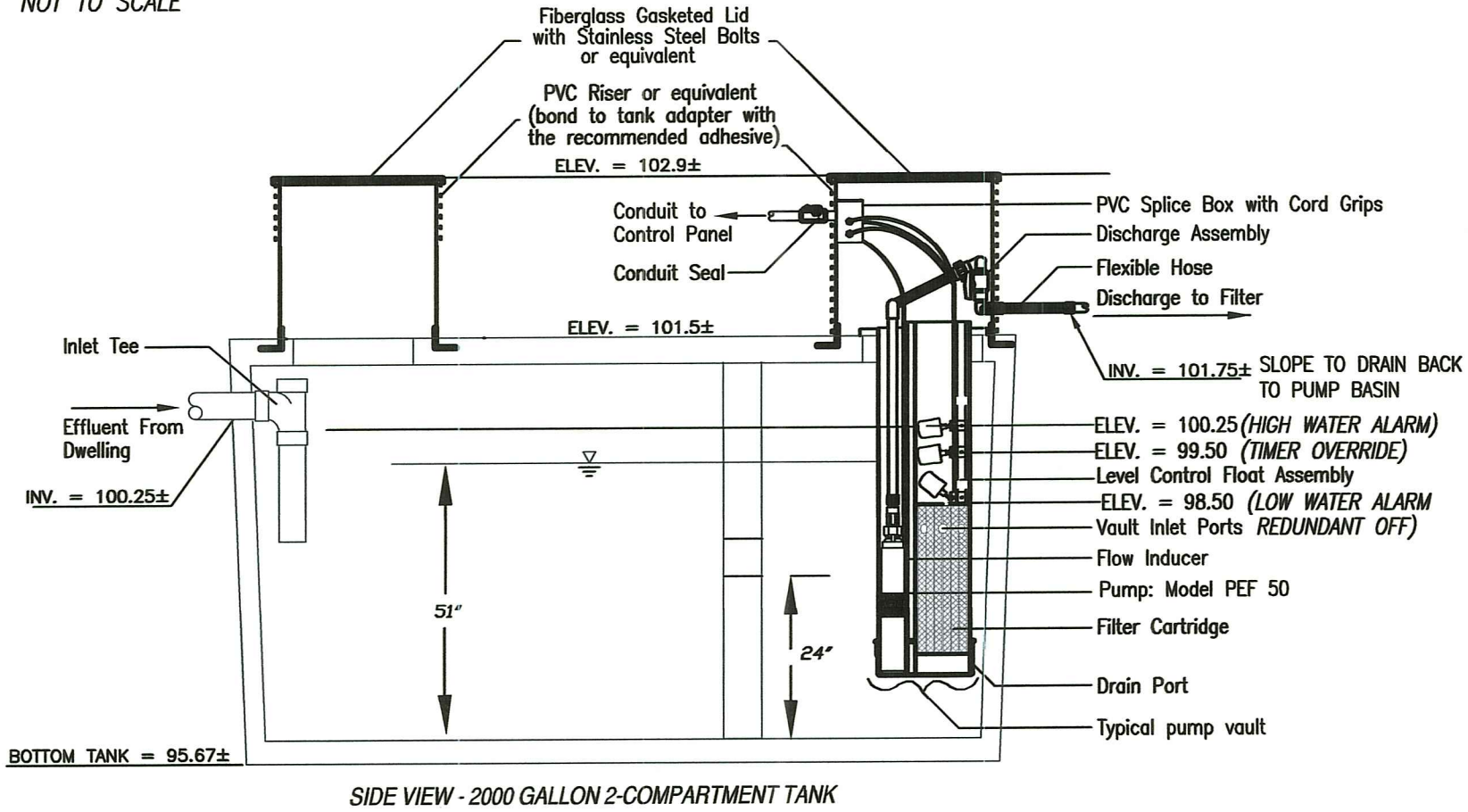


NOMINAL PIPE SIZE (IN.)	MAXIMUM STONE SIZE (IN.)
2 TO 4	1/2
6 TO 8	3/4
10 TO 16	1
18 AND LARGER	1-1/2

- NOTES:
- SHEETING IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE PIPE, UNLESS OTHERWISE INDICATED OR DIRECTED.
 - "COVER" AT ANY POINT SHALL BE DEFINED AS THE VERTICAL DISTANCE FROM THE UNDERMOST POINT OF THE PIPE TO A LINE WHICH CONNECTS THE SURFACE OF UNDISTURBED GROUND AT EITHER SIDE OF THE TRENCH AND IS AT RIGHT ANGLES TO THE DIRECTION OF THE PIPE.
 - SCREENED GRAVEL SHALL BE HARD, DURABLE, ROUNDED PARTICLES, FREE FROM SAND, LOAM, CLAY, EXCESS FINES AND DELICIOUS MATERIAL, UNIFORMLY GRADED SUCH THAT NOT LESS THAN 95% WILL PASS A 1/2 INCH SEIVE AND NOT MORE THAN 5% PASS A NO. 4 SEIVE.
 - CLASS II GRAVEL BORROW SHALL BE A CLEAN, COARSE GRAINED GRAVEL-SAND MIXTURE, THE MIXTURE SHOULD CONTAIN LESS THAN 5% PASSING THE #200 SEIVE AS WELL AS COMPLYING TO THE REQUIREMENTS OF TABLE 1.
 - WHERE FUTURE EXTENSION OF A PLUGGED PIPE OR A PLUGGED BRANCH WILL ENTAIL ROCK EXCAVATION, TRENCH EXCAVATION IN ROCK SHALL BE EXTENDED FOR A DISTANCE OF 5'-0" BEYOND THE PLUG.

SEPTIC TANK-1
2,000 GAL 2-COMPARTMENT SEPTIC TANK WITH PUMP VAULT

NOT TO SCALE



- NOTES:
- CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 - CONSTRUCTION OF SEPTIC TANK CONFORMS WITH 310 CMR, SECTION 15.00 DEP TITLE 5 RECS.
 - ALL REINFORCEMENT PER ASTM C1227.
 - BAFFLE WALL OPTIONAL FOR TWO COMPARTMENT TANKS.
 - TEES AND GAS BAFFLE SOLD SEPARATELY.
 - TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
 - IF COVER EXCEEDS 4 FEET, HEAVY DUTY TANK REQUIRED. ALSO AVAILABLE IN ASHITO HS-20 LOADING.

ITEM NO.	2000	STANDARD	HEIGHT
	2000H	H-20	15.250'
	2000C	STANDARD	15.454'
	2000CH	H-20	17.610'

STATE OF RHODE ISLAND
Department of Environmental Management
Office of Water Resources
Email: dem.OWTS@dem.ri.gov

Part A - Soil Profile Description Application Number: 0732-1750

Property Owner: LISA & DAVID BEALL
Property Location: 281 HUNDRED ACRE POND ROAD, PARCEL 29
Date of Test Hole: 11/17/23 Weather: CLOUDY 35° Shaded: Yes No [X] Time: 9:30 AM
Soil Evaluator: SHERIDAN B. CARPANO License Number: D-4428
Soil Evaluator email address: SHERIDAN.B.CARPANO@DEM.RI.GOV

Horizon	Depth	Horizon Boundaries			Soil Colors		Re-Dox		Texture	Structure	Consistence	Soil Category
		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.					
A	0-6"	L	S	11Y2/3/6					fsl	sh	vr	4
Bw1	6-7"	L	S	10Y2/4/6					gfs	sh	vr	4m
Bw2	7-8"	L	W	2.5Y/5/6					clgsl	sh	fr	3
C	8-18"	-	-	2.5Y/5/4					clg	sh	1	1m

TH23-2 Soil Class: B Total Depth: 18" Impervious/Limiting Layer Depth: 18" (log) GW Seepage Depth: NONE SHWT: 2M (log)

TH23-2 Soil Class: E/B Total Depth: 18" Impervious/Limiting Layer Depth: 18" (log) GW Seepage Depth: NONE SHWT: 2M (log)

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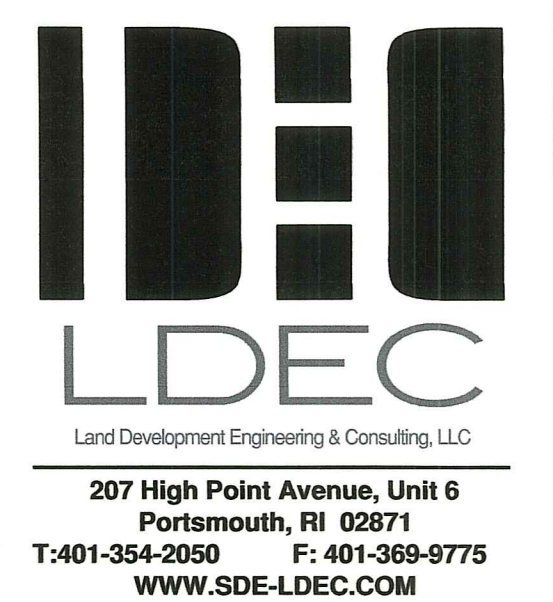
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		Dist	Topo	Matrix	Re-Dox Features	Ab.	S. Contr.					
A	0-4"	L	S	11Y2/3/6					fsl	sh	vr	4
Bw1	4-9"	L	S	11Y2/4/6					fsl	sh	vr	4
Bw2	9-11"	L	S	11Y2/5/6					fsl	sh	vr	4
Bw3	11-14"	L	W	2.5Y/5/6					clg	sh	fr	7
2C	14-18"	-	-	2.5Y/5/4					clg	sh	1	1m

TH23-2 Soil Class: B Total Depth: 18" Impervious/Limiting Layer Depth: 18" (log) GW Seepage Depth: NONE SHWT: 2M (log)

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NO.	DATE	GENERAL REVISIONS PER RIDEM COMMENTS	DESCRIPTION	APPROVED
1.	4/7/2023			

PLAN REVISIONS

DATE: MARCH 2, 2023
DRAWN BY: SJE DESIGN BY: SJE CHECK BY: MER

PROJECT NO. 23007
ISSUED FOR: PERMITTING



OWTS DETAILS
281 HUNDRED ACRE POND ROAD
ASSESSOR'S MAP 9, PARCEL 29
SOUTH KINGSTOWN, RHODE ISLAND

DRAWING TITLE:
OWTS DETAILS

SCALE: 1"=20'
SHEET NO.

PREPARED FOR LISA BEALL