



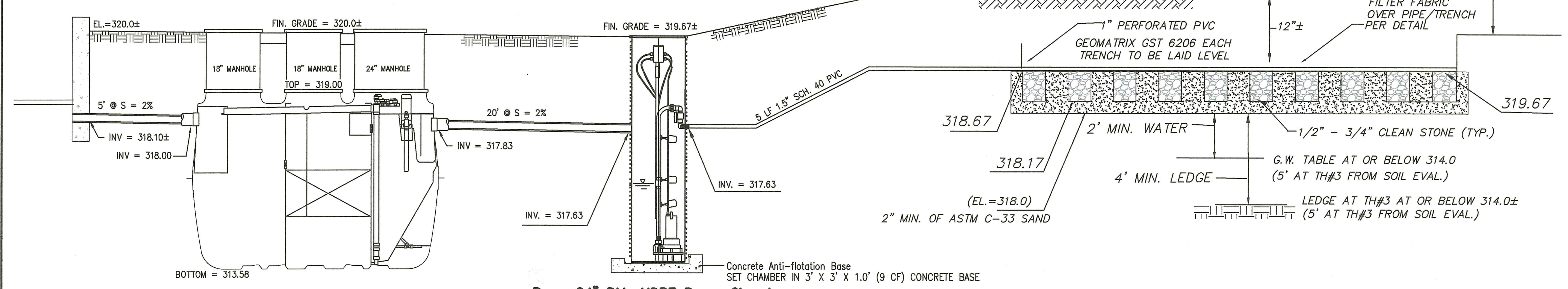
- LIST OF COMPONENTS**
- 749 GALLON 3-COMPARTMENT FUJICLEAN CEN-5 TANK
 - 24" DIA. HDPE PUMP BASIN (5' DEPTH)
 - (1) 40' LONG GEOMATRIX GST 6206 TRENCH
 - FUJICLEAN CONTROL PANEL.

SCHEDULE OF PVC PIPE SIZES

BUILDING TO FUJICLEAN TANK	4" SCH 40
FUJICLEAN TANK TO PUMP BASIN	4" SCH. 40 OR EQUAL
PUMP BASIN TO DRAINFIELD	1-1/2" SCH. 40 OR EQUAL
DRAINFIELD MANIFOLD	1-1/2" SCH. 40 OR EQUAL
DRAINFIELD LATERALS	1" SCH. 40 OR EQUAL

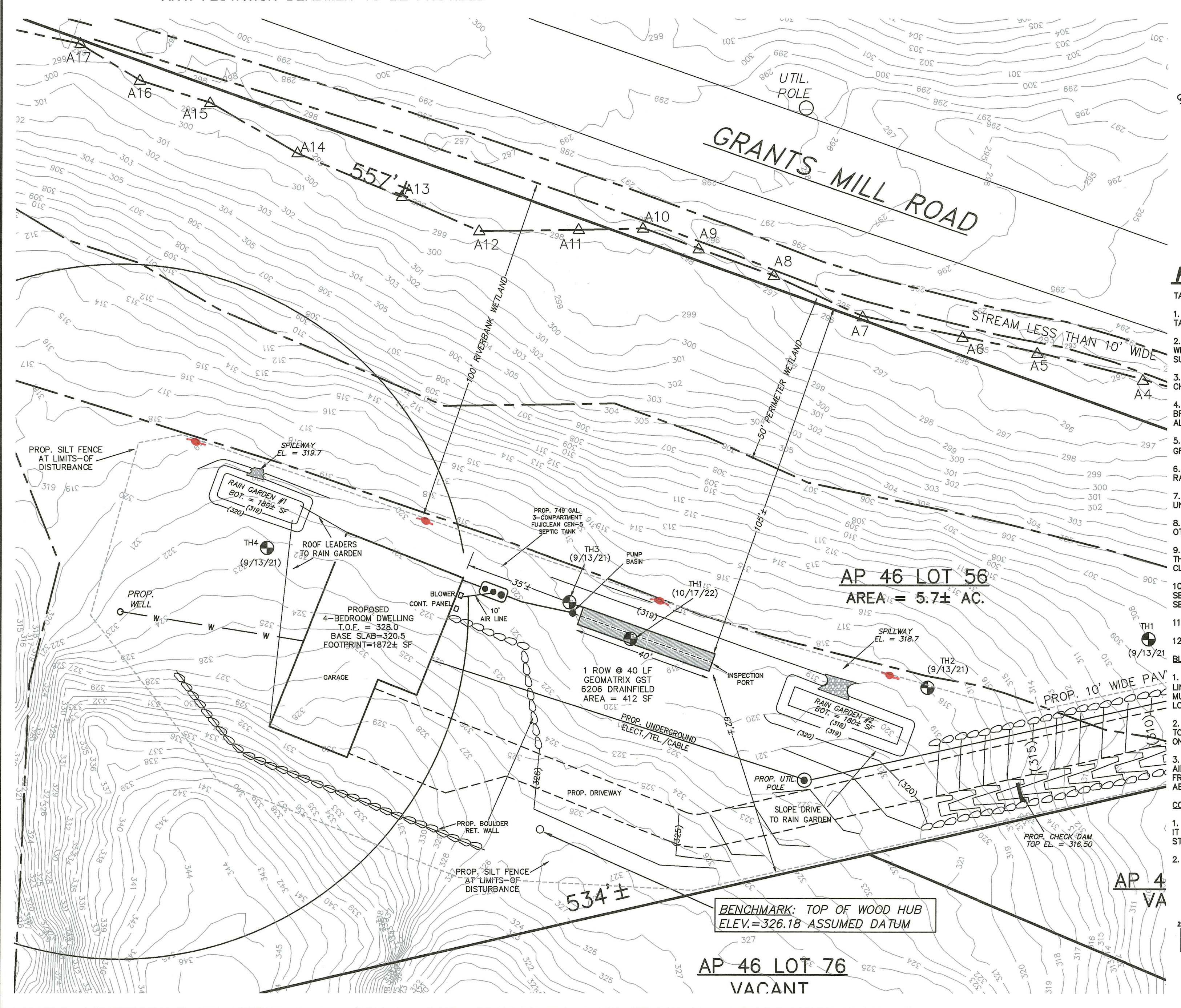
DRAINFIELD SIZE DETERMINATION
 4 BEDROOM X 115 GAL = 460 GPD
 460 GPD / 1.5 GPD/SF = 307 SF
 USING GEOMATRIX GST 6206 AT 10.3 GPD/LINEAR FOOT
 1 ROW GEOMATRIX GST 6206 AT 40 FEET = 412 SF

MAINTAIN INVERT ELEV. 319.67
 FOR 10' MIN. AROUND
 LEACHING FIELD



Fujiclean CEN-5
 ANTI FLOTATION DEADMEN TO BE PROVIDED

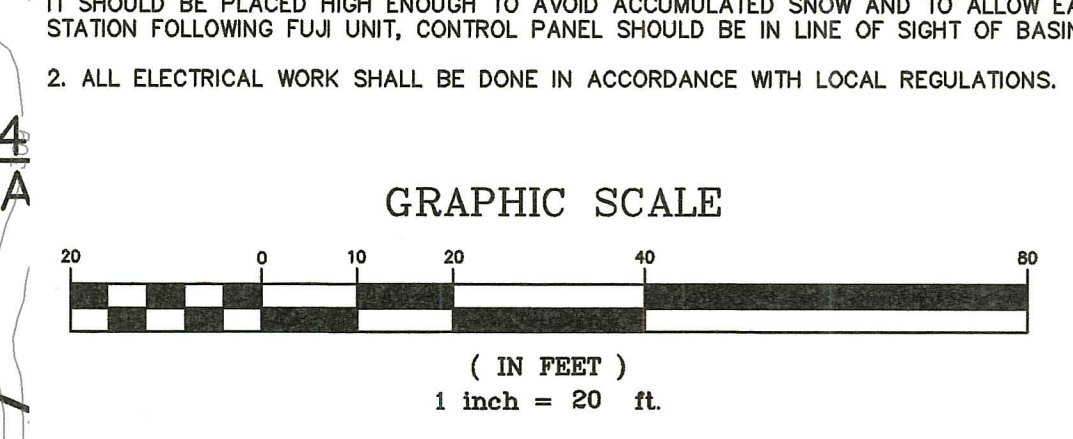
Prop. 24" DIA. HDPE Pump Chamber
 ANTI FLOTATION CONCRETE BASE TO BE PROVIDED



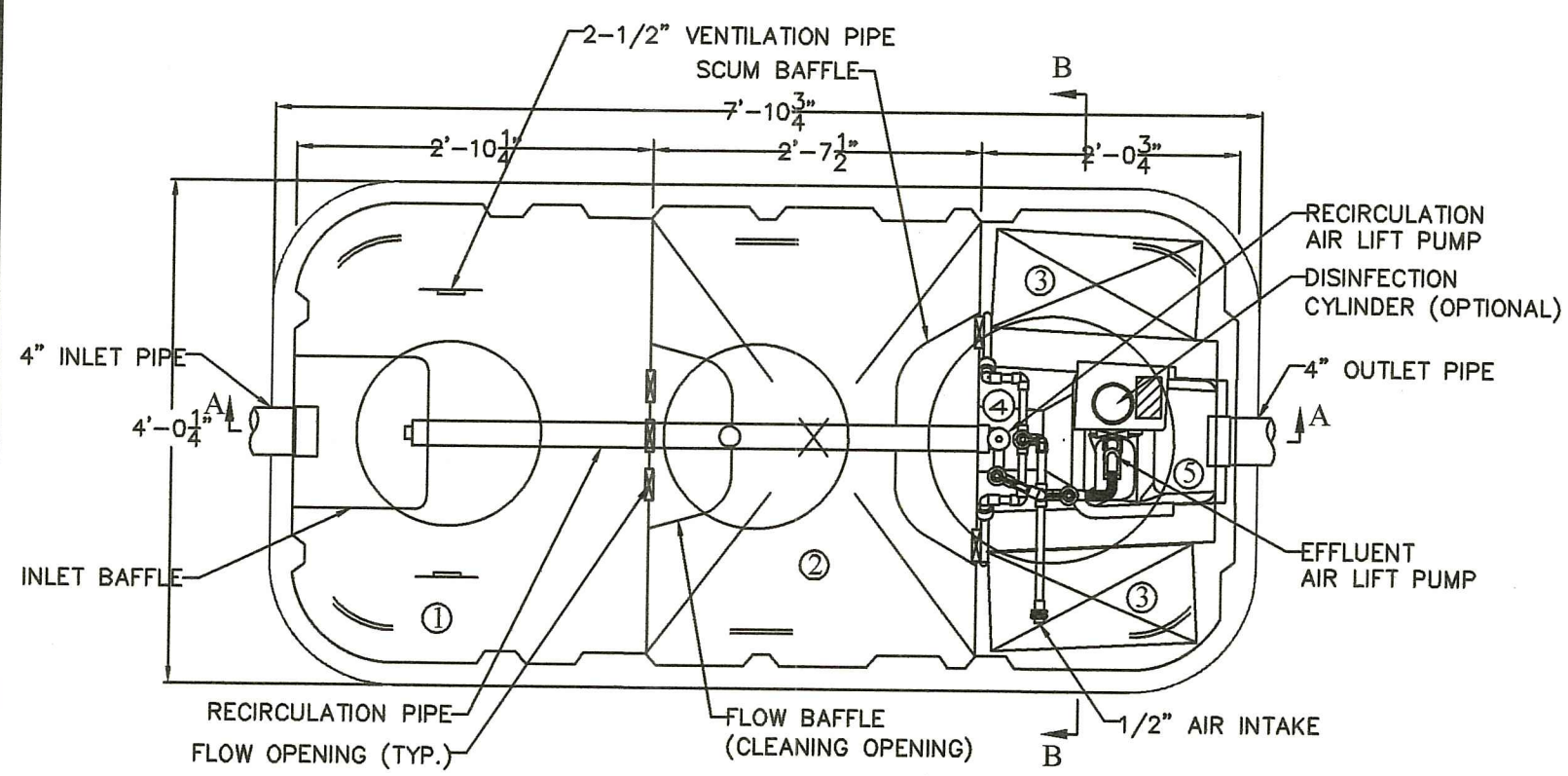
Permanent buffer markers
 per RIDEM

FUJICLEAN CONSTRUCTION NOTES

- TANK**
- IT IS RECOMMENDED TO USE A FOUR-LEG HOISTING SLING OR CHAIN TO LIFT AND SET TANK. THE FOUR LIFTING FITTINGS ON TANK ARE PLACED TO KEEP TANK LEVEL WHEN SETTING.
 - TANK BOTTOM SHOULD BE IN ORIGINAL MATERIAL WITH ALL STONES REMOVED, BOTTOM MUST BE LEVEL. IF VERY STONY OR WET, DIG DOWN MINIMUM OF 8" AND REPLACE UP TO BOTTOM GRADE WITH PEA STONE, SAND OR SCREENED GRAVEL. MAKE SURE BOTTOM IS COMPACTED AND FIRM WITH NO POSSIBILITY OF SETTLING.
 - IF BALLAST BLOCKS NECESSARY, PLACE BLOCKS OUTSIDE OF THE WIDTH OF FLANGES TO AVOID CABLE OR STRAPS FROM CHAFING ON FLANGE. MAKE SURE TO COMPACT SOIL BETWEEN BLOCK AND SIDE OF TANK.
 - TO AVOID TANK MOVEMENT WHILE BACKFILLING, BEGIN FILLING TANK WITH WATER BEFORE BACKFILLING. WATER SHOULD BE BROUGHT UP TO LOW WATER MARKINGS ON INSIDE SIDEWALL OF TANK. IN ORDER TO FILL TANK EVENLY AND COMPLETELY, ALTERNATE FILLING EACH COMPARTMENT.
 - BACK FILL AROUND TANK IN 8" LIFTS, USING FLOWABLE MATERIAL SUCH AS ORIGINAL SOIL WITHOUT STONE, SAND, PROCESSED GRAVEL WITHOUT STONE, ROUNDED 1/4 TO 1/2 STONE, OR PEA STONE.
 - DO NOT MECHANICALLY COMPACT BACKFILL; COMPACT WITH SHOVEL HANDLE OR TAMPER, ESPECIALLY AROUND THE SIDE RADIUS.
 - IN ORDER TO AVOID SETTLING AND POSSIBLE DAMAGE TO FITTING AND TANK, HAND COMPACT NEAR TANK ALL MATERIAL UNDER AIR CONDUIT AND FITTING WHERE IT ENTERS TANK.
 - AIR CONDUIT FROM BLOWER TO UNIT SHOULD BE PLACED ON ORIGINAL SOIL WHERE POSSIBLE AND ON COMPACTED SOIL OTHERWISE.
 - IF HIGH WATER ALARM CONDUIT IS GOING TO TANK, MAKE SURE CONDUIT IS SET ON FIRM GROUND AND ENTERS TANK THROUGH A WATERTIGHT GROMMET TO BE PLACED IN SECOND COMPARTMENT. FLOAT SHOULD BE SECURELY MOUNTED WITH CLAMP TO LENGTHWISE RECIRCULATION PIPE. CORD TETHER LENGTH SHOULD BE 3' FROM CLAMP.
 - TO AVOID DAMAGE TO TANK AND ASSURE PROPER WATER FLOW THROUGH UNIT, MAKE SURE INLET AND OUTLET PIPE ARE SECURELY GLUED INTO TANK FITTINGS AND SIT ON COMPACTED SOIL WHEREVER SOIL WAS DISTURBED FOR TANK HOLE TO AVOID SETTLING.
 - ALL RISERS AND LIDS MUST BE WATERTIGHT.
 - FINISH HEIGHT OF LIDS SHOULD ALLOW LOWER GRADING TO DRAIN WATER AWAY FROM TANK.
- BLOWER**
- BLOWER SHOULD BE LOCATED WITHIN 100' OF TREATMENT UNIT. CONDUIT CAN BE 3/4" PVC CONDUIT OR FLEXIBLE IRRIGATION LINE (100LB MAX PRESSURE). THERE SHOULD BE NO MORE THAN FIVE (5) 90-DEGREE FITTINGS IN THE LINE. ALL BLOWERS MUST BE LOCATED IN AREAS WHERE EXCESSIVE RUN OFF OR POTENTIAL FLOODING DO NOT OCCUR. THE BLOWER MUST BE LOCATED WHERE THEY CAN BE EASILY INSPECTED AND SERVICED AND SHOULD BE AS CLOSE TO CONTROL PANELS AS POSSIBLE.
 - IF ABOVE GRADE, BLOWER SHOULD BE IN PROTECTIVE ENCLOSURE WITH ADEQUATE VENTILATION AWAY FROM EXHAUST FANS. TO AVOID POSSIBLE NOISE COMPLAINTS, TRY NOT TO LOCATE UNDER BEDROOM WINDOWS. THE ENCLOSURE SHOULD BE PLACED ON Poured CONCRETE OR BLOCK PAD TO AVOID VIBRATION.
 - IF THE BLOWER IS PLACED BELOW GRADE, THE ENCLOSURE AND ANY THROUGH FITTINGS MUST BE WATERTIGHT WITH A 2" PVC AIR SUPPLY PIPE BROUGHT UP ABOVE POSSIBLE SNOW LINE. A GOOSENECK AT TOP OF PIPE IS NECESSARY TO PREVENT WATER FROM ENTERING BASIN. SUPPLY PIPE SHOULD NOT BE PLACED NEAR EXHAUST VENTS. TOP OF BLOWER SHOULD BE SLIGHTLY ABOVE SURROUNDING GRADE TO SHED WATER.
- CONTROL PANEL**
- THE CONTROL PANEL SHOULD BE SECURELY MOUNTED TO A POST OR PEDESTAL AND NOT DIRECTLY ON SIDEWALL OF HOUSE. IT SHOULD BE PLACED HIGH ENOUGH TO AVOID ACCUMULATED SNOW AND TO ALLOW EASE OF SERVICING. IF THERE IS A PUMP STATION FOLLOWING FUJ UNIT, CONTROL PANEL SHOULD BE IN LINE OF SIGHT OF BASIN.
 - ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL REGULATIONS.

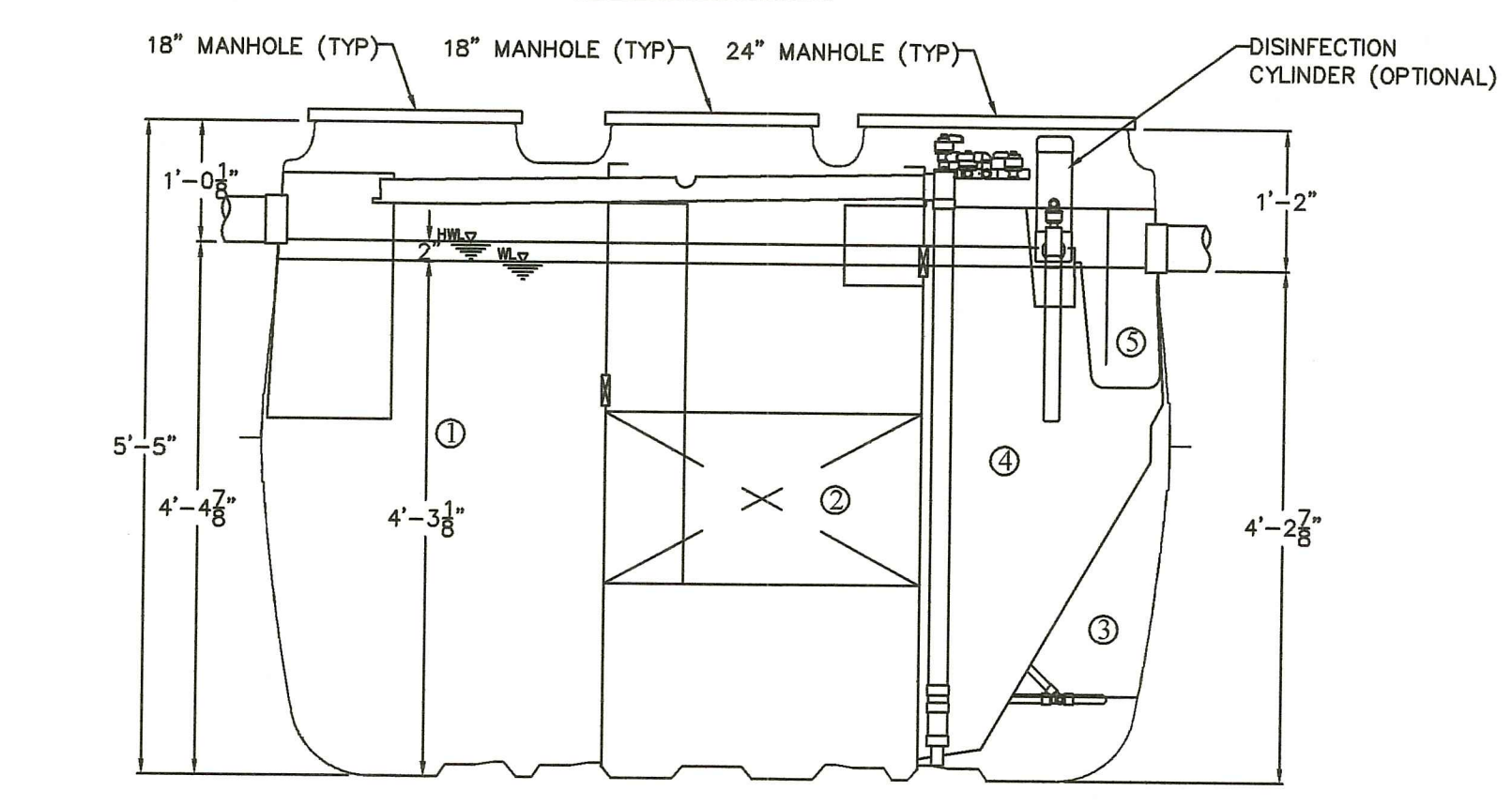


	TITLE: OWTS DESIGN PLAN	PROJ. NO: 2021051
	PROJECT: A.P. 46 LOT 56 1 GRANTS MILL ROAD CUMBERLAND, RHODE ISLAND	DATE: 6/21/2022
CLIENT: ROBERT GEDDES GARY C. LAMOND, PE, LLC 194 HATCHERY ROAD NORTH KINGSTOWN, RI 02852		1/4
SCALE: AS SHOWN		REVISED: 01/27/2023



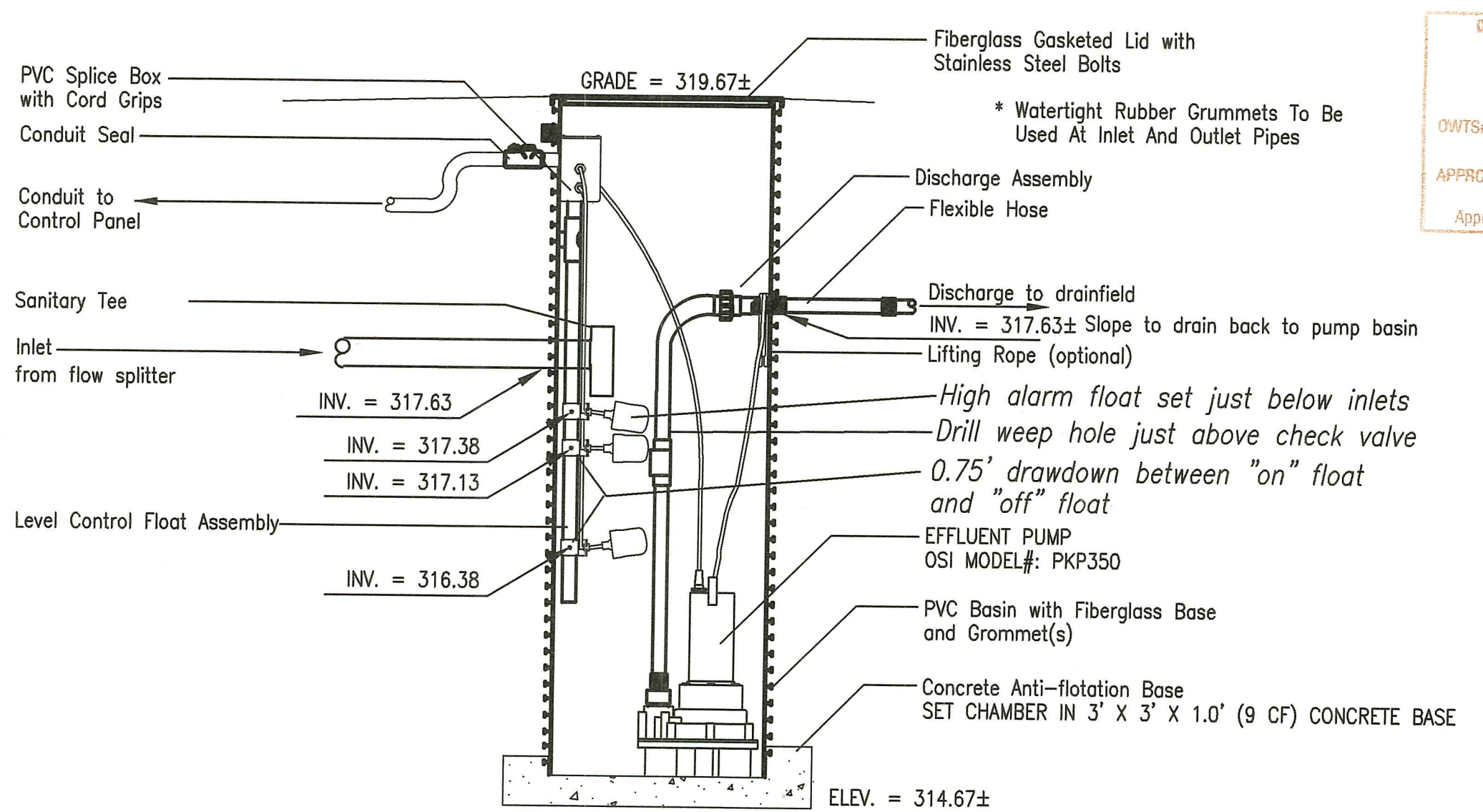
CHAMBER		Volume (gal)
①	Sedimentation Chamber	277
②	Anaerobic Filtration Chamber	278
③	Aerobic Contact Filtration Chamber	127
④	Storage Chamber	63
⑤	Disinfection Chamber	4
Total Volume		749

SPECIFICATIONS			
Anaerobic Media	PP / PE	Filling Rate	32%
Board Type Aerobic Media	PVC / PP / PE	Filling Rate	16%
Aerobic Media	PP / PE	Filling Rate	57%
Blower	2.8 cfm		
Tank	FRP		
Piping	PVC / PP / PE		
Access Covers	Plastic / Cast Iron		
Disinfectant (Optional)	Chlorine Tablets		



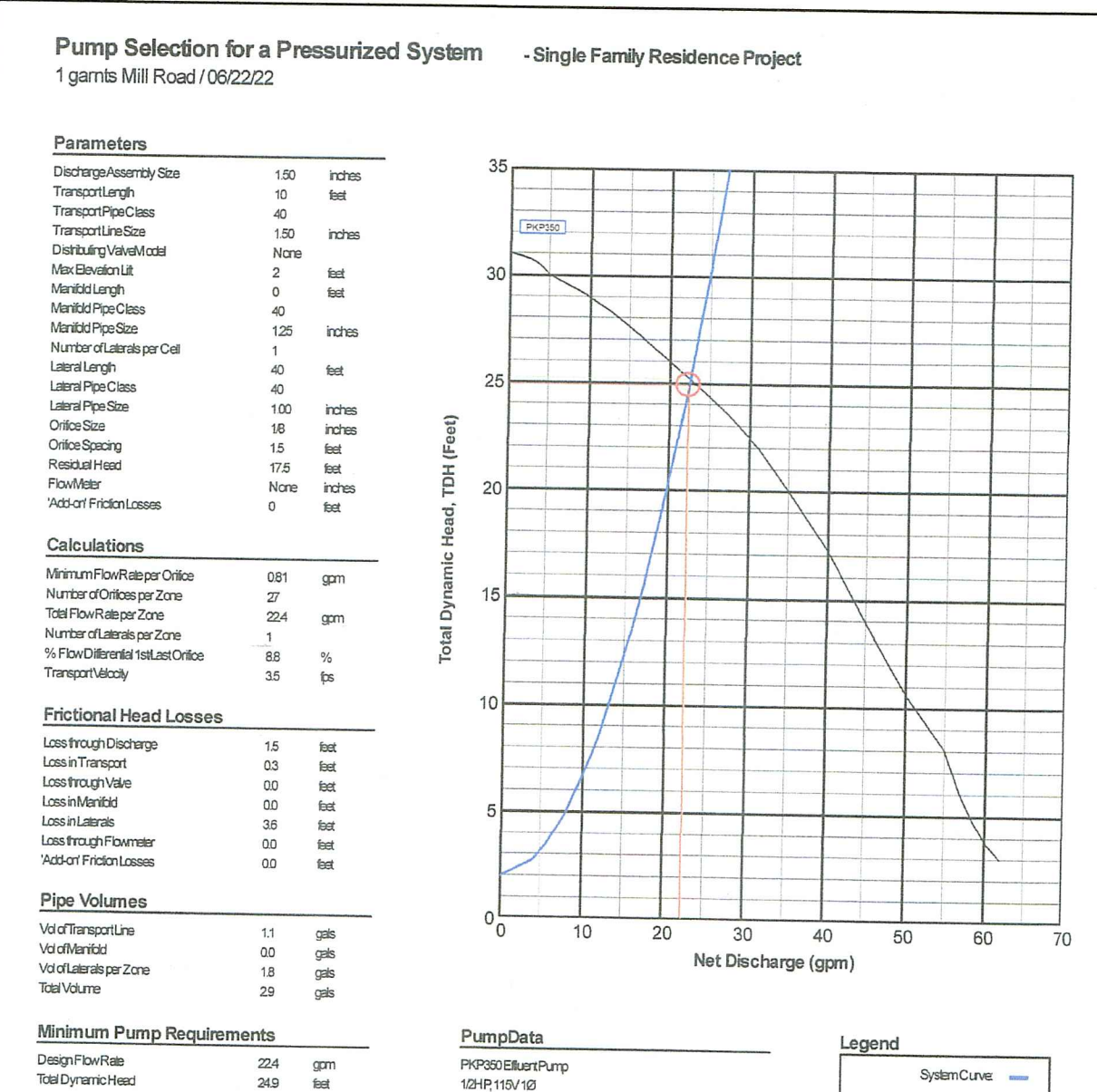
FUJICLEAN CENS

24" Diameter Drainfield Pump Basin with Effluent Pumping Assembly

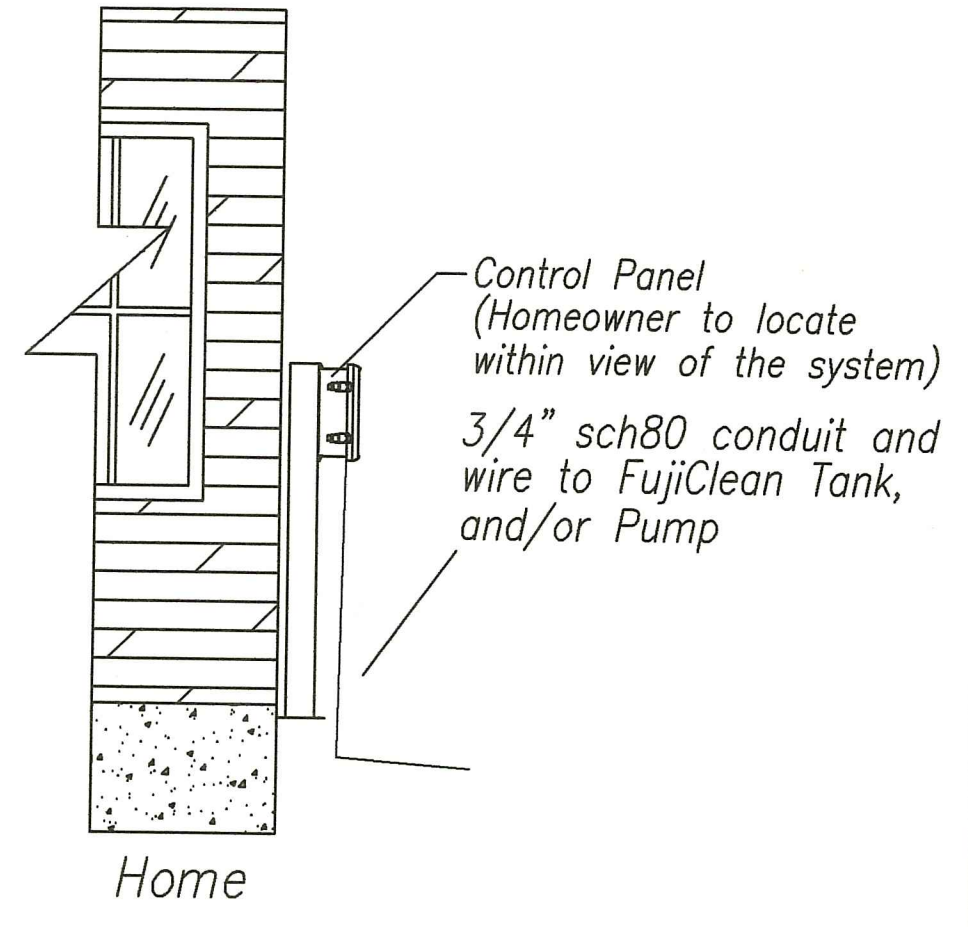


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL

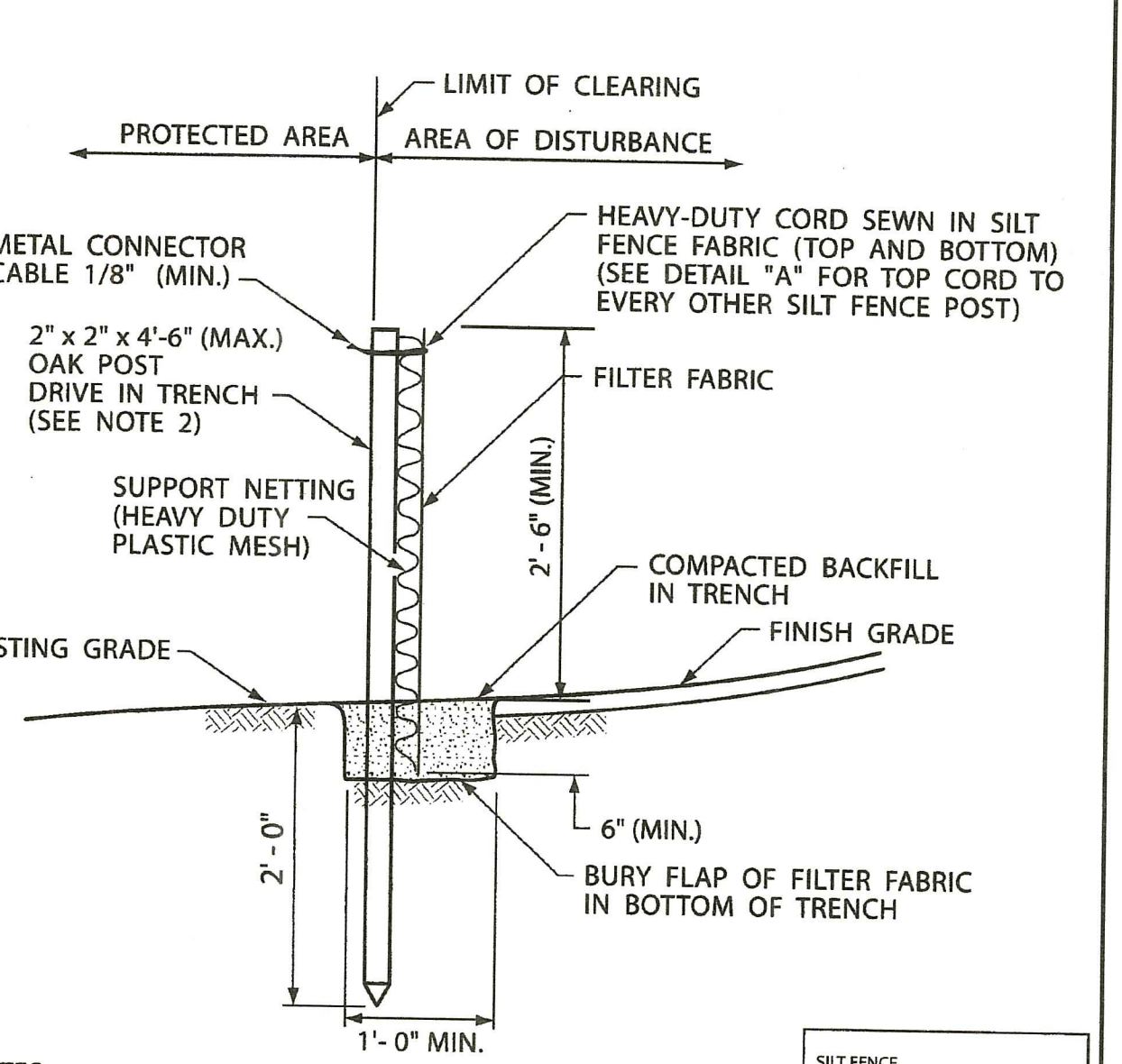
OWTS# 1508-1451 FWH# 22-0296
APPROVED: [Signature] DATE 3/6/23
No Changes Allowed Without RIDEM Approval
Approved Plans/Permit Must Be Kept at Construction Site



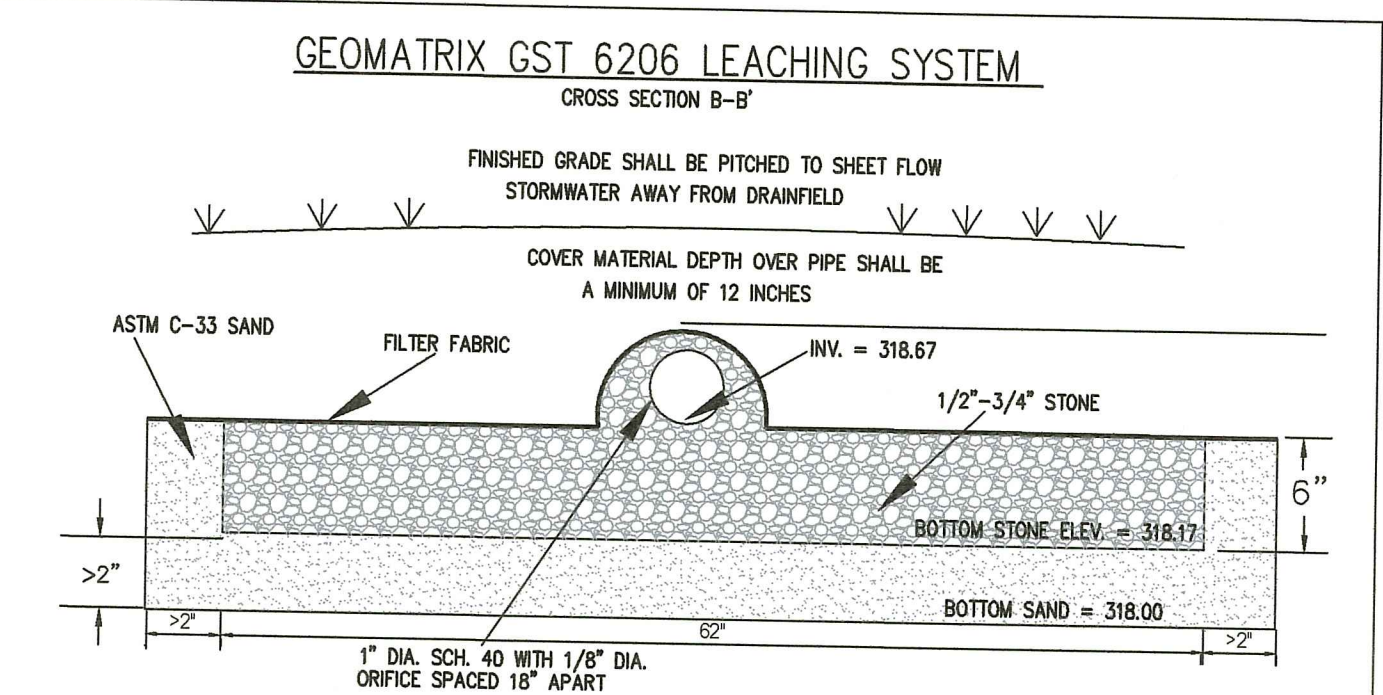
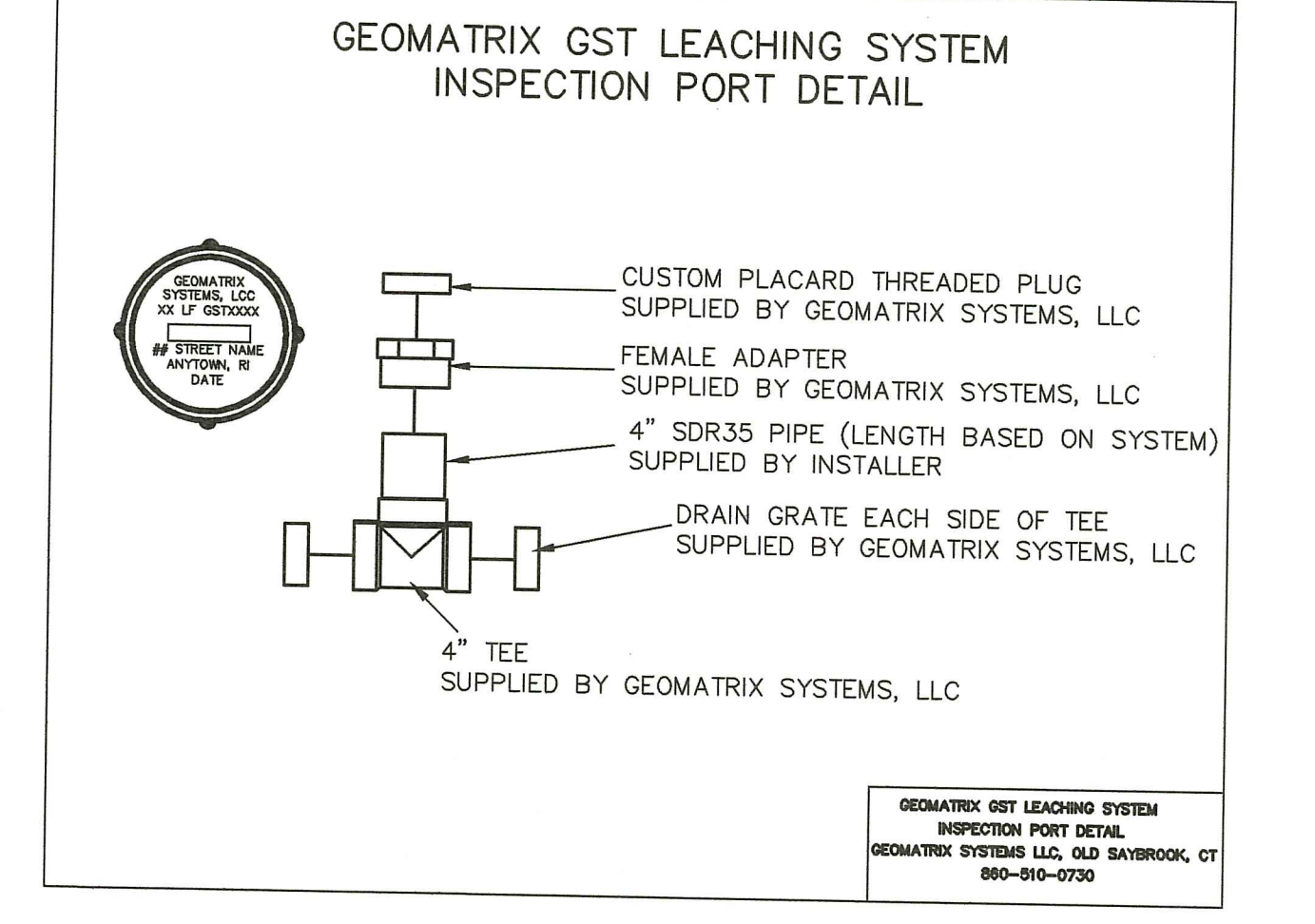
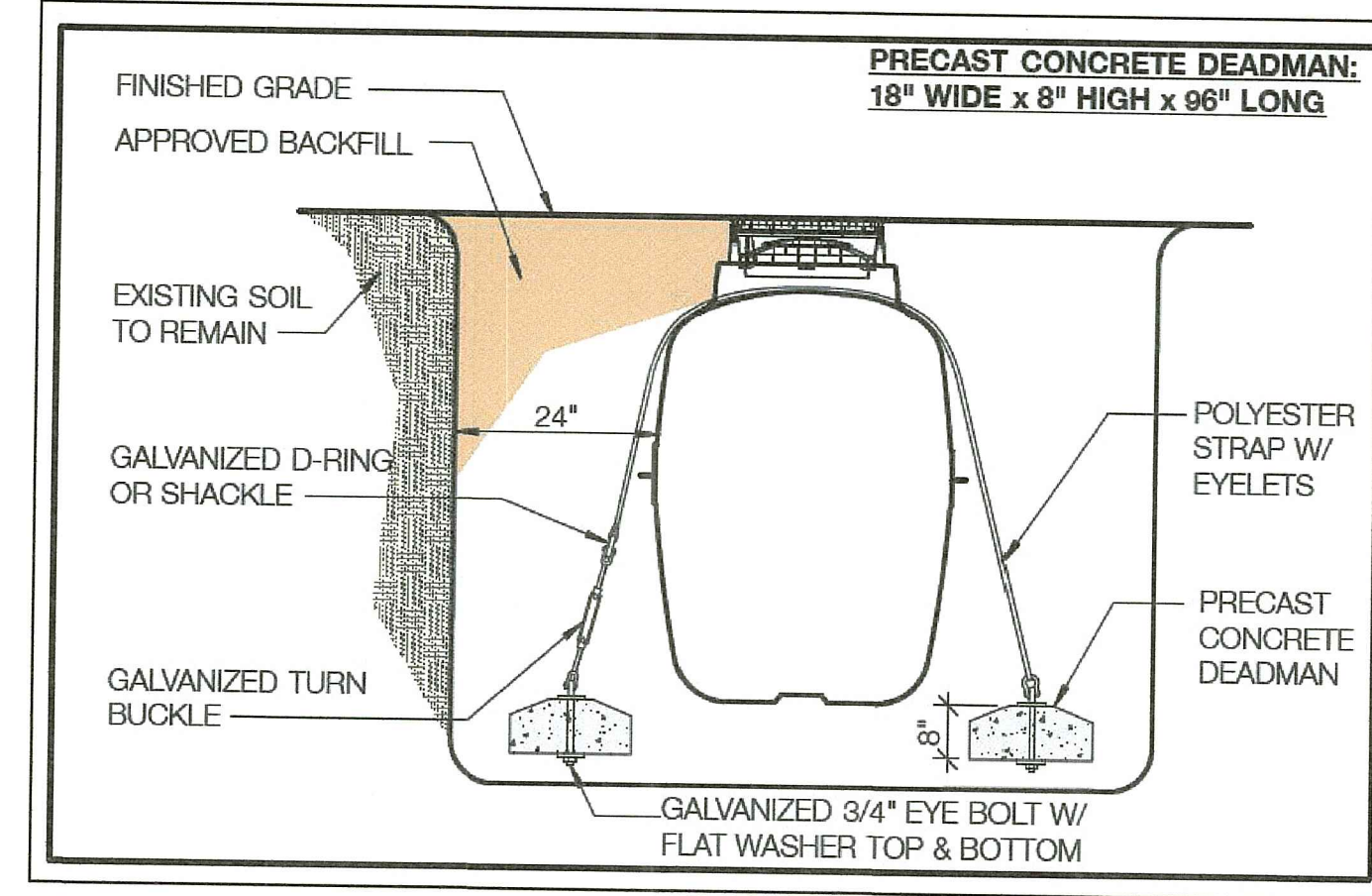
Minimum Pump Requirements	
Design/Supply	204 gpm
Head/Static	249



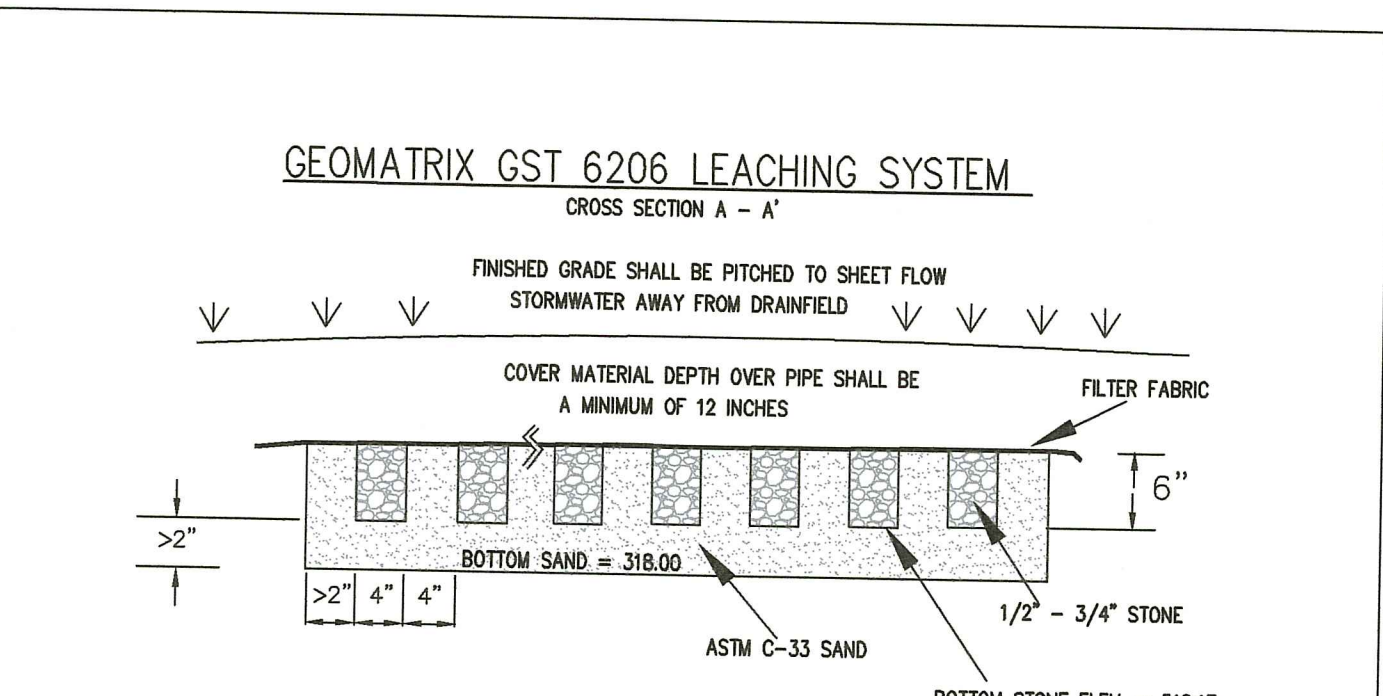
Installation of Silt Fence



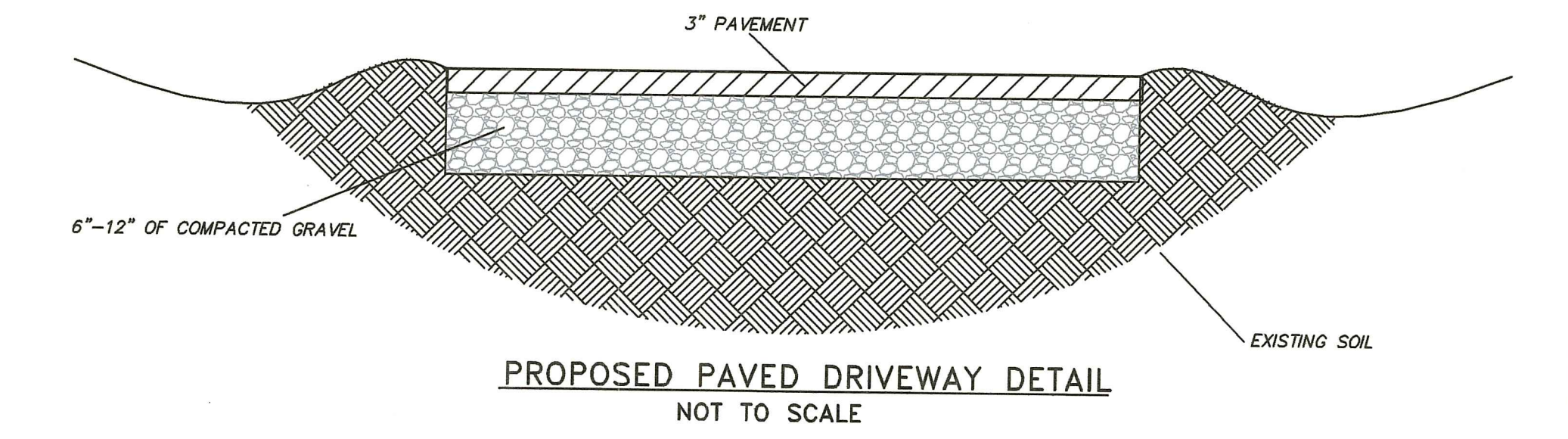
- NOTES:
- SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 - 2" x 2" x 4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 - 1" x 1" x 4'-6" (MIN.)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



- *H = 6" (GST6206)
12" (GST6212)
18" (GST6218)
24" (GST6224)
30" (GST6230)
36" (GST6236)
- *P = 4" SCH. 40 PIPE FOR GRAVITY APPLICATIONS
= 1.0" MINIMUM FOR PRESSURIZED DRAINFIELDS



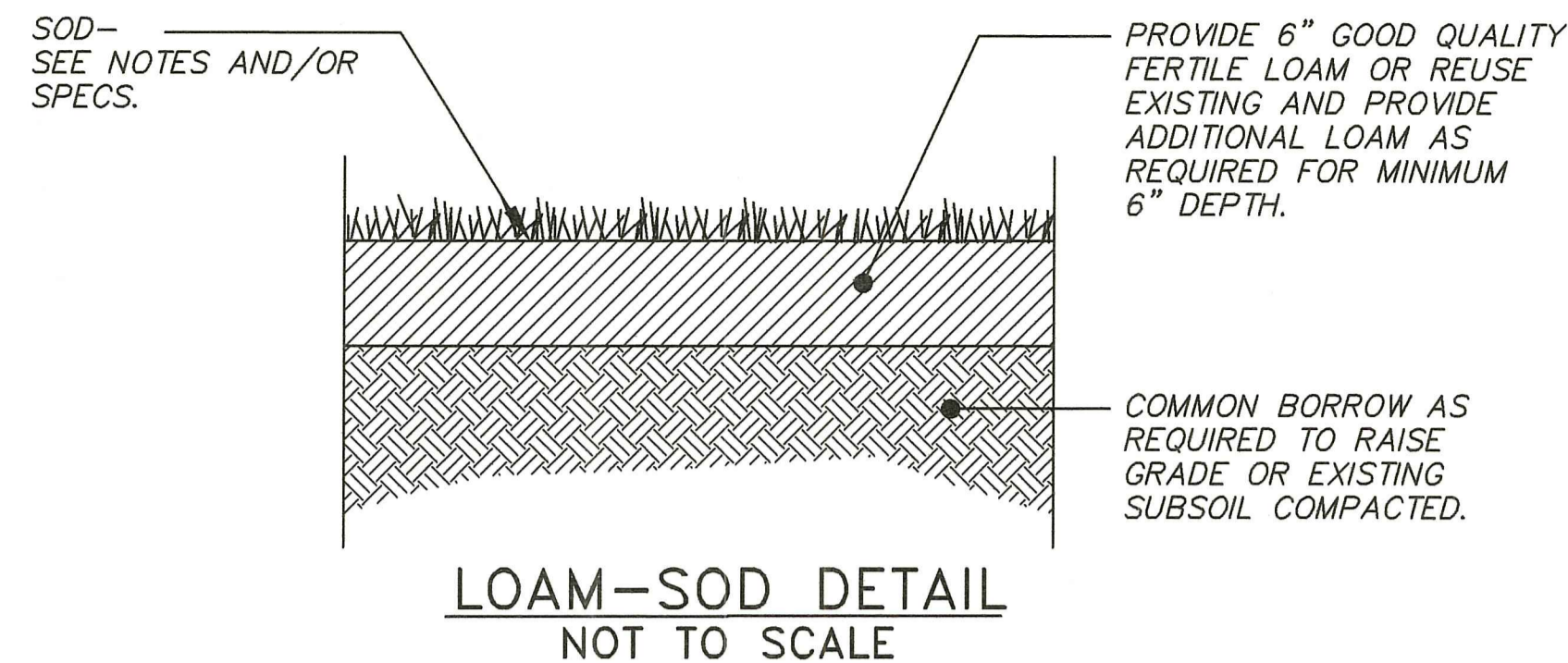
- *H = 6" (GST6206)
12" (GST6212)
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24" (GST6224)
30" (GST6230)
36" (GST6236)



GARY C. LAMOND
No. 7123
REGISTERED PROFESSIONAL ENGINEER
CIVIL

TITLE: OWTS DESIGN PLAN
PROJECT: A.P. 46 LOT 56
1 GRANTS MILL ROAD
CUMBERLAND, RHODE ISLAND
CLIENT: ROBERT GEDDES
GARY C. LAMOND, PE, LLC
194 HATCHERY ROAD
NORTH KINGSTOWN, RI 02852

PROJ. NO: 2021051
DATE: 6/21/2022
2/4
REVISED: 01/27/2023



EROSION CONTROL PROGRAM

PRIOR TO START OF CONSTRUCTION, HAYBALES, SILT FENCES AND ALL OTHER SPECIFIED EROSION CONTROL FENCES SHALL BE IN PLACE.

CRITICAL AREAS SUCH AS WETLAND AREAS, SLOPES AND STREAMS SHALL BE PROTECTED AS PER PLAN AND, IN THE PRESENCE OF WETLANDS, THE CONDITIONS OF ANY ISSUED PERMIT SHALL BE ADHERED TO.

THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH AND FULLY MAINTAIN ALL REQUIRED EROSION AND SEDIMENTATION CONTROLS.

SEDIMENTATION CONTROL PROGRAM

ALL EXPOSED SLOPES, INCLUDING STOCKPILES OF MATERIAL, SHALL RECEIVE TEMPORARY SEDIMENTATION AND EROSION CONTROLS. THIS WILL INCLUDE LOAMING AND SEEDING, MULCHING, HAYMATS, ETC., TO STABILIZE THE AREA.

ALL DRAINAGE STRUCTURES SHALL BE SURROUNDED BY HAYBALES TO PREVENT INFILTRATION OF SEDIMENTS.

DRYWELLS, GALLEYS, RAIN GARDENS, AND OTHER LEACHING FACILITIES SHALL BE THOROUGHLY PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION. IF SEDIMENTS ENTER FACILITIES DURING CONSTRUCTION, THE STRUCTURES SHALL BE CLEARED AND, IF NECESSARY, REMOVED AND REINSTALLED WITH ALL EXPENSE TO BE BORNE BY CONTRACTOR.

SHOULD SEDIMENTS ENTER A CRITICAL AREA, (WETLAND, BUFFER ZONE, ABUTTING PROPERTY) THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE THE EFFECTED AREA.

SLOPE PROTECTION TO BE INSTALLED ON ANY DISTURBED AREAS SUBJECT TO EROSION.

EXTREME CARE SHALL BE TAKEN TO PREVENT SEDIMENT OR UNSUITABLE MATERIAL FROM ENTERING WETLANDS, ROADWAYS AND/OR DRAINAGE STRUCTURES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES PROMPTLY AFTER EACH RAINFALL AND TO ENSURE THAT RUNOFF FLOW PATTERNS ARE NOT INHIBITED DURING RAINFALL AND/OR SNOWMELT.

REMOVED SEDIMENTS SHALL NOT BE STOCKPILED IN AREAS WHERE POTENTIAL EXISTS FOR TRANSPORT OF THESE SEDIMENTS VIA STORM FLOW TO WETLANDS OR OTHER UNDESIRABLE LOCATIONS.

SILT FENCE SHALL BE PLACED AS DESIGNATED ON PLAN AS WELL AS ANY AREAS WHERE CONDITIONS WARRANT DURING CONSTRUCTION.

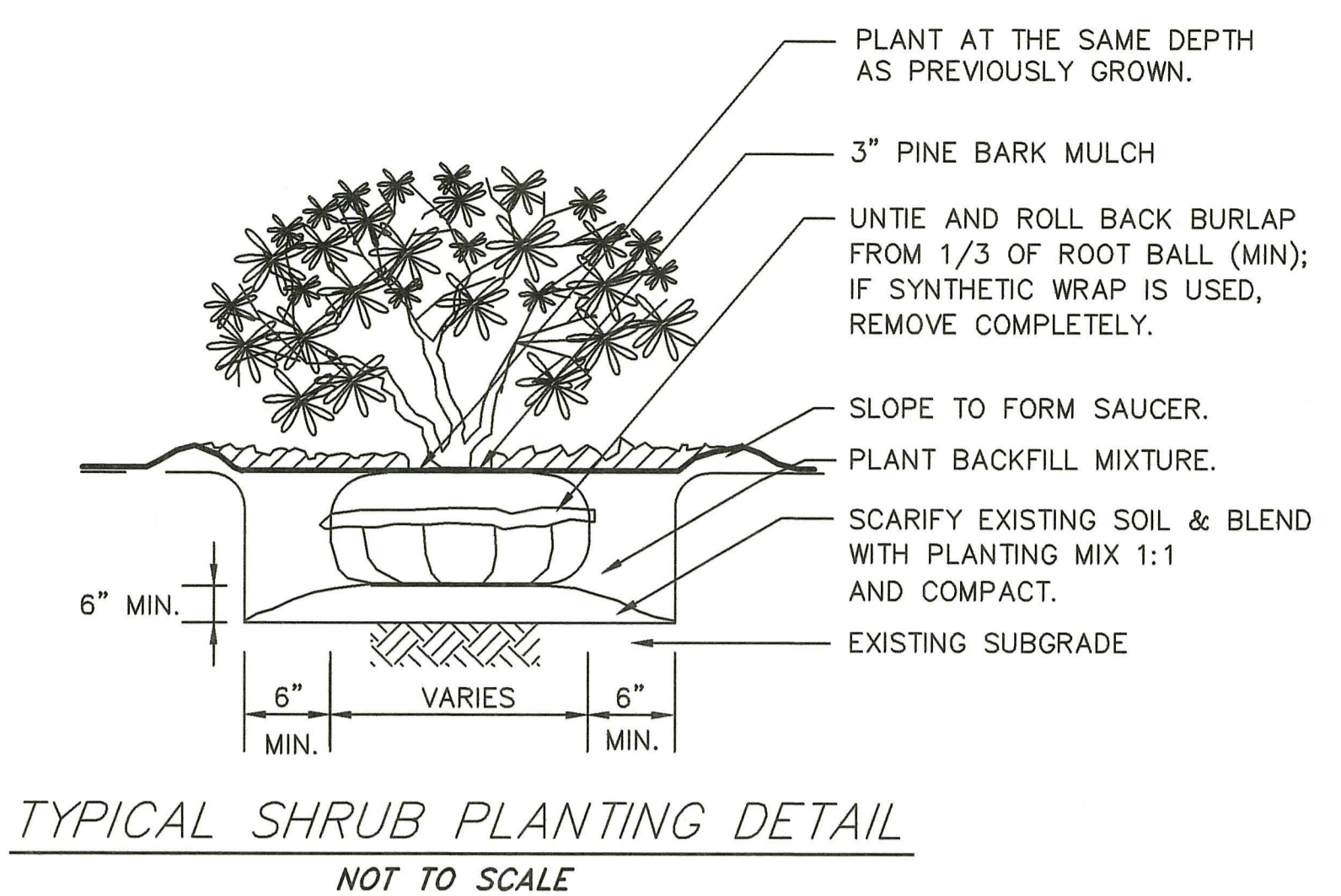
ACCUMULATED SEDIMENTS SHALL BE REMOVED AS DIRECTED BY THE OWNER, ENGINEER, BIOLOGIST, APPLICANT, LOCAL OR STATE OFFICIALS.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION ENTRANCE. AT A MINIMUM THE ENTRANCE SHALL BE SWEEPED FREE OF SEDIMENT AND DEBRIS AT THE END OF EACH WORK DAY.

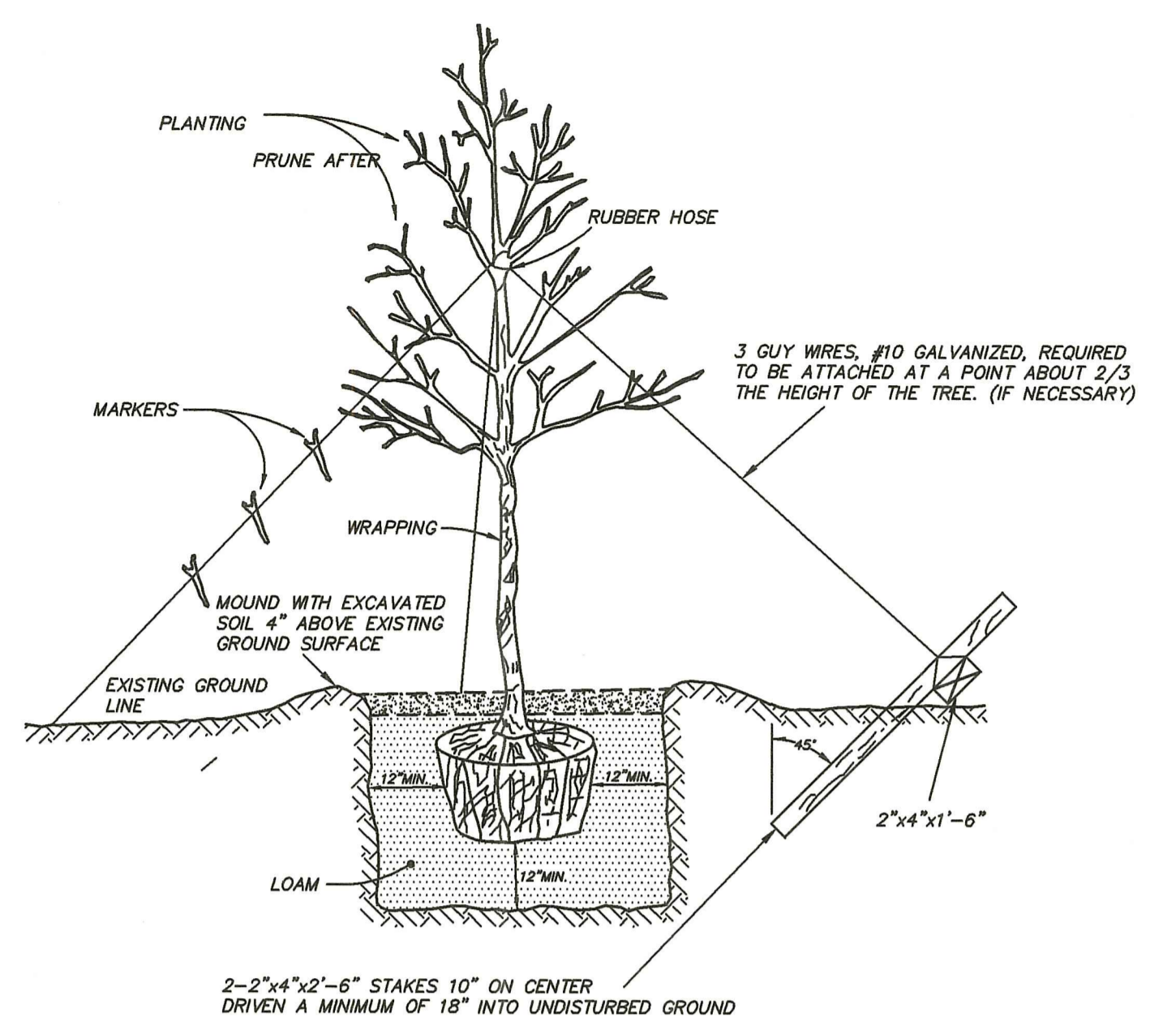
RAIN GARDEN #2 DESIGN CALCULATIONS

PROPOSED DRIVEWAY AREA = 2091± SF

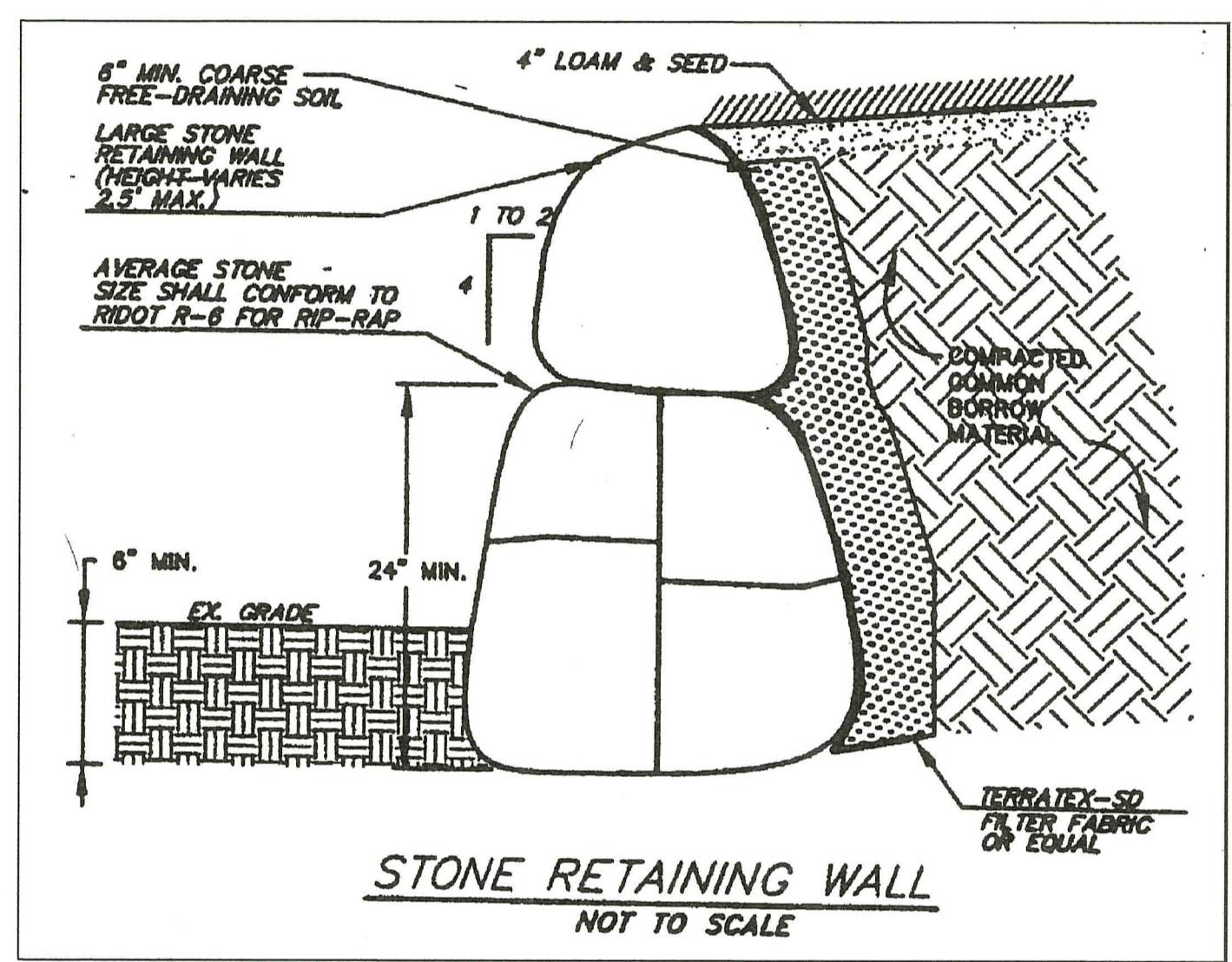
FROM TABLES 7 AND 8 OF THE RIDEM/CRMC GUIDELINES FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENT AN 8" DEEP RAIN GARDEN CONSTRUCTED IN SANDY SOILS REQUIRES A BOTTOM AREA OF 80 SF PER 1000 SF OF IMPERVIOUS SURFACE. GIVEN THERE IS 2091± SF OF PROPOSED IMPERVIOUS SURFACE, THE PROPOSED 8" DEEP RAIN GARDEN REQUIRES 80 SF X 2.091 = 167.28 SF OF BOTTOM AREA. THE PROPOSED RAINGARDEN PROVIDES A BOTTOM AREA OF 180 SF AND THEREFORE EXCEEDS THE CAPACITY REQUIRED BY THE RIDEM/CRMC GUIDELINES.



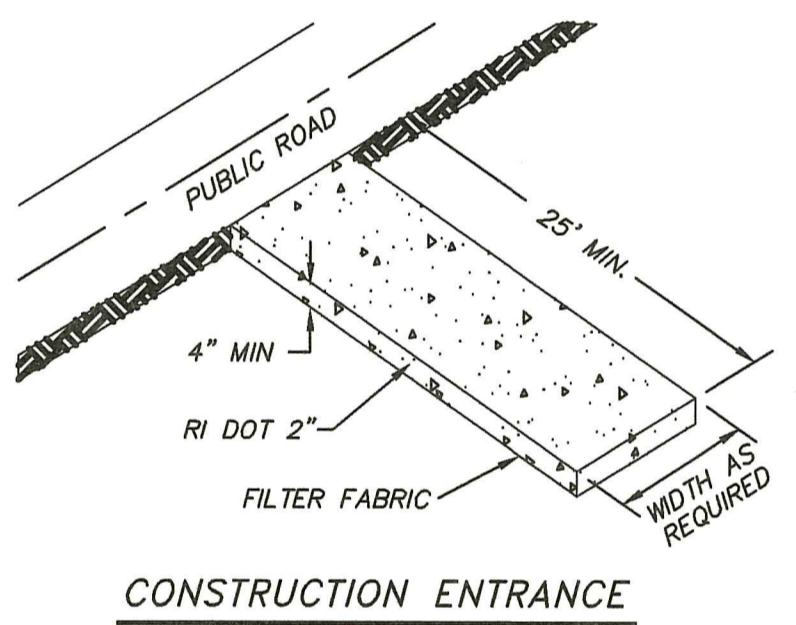
TYPICAL SHRUB PLANTING DETAIL NOT TO SCALE



TYPICAL TREE PLANTING DETAIL NOT TO SCALE



STONE RETAINING WALL NOT TO SCALE

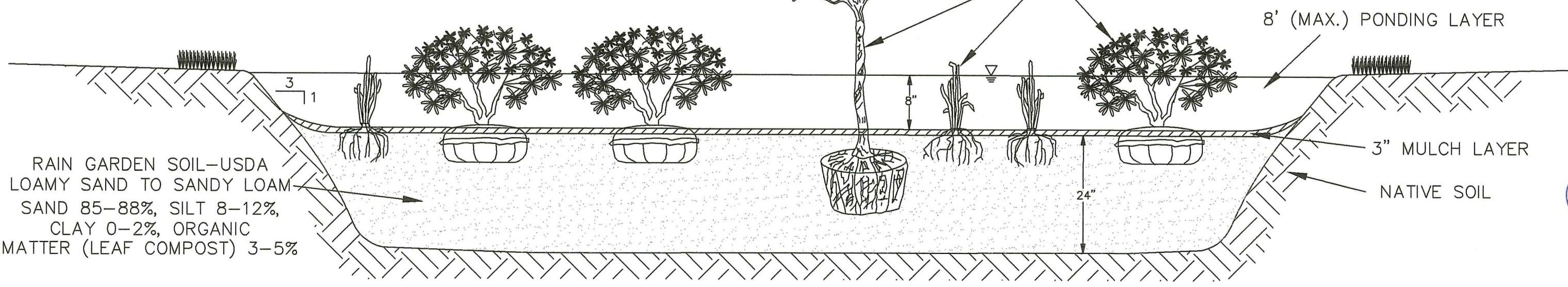


CONSTRUCTION ENTRANCE DETAIL NOT TO SCALE

RAIN GARDEN #1 DESIGN CALCULATIONS

PROPOSED ROOF AREA = 1872 SF

FROM TABLES 7 AND 8 OF THE RIDEM/CRMC GUIDELINES FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENT AN 8" DEEP RAIN GARDEN CONSTRUCTED IN SANDY SOILS REQUIRES A BOTTOM AREA OF 80 SF PER 1000 SF OF IMPERVIOUS SURFACE. GIVEN THERE IS 1872± SF OF PROPOSED IMPERVIOUS SURFACE, THE PROPOSED 8" DEEP RAIN GARDEN REQUIRES 80 SF X 1.872 = 149.76 SF OF BOTTOM AREA. THE PROPOSED RAINGARDEN PROVIDES A BOTTOM AREA OF 180 SF AND THEREFORE EXCEEDS THE CAPACITY REQUIRED BY THE RIDEM/CRMC GUIDELINES.

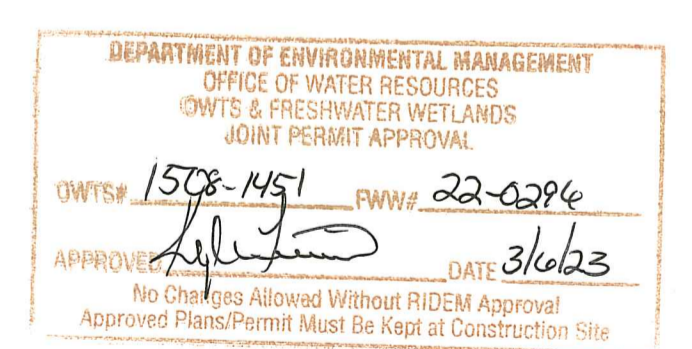


RAIN GARDEN AREA-TYPICAL CROSS-SECTION NOT TO SCALE

MATERIALS SIZE			
SQUARE MESH SIEVES (INCHES)	RIDOT 2" CRUSHED STONE OR GRAVEL % FINER	ASTM C-33 NO. 20 % FINER	ASTM C-33 NO. 30 % FINER
2-1/2	100	90-100	100
2	95-100	35-70	90-100
1-1/2	30-55	0-15	35-70
1-1/4	0-25	0-25	—
1	0-5	—	0-15
3/4	—	0-5	—
1/2	—	—	0-5
3/8	—	—	—

INSTALLATION REQUIREMENTS
THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. A STABILIZATION FILTER CLOTH CAN BE PLACED ON THE SUBGRADE PRIOR TO THE GRAVEL PLACEMENT TO PREVENT PUMPING. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

MAINTENANCE
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.



SOIL STABILIZATION & PLANTING PROGRAM

ACCEPTABLE PLANTING MATERIALS:
LOAM - THE MATERIAL TO BE FURNISHED SHALL CONSIST OF LOOSE, FRIABLE, SANDY LOAM OR LOAM TOPSOIL FREE OF A MIXTURE OF SUBSOIL, REFUSE, STUMPS, ROOTS, ROCKS, BRUSH, WEEDS AND OTHER MATERIAL WHICH WILL PREVENT THE FORMATION OF A SUITABLE SEED BED.

SEED MIXTURES - ALL LEGUME SEED SHALL BE INOCULATED WITHIN 24 HOURS BEFORE MIXING AND PLANTING WITH THE APPROPRIATE INOCULUM FOR EACH VARIETY. ALL INOCULA SHALL BE FRESH AND SHALL BE USED WITHIN THE DATE LIMIT PRESCRIBED BY THE MANUFACTURER.

FOR RELATIVELY FLAT SLOPES:

MIX	% BY WEIGHT
RED FESCUE - CHEWING'S PENNLAWN OR CREEPING	70
KENTUCKY BLUEGRASS	15
COLONIAL BENTGRASS - ASTORIA OR EXETER	5
PERENNIAL RYEGRASS	10

- SEEDING RATE = 100 LBS. PER ACRE

FOR STEEP SLOPES 3:1 OR GREATER:

MIX	% BY WEIGHT
RED FESCUE - PENNLAWN OR CREEPING	75
PERENNIAL RYEGRASS	5
COLONIAL BENTGRASS - ASTORIA OR EXETER	5
BIRDSFOOT TREFLOID - EMPIRE	15

- SEEDING RATE: 100 LBS. PER ACRE

THE ACCEPTED PLANTING SEASON SHALL BE BETWEEN APRIL 1ST AND OCTOBER 15TH. CONTRACTOR SHOULD COORDINATE. ON ALL DISTURBED AREAS. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF FOUR (4) INCHES OF LOAM ON AREAS UP TO 10% IN GRADE. ALL AREAS OVER 10% SHALL RECEIVE A MINIMUM OF SIX (6) INCHES.

SUGGESTED RAIN GARDEN AREA PLANT LIST

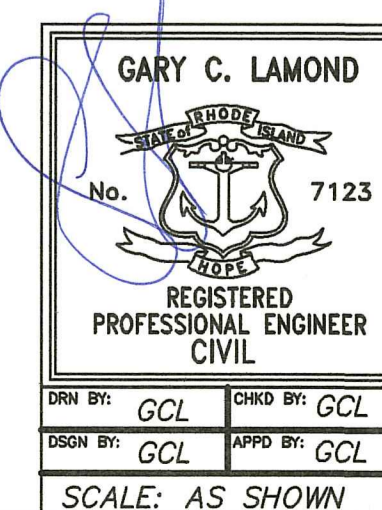
SPECIES	COMMON NAME	PLANT TYPE
Amelanchier arborea	SERVICEBERRY	TREE
Amelanchier canadensis	SHADBUSH	SHRUB
Amelanchier laevis	ALLEGHENY SERVICEBERRY	TREE
Arctostaphylos uva-ursi	BEARBERRY	SHRUB
Asclepias tuberosa	BUTTERFLY MILKWEED	PERENNIAL
Carex stricta	TUSSOCK SEDGE	GRASS
Clethra alnifolia	SWEET PEPPERBUSH	SHRUB
Comptonia peregrina	SWEET FERN	SHRUB
Cornus amomum	SILKY DOGWOOD	SHRUB
Cornus racemosa	GRAY DOGWOOD	SHRUB
Cornus sericea	REDSIOSER DOGWOOD	SHRUB
Eupatorium purpureum	JOE PYE WEED	PERENNIAL
Ilex glabra	INKBERRY HOLLY	SHRUB
Ilex opaca	AMERICAN HOLLY	TREE
Ilex verticillata	WINTERBERRY HOLLY	SHRUB
Morella (Myrica) pensylvanica	BAYBERRY	SHRUB
Panicum virgatum	SWITHGRASS	GRASS
Photinia melanocarpa	BLACK CHOKEBERRY	SHRUB
Photinia pyrifolia	RED CHOKEBERRY	SHRUB
Symphoricarpon novae-angliae	NEW ENGLAND ASTER	PERENNIAL
Vaccinium corymbosum	HIGHBUSH BLUEBERRY	SHRUB
Vernonia noveboracensis	NEW YORK IRONWEED	PERENNIAL
Viburnum dentatum	ARROWOOD	SHRUB

PLANT SPECIES WERE SELECTED FROM THE RHODE ISLAND COASTAL PLANT GUIDE PREPARED BY THE URI CELLS AND RI CRMC. ONLY THOSE NATIVE PLANTS THAT ARE SUITABLE FOR RAIN GARDENS AND ARE TOLERANT OF FULL SUN AND DROUGHT ARE SHOWN HERE.

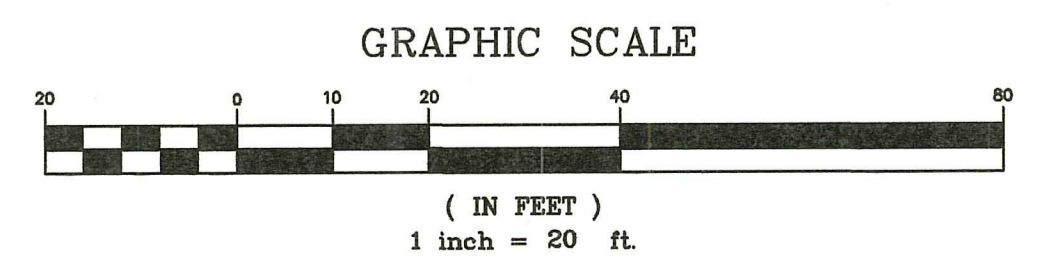
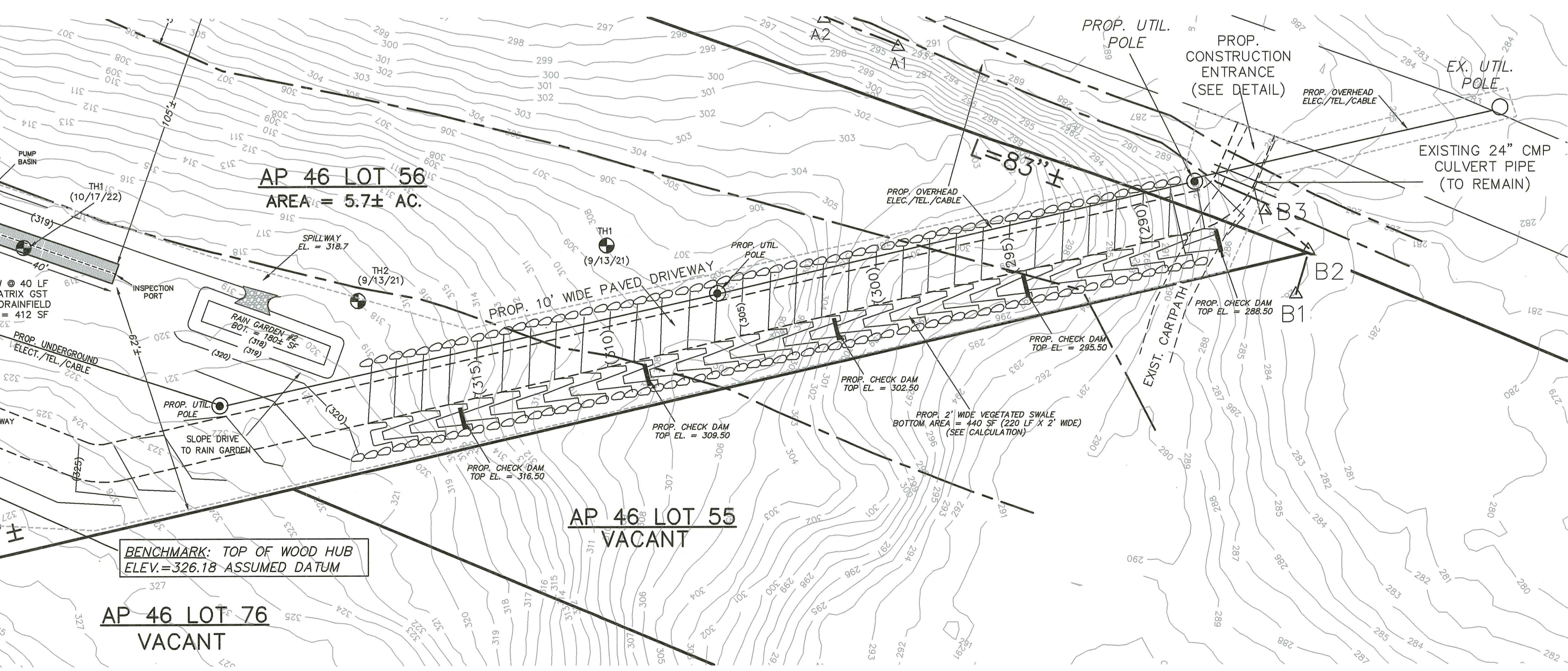
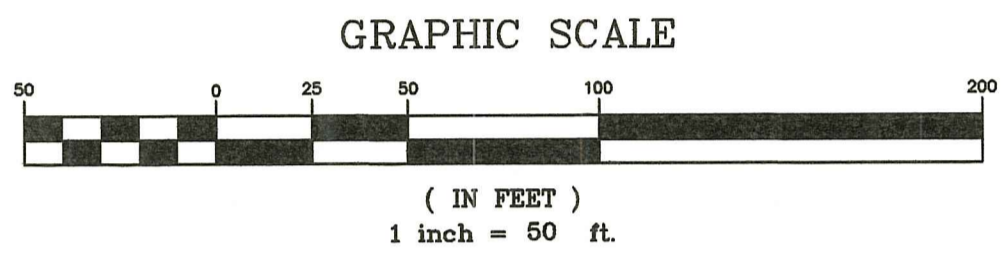
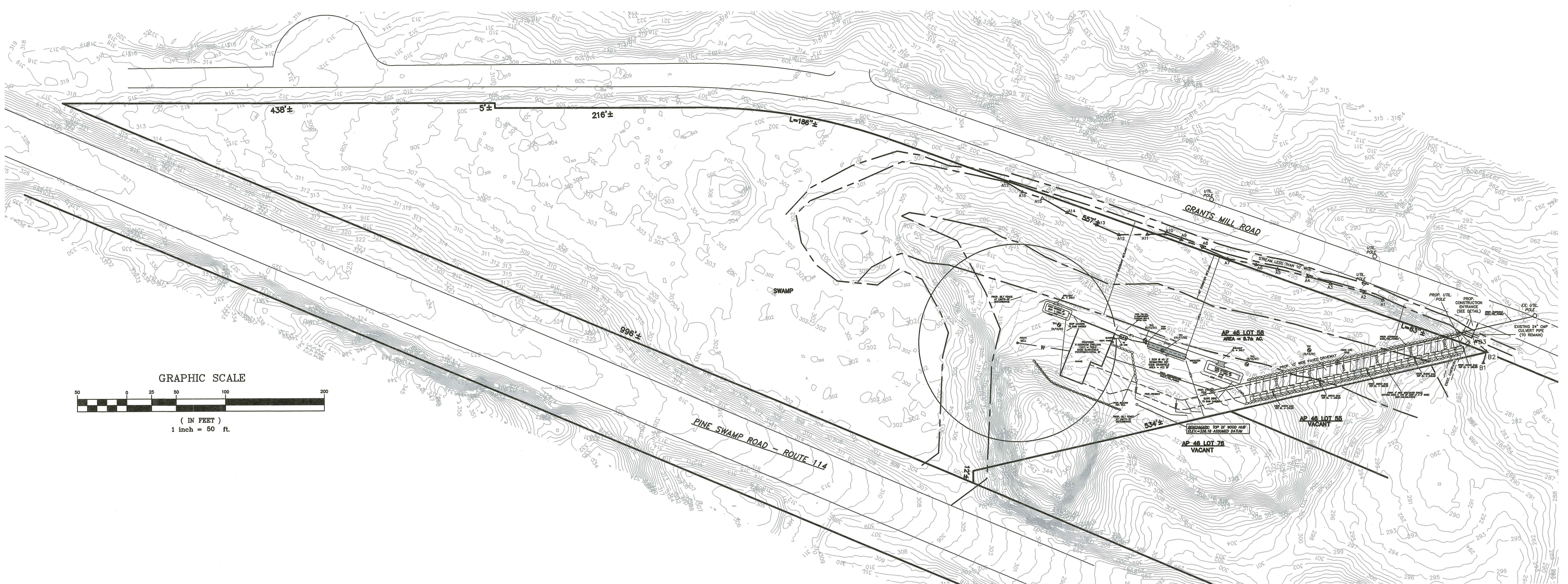
TREES SHALL BE PLANTED WITH A DENSITY OF NO MORE THAN ONE PER 250 SF, SPACED 15 FT ON CENTER. SHRUBS SHALL BE PLANTED 5-10 FT ON CENTER AND HERBACEOUS VEGETATION PLANTED 2.5 FT ON-CENTER.

NOTE: RAIN GARDEN AREA LOCATED AT LEAST 15 FT FROM OWTs AND 25 FT FROM ANY WELL OR WATER SUPPLY.

ROOF GUTTER DOWNSPOUTS SHALL DIRECT WATER TO BIORETENTION VIA UNDERGROUND PIPING OR OVERLAND WHERE UNDERGROUND PIPING IS UNFEASIBLE OR NOT PERMISSIBLE.



TITLE: OWTs DESIGN PLAN	PROJ. NO: 2021051
PROJECT: A.P. 46 LOT 56 1 GRANTS MILL ROAD CUMBERLAND, RHODE ISLAND	DATE: 6/21/2022
CLIENT: ROBERT GEDDES	3/4
ENGINEER: GARY C. LAMOND, PE, LLC 194 HATCHERY ROAD NORTH KINGSTOWN, RI 02882	REVISED: 01/27/2023



VEGETATED SWALE DESIGN CALCULATIONS

PROPOSED DRIVEWAY DISCHARGE TO SWALE = 2500± SF

FROM TABLE 5 OF THE RIDEM/CRMC GUIDELINES FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENT AN 8" DEEP VEGETATED SWALE CONSTRUCTED IN SANDY SOILS REQUIRES A BOTTOM AREA OF 80 SF PER 1000 SF OF IMPERVIOUS SURFACE. GIVEN THERE IS 2500± SF OF PROPOSED IMPERVIOUS SURFACE DRAINING TO THE PROPOSED SWALE, THE PROPOSED 8" DEEP VEGETATED SWALE REQUIRES 80 SF X 2.5 = 200 SF OF BOTTOM AREA. THE PROPOSED SWALE PROVIDES A BOTTOM AREA OF 440 SF AND THEREFORE EXCEEDS THE CAPACITY REQUIRED BY THE RIDEM/CRMC GUIDELINES.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
40HHT PERMIT APPROVAL
OWTS# 1508-1451 PWW# 22-0286
APPROVED: [Signature] DATE: 3/6/23
No Changes Allowed Without RIDEM Approval
Approved Plans Must Be kept at Construction Site

	TITLE: OWTS DESIGN PLAN	PROJ. NO: 2021051
	PROJECT: A.P. 46 LOT 56 1 GRANTS MILL ROAD CUMBERLAND, RHODE ISLAND	DATE: 6/21/2022
	CLIENT: ROBERT GEDDES	4/4
DRAWN BY: GCL CHECKED BY: GCL SCALE: AS SHOWN	GARY C. LAMOND, P.E., LLC 194 HATCHERY ROAD NORTH KINGSTOWN, RI 02852	REVISED: 01/27/2023