

**PUMP STATION NOTES:**

- ALL EQUIPMENT AND MATERIALS SHALL BE TRANSPORTED, UNLOADED AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS AND PROCEDURES SO TO ENSURE THE MANUFACTURERS' WARRANTIES ON ALL EQUIPMENT AND MATERIALS.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS NECESSARY TO PROVIDE A COMPLETELY OPERATIONAL WASTEWATER PUMP STATION MEETING THE INTENT OF THESE DRAWINGS. CONTRACTOR MAY REQUEST TO INSTALL AN "OR EQUAL" TO A PARTICULAR MANUFACTURER MODEL, PROVIDED THE "OR EQUAL" MEETS OR EXCEEDS THE SPECIFICATIONS OF THE SPECIFIED MODEL.
- ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED ACCORDING TO THE NATIONAL ELECTRIC CODE AND ALL APPLICABLE STATE AND LOCAL ELECTRICAL CODES AND REGULATIONS.
- CONTRACTOR SHALL CONFIRM PUMP VOLTAGE WITH THAT AVAILABLE ON-SITE.
- PUMP CHAMBER SHALL BE PRECAST CONCRETE, RATED H-10 MINIMUM. PUMP CHAMBER SHALL BE MANUFACTURED BY ROTONDO, WITH INSIDE DIMENSIONS OF 6'W x 6'L x 5'H, OR APPROVED EQUAL.
- ALL PRECAST JOINTS SHALL BE KEYPED AND SEALED WATERTIGHT WITH BUTYL RUBBER SEALANT. EXTERIOR SHALL BE BITUMASTIC COATED.
- CONTRACTOR SHALL CONDUCT HYDROSTATIC TESTING OF PUMP CHAMBER BY FILLING THE CHAMBER TO THE OUTLET INVERT ELEVATION WITH POTABLE WATER AND MONITORING THE LIQUID LEVEL OVER A MINIMUM 24-HOUR PERIOD. CONTRACTOR SHALL COORDINATE TESTING WITH PARE ENGINEERING. IF DETERMINED TO BE LEAKING, CONTRACTOR SHALL INITIATE CORRECTIVE ACTION AND COORDINATE CORRECTIVE ACTIONS WITH PARE ENGINEERING.
- PUMP CHAMBER SHALL BE INSTALLED ON A LEVEL COMPACTED BASE FREE OF UNSUITABLE FILL OR OTHER DELETERIOUS MATERIAL, WITH A MINIMUM 6" OF CRUSHED STONE BEDDING.

**SEWER PIPING NOTES**

- GRAVITY SEWER PIPING SHALL BE 4-INCH POLYVINYL CHLORIDE PIPE (PVC) GASKETED BELL AND SPIGOT PUSH ON JOINT SDR 35 PIPE, OR APPROVED EQUAL.
- FORCE MAIN SHALL BE 2-INCH PRESSURE-RATED SCHEDULE 40 PVC PIPING WITH SOCKETED SOLVENT-WELDED JOINTS AND 280 PSI WORKING PRESSURE AT 73 DEGREES FAHRENHEIT.
- ALL PIPE PENETRATIONS THROUGH SDDS STRUCTURES SHALL BE MADE WATERTIGHT WITH HYDRAULIC CEMENT.
- CONTRACTOR SHALL CONDUCT PRESSURE TESTING OF PROPOSED GRAVITY AND FORCE MAIN SEWER LINES AT A PRESSURE OF 5 PSI FOR FIVE (5) MINUTES. CONTRACTOR SHALL COORDINATE TESTING WITH PARE ENGINEERING. IF 5 PSI PRESSURE FOR 5 MINUTES IS NOT MET, CONTRACTOR SHALL INITIATE CORRECTIVE ACTION AFTER COORDINATION WITH PARE ENGINEERING.
- SUPPORT ALL FORCE MAIN VERTICAL BENDS BY USING 12"x12" CONCRETE ANCHOR BLOCK WITH 1/4" GALVANIZED U-BOLT EMBEDDED A MINIMUM OF 4" INTO CONCRETE BLOCK

**EROSION AND SEDIMENTATION CONTROL NOTES:**

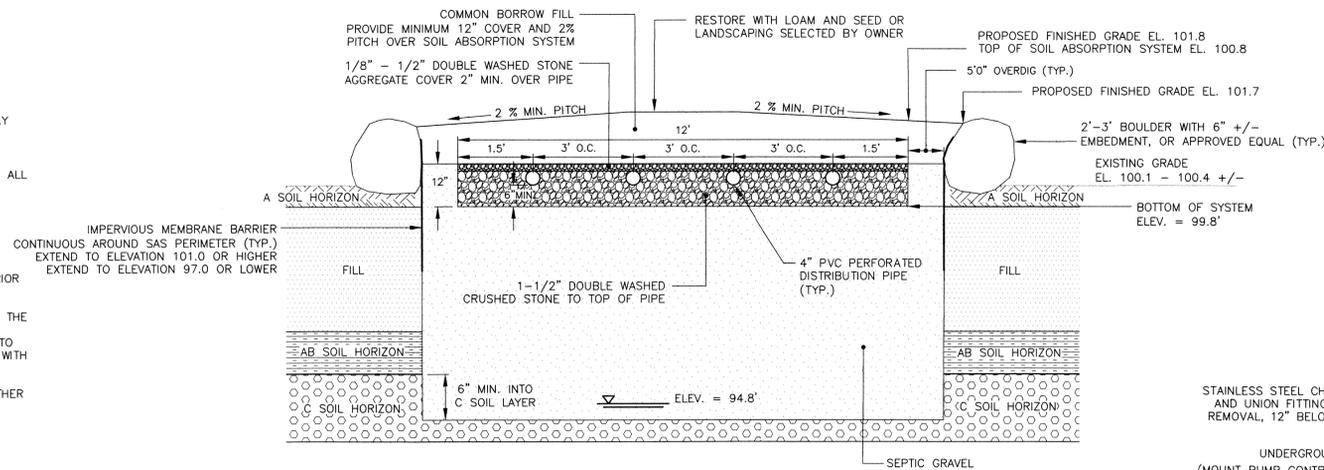
- SILT FENCE AND HAYBALE SEDIMENT CONTROL BARRIERS ARE TO BE INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS AND DETAILS PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK. HAYBALE BARRIERS SHALL BE INSTALLED AROUND ALL MATERIAL STOCKPILES.
- ALL CONSTRUCTION PHASE EROSION CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDER DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER ANY STORM EVENT THAT GENERATES AT LEAST 0.5 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD. ANY IDENTIFIED DEFICIENCIES SHALL BE PROMPTLY CORRECTED.
- ACCUMULATED SEDIMENTS SHALL BE EXCAVATED AND PROPERLY DISPOSED WHEN THE HEIGHT OF THE SEDIMENT EXCEEDS ONE THIRD (1/3) THE HEIGHT OF THE SILT FENCE.
- REMOVE THE SEDIMENT DEPOSITS OR INSTALL A SECONDARY BARRIER UPSLOPE FROM THE EXISTING BARRIER WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE HAYBALE BARRIER.
- REPLACE OR REPAIR THE BARRIER WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE BARRIER HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE BARRIER BECAUSE:
  - THE BARRIER HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER,
  - THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR
  - THE HAY BALES OR SILT FENCE HAS DETERIORATED OR BEEN DAMAGED.
- IF REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS (E.G. TEMPORARY STABILIZATION OF CONTRIBUTING AREA, DIVERSIONS, STONE BARRIERS) ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE HAY BALE BARRIER.
- PERMANENT VEGETATION OR OTHER APPROVED STABILIZATION SHALL BE RE-ESTABLISHED UPON COMPLETION OF EARTHWORK.
- UPON COMPLETION OF THE PROJECT AND PERMANENT STABILIZATION OF THE GROUND SURFACE, ALL SEDIMENT CONTROL BARRIERS SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE FASHION.

**SOIL ABSORPTION SYSTEM NOTES:**

- REMOVE ALL TOPSOIL, SUBSOIL, AND FILL WITHIN AND 5 FEET AROUND THE SOIL ABSORPTION SYSTEM 6" INTO PARENT MATERIAL. INSTALL SEPTIC GRAVEL IN 12" MAX COMPACTED LIFTS CONFORMING TO SECTION 15.255 OF MADEP TITLE V FROM BOTTOM OF EXCAVATION TO TOP OF SYSTEM ELEVATION 100.80. LEVEL BOTTOM OF EXCAVATION TO BE OBSERVED BY TOWN AND PARE ENGINEERING PRIOR TO COMMENCEMENT OF FILL.
- STONE SHALL BE CLEAN AND FREE OF FINES. PARE ENGINEERING SHALL OBSERVE AND APPROVE SAMPLES OF STONE PRIOR TO INSTALLATION OF SOIL ABSORPTION SYSTEM.
- DISTRIBUTION PIPING WITHIN LEACHFIELD SHALL BE 4-INCH SDR 35 PVC PERFORATED PIPE.
- INTERCONNECT ENDS OF DISTRIBUTION LINES WITH 4" SDR 35 SOLID PVC PIPE HEADER.
- INSTALL A VENT (SEE DETAIL ON THIS SHEET).
- CONTRACTOR SHALL EXCAVATE A TEST HOLE WITHIN THE LIMITS OF SOIL ABSORPTION SYSTEM TO CONFIRM THAT THE C LAYER HAS A MINIMUM THICKNESS OF FOUR FEET. PARE SHALL PERFORM A PERCOLATION TEST IN THE SOIL ABSORPTION SYSTEM SUBGRADE TO CONFIRM THE ASSUMED 2 M.P.I. PERCOLATION RATE, IF DEEMED WARRANTED.

**EXISTING SEPTIC TANK NOTES**

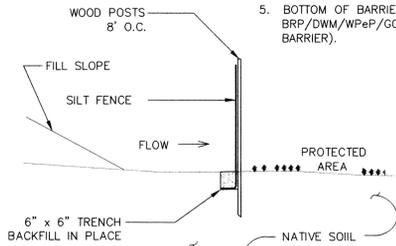
- CONTRACTOR SHALL PUMP OUT EXISTING SEPTIC TANK FOR THE PURPOSE OF EVALUATION OF STRUCTURAL INTEGRITY AND POTENTIAL INFILTRATION. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH PARE ENGINEERING. IF THE TANK IS DETERMINED BY PARE ENGINEERING TO BE UNSUITABLE FOR REUSE, THE CONTRACTOR SHALL INITIATE CORRECTIVE ACTION, INCLUDING POTENTIAL REPLACEMENT, AND COORDINATE CORRECTIVE ACTION WITH PARE ENGINEERING.
- CONTRACTOR SHALL CONDUCT A HYDROSTATIC TEST OF EXISTING SEPTIC TANK, IF FOUND SUITABLE FOR REUSE, BY FILLING THE TANK ABOVE THE OUTLET PIPE WITH POTABLE WATER AND MONITORING THE LIQUID LEVEL OVER A MINIMUM 24-HOUR PERIOD. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH PARE ENGINEERING. IF TANK DETERMINED BY PARE ENGINEERING TO BE LEAKING, CONTRACTOR SHALL INITIATE CORRECTIVE ACTION AND COORDINATE CORRECTIVE ACTION WITH PARE ENGINEERING.
- CONTRACTOR SHALL RETROFIT SEPTIC TANK WITH INLET AND OUTLET TEES, AS REQUIRED. THE INLET TEE SHALL EXTEND A MINIMUM OF 10" BELOW THE FLOW LINE. EFFLUENT FILTER AND TEE SHALL BE EXTENDED AS REQUIRED TO CONFORM TO THE MINIMUM REQUIREMENTS SPECIFIED IN 310 CMR:15.227.
- FOR ENHANCED PERFORMANCE, A ZABEL MODEL A-1800 EFFLUENT FILTER, OR APPROVED EQUAL, SHALL BE INSTALLED ON THE OUTLET TEE. OWNER IS RESPONSIBLE FOR MAINTAINING EFFLUENT FILTER AND SEPTIC TANK.
- CONTRACTOR SHALL INSTALL PRECAST CONCRETE RISER AND MANHOLE COVER TO WITHIN 6 INCHES OF FINISHED GRADE OVER SEPTIC TANK OUTLET.



**SOIL ABSORPTION SYSTEM CROSS SECTION**  
NOT TO SCALE

**IMPERVIOUS MEMBRANE BARRIER**

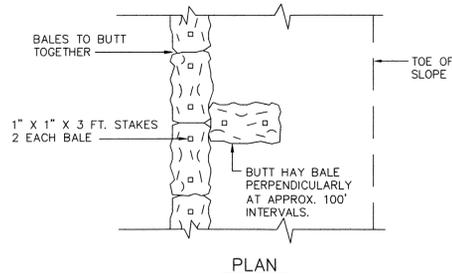
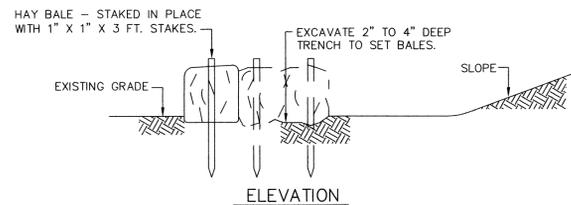
- SHALL BE PLASTIC, 40 MIL MIN. IN THICKNESS, OR APPROVED EQUAL.
- BARRIER SHALL BE CONTINUOUS ALONG ENTIRE PERIMETER OF SOIL ABSORPTION SYSTEM DIGOUT. SEAMS SHALL OVERLAP A MINIMUM OF 1 FOOT.
- MATERIAL SHALL BE INSPECTED PRIOR TO INSTALLATION TO INSURE NO HOLES OR OTHER DEFECTS IN MATERIAL.
- TOP OF BARRIER SHALL BE EXTENDED TO MINIMUM ELEVATION 101.0.
- BOTTOM OF BARRIER SHALL BE EXTENDED TO ELEVATION 97.0, OR LOWER (DEVIATION FROM BRP/DWM/WPeP/Go20-1 DUE TO DEPTH OF FILL AND NO GRADE BREAK WITHIN 50 FEET OF BARRIER).



**CONSTRUCTION:**

- FILTER CLOTH SHALL BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES AND POSTS SHALL BE SPACED EVERY 8 FEET.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED.
- ENTRENCH SILT FENCE AS SHOWN.

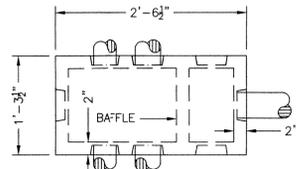
**SILTATION FENCE INSTALLATION**  
NOT TO SCALE



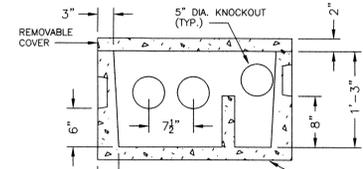
**CONSTRUCTION:**

- EXCAVATE TRENCH 4" AND PLACE FILL UP-SLOPE OF TRENCH.
- PLACE HAY BALE AND STAKE FIRST STAKE AT ANGLE TOWARDS FIRST BALE. STAKES ARE 18" MIN. INTO GROUND.
- WEDGE LOOSE HAY BETWEEN BALES.
- BACKFILL AND COMPACT EXCAVATED FILL ALONG HAY BALE.

**HAY BALE EROSION CONTROL BARRIER**  
NOT TO SCALE



**PLAN VIEW**

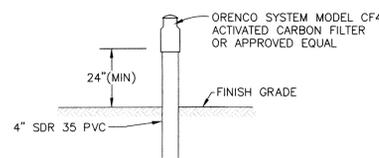


**CROSS SECTION**

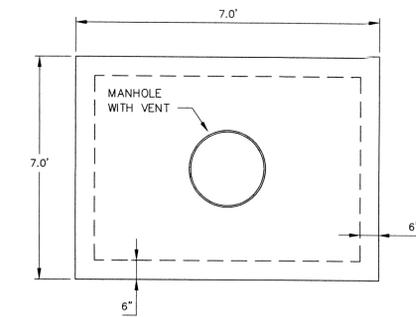
**NOTES:**

- DISTRIBUTION BOX SHALL BE ROTONDO MODEL DB-5, OR AN APPROVED EQUAL.
- DB-5 DESIGN LOADING: H-20
- DISTRIBUTION BOX SHALL BE INSTALLED ON A LEVEL COMPACTED BASE FREE OF UNSUITABLE FILL OR OTHER DELETERIOUS MATERIAL, WITH MIN. 6" CRUSHED STONE BEDDING.
- ALL OUTLET PIPES SHALL BE LAID LEVEL FOR A MINIMUM OF 2 FEET FROM THE DISTRIBUTION BOX.
- DISTRIBUTION BOX INLET TO BE INSTALLED WITH SDR 35 PVC SANITARY TEE. TEE SHALL BE ORIENTED HORIZONTALLY.

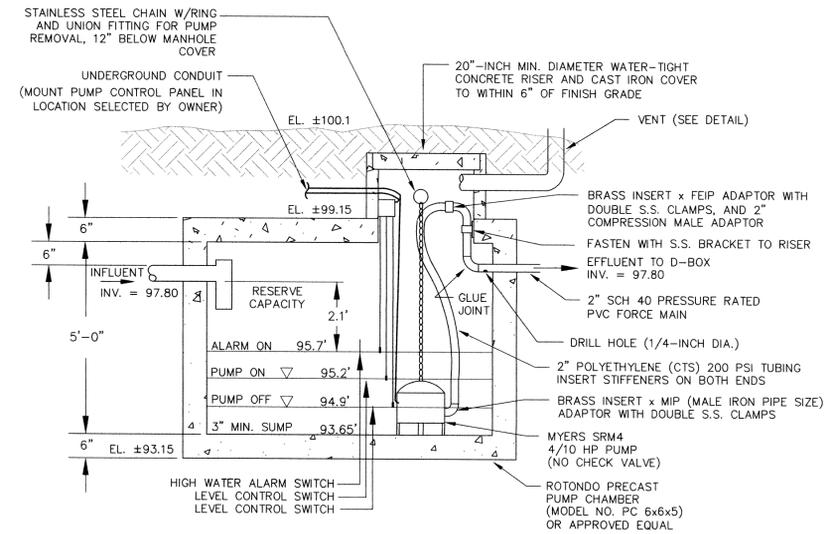
**DISTRIBUTION BOX**  
NOT TO SCALE



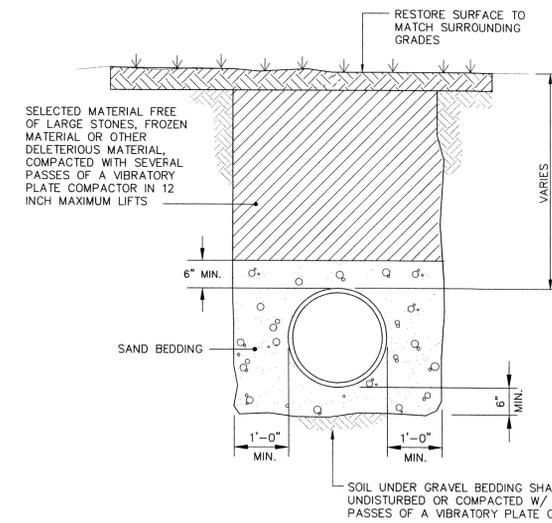
**VENT DETAIL**  
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**PLAN VIEW**  
NOT TO SCALE



**PUMP CHAMBER DETAIL**  
NOT TO SCALE



**NOTES:**

- REMOVE ALL TOPSOIL, SUBSOIL AND UNSUITABLE FILL AND PLACE BEDDING ON A COMPACTED LEVEL SUBGRADE.
- GRAVITY SEWER PIPING TO BE INSTALLED AT CONTINUOUS SLOPE, AS INDICATED ON SHEET C-1.

**GRAVITY SEWER TRENCH DETAIL**  
NOT TO SCALE

REVISIONS: APPROVED:	
PARE ENGINEERING CORPORATION 8 BLACKSTONE VALLEY PLACE LINCOLN, RI 02885 401-334-4100	
SUBSURFACE SEWAGE DISPOSAL SYSTEM REPAIR MASSACHUSETTS	CHECKED BY: SJS DATE: APRIL 2005
DESIGNED BY: IAL DATE: APRIL 2005	CHECKED BY: SJS DATE: APRIL 2005
DRAWN BY: IAL DATE: APRIL 2005	CHECKED BY: SJS DATE: APRIL 2005
126 BROOK HILL DRIVE A.P. 15, LOT 41 (REVISED LOT 228)	DETAILS 1 SCALE: AS SHOWN
PROJ. NO. 05012.00 DWG. NO. 69-570	C-2 Sheet 2 of 2