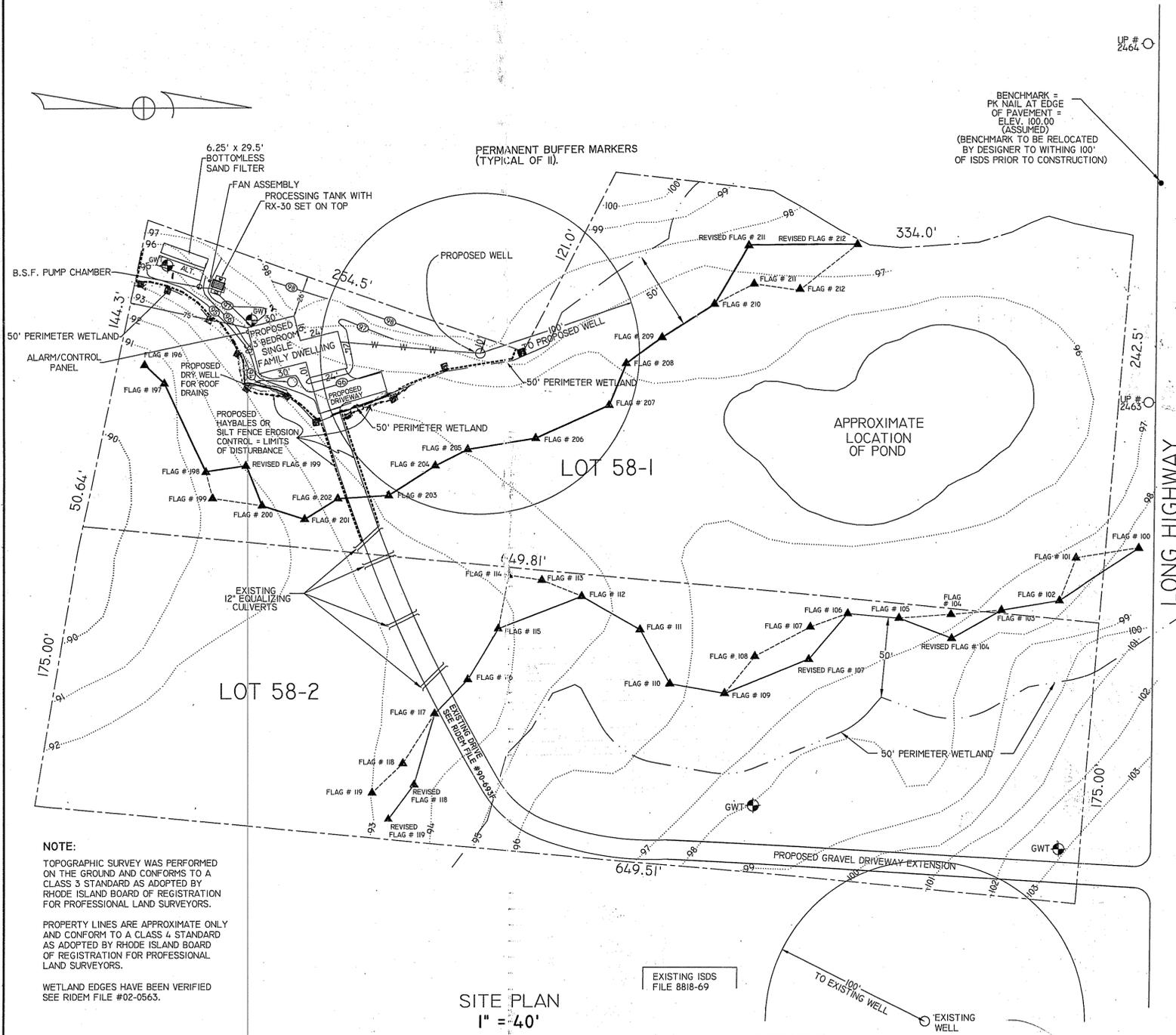
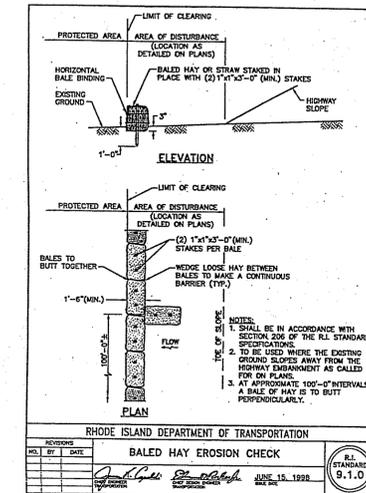
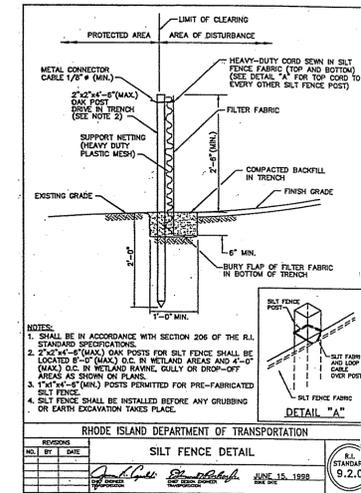


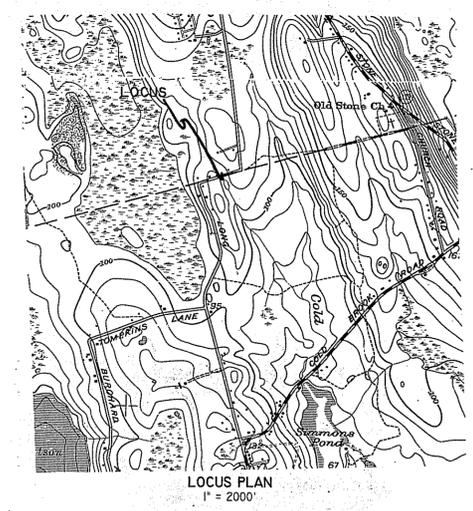
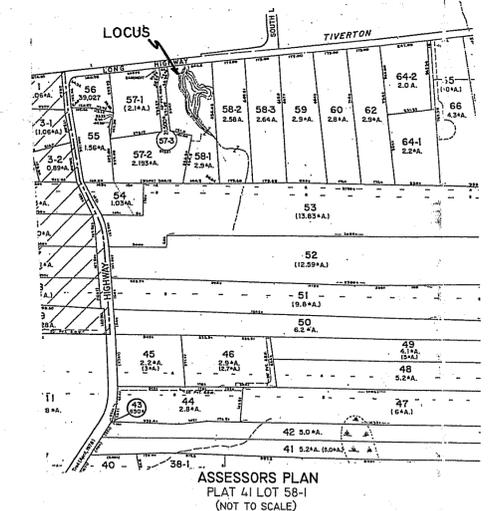
WETLAND & EROSION CONTROL NOTES

1. Contractor to install haybale checkdam or silt fencing prior to any excavation and remain in place until work is completed and vegetation is established. Maintain haybales or silt fencing as necessary to prevent runoff of soil.
2. Contractor to loam and seed all disturbed areas. Mulch and water as required to establish a strong stand of grass.
3. Fueling of vehicles within 50' of wetland areas is prohibited.
4. 4" x 4" Pressure Treated Buffer Zone Markers (24" above grade, 24" below grade) shall be installed as shown on plan prior to any construction. Contact RI DEM upon installation for verification and acceptance of location. Work shall commence upon RI DEM approval (or after one full week has elapsed from notification if no comments are received.)
5. In lieu of the above Buffer Markers (see note 4), Arborvitae plantings 3' in height shall be installed 10' on center as shown. Plantings shall be watered as necessary to insure survival. Any plantings that do not survive one growing season shall be replaced.
6. South Lake Road/ 4 Rod Way/ Long Highway Intersection is 350' east of the site
7. A driveway easement on lot 58-2 for the benefit of Lot 58-1 shall be recorded in the Little Compton Land Evidence Records prior to construction.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 18 2000
BOOK 91.100, FILE # 03-0412
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

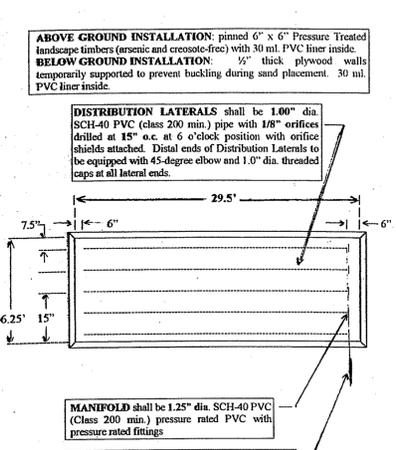
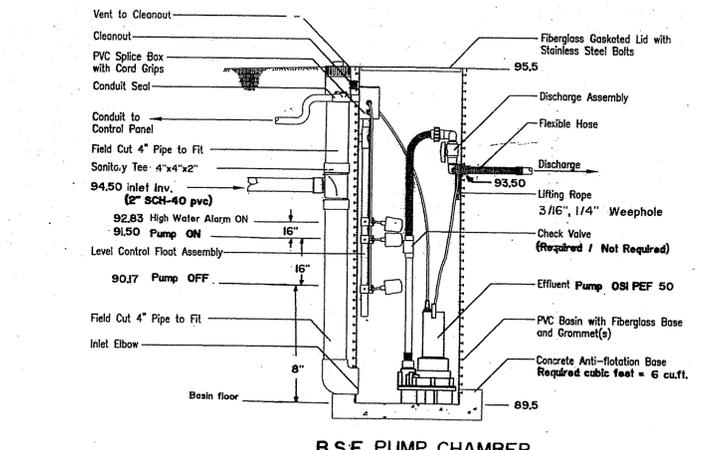
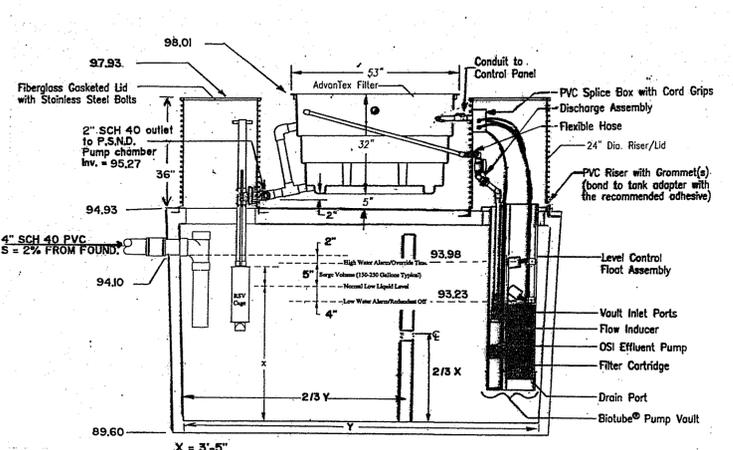
W. Joseph Crady



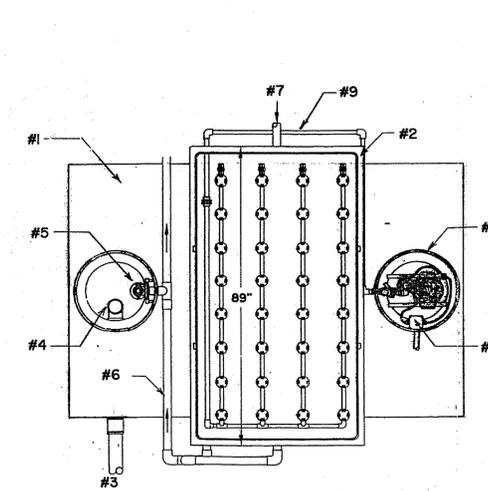
WILLIAM F. SMITH
No. 53034
REGISTERED PROFESSIONAL ENGINEER

9/2/03 ADD BUFFER MARKERS/WETLAND NOTES
8/27/03 ADJUST SILT-FENCE
REVISIONS:

PROPOSED ISDS NEW CONSTRUCTION PLAN
WETLAND PRELIMINARY WITH PROPOSED BUFFER MARKERS
LAWRENCE MEDEIROS
PLAT 41 LOT 58-1
LONG HIGHWAY
LITTLE COMPTON, RHODE ISLAND
SCALE: 1" = 40' DATE: JUNE 5, 2003
Civil Engineering Concepts, Inc.
1723 STAFFORD ROAD P.O. BOX 943
TIVERTON, RHODE ISLAND 02878 NEW BEDFORD, MA. 02741
PH: (401) 624-7611
FAX: (401) 624-7551
SHEET 1 OF 2 JOB#: 88-011



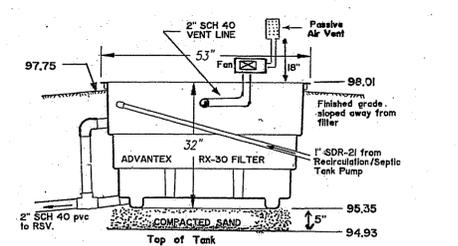
- NOTES**
- All construction shall conform to the State of Rhode Island and Providence Plantations Department of Environmental Management - Rules and Regulations Establishing Minimum Standards Relating to Location, Design, Construction, and Maintenance of Individual Sewage Disposal Systems as most recently Amended, and in accordance with the Bottomless Sand Filter Guidelines Document (as most recently amended).
 - All work shall be done in a workmanlike manner with lines laid as straight as possible and joints made watertight. All work shall be performed by an installer licensed in the State of Rhode Island.
 - CONTRACTOR SHALL NOTIFY DESIGNER 72 HOURS PRIOR TO ANY REQUIRED INSPECTION (Designer shall notify RI DEM for inspection at various stages of construction as designated on the approval application). Work shall not continue until the previous stage is inspected and approved.
 - DIG-SAFE NOTIFICATION IS REQUIRED PRIOR TO ANY EXCAVATION. Any underground utilities shown are approximate only and are based on limited availability of plans, visual observations, and local knowledge. ACTUAL LOCATIONS ARE TO BE VERIFIED BY CONTRACTOR PRIOR TO EXCAVATION THROUGH DIG-SAFE procedures.
 - Any existing tanks and/or any leaching area components / contaminated soil encountered shall be pumped empty and filled with clean soil or removed and properly disposed of in a manner approved by RI DEM and the Designer.
 - Any existing well that is to be abandoned as part of this installation shall be physically disconnected from the building plumbing, filled with clean granular soil, and sealed.
 - Area to be utilized for B.S.F. shall remain clear of all vehicles, equipment, and stockpiled materials. It is recommended the area be marked with caution tape to restrict access. Connection or smearing of native soil will compromise the operation of the B.S.F.
- SEPTIC/RECIRCULATION TANK:** Gallonage as specified on Processing Tank Detail
- Equipped with suitable cast-in-place PVC mounting flange for Detail specified diameter PVC risers over inlet & outlet access covers. Water tight bonding epoxy (or other proper adhesive) required between tank adapters and risers. Fiberglass/PVC covers required. "U" or "double tee" NOT TO BE INSTALLED on interior baffle wall. Baffle wall opening to be as specified on tank detail.
 - Fiberglass tank access covers are NOT to be covered with soil. Final foam placement (elevation) shall be at least 1" below the access covers and graded away from tank.
 - ALL TANK SEAMS, riser connections (if any) and all plumbing joints are to be installed 100% watertight, sealed with suitable gasket material, asphalt cement or other cement suitable for that specific component. Any knock-out holes in the bottom of the tank shall remain sealed or be sealed with suitable plug and cement. Unused inlet/outlet knockouts shall be filled with mortar. Static water test required on tank following attachment of risers. The life span of the system would be compromised by the intrusion of any groundwater.
 - For proper operation, the septic tank shall be inspected annually and pumped when any solids accumulation exceeds 1/3" liquid depth.
 - Standard OSI mounting hardware shall be utilized for Recirculating Splitter Valve installation and pump vault components. ALL MATERIALS AND CONSTRUCTION shall meet the manufacturer's requirements and applicable building, electrical, and plumbing codes. A manufacturer's installation & maintenance schedule shall be acquired and followed. See note # 37a. Third party or alternate generic parts requiring substantial field modifications to fit shall not be permitted.
 - Recirc. compartment Biotube Pump Vault shall be OSI 3-Hour Effluent Pumping System package specifically for discharging to Advantex RX-30 Filter, and MYP-RX control panel for operating a linked pump system (2 pumps in separate locations) unless otherwise specified on plan.
 - For additional PUMP INFORMATION, see additional details contained within this plan and accompanying documentation and manufacturers published information provided at the time of pump purchase. The information contained within this plan is intended to provide schematic requirements only. Actual manufacturer's shop drawings are to be coordinated with the pump supplier, including all accessories such as alarm, floats, etc. that are compatible with the pumps. O&S components requiring extensive modification to the system are not permitted.
 - A SIGN shall be posted in the vicinity of pump manholes warning of the potential of hazardous sewer gases and the need for proper adequate venting and air monitoring prior to working on the pump assembly.
 - ELECTRICAL WIRING is to be encased in suitable conduit with proper fittings at each end to maintain a watertight connection and prevent transport of gases. Electrical installation shall conform to all applicable local/state regulations.



1. 1500/2000 gallon Processing Tank	6. 2" Class 200 (psi) SCH-40 pipe to secondary pump chamber
2. RX-30 Media Filter set on sand bed	7. Ventilation Fan Assembly line
3. 4" SCH-40 PVC bldg. sewer inlet pipe	8. Biotube Pump Package w/ RX-30 Recirc. pump
4. 4" SCH-40 inlet pipe	9. 1" Class 200 (psi) SCH-40 pressure pipe to RX-30
5. Recirc. Splitter Valve (manufacturer specified)	10. Waterproof/Vaporproof junction/splice box & elec. conduit

Representative piping route - shown for component identification only
Refer to plan view for piping alignment and inlet/outlet locations

PROCESSING TANK W/ OSI RX-30 MEDIA FILTER
not to scale

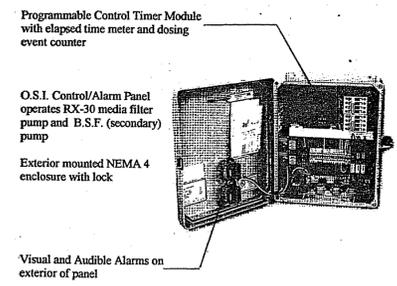


OSI ADVANTEX RX-30 MEDIA FILTER DETAIL
not to scale

I.S.D.S. ELEVATION SCHEDULE

FINISHED FIRST FLOOR	100.1
TOP OF FOUNDATION (MINIMUM)	99.0
FINISHED BASEMENT FLOOR	93.0
INVERT AT BUILDING	94.58
AVERAGE EXISTING GRADE AT PROCESSING TANK	96.0
ELEV. OF WATERTABLE AT TANK (based on 36" below grade)	93.0
INLET INVERT AT PROCESSING TANK	94.10
INVERT AT RECIRC. SPLITTER VALVE	95.27
INLET INVERT AT B.S.F. PUMP CHAMBER	94.00
INVERT OUT OF PUMP CHAMBER	93.50
ELEVATION OF TOP OF PEA STONE	97.00
INVERT AT END OF DISTRIBUTION LATERAL	96.77
INVERT AT START OF DISTRIBUTION LATERAL	96.73
TOP OF C33 FILTER SAND	96.50
BOTTOM OF C33 FILTER SAND	94.50
BOT. OF 6" LAYER C33 SAND/SOIL MIX	94.0
ELEVATION OF WATER TABLE AT B.S.F.	93.0
ELEVATION OF LEDGE	n/a
EXIST. AVERAGE GRADE AT B.S.F.	96.0
MAX. PROP. GRADE ADJACENT TO B.S.F.	96.25
MIN. PROP. GRADE ADJACENT TO B.S.F.	94.25

EXISTING BSF GROUND SURFACE PREPARATION SHALL ONLY CONSIST OF STRIPPING NATIVE "A" AND NATIVE "B" HORIZONS (IF NECESSARY) DOWN TO THE SPECIFIED ELEVATION OF THE BOTTOM OF THE SAND/SOIL MIX AS SHOWN ON THE BSF DETAIL. CLEAN NATIVE "B" MATERIAL, MIXED EQUALLY WITH CLEAN MEDIUM SAND SHALL BE THEN APPLIED IN A SIX- INCH DEEP LAYER AS SPECIFIED ON DETAIL.



ALARM / CONTROL PANEL DETAIL
not to scale

B.S.F. PUMP CHAMBER BUOYANCY CALCULATIONS:

Downward force
Tank type: 24" diameter, 6" deep P/C/fiberglass basin
Tank weight: 200 lbs. (negl. int. components/effluent weight)
Concrete ballast attached to tank (if required):
6.0 cu.ft. x 87.6 lb/cu.ft. = 525 lbs.
Ballast weight = 525 lbs.

Upward lift (neglecting soil wall friction):
Water table at 3.5" above basin floor:
1.0' x 1.0' x 3.1417 x 3.5' x 62.4 lb/cu.ft. = 686 lbs.
Buoyancy lift = 1072 lbs.

Safety factor:
200 lbs (tank) + 525 (conc.) = 725
686 (lift) = 1.11

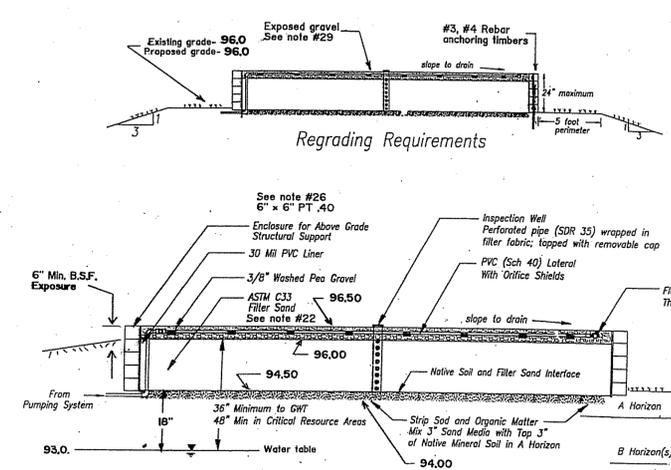
PROCESSING TANK BUOYANCY CALCULATIONS:

Downward force
Tank type: Rotondo-type ST-1500, all-in H-10 rated
Tank weight: 12,420 lbs. (neglecting baffle wall or interior components)
Advantex RX-30 filter weight: 606 lbs (dry)
Weight of earth cover: limited to 5" under RX-30, and 3" depth on sides of RX-30, at ground risers
Soil Weight: 1,300 lbs.

Concrete ballast on tank (if required): none
* 1.5 (depth) x * 1.5 (width) x * 1.5 (height) x 150 lb/cu.ft. =
Ballast weight = 0 lbs.

Upward lift (neglecting soil wall friction):
Water table: 3.5" (max) above bottom of tank
5.6 ft. x 10.5 ft. x 3.5 ft. x 62.4 lb/cu.ft. =
Buoyancy lift = 12,842 lbs.

Safety factor:
12,420 (tank) + 600 (RX-30) + 1,300 (soil)
14,320 (total) = 1.11



BOTTOMLESS SAND FILTER DETAILS
not to scale

BASIS OF SANITARY DESIGN

NUMBER OF BEDROOMS: 3
GARBAGE GRINDER: not allowed
LEACHING SYSTEM USED: Bottomless Sand Filter
SIZE OF PROCESSING TANK: 1500 gallon 2-compartment w/ specified baffle wall
SECONDARY TREATMENT UNIT: OSI Advantex RX-30 Media Filter
SIZE OF BSF PUMP CHAMBER: 24-inch dia., 6" deep PVC unit
SOIL TYPE: Friable SIL
APPLICATION RATE: Use Soil Category 7
B.S.F. LOADING RATE: 2.8 gal/st/day, timed dose category 1 Loading Rate

TOTAL SQUARE FOOTAGE REQ'D: 450 sq. ft. (pump chamber)
2.8 loading rate = 160.7 S.F. REQ'D

B.S.F. SQUARE FOOTAGE PROVIDED: 6.25' x 29.5' = 184.3 S.F. PROVIDED

B.S.F. DOSING CYCLE: 24" dia. pump chamber
16" DRAWDOWN (field set) BETWEEN "PUMP ON" AND "PUMP OFF"
DOSING QUANTITY: 31.3 GALLONS/CYCLE

B.S.F. DISCHARGE
31.3 gal/cycle - 3.6 gal (drainback)
115 orifices = 0.24 GAL/ORIFICE/CYCLE

45.7 gpm (pump discharge)
115 orifices = 0.379 GPM/ORIFICE

EMERGENCY STORAGE VOLUME BELOW HIGH WATER ALARM FLOAT:
1.00' x 1.00' x 1.33' x 3.1417 x 7.481 gal/cu.ft. = 31.3 GALLONS PROVIDED

MINIMUM EMERGENCY STORAGE REQ'D = 1 pump cycle = 31.3 GALLONS REQ'D

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATERS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 16 2003 FILE # 03-0112
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Casey

PROPOSED ISDS - DETAILS
LAWRENCE MEDEIROS
PLAT 41, LOT 58-1 SEP - 3 2003
LONG HIGHWAY
LITTLE COMPTON, RHODE ISLAND

SCALE: NONE DATE: APRIL 15, 2003

Civil Engineering Concepts, Inc
1723 STAFFORD ROAD P.O. BOX 3009
TIVERTON, RHODE ISLAND 02878 NEW BEDFORD, MA. 02741
PH. (401) 624-7611 PH. (508) 990-4900
FAX: (401) 624-7551

WILLIAM F. SMITH
Professional Engineer
No. 03263

NO CHANGE THIS SHEET
9/12/03

SHEET: 2 OF 2 FILE: 88-11A