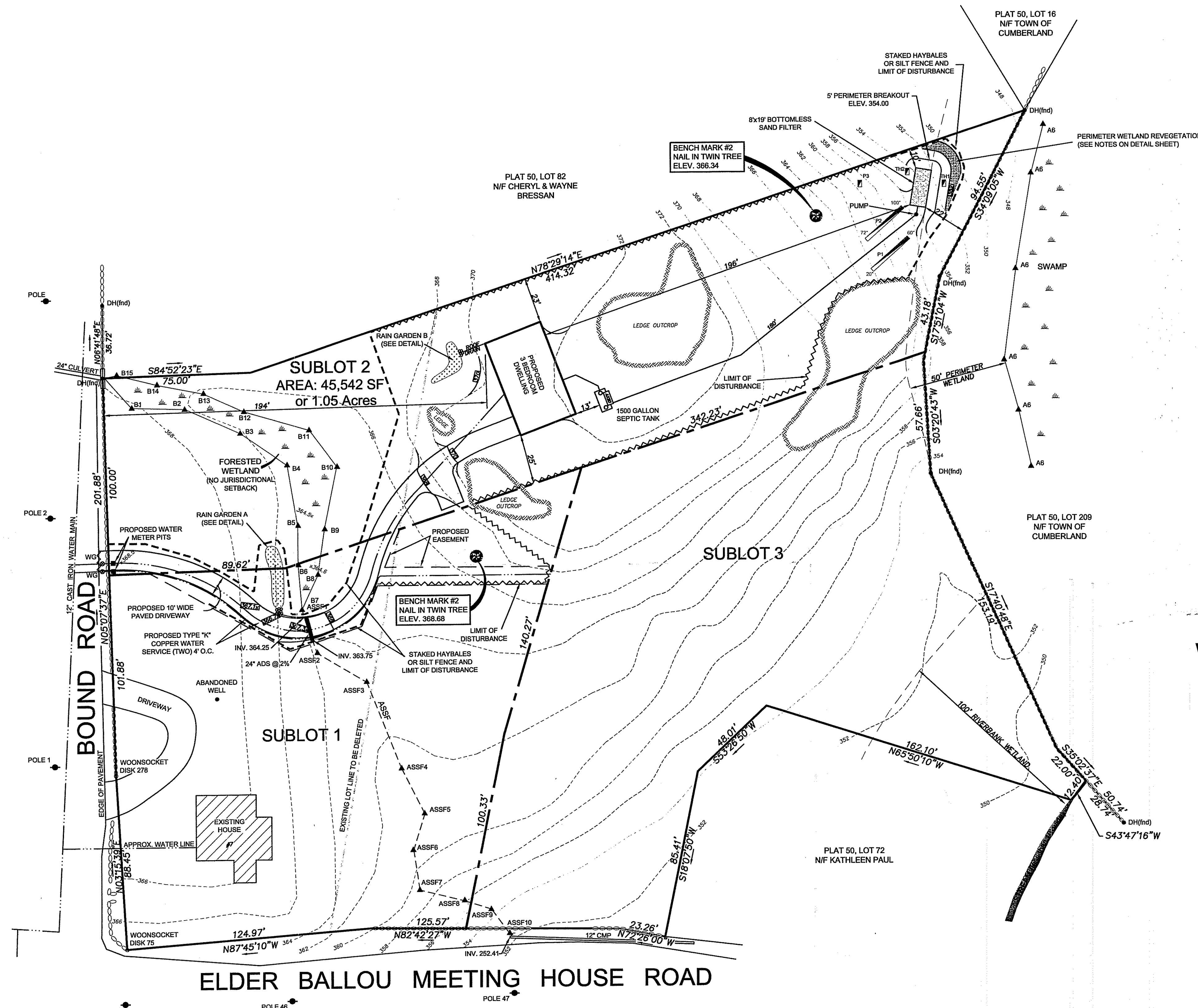
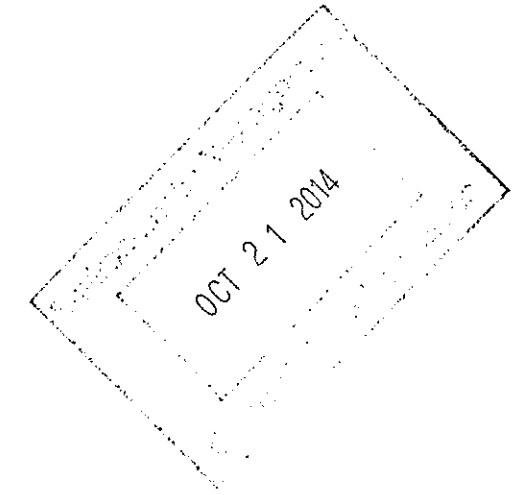


LOCUS MAP
NOT TO SCALE



LEGEND

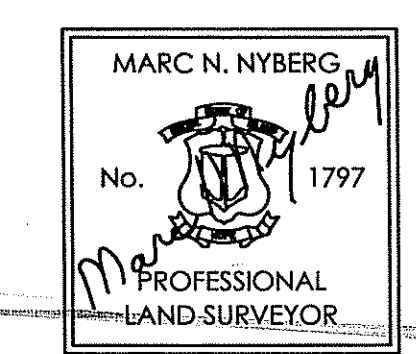
100 - - - - - 100	EXISTING CONTOURS
100.25x	EXISTING GRADE
---	PROPOSED CONTOURS
WG ⊗	WATER GATE
⊗	TEST HOLE
---	WATER LINE

**SITE PLAN FOR
WETLANDS, OWTS and WATER LINE CONNECTION
for
PREMIER PROPERTIES INC.
PLAT 50, LOTS 18 & 221
SUBLOT 2
BOUND ROAD
CUMBERLAND, RHODE ISLAND
OCTOBER, 2014
SCALE: 1 INCH EQUALS 30 FEET
SHEET 1 OF 2**



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PERMITS
APPROVED WITH COMMENTS
AS SPECIFIED BY THE LETTER
DATED 11 NOV 20 2014 14-0189
NO CHANGES ALLOWED WITHOUT APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THIS SURVEY AND PLAN CONFORM TO CLASS IV STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.
Marc N. Nyberg
REG. PROFESSIONAL LAND SURVEYOR



MARC N. NYBERG ASSOCIATES, INC.
LAND SURVEYORS and PLANNERS
501 GREAT ROAD, UNIT 104
NORTH SMITHFIELD, RHODE ISLAND 02896
TEL (401) 762-2870 FAX (401) 762-2871

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

RAIN GARDEN

TREATMENT
Rain garden to be 8" deep with a 2-4 inch amended soil layer (50/50 mixture of the excavated native soils and mature organic compost) and a 2-3 inch layer of non-dyed aged shredded hardwood mulch.

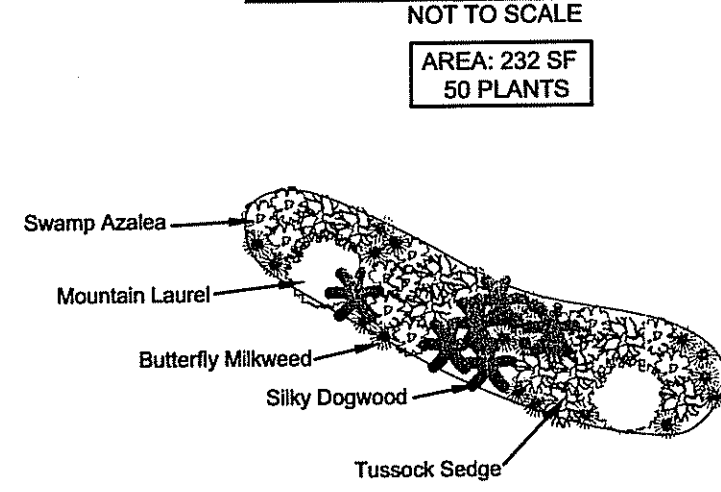
CONSTRUCTION

1. A crushed stone entrance should be installed at the inflow to prevent channeling.
2. A berm to detain stormwater should be constructed along the downhill side of the rain garden, perpendicular to the slope of the lawn.
3. Be sure that the soil within the rain garden area does not become compacted by construction activities (i.e. heavy machinery). If soil becomes severely compacted it may need to be tilled and amended to maintain proper

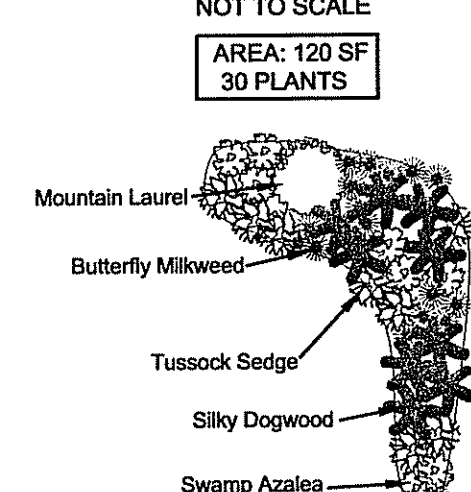
MAINTENANCE

1. The rain garden shall be inspected following at least the first two precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, the rain garden shall be monitored and maintained to assure proper functioning, plant growth and survival. Plants shall be replaced on an as-needed basis during the growing season.
2. Silt/sediment shall be removed from the rain garden when the accumulation exceeds one inch, or when water ponds on the surface of the rain garden for more than 48 hours. The top few inches of material shall be removed and shall be replaced with fresh soil mixture and mulch.
3. Pruning or replacement of woody vegetation shall occur when dead or dying vegetation is observed.
4. Soil erosion gullies shall be repaired when they occur.
5. Fertilizer or pesticides shall not be applied to plants within rain gardens.
6. Perennial plants and ground covers shall be replaced as necessary to maintain an adequate vegetated ground cover. Annual plants may also be used to maintain ground cover.

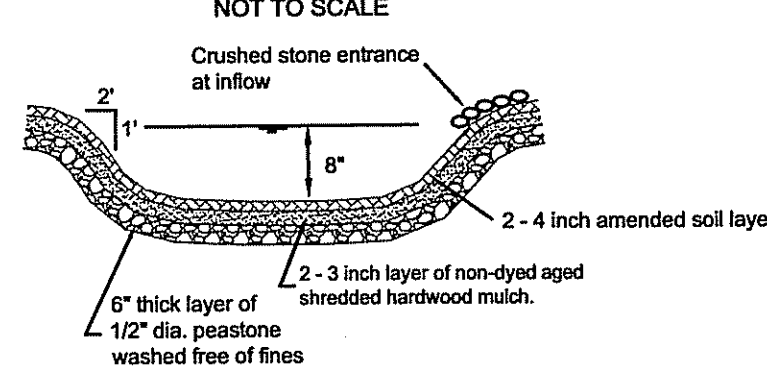
RAIN GARDEN A PLANTING DETAIL



RAIN GARDEN B PLANTING DETAIL



RAIN GARDEN CROSS-SECTION



SYSTEM SIZING:

3 BEDROOMS: 115 GPD x 3 = 345 GPD

SOIL CATEGORY: 6

APPLICATION RATE: 2.3 GPD/SF

AREA REQUIRED: 345/2.3 = 150 SF

AREA PROVIDED: 8' x 19' = 152 SF

TIMER INFO:

SET ADVANTEX TIMER TO 24 DOSES/DAY

345 GPD/24 DOSES/DAY = 14.38 GAL/DOSE

14.38/33.9 GPM = .42 MIN.

TOTAL PUMP RUN TIME = 10.08 MIN./DAY

TOTAL PUMP OFF TIME = 1420.32 MIN./DAY

TIME OFF PER CYCLE = 59.18 MIN.

TIME ON PER CYCLE = 0.42 MIN.

DOSE RATE:

14.38 GAL/DOSE

PUMP CHAMBER CAPACITY = 23.5 GAL./FT OR 1.96 GAL./INCH

PUMP CHAMBER DEPTH @ 14.38 GAL = .61 FEET

DOSE PER ORIFICE = 345 GPD/(24 DOSES/DAY)/78 ORIFICES = .18 GAL/ORIFICE/DOSE

OWTS SYSTEM COMPONENTS

1. 1,500 GALLON 2-COMPARTMENT CONCRETE SEPTIC TANK WITH PUMP VAULT AND RECIRCULATING SPLITTER VALVE AND W/O SIP3005 (6 STAGE) PUMP TANK.
2. 5' DEEP - 24" DIAMETER PUMP BASIN.
3. AX-20 ADVANTEX TEXTILE FILTER.
4. 19' LONG x 8' WIDE BOTTOMLESS SANDFILTER
5. ORENCO SYSTEMS, INC. CONTROL PANEL.

TEST HOLE DATA

DATE: 6-13-14

TH 1

0"-8" Ap, SL, 10YR 3/3

8"-20" Bw, SL, 10YR 4/4

20"-50" C, SL, 2.5YR 5/3

50"-120" C2, CB, G, SL, 5YR 5/3

ESHW: 120"

LEDGE AT: 24"

SOIL CATEGORY: 6

TH 2

0"-8" Ap, SL, 10YR 3/3

8"-24" Bw, SL, 10YR 4/4

24"-72" C, CB, G, SL, 5YR 5/3

ESHW: 30"

LEDGE AT: 72"

SOIL CATEGORY: 6

LEDGE PROBES:

P1 (TRENCH) 60"-20" E-W

P2 - (TRENCH) 100"-72" E-W

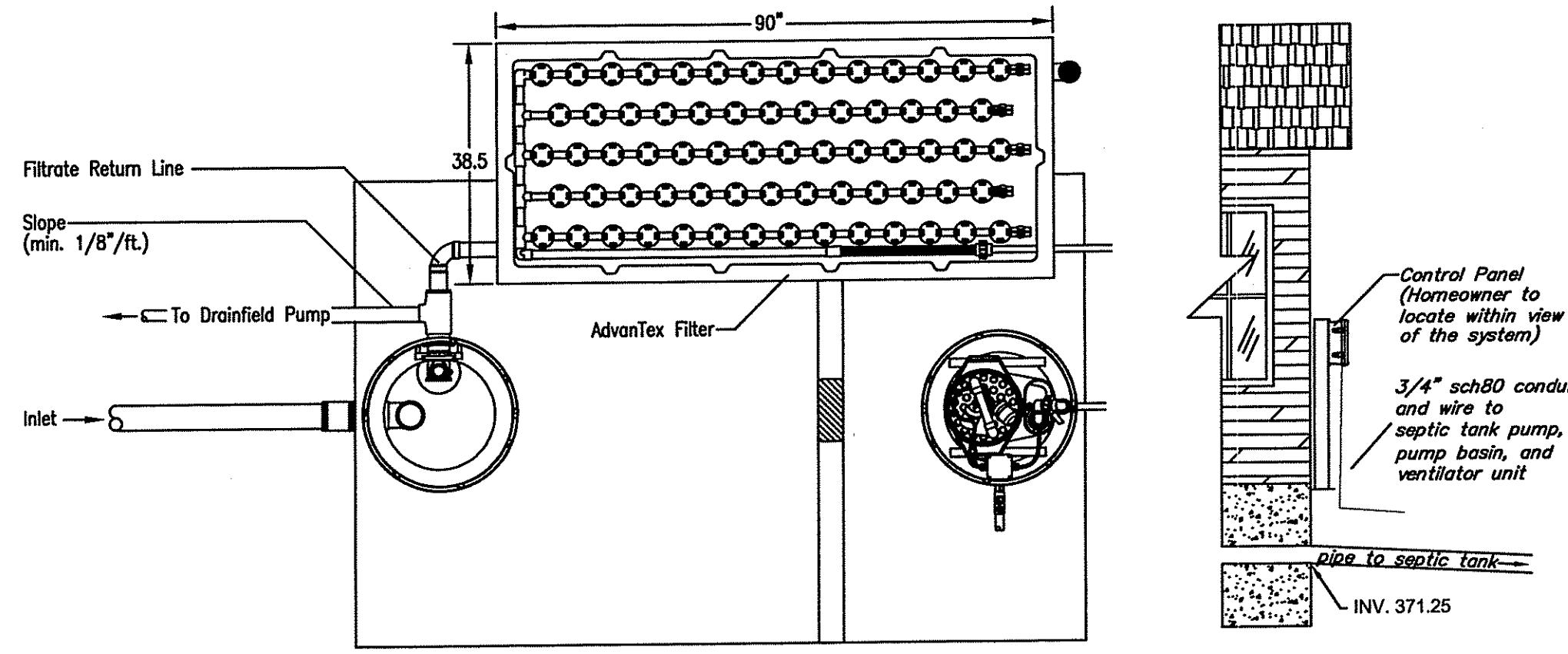
P3 - 30"

RECIRCULATING EFFLUENT PUMP SYSTEM (REPS)

(2 COMPARTMENT 1,500 GALLON SEPTIC TANK
AX 20 ADVANTEX TEXTILE FILTER)

NOT TO SCALE

AdvanTex Treatment System
AX 20 Series - Mode 3b

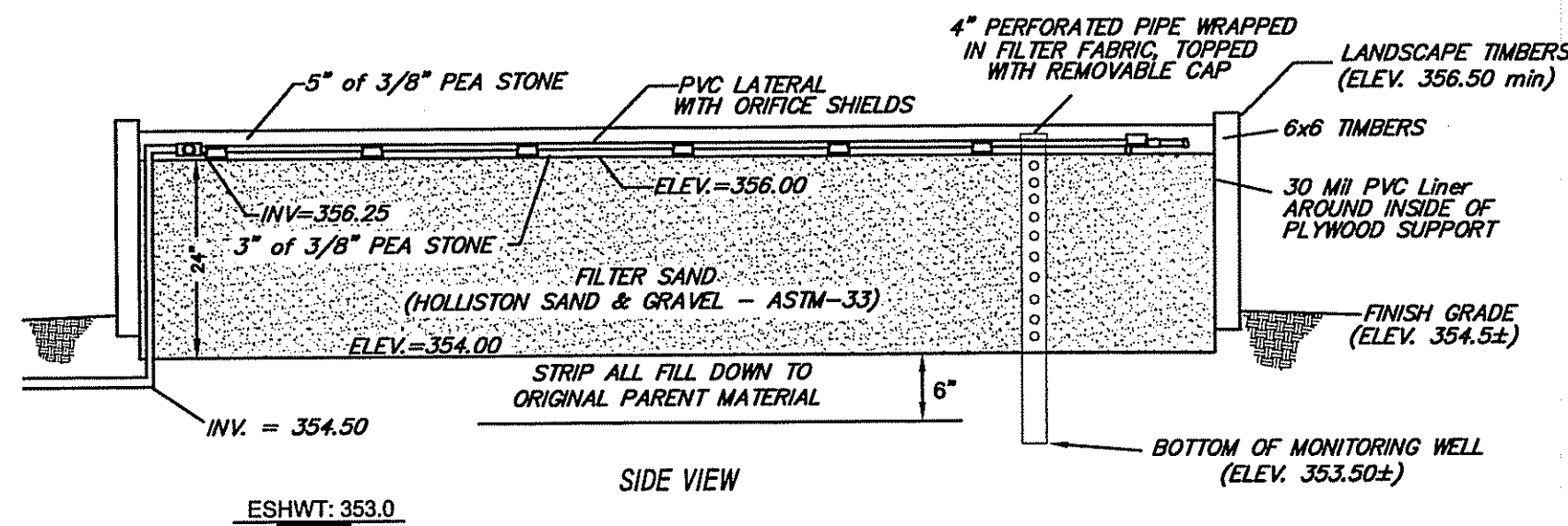


Top View

Side View

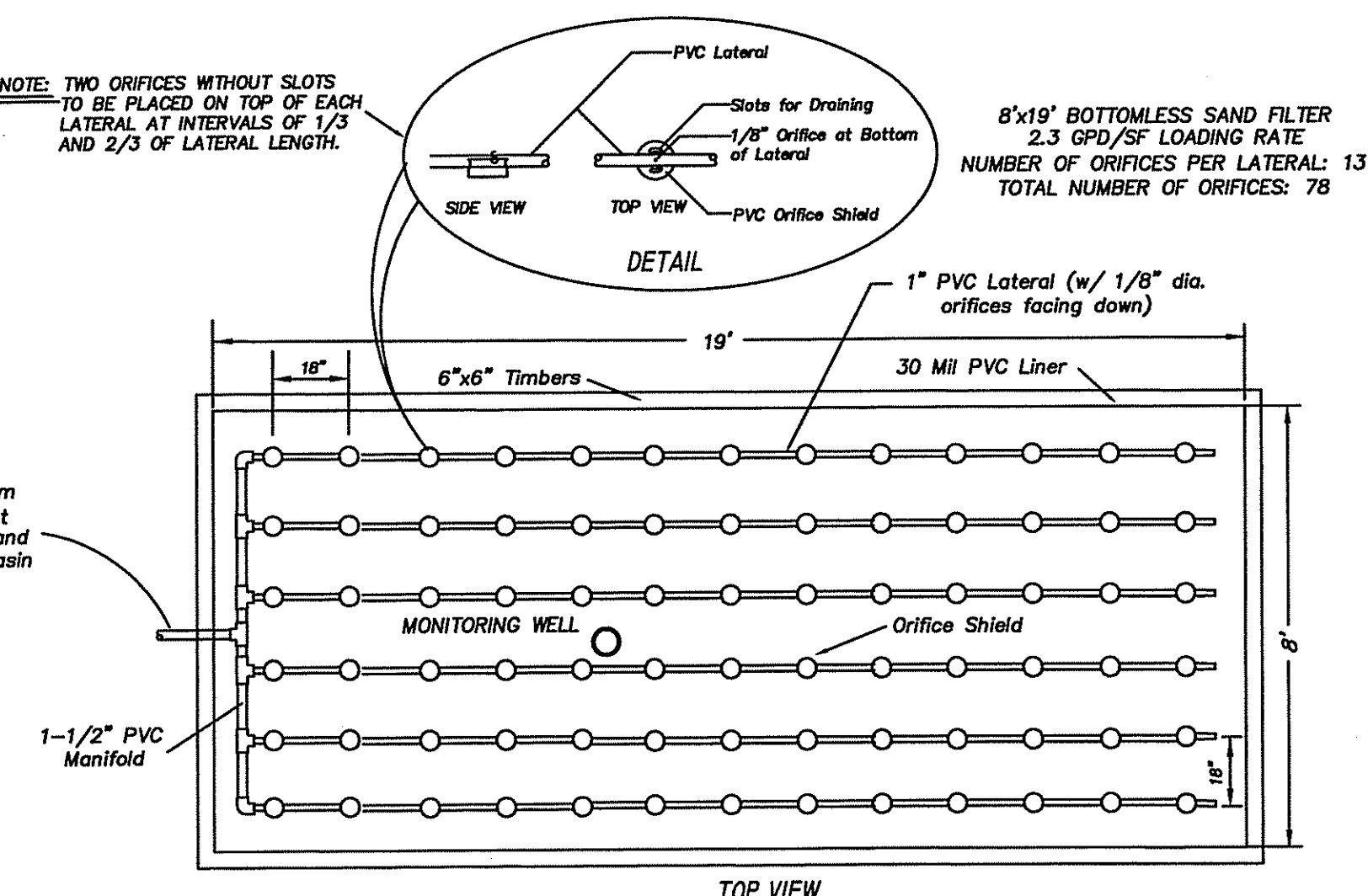
BOTTOMLESS SAND FILTER

NOT TO SCALE



SIDE VIEW

NOTE: TWO ORIFICES WITHOUT SLOTS TO BE PLACED ON TOP OF EACH LATERAL AT INTERVALS OF 1/3 AND 2/3 OF LATERAL LENGTH.



TOP VIEW

OWTS NOTES

- 1) SYSTEM INSTALLATION TO BE SUPERVISED BY THE DESIGNER.
- 2) ALL TREES AND/OR STUMPS WITHIN 10 FEET OF PROPOSED SYSTEM TO BE CLEARED.
- 3) NO WELL EXISTS WITHIN 100' OF THE PROPOSED LEACHING SYSTEM.
- 4) 5 FEET FROM SAND FILTER NOT TO BE LOWER THAN ELEVATION 354.00.
- 5) ANY PRIVATE WELLS, EXISTING & PROPOSED, WITHIN 200' OF ISDS ARE SHOWN.
- 6) ANY PUBLIC WELLS, EXISTING AND PROPOSED, WITHIN 500' OF ISDS ARE SHOWN.
- 7) SEPTIC TANK TO BE A MINIMUM OF 75' FROM ALL WELLS.
- 8) NO DRAINS OF ANY KIND SHALL BE WITHIN 25' UPGRADIENT OR 50' DOWNGRADIENT OR SIDE GRADIENT OF THE PROPOSED LEACHING SYSTEM.
- 9) ALL SOIL AT LEAST 6"± BELOW EXISTING GRADE AT BOTTOMLESS SAND FILTER SHALL BE STRIPPED AND BACKFILLED WITH FILTER SAND.
- 10) THE SEPTIC TANK SHALL BE A WATERTIGHT, 1,500 GALLON 2-COMPARTMENT TANK WITH 24" DIAMETER INLET AND OUTLET ACCESS RISERS. RISERS SHALL BE PVC WITH SECURE FIBERGLASS LIDS. IF CONCRETE TANK IS USED, ABS TANK ADAPTER SHALL BE CAST IN PLACE. TANK SHALL BE VACUUM TESTED WHEN CONSTRUCTED (W/CERTIFICATE) OR WATER TESTED/VACUUM TESTED ON SITE PRIOR TO ACCEPTANCE FROM THE ENGINEER.
- 11) THE ADVANTEX-AX TREATMENT SYSTEM CONTAINS A PACKED BED FILTER THAT USES SPECIALLY DESIGNED TEXTILE MATERIALS WITHIN A PRE-ASSEMBLED FILTER UNIT.
- 12) ALL PUMPS SHALL BE EQUIPPED WITH A HIGH WATER LEVEL VISABLE AND AUDIBLE ALARM POWERED BY A CIRCUIT SEPERATE FROM THE PUMP POWER. THE ALARM SHALL BE LOCATED IN A NORMALLY OCCUPIED AREA OF THE DWELLING OR SHALL BE INSTALLED AT A LOCATION TO BE DESIGNATED BY THE HOMEOWNER.
- 13) THE SEPTIC TANK SHALL BE PROVIDED WITH A PVC INLET TEE AND SCREENING PUMP VAULT IN THE OUTLET END. AN ACCESS RISER SHALL BE INSTALLED DIRECTLY ABOVE THE SCREENED PUMP VAULT AND INLET TEE.
- 14) BOTTOMLESS SAND FILTER MEDIA: HOLLISTON SAND & GRAVEL ASTM-33 SAND, LESS THAN 1% PASSING THE SIEVE WITH AN EFFECTIVE SIZE OF .25mm-.45mm AND WITH A UNIFORMITY COEFFICIENT OF 2.0±.
- 15) IF CONTRACTOR ENCOUNTERS ANY CONDITIONS DURING CONSTRUCTION WHICH INDICATE THE SYSTEM CANNOT BE INSTALLED IN ACCORDANCE WITH THE APPROVED DESIGN, OR FIND CONFLICTING INFORMATION ON THE PLAN, CONSTRUCTION SHALL CEASE AND DESIGNER BE NOTIFIED.
- 16) THE DESIGNER IS NOT RESPONSIBLE FOR ANY NEGLIGENT ACT OF OMISSION OF AN ISDS USER, INCLUDING BUT NOT LIMITED TO, FAILURE TO PROPERLY USE AND MAINTAIN THE SYSTEM, WHICH CAUSES DAMAGE TO THE SYSTEM.
- 17) LOCAL SUPPLIER OF OSI EQUIPMENT: ATLANTIC SOLUTIONS, 2417 EAST MAIN ROAD, PORTSMOUTH, RI 02871 TEL. (401) 293-0176

WETLANDS NOTES

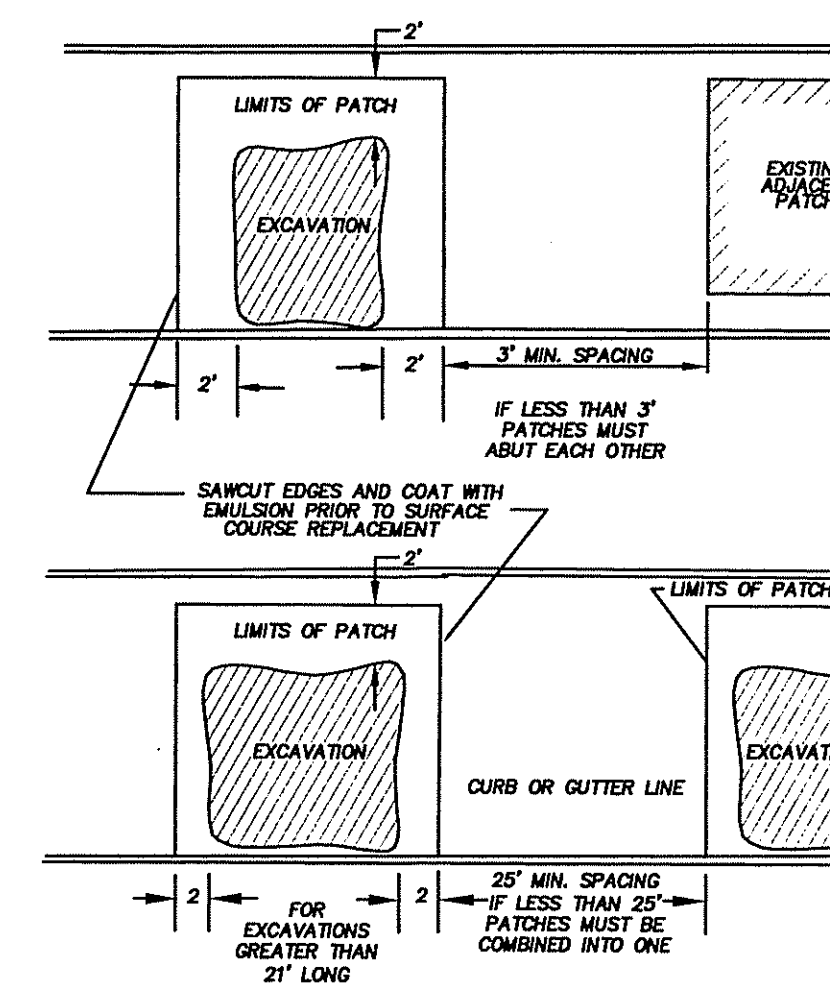
- 1) EROSION CONTROL TO BE INSTALLED PRIOR TO START OF CONSTRUCTION. IT IS TO BE INSPECTED BY THE OWNER OR CONTRACTOR AFTER ANY RAIN EVENT AND REPAIRED OR REPLACED AS NECESSARY UNTIL CONSTRUCTION IS COMPLETE AND AREA HAS STABILIZED.

REVEGETATION NOTES

- 1) DISTURBED AREAS SHALL BE LOAMED WITH 4"-6" OF SUITABLE TOPSOIL THEN SEEDED WITH A CONSERVATION GRASS MIXTURE.
- 2) THE AREA SHALL BE MULCHED WITH LOOSE HAY TO RETAIN MOISTURE AND RETARD EROSION.
- 3) SHRUBS SHALL BE PLANTED OUTSIDE THE 5' OWTS BREAKOUT PERIMETER. THESE PLANTINGS SHALL INCLUDE:
 - 5 PEPPERBUSH (Clethra alnifolia) 2'-3' HIGH; 5' O.C.
 - 5 ARROWWOOD (Viburnum dentatum) 2'-3' HIGH; 5' O.C.
- 4) SHRUB PLANTED AREA SHALL BE ALLOWED TO REVEGETATE NATURALLY.

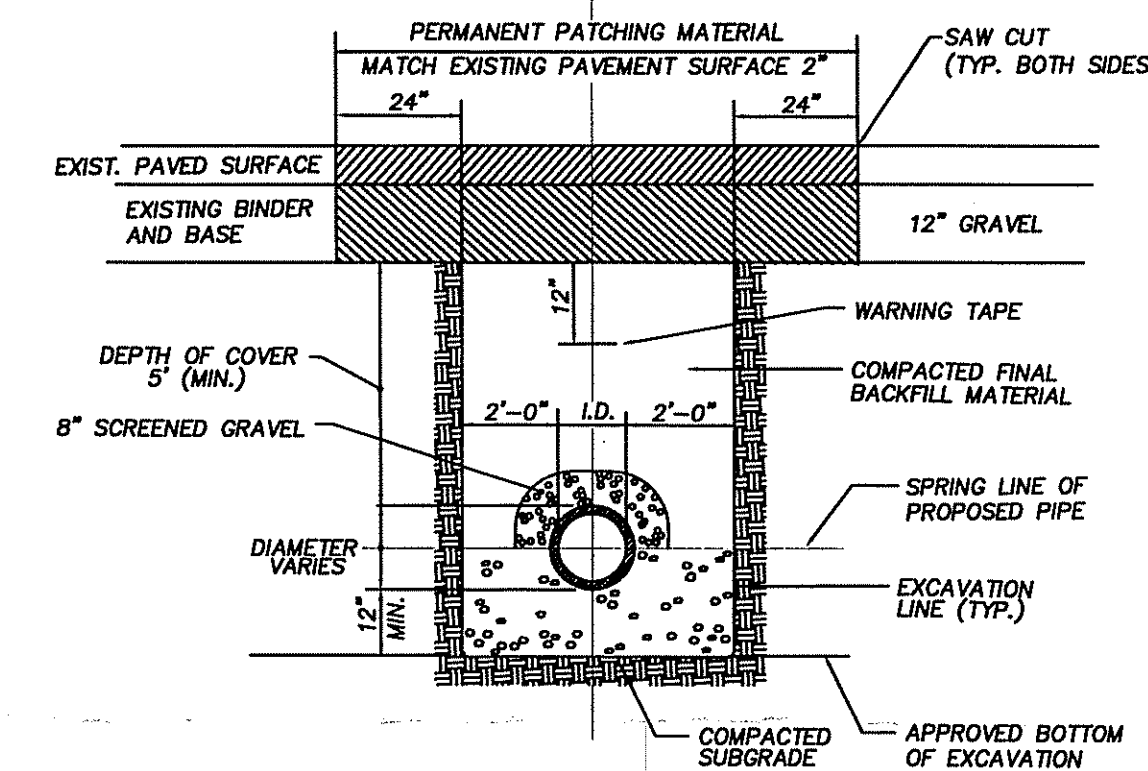
ROADWAY PATCH DETAIL

NOT TO SCALE



WATER LINE TRENCH DETAIL

NOT TO SCALE



* 2'-0" FOR ALL PIPE UP TO AND INCLUDING 36"
2'-6" FOR ALL PIPE GREATER THAN 36"

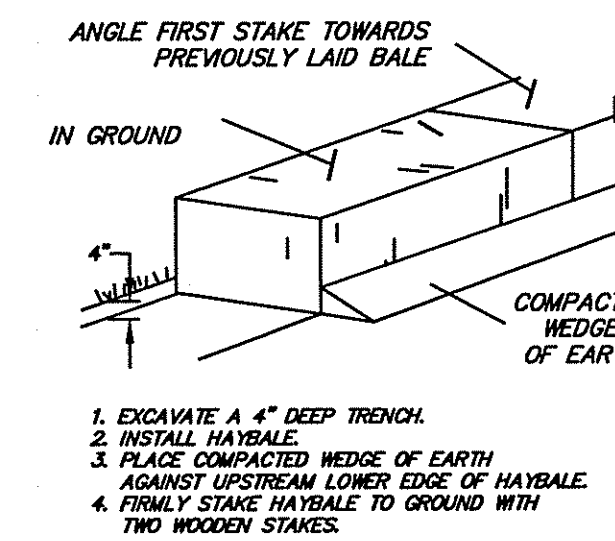
TYPICAL TRENCH AND PERMANENT PATCH DETAIL

NOT TO SCALE

NOTE: CONTRACTOR IS TO INSTALL ONE ASPHALT PATCH TO INCLUDE ALL UTILITIES.

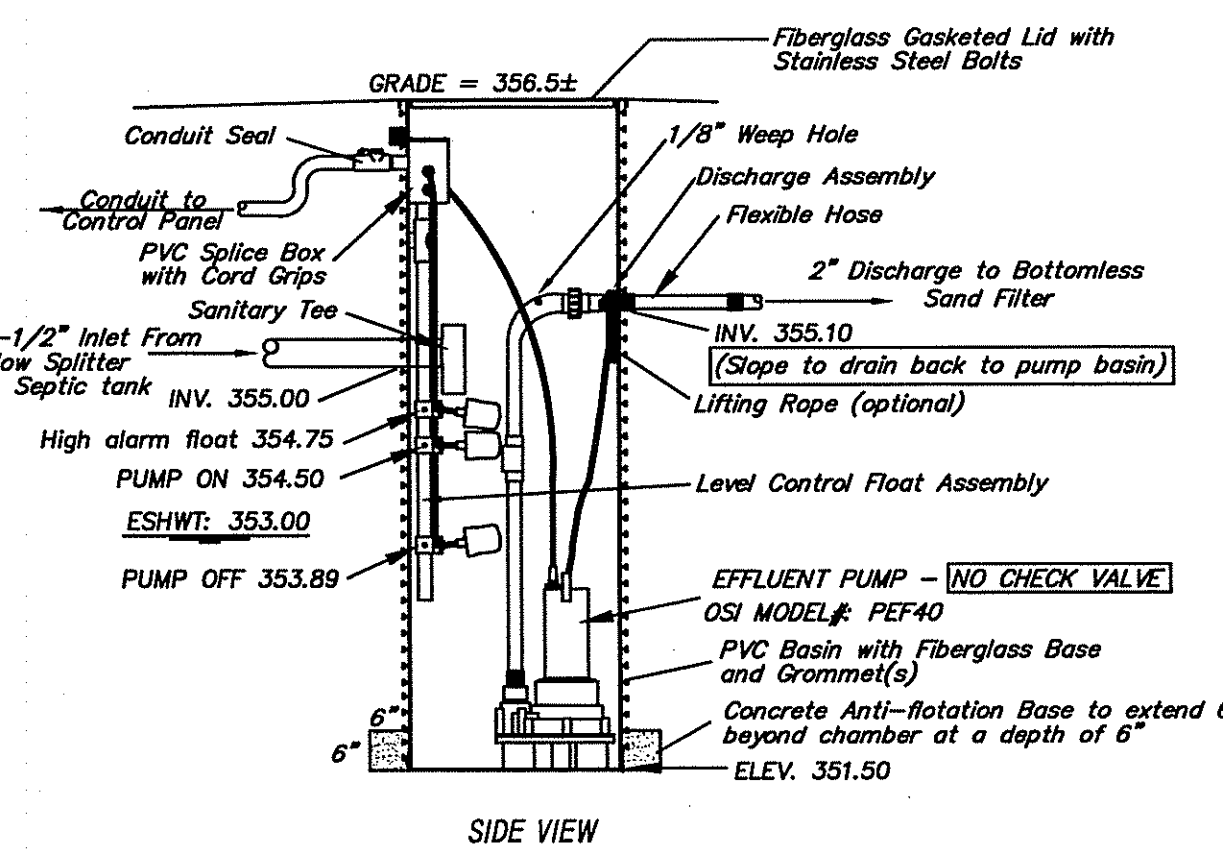
STAKED HAYBALE DETAIL

NOT TO SCALE



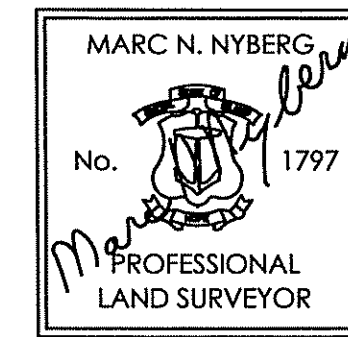
24" DIA. BOTTOMLESS SAND FILTER PUMP BASIN

WITH EFFLUENT PUMP ASSEMBLY NOT TO SCALE



SIDE VIEW

DETAIL SHEET
for
PREMIER PROPERTIES INC.
PLAT 50, LOTS 18 & 221
BOUND ROAD and
ELDER BALLOU MEETING HOUSE ROAD
CUMBERLAND, RHODE ISLAND
OCTOBER, 2014
SCALE: AS NOTED
SHEET 2 OF 2



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PROFESSIONAL LAND SURVEYORS
I HEREBY CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF THE ORIGINAL AS SUBMITTED TO THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT FOR RECORDATION.
DATE: NOV 20 2014 FILE # 14-0184
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

MARC N. NYBERG ASSOCIATES, INC.
LAND SURVEYORS and PLANNERS
501 GREAT ROAD, UNIT 104
NORTH SMITHFIELD, RHODE ISLAND 02896
TEL (401) 762-2870 FAX (401) 762-2871

Formal survey equipment is a verification of the type or extent of the survey work done on site.