

- NOTES**
1. TOPOGRAPHY AND ELEVATIONS SHOWN ARE FROM AN ON SITE SURVEY PERFORMED IN JULY 2015 USING CONVENTIONAL (TOTAL STATION) SURVEYING METHODS. LEVELING WAS CONDUCTED TO A CLASS II VERTICAL STANDARD. THE DATUM FOR THE PROJECT IS NAVD 88 AND WAS ESTABLISHED USING GLOBAL POSITIONING TECHNOLOGY.
 2. THE SUBJECT OF THIS APPLICATION IS RECORD LOT 2 WHICH IS PART OF A TWO LOT SUBDIVISION WITH ONE LOT PROPOSED FOR DEVELOPMENT (RECORD LOT 1) AND THE EXISTING DWELLING TO REMAIN ON RECORD LOT 1.
 3. THE SITE IS LOCATED IN FLOOD HAZARD ZONE A (NO BASE FLOOD ELEVATION DETERMINED) AND ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FEDERAL INSURANCE RATE MAP NO. 44003C01360, EFFECTIVE DECEMBER 3, 2010.
 4. WETLANDS DELINEATION WAS CONDUCTED BY NATURAL RESOURCE SERVICES, INC. OF HARRISVILLE, R.I. IN JUNE 2015.
 5. FOR RECORD LOT 1 SEE ON-SITE WASTE WATER TREATMENT SYSTEM REPAIR APPLICATION #9535-3246. FOR GROUNDWATER TABLE INFORMATION SEE SOIL EVALUATION APPLICATION #1535-0554 DATED JULY 14, 2015.
 6. THE SITE IS A DEVELOPED RESIDENTIAL LOT.
 7. STRAW BALE EROSION CHECK (R.I. STANDARD 9.1.0) AND/OR SILT FENCE SHALL BE INSTALLED AT ALL DOWNGRADIENT LIMITS OF DISTURBANCE PRIOR TO EARTH DISTURBING ACTIVITIES, AND SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
 8. ALL IMPROVEMENTS SHALL BE ACCURATELY LOCATED AND STAKED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 9. ALL DISTURBED AREAS SHALL BE STABILIZED WITH 4" LOAM AND SEED OR SOD, PROPOSED SLOPES SHALL BE 3:1 (TYPICAL).
 10. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. "DIG SAFE" AND APPROPRIATE UTILITY AUTHORITIES SHALL BE NOTIFIED PRIOR TO ANY CONSTRUCTION FOR ACCURATE UTILITY LOCATIONS.
 11. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF THE R.I.D.E.M. O.W.T.S. PERMIT, WETLANDS PERMIT AND IN COMPLIANCE WITH ALL TOWN REGULATIONS. NO WORK IS PROPOSED WITHIN JURISDICTIONAL WETLANDS.
 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
 13. ALL STAGES OF O.W.T.S. CONSTRUCTION MUST BE SUPERVISED BY THE SYSTEM DESIGNER.
 14. PER R.I.D.E.M. RULE 7.12 APPLICANTS ARE REQUIRED TO TREAT THE WATER QUALITY VOLUME, OR ONE INCH OF STORMWATER RUNOFF FROM ANY NEW ROOFTOP IMPERVIOUS SURFACES OF 600 SQUARE FEET OR GREATER IN SIZE.
 15. THIS PLAN REFERENCES O.W.T.S. APPLICATION #1535-0554 AND FRESHWATER WETLANDS APPLICATION #15-0234.

BIO-RETENTION AREA NOTES

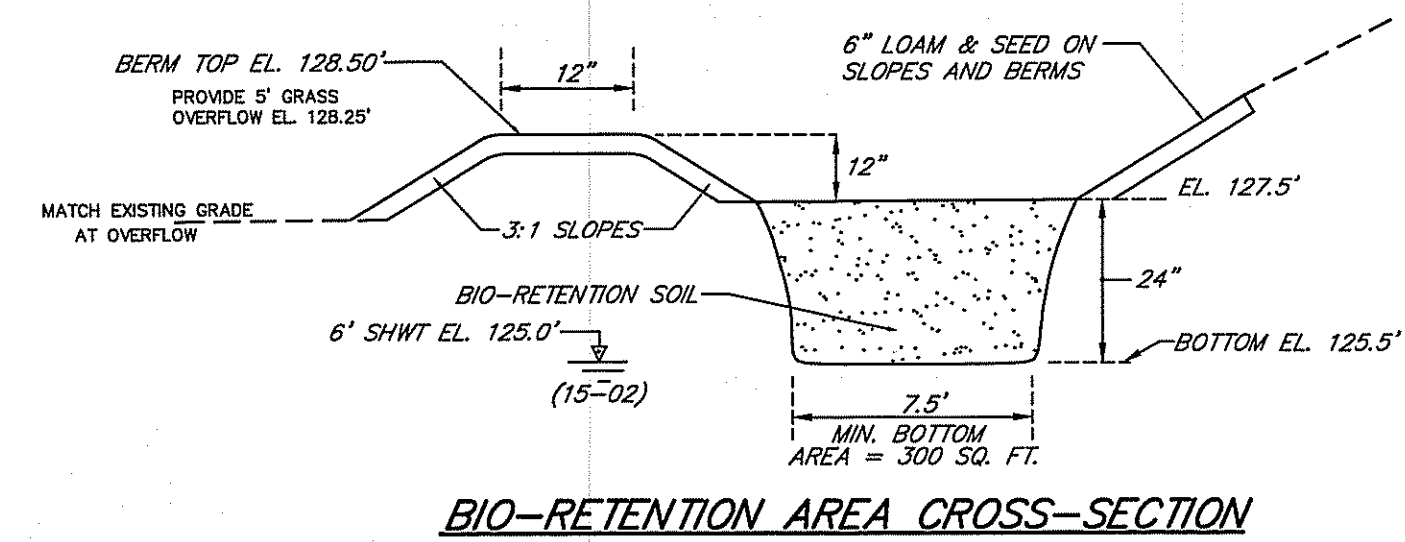
1. ALL LOAM & SUBSOIL SHALL BE STRIPPED AND THE AREA EXCAVATED TO DESIGN BOTTOM GRADE. BIO-RETENTION SOIL SHALL BE PLACED TO A DEPTH OF 24".
2. BIO-RETENTION AREA BASIN BOTTOM AREA SHALL BE SEED WITH "MIXED HEIGHT PRAIRIE SEED MIX", CODE MDM, FROM PRAIRIE MOON NURSERY, (1-866-417-8150), OR APPROVED EQUAL.
3. PLANTINGS SHALL BE SELECTED BY A LANDSCAPE ARCHITECT TO COMPLY WITH APPENDIX B.9.3 OF THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL (DECEMBER 2010).
4. BIO-RETENTION AREA PLANTINGS SHALL BE INSTALLED BY A LANDSCAPE CONTRACTOR. SURVIVAL SHALL BE GUARANTEED FOR ONE YEAR.
5. BIO-RETENTION SOIL SHALL HAVE A LOAMY SAND TEXTURE AND CONFORM TO THE FOLLOWING GRADATION:
SAND 85 - 88%
SILT 8 - 12%
CLAY 0 - 2%
ORGANIC MATTER 3 - 5%
6. ROOF DRAIN SHALL BE 6" PVC OR ADS AT S=.01 MINIMUM. ALL ROOF RUNOFF SHALL BE DIRECTED TO THE BIO-RETENTION AREA.
7. BIORETENTION AREA SHALL BE A MINIMUM OF 10' FROM THE BUILDING FOUNDATION AND 15' (MINIMUM) FROM THE O.W.T.S.

BIO-RETENTION AREA MAINTENANCE PLAN

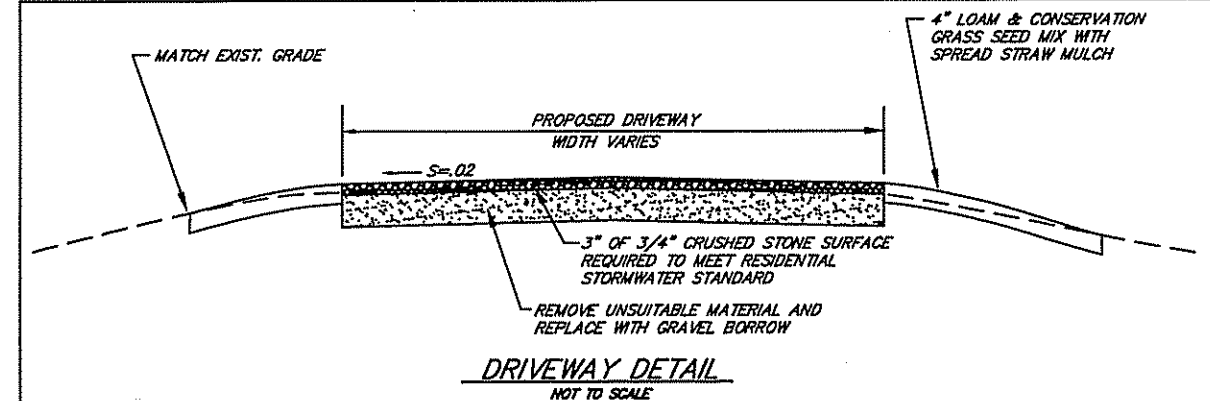
1. BIO-RETENTION AREA SHALL BE INSPECTED TWICE PER YEAR.
2. SOIL EROSION GULLIES SHALL BE REPAIRED WHEN THEY OCCUR.
3. IF STANDING WATER REMAINS 48 HOURS AFTER A RAINFALL EVENT, THE BOTTOM SHALL BE ROTO-TILLED THEN RE-SEED.
4. PRUNING OR REPLACEMENT OF VEGETATION SHOULD OCCUR WHEN DEAD OR DYING VEGETATION IS OBSERVED.

LEGEND

- A.P. ASSESSOR'S PLAT
SQ. FT. SQUARE FEET
STONE WALL
CATCH BASIN
RETAINING WALL
SEPTIC MANHOLE
UTILITY POLE
OVERHEAD WIRES
EXISTING CONTOUR
PROPOSED WATER LINE
EXISTING SPOT ELEVATION
WETLANDS DELINEATION FLAG
SOIL EVALUATION PIPE
EXISTING/PROPOSED WELL
PROPOSED EROSION CONTROL AND LIMIT OF DISTURBANCE PER R.I.D.E.M.



BIO-RETENTION AREA CROSS-SECTION
NOT TO SCALE

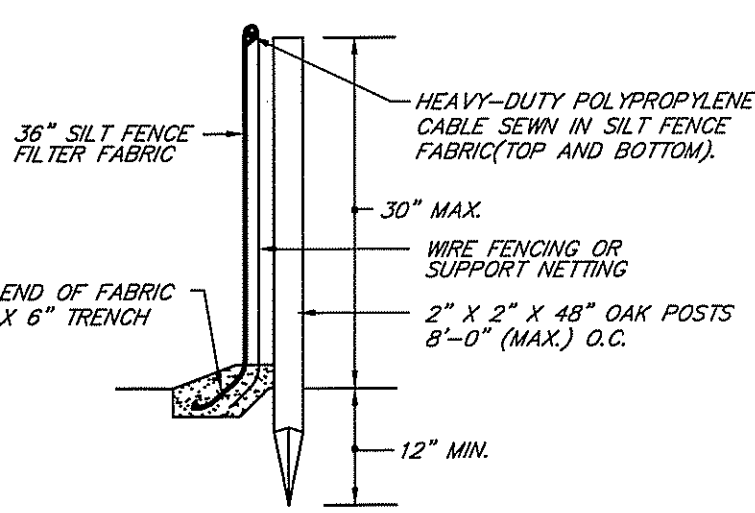


DOWNSPOUT SECTION
NOT TO SCALE

INSTALLATION NOTES:

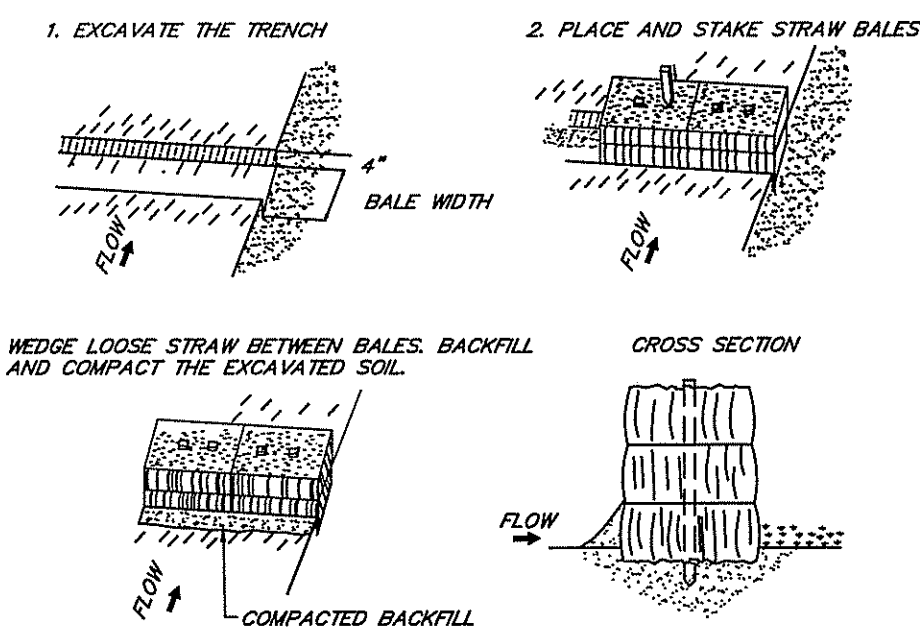
1. SET POSTS MINIMUM DEPTH 12" AND EXCAVATE 6" X 6" TRENCH UPSLOPE ALONG LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND TO TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.
5. BARRIER HEIGHT NOT TO EXCEED 30". LOCATE 6 FEET FROM TOE OF SLOPE. OVERLAP FILTER FABRIC 6" AT POSTS. POST SPACING MAXIMUM 8 FEET.

SILT FENCE DETAIL
NOT TO SCALE



STAKED BALED STRAW EROSION CHECK DETAIL

NOT TO SCALE

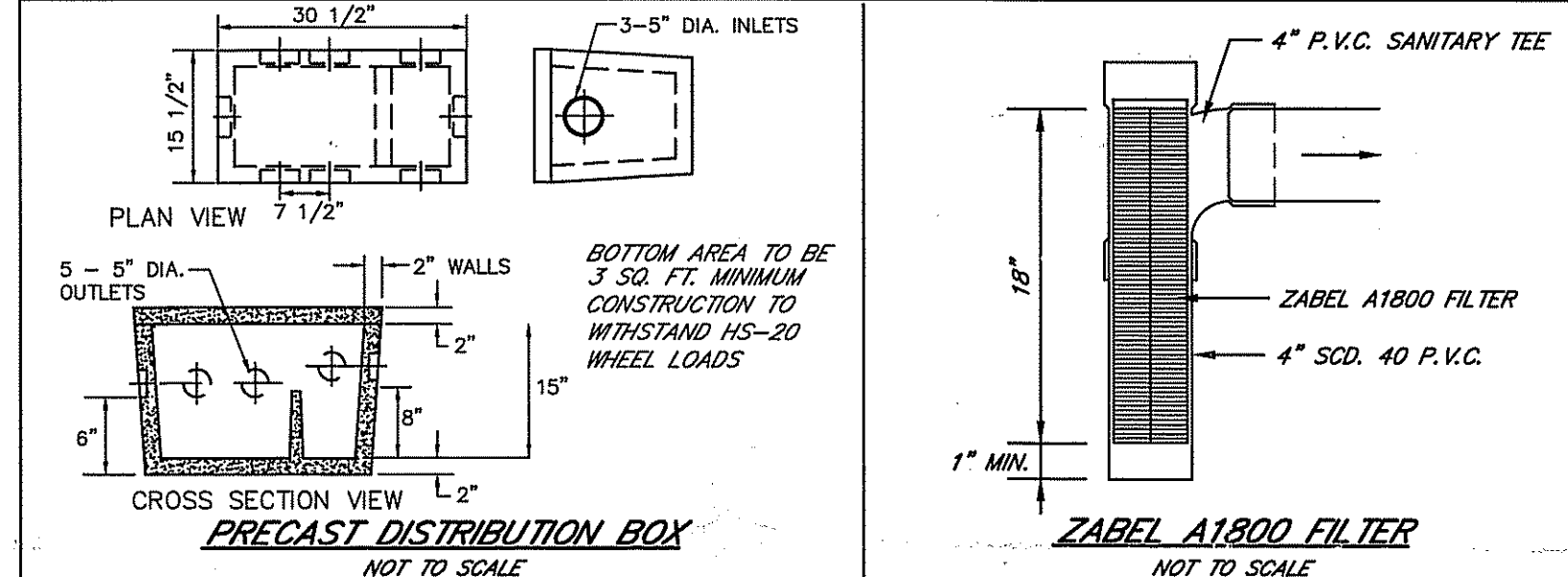
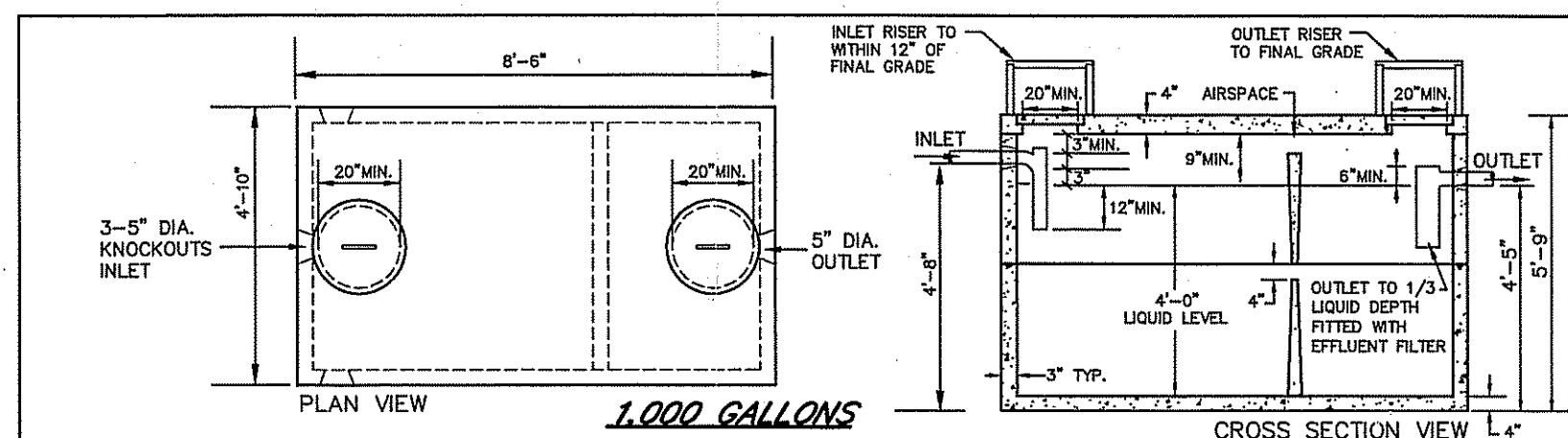


TEST PIT	GROUNDWATER DEPTH	GROUNDWATER ELEVATION	LEDGE DEPTH	LEDGE ELEVATION
15-01	5.0'	123.7'	9.0'	119.7'
15-02	6.0'	125.0'	9.5'	121.5'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
OWTS & FRESHWATER WETLANDS
JOINT PERMIT APPROVAL
OWTS# 1535-0554 FWW# 15-0234
APPROVED: [Signature] DATE 12-7-15
No Changes Allowed Without RIDEM Approval
Approved Change Permit Must Be Kept at Construction Site

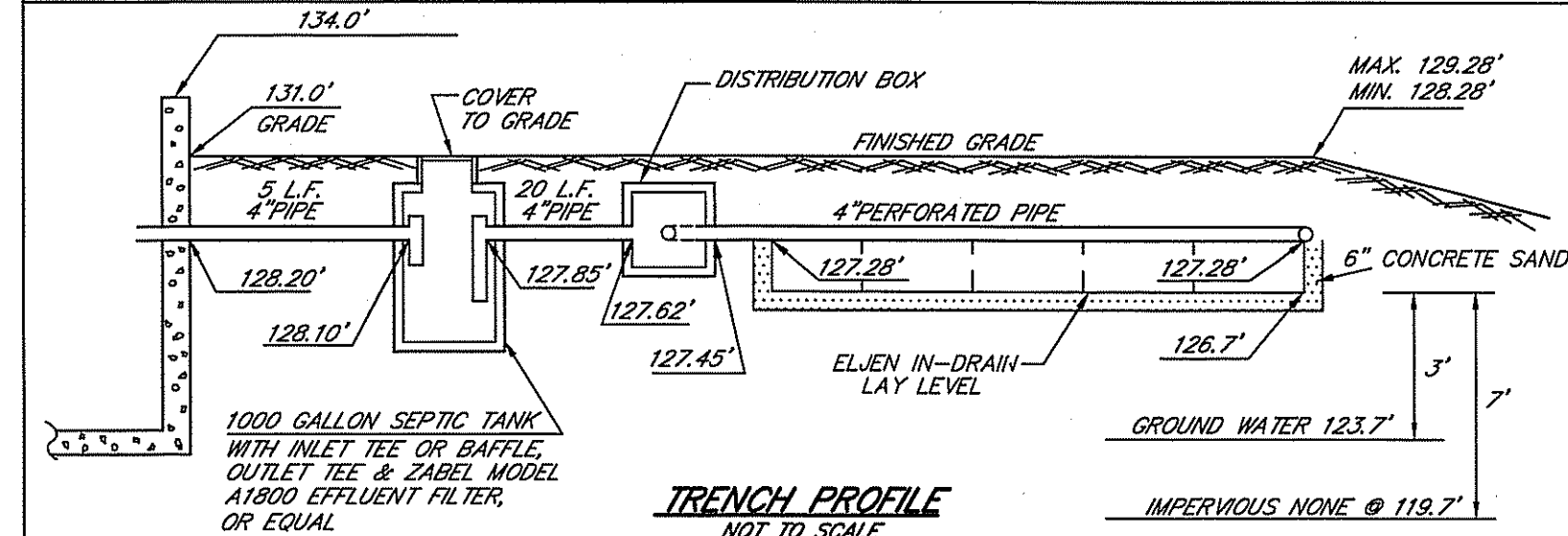
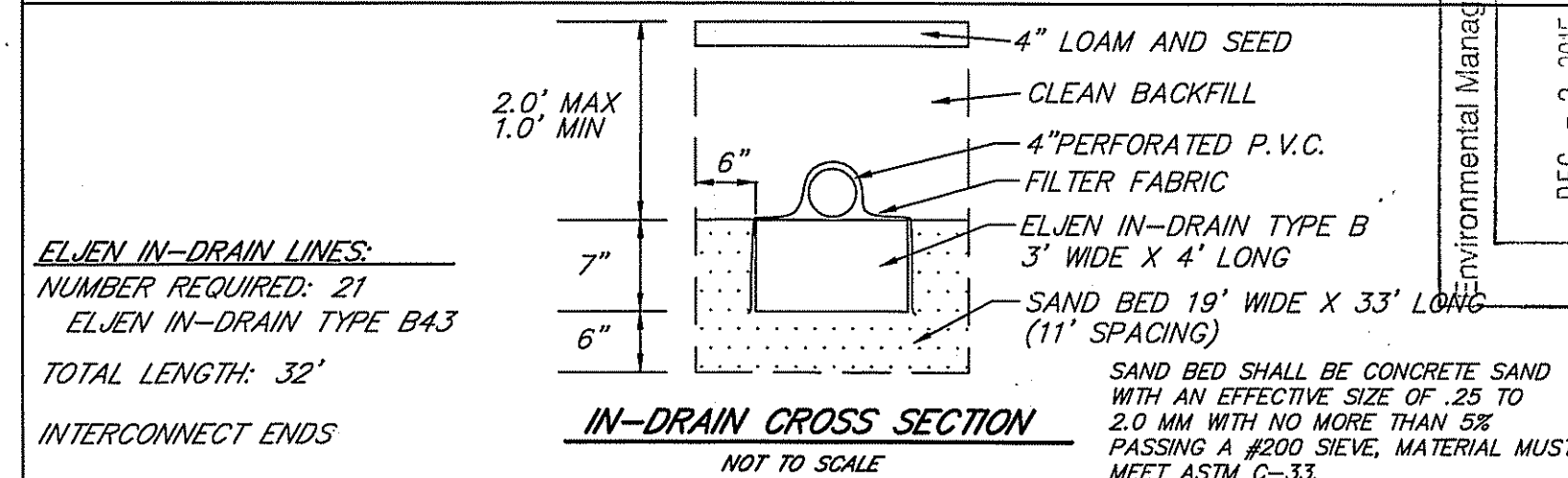
DESIGN CRITERIA

SEWAGE FLOW - 3 BEDROOMS - 115 GALLONS PER BEDROOM UNIT
PERCOLATION RATE - SOIL CATEGORY 1m - .61 GALLONS/SQ. FT./DAY
TOTAL DAILY FLOW:
115 GALLONS/DAY/BEDROOM - 115 X 3 = 345 GALLONS PER DAY
MINIMUM REQUIRED LEACH FIELD AREA:
345 GALLONS PER DAY (MAX) ÷ .61 GALS/SQ. FT./DAY = 565.6 SQ. FT.
LEACH FIELD AREA PROVIDED: 21 ELJEN UNITS X 4' X 7' = 588 SQ. FT.
LEACH FIELD DESIGN POINT: ELEVATION 128.75'



DESIGN AND CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RULES AND REGULATIONS, AS AMENDED.
2. THE TOP OF FOUNDATION ELEVATION SHOWN HAS BEEN DESIGNED FOR O.W.T.S. PURPOSES ONLY. THE OWNER AND/OR CONTRACTOR IS ADVISED TO DETERMINE WHETHER THE BASEMENT FLOOR OF THE PROPOSED DWELLING IS AT OR BELOW THE GROUND WATER TABLE AND, IF SO, RAISE THE FOUNDATION ACCORDINGLY.
3. THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THIS SITE PLAN. THE DESIGNER MUST PERFORM ALL NECESSARY INSPECTIONS, BOTH DURING AND AFTER INSTALLATION, BEFORE ANY COMPONENT OF THE SYSTEM IS COVERED.
4. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN COMPILED FROM MAPS, DEEDS, AND OTHER SOURCES OF INFORMATION, AND ARE SUBJECT TO SUCH MODIFICATIONS AS AN ACTUAL BOUNDARY SURVEY MAY DISCLOSE. TO THE EXTENT THAT SUCH BOUNDARIES ARE CRITICAL TO THE O.W.T.S. LOCATION, THEY MUST BE ESTABLISHED PRIOR TO CONSTRUCTION.
5. ALL TREES, STUMPS, AND BRUSH WITHIN A 10' PERIMETER AROUND THE SYSTEM MUST BE CLEARED.
6. THE EXCAVATION SHALL BE LEVEL AND SCARIFIED.
7. ALL TOPSOIL AND SUBSOIL WITHIN A 5' PERIMETER OF THE SYSTEM SHALL BE STRIPPED AND BACKFILLED WITH CLEAN, COARSE GRAVEL. EXCAVATION INTO IMPERVIOUS MATERIAL IS PROHIBITED UNLESS APPROVED BY THE DESIGNER.
8. MAINTAIN TRENCH INVERT ELEVATION FOR 10' BEYOND THE PERIMETER OF THE LEACHING FIELD. THE ADJACENT SIDE SLOPE SHALL NOT BE STEEPER THAN 3:1 FOR A 25' MIN. DISTANCE FROM THE EDGE OF LEACH FIELD. MAINTAIN 5' TO PROPERTY LINE FROM TOE OF 3:1 SIDE SLOPE.
9. INSTALL CAST IRON PIPE OR EQUIVALENT FROM THE FOUNDATION TO THE SEPTIC TANK. ALL OTHER PIPES MUST BE SDR 35 P.V.C. OR EQUIVALENT.
10. SUBSURFACE DRAINS AND WATER SUPPLY LINE TO BE INSTALLED IN CONFORMANCE WITH DISTANCES SPECIFIED IN TABLE 22.1.
11. ALL KNOWN EXISTING AND PROPOSED PUBLIC WATER SUPPLY WELLS WITHIN 500' OF THE SYSTEM ARE SHOWN; ALL KNOWN EXISTING AND PROPOSED PRIVATE WELLS WITHIN 200' OF THE SYSTEM ARE SHOWN; ALL KNOWN EXISTING AND PROPOSED SEPTIC SYSTEMS WITHIN 100' OF THE WELL ARE SHOWN.
12. ALL WORK MUST CONFORM TO THE REQUIREMENTS OF OTHER EXISTING PERMITS, IF ANY.
13. WITH RESPECT TO MINERAL ZONING REQUIREMENTS, THE DESIGNER HAS MADE A REASONABLE EFFORT TO ASCERTAIN THE APPLICABLE DIMENSIONAL SETBACKS AND OTHER CONSTRAINTS TO DEVELOPMENT. HOWEVER, TO THE POSSIBILITY OF UNRECORDED VARIANCES, NON-CONFORMING USES, AND OTHER RELEVANT DOCUMENTS, IT REMAINS THE RESPONSIBILITY OF THE OWNER TO VERIFY THAT THIS DESIGN COMPLIES WITH ALL LOCAL GOVERNMENT CODES.
14. ALL STAGES OF CONSTRUCTION MUST BE SUPERVISED BY THE DESIGNER OF RECORD. UNLESS WAIVED BY THE DESIGNER, ALL IMPROVEMENTS MUST BE STAKED BY THE DESIGNER OR HIS AGENTS PRIOR TO CONSTRUCTION. THESE INCLUDE THE O.W.T.S., FOUNDATION, WELL, EROSION CONTROLS, CLEARING LIMITS AND ANY OTHER FEATURES DEEMED CRITICAL TO THE DESIGN.



SCOTT F. MOOREHEAD
REGISTERED PROFESSIONAL ENGINEER
No. 4298

SFM

DRAINAGE SYSTEM DESIGNER/ENGINEER
S.F.M. ENGINEERING ASSOCIATES
410 TIIOQUE AVENUE
COVENTRY, R.I. 02816
(401)826-3736

DATE	REVISION

CHK. BY: SFM JOB. NO. SFM831

ZONE: RESIDENCE A-40
MINIMUM LOT AREA: 40,000 SQ. FT.
MINIMUM LOT FRONTAGE: 150'
MINIMUM LOT WIDTH: 150'
MINIMUM BUILDING SETBACKS:
FRONT & CORNER SIDES: 40'
REAR: 30'
MAXIMUM STRUCTURE HEIGHT: 35'
MINIMUM LANDSCAPED OPEN SPACE: 20%

OWNERS/APPLICANTS
COBBLE HILL DEVELOPMENT, LLC &
BLUE WATER REALTY, LLC
132 OLD RIVER ROAD SUITE 103
LINCOLN, RHODE ISLAND 02863
TELE: 722-3600

SCITUATE SURVEYS, INC.
410 TIIOQUE AVENUE
COVENTRY, RHODE ISLAND 02816
401-821-6101
LAND SURVEYING/MAPPING/SITE PLANNING

FOR STREET AND ROAD INDEX FILE UNDER:
COWSETT ROAD

ANGLO M. RAIMONDI
No. 1762
PROFESSIONAL
LAND SURVEYOR

ASSESSOR'S PLAT 231 PORTION LOT 6
ON-SITE WASTEWATER DISPOSAL SYSTEM
PLAN OF PROPOSED IMPROVEMENTS AND

COWSETT ROAD
WARWICK, RHODE ISLAND

PREPARED FOR: COBBLE HILL DEVELOPMENT, LLC & BLUE WATER REALTY, LLC

PROJECT NO.: SS2715
DRAWING NO.: SS4221

SHEET
1 OF 1