TEST PIT DATA:

SUSAN J. FARETRA DESIGNER #946 DATE: 04/12/2012
WITNESS: TOM JOHNSON FOR TOWN OF DURHAM

TEST PIT:
0–14" 10YR3/3 DARK BROWN SILT LOAM, GRANULAR, FRIABLE
14–60" 2.5Y4/2 DARK GRAYISH BROWN SILTY CLAY, MASSIVE, FIRM W/ REDOXIMORPHIC FEATURES

ESHWT: 14" RESTRICTIVE: 14" ROOTS: 14"
NO OBSERVED WATER REFUSAL: NONE

PERC RATE: 48 MIN/IN AT 12"

PLAN INTENT:

REPLACEMENT SYSTEM

REPLACEMENT OF EXISTING ISDS: THE NEED FOR A DESIGN FOR THIS REPLACEMENT ISDS IS DUE TO OWNERS DESIRING PERMITTING FOR A MODERN UPGRADED SYSTEM.

THE ISDS SERVICES A 2 BEDROOM HOME WITH THE FOLLOWING THE EXISTING TYPES OF APPLIANCES AND FIXTURES: DISHWASHER, WASHING MACHINE, JACUZZI, TOILETS, SHOWERS.

DESIGN CALCULATIONS:

HYDRAULIC LOADING: 2 BEDROOMS = 300 GALLONS PER DAY

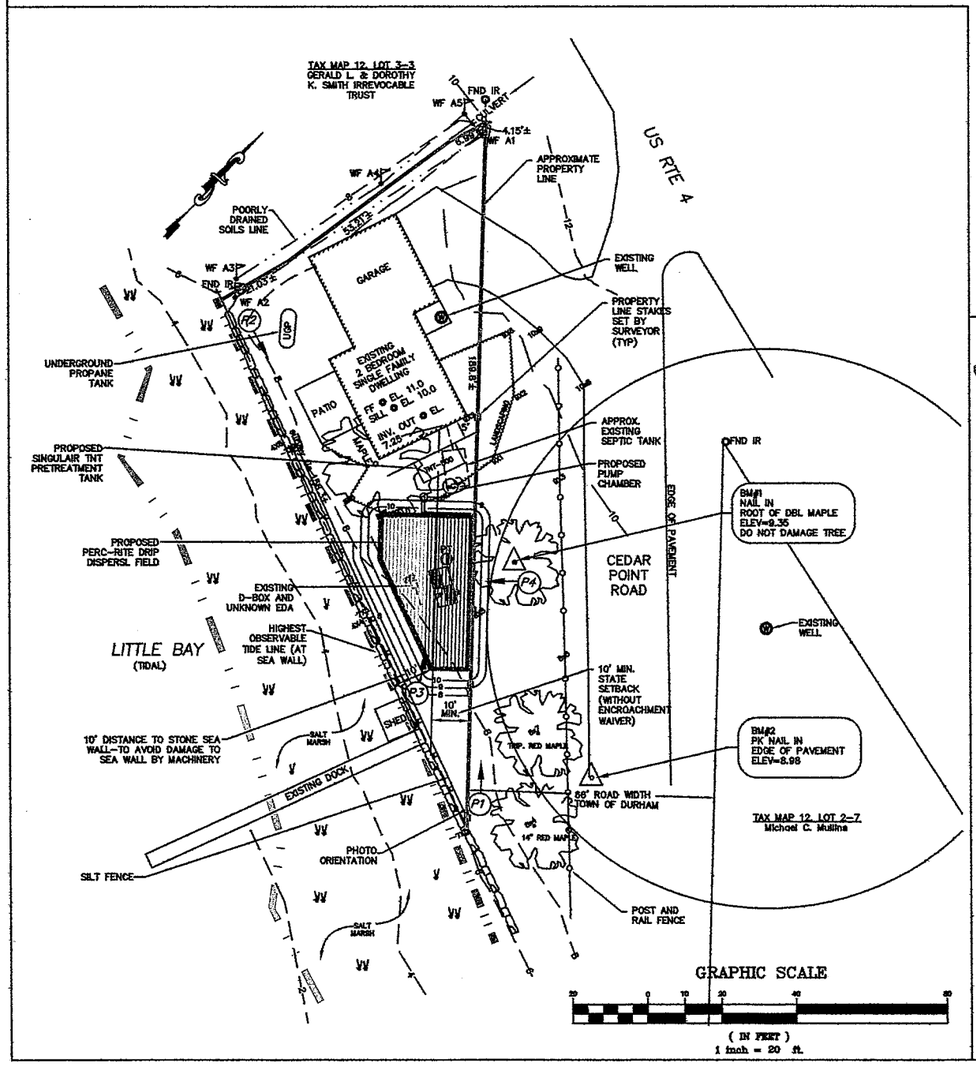
PERCOLATION RATE: 48 MIN./INCH AT 12 INCHES

EFFLUENT DISPOSAL AREA REQUIRED: 598 LINEAR FEET OF PERC RITE DRIP DISPERSAL TUBING

EFFLUENT DISPOSAL AREA PROVIDED: 743 LINEAR FEET OF PERC RITE DRIP DISPERSAL TUBING – 1' ON CENTER

AREA OF DISPERSAL = 720 SF (60% SIZE OF STONE AND PIPE REQUIRED AREA OF 1200 SF)

SEE LAYOUT ON SHEET 2 FOR VARYING LENGTH OF TUBING



DESIGN INTENT STATEMENT:

THE BOTTOM OF THE EFFLUENT DISPOSAL AREA SHALL BE CONSTRUCTED AT ELEVATION: 9.53

THIS IS APPROXIMATELY 0.83 FEET (10") ABOVE THE ORIGINAL GROUND ON THE HIGH CONTOUR OF THE DESIGNED EFFLUENT DISPOSAL AREA, EL. 8.7. THIS PROVIDES A MINIMUM SEPARATION TO ESTIMATED SEASONAL HIGH WATER TABLE OF 2 FT (24") AS ALLOWED FOR PERC–RITE DRIP DISPERSAL SYSTEMS UTILIZING PRETREATED WASTEWATER EFFLUENT.

FOUNDATION DRAINS: NONE
NEAREST ABUTTING WELL: 75± FT
NEAREST SURFACE WATER: AS SHOWN
NEAREST POORLY DRAINED SOILS: AS SHOWN
NEAREST VERY POORLY DRAINED SOILS: AS SHOWN

WETLANDS HAVE BEEN IDENTIFIED/DELINEATED BY STEVEN D. RIKER, CERTIFIED WETLAND SCIENTIST #219, ON 04/12/2012, PER ENV–WQ 1014.03

SOIL CLASSIFICATION FROM NRCS WEB SOIL SURVEY: SoA–SCANTIC SILT LOAM

PLAN SPECIFIC NOTES:

1. THE SINGULAIR MODEL TNT–500 PROVIDES AN AVERAGE PERCENT NITROGEN REDUCTION OF 68%

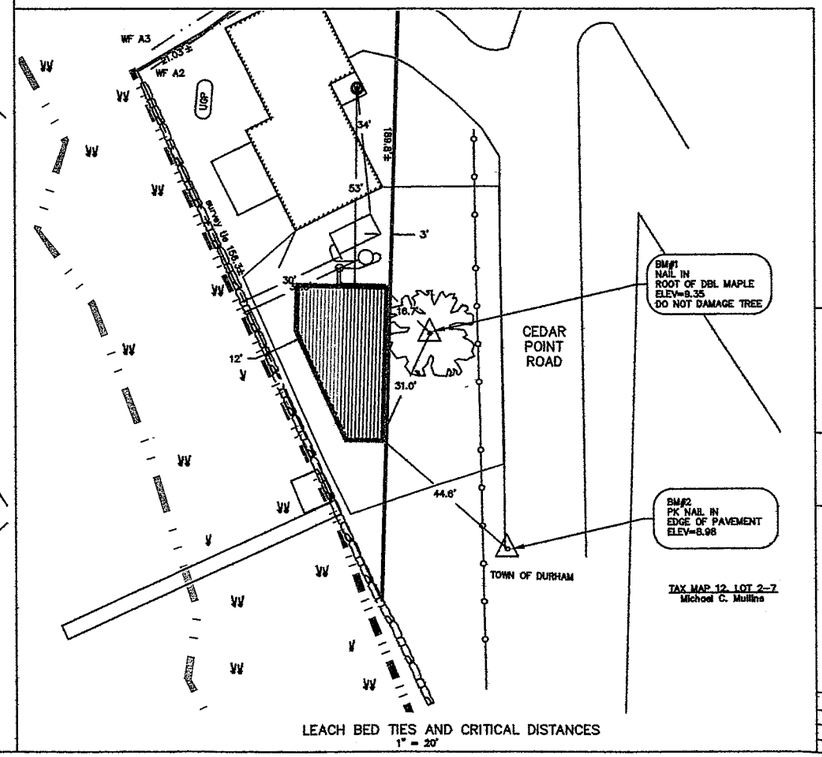
2. PIPE FROM HOUSE TO TANK AND TANK TO PUMP CHAMBER TO BE SDR 26 OR EQUAL. TANKS MUST BE SEALED AND GROUTED TO PREVENT INFILTRATION AND EXFILTRATION.

3. EXISTING LEACHING AREA LOCATION IS APPROXIMATE AND EXTENT IS UNKNOWN. REMOVE COMPONENTS OF EXISTING SEPTIC SYSTEM WHERE FOUND DURING CONSTRUCTION. REMOVE CONTAMINATED SOILS IF FOUND UNDER NEW LEACH BED AND FILL EXTENSIONS AND REFILL WITH SEPTIC SAND.
DISPOSE OF ALL CONTAMINATED COMPONENTS AND SOILS IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

4. TOPOGRAPHY BASED ON VERTICAL DATUM: NGVD 1929.

5. THIS PROPERTY IS IN FLOOD ZONE AE EL. 7.0. IT IS ESSENTIAL THAT ALL COMPONENTS OF THIS SYSTEM BE WATER TIGHT AND GRADED IN A WAY TO SHED SURFACE WATER.

6. INSTALLATION OF THIS SYSTEM TO BE DONE IN DRY SEASON TO MINIMIZE SMEARING AND COMPACTION OF SOILS DURING CONSTRUCTION.



LEACH BED TIES AND CRITICAL DISTANCES
1" = 20'

NHDES WAIVERS REQUESTED:

ENV–WQ 1021.04(A)(1) AND (B):.

1) THE FINISH GRADE OVER THE BED SHALL EXTEND 5' BEYOND BED AND THE SIDES OF THE RAISED EDA SHALL TAPER AT 3:1 SLOPE
REQUESTING 3' FILL EXTENSION AND TAPER AT 2:1 SLOPE.

ENV–WQ 1008.04(A) MINIMUM DISTANCES:

2) PRIVATE WELL TO BED – 75' MIN. SEPARATION DISTANCE
REQUESTING 53' TO OWNERS WELL FROM LEACH BED
3) PRIVATE WELL TO SEPTIC TANK – 50' MIN. SEPARATION DISTANCE
REQUESTING 34' TO OWNERS WELL FROM SEPTIC TANK, 43' FROM PUMP CHAMBER
4) SURFACE WATER TO SEPTIC TANK– 50' MIN. SEPARATION DISTANCE
REQUESTING 34' TO PUMP CHAMBER AND 30' TO SEPTIC TANK
5) SURFACE WATER TO LEACH BED – 75' MIN. SEPARATION DISTANCE
REQUESTING 12' TO HIGHEST OBSERVABLE TIDE LINE
6) PROPERTY LINES TO ALL SEPTIC SYSTEM COMPONENTS – 10' MIN.
REQUESTING TOWN OF DURHAM TO ALLOW SEPTIC TANKTO BE 3' FROM PROPERTY LINE, PUMP CHAMBER TO BE 4.5' AND BED TO BE LOCATED AT PROPERTY LINE WITH GRADING TO EXTEND ONTO TOWN PROPERTY.

MUNICIPAL RELIEF REQUESTED:

1) ARTICLE XII: 175.40 ZONE REQUIREMENT –
ZONE RC REQUIRES STRUCTURES TO HAVE FRONT SETBACK 30', SIDE SETBACK 50', REAR SETBACK 50'
REQUESTING THAT THESE SEWAGE DISPOSAL COMPONENTS TO BE LOCCATED AT THE FRONT PROPERTY LINE.

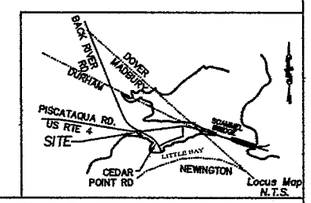
2) SHORELAND PROTECTION OVERLAY DISTRICT (250' FROM LITTLE BAY)
175–74 (B) DIMENSIONAL REQUIREMENT THAT SEPTIC SYSTEMS BE 125' FROM PROTECTED WATERS
REQUESTING THAT SEWAGE DISPOSAL COMPONENTS BE AS CLOSE AS 12' TO PROTECTED SURFACE WATER.

PRODUCT MANUFACTURERS:

NORWECO SINGULAIR AVAILABLE THROUGH:
AJ FOSS PRECAST CONCRETE, 100 COCHECO RD, FARMINGTON, NH
603–755–2515; WWW.AJFOSS.COM

PERC–RITE DRIP DISPERSAL AVAILABLE THROUGH:
OAKSON, INC., 6 SARGENT ST., GLOUCESTER, MA. 01930
978–282–1322, 877–OAKSON1; WWW.OAKSONINC.COM

STATE OF NEW HAMPSHIRE
STEVEN D. RIKER
3/22/13
No. 219
CERTIFIED WETLAND SCIENTIST



Locus Map
N.T.S.

ZONING BOARD OF ADJUSTMENT APPLICATION FOR A REPLACEMENT SEWAGE DISPOSAL SYSTEM

SITE LOCATION: 2 CEDAR POINT ROAD
TAX MAP 12, LOT 2–8
DURHAM, NH

SUBDIVISION APPROVAL #:	LOT SIZE:	DEED BOOK/PAGE:
PRE–1967	0.15 ACRES	SCRD 1950/189

FOR: STEVEN AND ALISON KALVELAGE
2 CEDAR POINT ROAD
DURHAM, NH 03824

DESIGNER:

FARETRA SEPTIC DESIGN, LLC

SUSAN J. FARETRA
NH DESIGNER #946
181 GILE ROAD, NOTTINGHAM, NH 03290
PHONE & FAX: 603–659–6556
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NEW HAMPSHIRE Designer of Subsurface Disposal Systems ★★★ Susan J. Faretra No. 946 Department of Environmental Services
NH Designer Stamp

PLAN SCALE: 1" = 20' PLAN DATE: NOV 19, 2012

Date	Revision/Amendment Description	By

Sheet 1 of 1
File# 12–121