SANITARY SYSTEM DESIGN

NUMBER OF BEDROOMS	7	
PERCOLATION RATE	10.1–20 MIN/IN.	
ABSORPTION AREA REQUIRED	1,237.5	S.F. (MIN.)
USE 12" HIGH GALLERIES	210	L.F. REQ'D
	216	L.F. PROVIDED
*SEPTIC TANK CAPACITY	1,875	GAL. (MIN.)
*(INCLUDES GARBAGE DISPOSAL)	2,000	GAL. PROVIDED

A GARBAGE DISPOSAL WILL BE INSTALLED.
PROPOSED BATH TUBS WILL BE LESS THAN 100 GALLONS EACH.

EXISTING SANITARY SYSTEM ELEVATIONS

TOP OF 4" PVC FDN. OUTLET	= 83.51
FL TANK INLET KNOCK OUT	= 67.46
TOP OF 4" PVC TOC OUTLET	= 67.56
CL H. END TOP OF TANK	= 68.49
CL S. END TOP OF TANK	= 68.47
TOP OF 4" PVC ELBOW #4	= 67.54
TOP OF 4" PVC ELBOW #5	= 65.38
TOP OF 4" PVC ELBOW #6	= 64.71
TOP OF 4" PVC ELBOW #7	= 64.64
DISTRIBUTION BOX #1 (8)	
F.L. 4" PVC IN E	= 64.02
F.L. 4" PVC OUT N	= 64.05
F.L. 4" PVC OUT S	= 64.07
F.L. 4" PVC OUT W	= 64.20
DISTRIBUTION BOX #2 (11)	
F.L. 4" PVC IN E	= 61.63
F.L. 4" PVC OUT N	= 61.53
F.L. 4" PVC OUT S	= 61.53
TOP S. END GALLERY 1 (9)	= 64.44
TOP N. END GALLERY 1 (10)	= 64.40
TOP S. END GALLERY 2 (12)	= 61.63
TOP N. END GALLERY 2 (13)	= 61.88

EXISTING SANITARY TIES

	A	B	C
1	11.7'	53.6'	
2	95.8'	73.4'	
3	98.9'	70.0'	
4	99.1'	68.5'	
5	93.7'	65.3'	
6	113.2'	61.0'	
7	115.6'	63.2'	
8	119.8	67.6'	
9	107.7	77.5'	
10		92.5'	88.6
11		79.9'	109.1
12		81.1'	125.5'
13		105.4'	101.4'

SOILS DATA

SOIL TESTING PERFORMED ON APRIL 11, 1988.

TEST PIT: 1 (old)
DEPTH: 38"
LEDGE: 36"
WATER: NONE
MOTTLING: NONE
MATERIAL: 8" LOOSE TOPSOIL
18" SANDY LOAM
38" FINE SAND & SILT

TEST PIT: 1-A (old)
DEPTH: 68"
LEDGE: NONE
WATER: NONE
MOTTLING: NONE
MATERIAL: 10" TOPSOIL
24" SANDY LOAM
68" FINE SAND & GRAVEL

TEST PIT: 1-B (old)
DEPTH: 60"
LEDGE: 60"
WATER: NONE
MOTTLING: NONE
MATERIAL: 10" TOPSOIL
36" LOOSE SANDY LOAM
60" MED. SILTY SAND

TEST PIT: 1-C (old)
DEPTH: 36"
LEDGE: 36"
WATER: NONE
MOTTLING: NONE
MATERIAL: 10" TOPSOIL
36" SANDY LOAM

TEST PIT: 2 (old)
DEPTH: 24"
LEDGE: 24"
WATER: NONE
MOTTLING: NONE
MATERIAL: 12" TOPSOIL
24" SANDY LOAM

TEST PIT: 3 (old)
DEPTH: 30"
LEDGE: 30"
WATER: NONE
MOTTLING: NONE
MATERIAL: 12" TOPSOIL
30" SANDY LOAM

TEST PIT: 4 (old)
DEPTH: 36"
LEDGE: 36"
WATER: NONE
MOTTLING: NONE
MATERIAL: 12" STONY TOPSOIL
36" SANDY LOAM

TEST PITS OBSERVED BY CHATHAM HEALTH DISTRICT ON APRIL 25, 2011.

TEST PIT: 1
DEPTH: 44"
LEDGE: 44"
GW: NONE
MOTTLING: 36"
ROOTS: 20"
MATERIAL: 0-8" TOPSOIL
8-30" BROWN FINE SANDY LOAM
30-44" BROWN FINE SAND AND SILT

TEST PIT: 2
DEPTH: 76"
LEDGE: NONE
GW: 62"
MOTTLING: NONE
ROOTS: 28"
MATERIAL: 0-7" TOPSOIL
7-22" BROWN FINE SANDY LOAM
22-25" BROWN FINE SAND
25-76" OLIVE GREY FINE SAND AND SMALL STONES

TEST PIT: 3
DEPTH: 48"
LEDGE: 48"
GW: NONE
MOTTLING: NONE
ROOTS: 35"
MATERIAL: 0-7" TOPSOIL
7-24" BROWN FINE SANDY LOAM
24-48" BROWN FINE SAND AND SILT

TEST PIT: 4
DEPTH: 48"
LEDGE: 48"
GW: NONE
MOTTLING: NONE
ROOTS: 40"
MATERIAL: 0-6" TOPSOIL
6-28" BROWN FINE SANDY LOAM
28-48" BROWN FINE SAND AND SILT

TEST PIT: 5
DEPTH: 30"
LEDGE: 30"
GW: NONE
MOTTLING: NONE
ROOTS: 20"
MATERIAL: 0-9" TOPSOIL
9-20" BROWN FINE SANDY LOAM

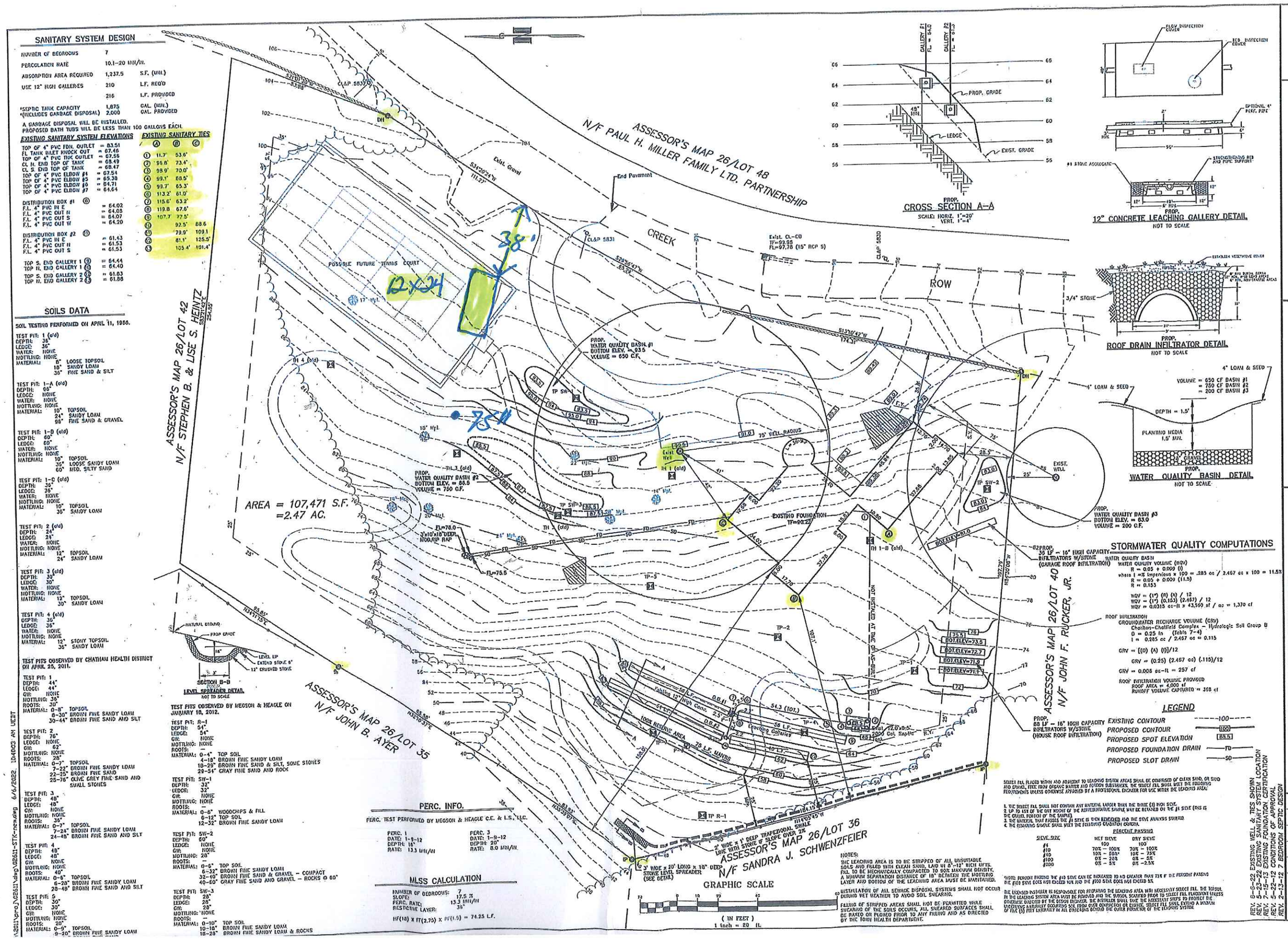
TEST PITS OBSERVED BY MEGSON & HEAGLE ON JANUARY 10, 2012.

TEST PIT: R-1
DEPTH: 54"
LEDGE: 54"
GW: NONE
MOTTLING: NONE
ROOTS: —
MATERIAL: 0-4" TOP SOIL
4-18" BROWN FINE SANDY LOAM
18-29" BROWN FINE SAND & SILT, SOME STONES
29-54" GRAY FINE SAND AND ROCK

TEST PIT: SW-1
DEPTH: 32"
LEDGE: 32"
GW: NONE
MOTTLING: NONE
ROOTS: —
MATERIAL: 0-6" WOODCHIPS & FILL
6-12" TOP SOIL
12-32" BROWN FINE SANDY LOAM

TEST PIT: SW-2
DEPTH: 60"
LEDGE: NONE
GW: NONE
MOTTLING: 20"
ROOTS: —
MATERIAL: 0-6" TOP SOIL
6-32" BROWN FINE SANDY LOAM
32-40" BROWN FINE SAND & GRAVEL – COMPACT
40-60" GRAY FINE SAND AND GRAVEL – ROCKS @ 60"

TEST PIT: SW-3
DEPTH: 28"
LEDGE: 28"
GW: 28"
MOTTLING: NONE
ROOTS: —
MATERIAL: 0-10" TOP SOIL
10-18" BROWN FINE SANDY LOAM
18-28" BROWN FINE SANDY LOAM & ROCKS



PROP.
CROSS SECTION A–A
SCALE: HORIZ. 1"=20'
VERT. 1"=4'

PROP.
12" CONCRETE LEACHING GALLERY DETAIL
NOT TO SCALE

PROP.
ROOF DRAIN INFILTRATOR DETAIL
NOT TO SCALE

PROP.
WATER QUALITY BASIN DETAIL
NOT TO SCALE

LEVEL SPREADER DETAIL
NOT TO SCALE

PERC. INFO.

PERC. TEST PERFORMED BY MEGSON & HEAGLE C.E. & L.S., LLC.

PERC. 1
DATE: 1-9-12
DEPTH: 18"
RATE: 13.3 MIN/IN

PERC. 3
DATE: 1-9-12
DEPTH: 20"
RATE: 8.0 MIN/IN

MLSS CALCULATION

NUMBER OF BEDROOMS: 7
SLOPE: 17.5 %
PERC. RATE: 13.3 MIN/IN
RESTRICTIVE LAYER: 38"

HF(18) X FT(2.75) X PF(1.5) = 74.25 L.F.

STORMWATER QUALITY COMPUTATIONS

WATER QUALITY BASIN
WATER QUALITY VOLUME (WQV)
R = 0.05 + 0.009 (I)
where I =% impervious x 100 = .285 ac / 2.467 ac x 100 = 11.5%
R = 0.05 + 0.009 (11.5)
R = 0.153
WQV = (1") (R) (A) / 12
WQV = (1") (0.153) (2.467) / 12
WQV = 0.0315 ac-ft x 43,560 sf / ac = 1,370 cf

ROOF INFILTRATION
GROUNDWATER RECHARGE VOLUME (GRV)
Chatham-Chatfield Complex – Hydrologic Soil Group B
D = 0.25 in (Table 7-4)
I = 0.285 ac / 2.467 ac = 0.115

GRV = [(D) (A) (I)]/12
GRV = (0.25) (2.467 ac) (.115)/12
GRV = 0.008 ac-ft = 257 cf

ROOF INFILTRATION VOLUME PROVIDED
ROOF AREA = 4,000 sf
RUNOFF VOLUME CAPTURED = 358 cf

LEGEND

EXISTING CONTOUR	100
PROPOSED CONTOUR	100
PROPOSED SPOT ELEVATION	85.5
PROPOSED FOUNDATION DRAIN	FD
PROPOSED SLOT DRAIN	SD

SELECT FILL PLACED WITHIN AND ADJACENT TO LEACHING SYSTEM AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN DEBRIS/WASTE. THE SELECT FILL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE APPROVED BY A PROFESSIONAL ENGINEER FOR USE WITHIN THE LEACHING AREA:

1. THE SELECT FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN ONE INCHE (1) INCH SIEVE.
2. UP TO LESS OF THE ONE INCHEN OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE (THIS IS THE GRAVEL PORTION OF THE SAMPLE).
3. THE MATERIAL THAT PASSES THE #4 SIEVE IS THEN REMOVED AND THE SIEVE ANALYSIS STARTED.
4. THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CURVE.

PERCENT PASSING

SIEVE SIZE	WET SIEVE	DRY SIEVE
#4	100	100
#10	70% – 100%	70% – 100%
#40	10% – 80%*	10% – 78%
#100	0% – 20%	0% – 5%
#200	0% – 5%	0% –2.5%

NOTE: PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO AND GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%

THE UNDERSIGNED INSTALLER IS RESPONSIBLE FOR PREPARING THE LEACHING AREA WITH NECESSARY SELECT FILL. THE TOPSOIL IN THE LEACHING SYSTEM AREA MUST BE REMOVED AND THE REMAIN SCARIFIED PRIOR TO SELECT FILL PLACEMENT UNLESS OTHERWISE DIRECTED BY THE DESIGN ENGINEER. THE INSTALLER SHALL TAKE THE NECESSARY STEPS TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE. SELECT FILL SHALL EXTEND A MINIMUM OF FIVE (5) FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE LEACHING SYSTEM.

NOTES:
THE LEACHING AREA IS TO BE STRIPPED OF ALL UNSUITABLE SOILS AND FILLED WITH CLEAN SAND, LAID IN 8"–12" INCH LIFTS. FILL TO BE MECHANICALLY COMPACTED TO 90% MAXIMUM DENSITY. A MINIMUM SEPARATION DISTANCE OF 18" BETWEEN THE MOTTLED LAYER AND BOTTOM OF THE LEACHING AREA MUST BE MAINTAINED.

INSTALLATION OF ALL SEWAGE DISPOSAL SYSTEMS SHALL NOT OCCUR DURING WET WEATHER TO AVOID SOIL SMEARING.

FILLING OF STRIPPED AREAS SHALL NOT BE PERMITTED WHILE SMEARING OF THE SOILS OCCURS. ALL SMEARED SURFACES SHALL BE RAKED OR PLOWED PRIOR TO ANY FILLING AND AS DIRECTED BY THE TOWN HEALTH DEPARTMENT.

I HEREBY DECLARE TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS PLAN IS SUBSTANTIALLY CORRECT.

JONATHAN H. SCZUREK P.E. # 26858

MEGSON, HEAGLE & FRIEND
CIVIL ENGINEERS & LAND SURVEYORS, LLC
81 RANKIN ROAD
GLASTONBURY, CONN. 06033
PHONE (860)-659-0587

STORMWATER & SEPTIC DESIGN PLAN
CREEK ROW
PREPARED FOR
STEVE SOMOSKY
EAST HADDAM, CONN.

CK. BY:	JLH
DRW. BY:	JHS
DATE:	1-20-12
SCALE:	1"=20'
MAP NO.	26-11-150
SHEET:	C – 2

REV. 6-6-22 EXISTING WELL & TIES SHOWN
REV. 5-23-22 EXISTING SANITARY SYSTEM LOCATION
REV. 7-15-13 EXISTING FOUNDATION CERTIFICATION
REV. 5-22-12 CONDITIONS OF APPROVAL
REV. 2-13-12 7 BEDROOM SEPTIC DESIGN

12x24

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