

SYSTEM DESIGN

DESIGN BASIS: CONNECTICUT PUBLIC HEALTH CODE REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS REVISED JANUARY 2018.

FLOW: 4 BEDROOMS
 PERC RATE: 20.1-30 MIN/INCH
 EFFECTIVE AREA REQUIRED = 875 SQ.FT.
 RESTRICTIVE LAYER = ATYPICAL LEDGE AT 33"
 SLOPE = 14.5% (10.1-15.0% RANGE)
 RS DEPTH = (33" @ TP 20 + 37" @ TP 21) / 2 = 35"
 HYDRAULIC FACTOR (HF) = 20
 FLOW FACTOR (FF) = 1.75
 PERCOLATION FACTOR (PF) = 1.5
 M.L.S.S. = 201.75 * 1.5 = 52.5
 PRIMARY AREA - USE 152 LF (1 ROW-80' LONG, 1 ROW-72' LONG)
 12" CONCRETE GALLERIES
 EFFECTIVE LEACHING AREA PROVIDED = 896.8 (5.9 SQ.FT./L.F.)
 RESERVE AREA
 PERC RATE: 20.1-30.0 MIN/INCH
 EFFECTIVE AREA REQUIRED = 875 SQ.FT.
 RESTRICTIVE LAYER = ATYPICAL LEDGE AT 37"
 RESERVE AREA - USE 152 LF (1 ROW-80' LONG, 1 ROW-72' LONG)
 12" CONCRETE GALLERIES
 EFFECTIVE LEACHING AREA PROVIDED = 896.8 SQ.FT. (5.9 SQ.FT./L.F.)

SEPTIC SYSTEM INVERT ELEVATIONS

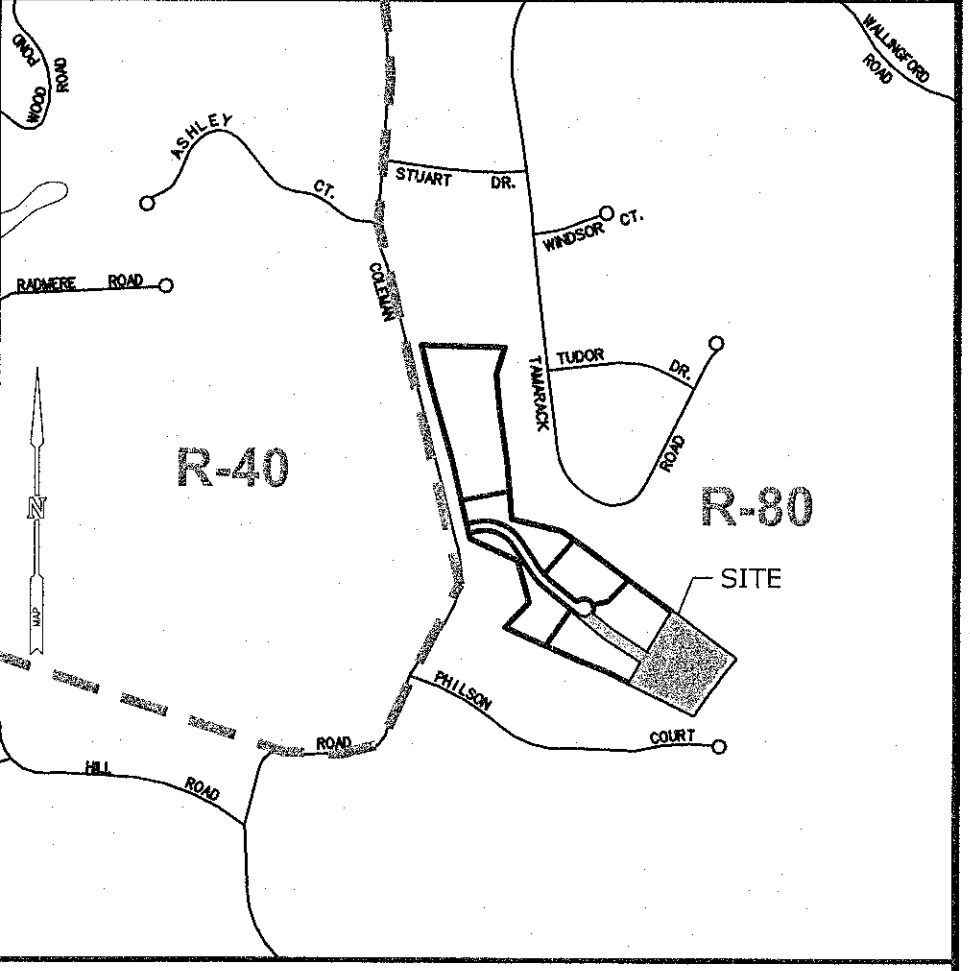
INVERT AT FOUNDATION WALL = 248.00
 SEPTIC TANK INLET = 244.10
 SEPTIC TANK OUTLET = 243.85 MIN.
 ROW 1 INVERT ELEVATION = 245.00
 ROW 1 BOTTOM ELEVATION = 244.50
 HIGH LEVEL OVERFLOW = 245.50
 ROW 2 INVERT ELEVATION = 243.00
 ROW 2 BOTTOM ELEVATION = 242.50

SOIL TESTING DATA

Test Pit: 20
 Date: 2/25/2015
 00"-04" TOPSOIL
 04"-24" BROWN FINE SANDY LOAM
 24"-33" BROWN GRAVELLY FINE SANDY LOAM/VERY FINE SANDY LOAM (SILTIER THAN 4"-24")
 33"-81" DECOMPOSED SANDSTONE
 MOTTLING @ 33"
 GROUNDWATER-N/A
 LEDGE-ATYPICAL 33"
 ROOTS-50"
 RESTRICTIVE-33"
 PERC-N/A

Test Pit: 21
 Date: 2/25/2015
 00"-06" TOPSOIL
 06"-25" BROWN SANDY LOAM/ FINE SANDY LOAM
 25"-37" BROWN GRAVELLY FINE SANDY LOAM/VERY FINE SANDY LOAM (SILTIER THAN 06"-25")
 37"-65" VERY DECOMPOSED SANDSTONE
 65"-84" TIGHT SANDSTONE
 MOTTLING @ 37"
 GROUNDWATER-N/A
 LEDGE-ATYPICAL 37"
 ROOTS-55"
 RESTRICTIVE-37"
 PERC-21
 DEPTH-23"
 PERC RATE-20.1-30.0

Test Pit: 22
 Date: 2/25/2015
 00"-08" TOPSOIL
 08"-36" BROWN SANDY LOAM/ FINE SANDY LOAM
 36"-93" VERY DECOMPOSED SANDSTONE
 MOTTLING @ 36"
 GROUNDWATER-N/A
 LEDGE-ATYPICAL 36"
 ROOTS-40"
 RESTRICTIVE-36"
 PERC-22
 DEPTH-22"
 PERC RATE-20.1-30.0



GENERAL NOTES:

- TOPOGRAPHIC INFORMATION IS BASED UPON AVAILABLE TOWN MAPPING.
- EXISTING BOUNDARY IS BASED UPON FIELD SURVEY CONDUCTED BY MILONE AND MACBROOM INC.
- MILONE & MACBROOM INC. ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM 6" TOPSOIL AND BE SEEDED WITH GRASS.
- THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO THE EXECUTION OF THE WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
- ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF CHESHIRE REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 817 AND ADDENDUMS.
- ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR DETERMINATION.
- ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION, MEANS OF CONSTRUCTION, AND SIZE OF ELECTRIC, TELEPHONE, AND CABLE ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.
- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG" (800) 922-4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLAN SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
- SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION HAS BEEN ESTABLISHED.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
- A STABLE BENCH MARK SHALL BE SET BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE PROPOSED LEACHING SYSTEM.
- NO EXISTING WELLS ARE LOCATED WITHIN 75' OF THE PROPOSED LEACHING SYSTEM.
- COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITEE.
- FF=FINISH FLOOR ELEVATION, GF=GARAGE FLOOR ELEVATION, BF=BASEMENT FLOOR ELEVATION

SELECT FILL MATERIAL

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

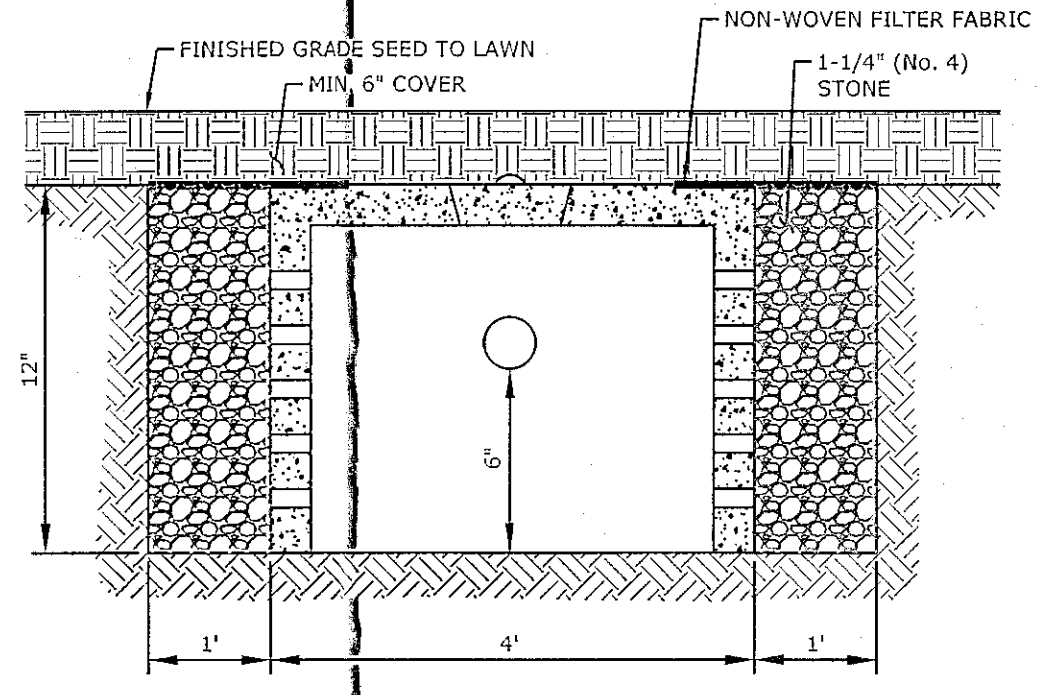
- THE SELECT FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN THREE (3) INCH SIEVE.
- UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE (THIS IS THE GRAVEL PORTION OF THE SAMPLE).
- THE MATERIAL THAT PASSES THE #4 SIEVE IS THEN REWEIGHED AND THE SIEVE ANALYSIS STARTED.
- THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA:

SIEVE SIZE	PERCENT PASSING	
	WET SIEVE	DRY SIEVE
#4	100	100
#10	70-100	70-100
#40	10-50*	10-75
#100	0-20	0-5
#200	0-5	0-2.5

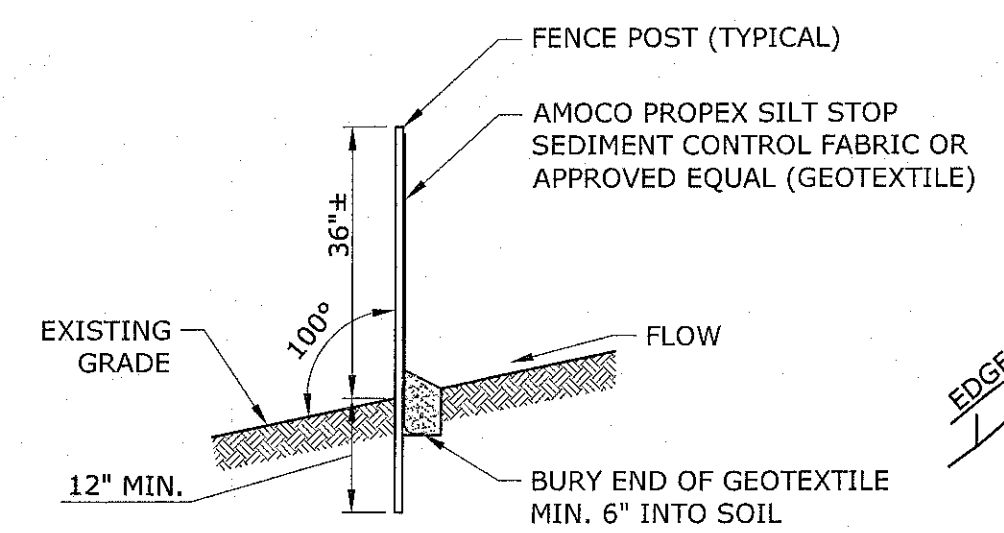
* PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

No. 4 STONE AGGREGATE (1 1/2" STONE)

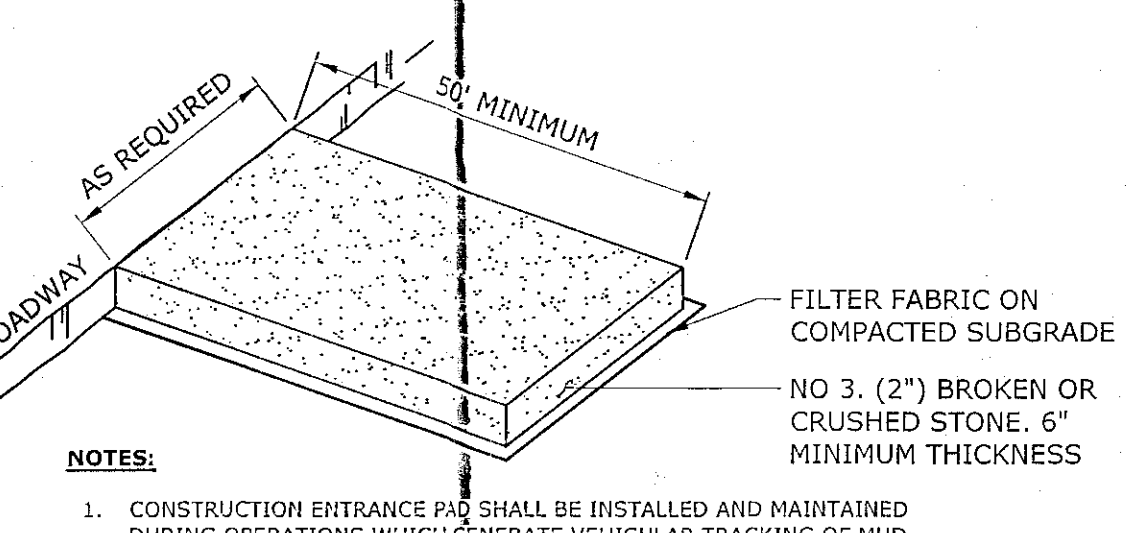
SIEVE SIZE	PERCENT PASSING (BY WEIGHT)
2-INCH	100
1.5-INCH	90-100
1-INCH	20-55
3/4-INCH	0-15
1/2-INCH	N/A
3/8-INCH	0-5
#4	N/A



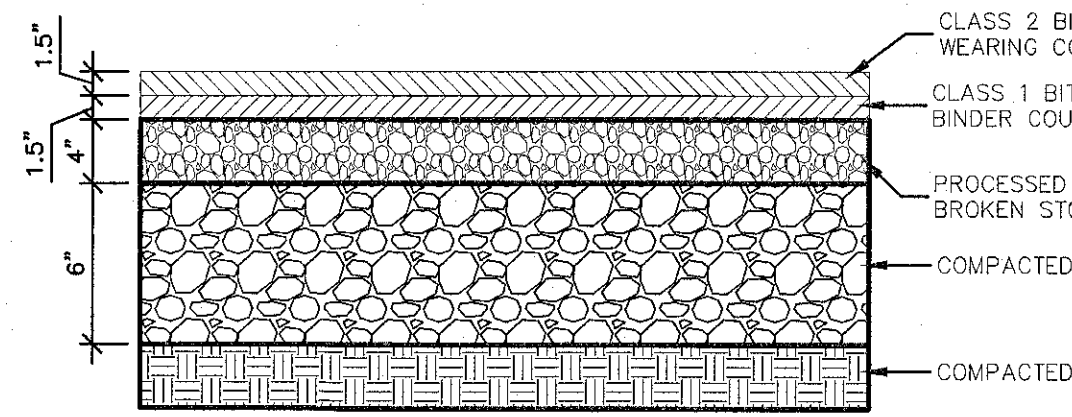
TYPICAL SECTION THRU LEACHING GALLERY
NOT TO SCALE



SEDIMENT FILTER FENCE
NOT TO SCALE

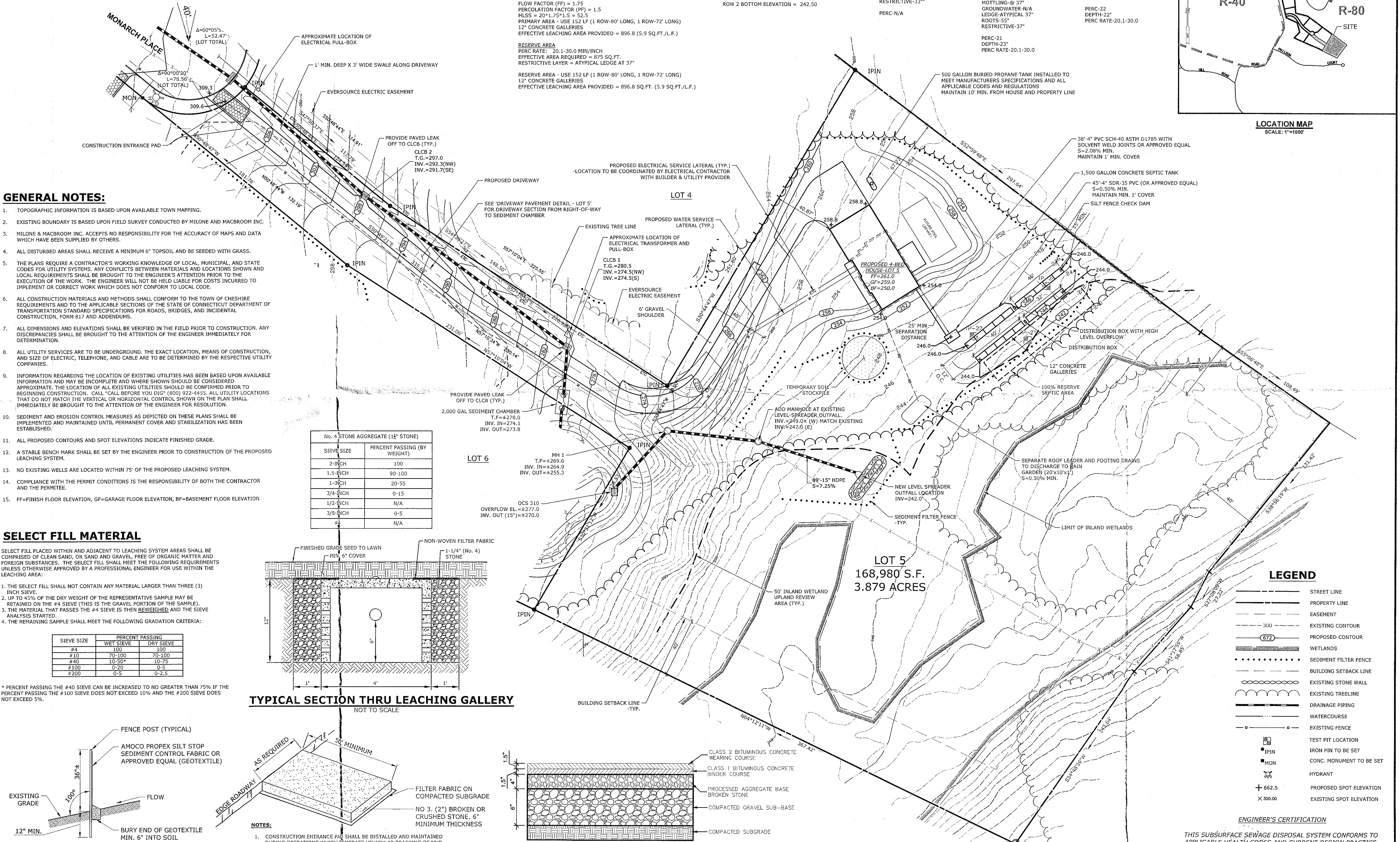


CONSTRUCTION ENTRANCE PAD
NOT TO SCALE



DRIVEWAY PAVEMENT DETAIL - LOT 5*
NOT TO SCALE

*REQUIRED PAVEMENT SECTION FROM CUL-DE-SAC TO SEDIMENT CHAMBER



LEGEND

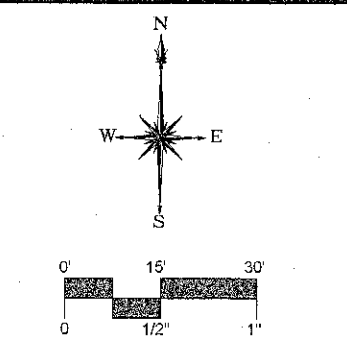
- STREET LINE
- PROPERTY LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WETLANDS
- SEDIMENT FILTER FENCE
- BUILDING SETBACK LINE
- EXISTING STONE WALL
- EXISTING TREELINE
- DRAINAGE PIPING
- WATERCOURSE
- EXISTING FENCE
- TEST PIT LOCATION
- IRON PIN TO BE SET
- CONC. MONUMENT TO BE SET
- HYDRANT
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION

ENGINEER'S CERTIFICATION

THIS SUBSURFACE SEWAGE DISPOSAL SYSTEM CONFORMS TO APPLICABLE HEALTH CODES AND CURRENT DESIGN PRACTICE. NO OTHER WARRANTY IS GIVEN OR IMPLIED BY THE ENGINEER.

Edward A. Hart
 EDWARD A. HART

CONNECTICUT P.E. #15502



DESCRIPTION	DATE	BY

SITE PLAN - SUBSURFACE SEWAGE DISPOSAL SYSTEM
 MONARCH ESTATES SUBDIVISION
 LOT 5
 40 MONARCH PLACE
 CHESHIRE, CONNECTICUT

RECEIVED
 Town of Cheshire
 JUL 15 2020
 Planning Dept.

VEH DESIGNED	STN DRAWN	EAH CHECKED
SCALE: 1" = 30'		
DATE: JULY 15, 2020		
PROJECT NO: 6793-02		
SHEET NO: 1 OF 1		
LOT 5		
SHEET NAME		