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SEPTIC SYSTEM DESIGN CALCULATIONS AND NOTES

(1) FIELD TESTS

PERCOLATION TESTS ⁽¹⁾			DEEP HOLE "H2" RESULT ⁽²⁾	
Hole Designation	Stabilized Rate (Min.)	DEPTH (in.)	Depth (in.)	Description
A	26	24	0-8	Topsoil
B	9	24	8-36"	ROOTS TO 18", MODEL CLAY
C	14	24	36-48"	SILT W/ ASHY MATERIAL
			48-56"	SILT W/ ASHY MATERIAL, SOME CLAY AND 3-6" COBBLES
				NO WATER, BEDROCK OR MINERALS

(1) COMPLETED BY MARATHON ENGINEERING ON 04/27/2018.
(2) COMPLETED BY MARATHON ENGINEERING ON 11/16/18, WITNESSED BY GEORGE BARDEN (CANANDAIGUA WATERSHED INSPECTOR)

(2) REQUIREMENTS & DESIGN

A. FLOW RATE: 150 GALLONS / BEDROOM, DESIGN FOR A 4-BEDROOM HOUSE. THE REQUIRED DESIGN FLOW RATE IS 600 GALLONS PER DAY (GPD).

B. SOLUTION:

- 1,500 gal SEPTIC TANK (DUAL CHAMBER, POLYPROPYLENE IS ACCEPTABLE IF INFILTRATOR OR ROTH BRANDS ARE USED)
- KISTNER PUMP TANK (PP-PT-06, OR APPROVED EQUAL) WITH:
 - 2x LIBERTY 280 EFFLUENT PUMP (CORD LENGTH AS REQ., OR APPROVED EQUAL)
 - INDOOR DUPLEX CONTROL (DAYTON MODEL 2PZG7 OR APPROVED EQUAL) PANEL WITH 3 FLOAT SWITCHES AND AUDIO/VISUAL ALARM LOCATED IN CONSPICUOUS AREA
- DISTRIBUTION BOX (SITE SLOPE <5%)
- PRESBY ENVIROFIN UNITS (4 UNITS REQUIRED, 4 UNITS PROVIDED, 150 GPD CAPACITY EACH)

STANDARD DESIGN TABLE	
ITEM	QUANTITY
NUMBER OF BEDROOMS	4
DESIGN FLOW RATE: Q=(GPD)	600 GPD
SEPTIC TANK (INC. TO ALLOW FOR GARBAGE GRINDER)	1,500
BASAL AREA	334sqf REQ., 335sqf PROV
PRESBY ENVIROFIN UNITS	3 REQ., 4 USED

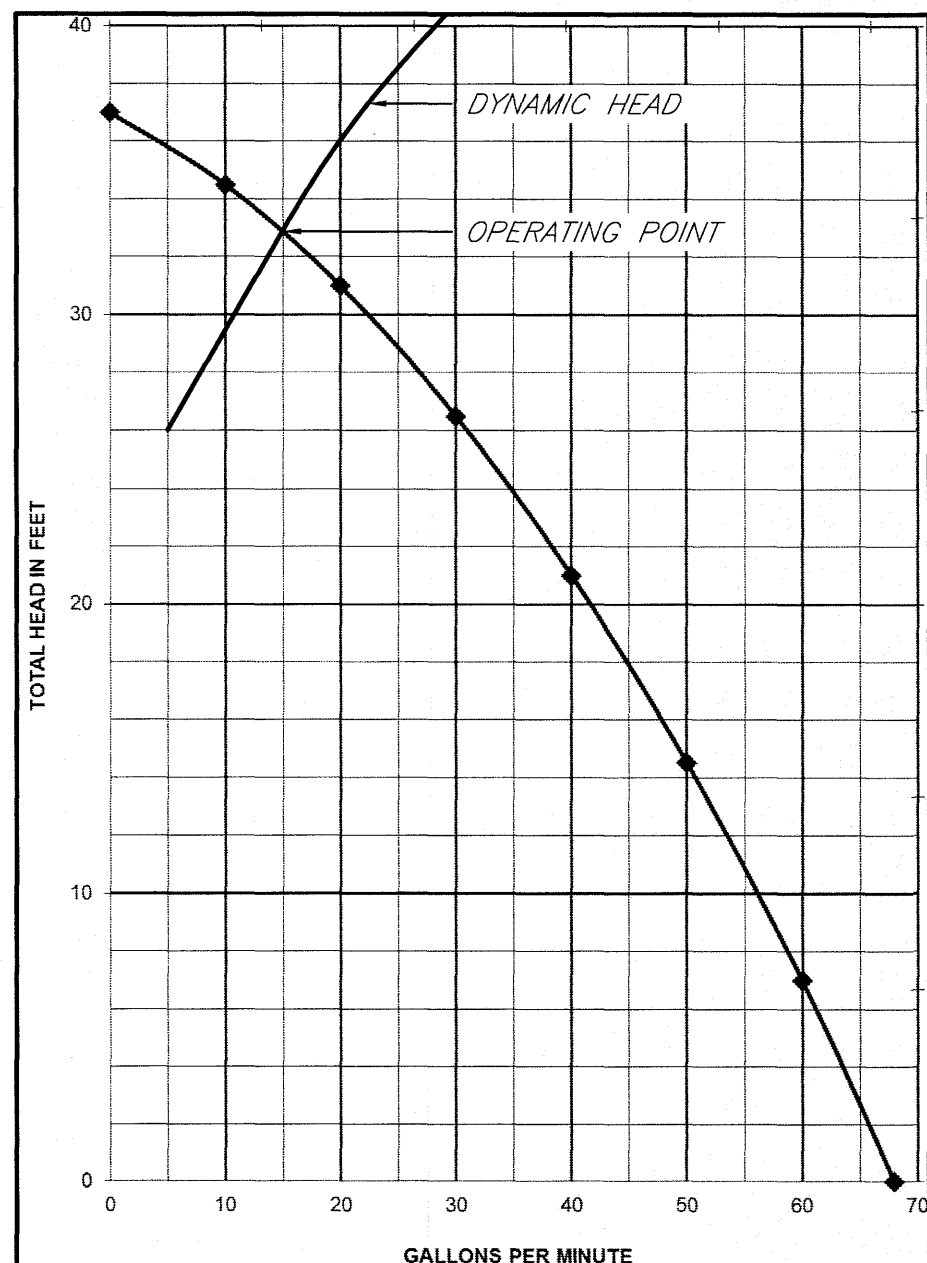
NOTE:
• DOSING VOLUME = 50 GALLONS (600 GALLONS/12 DOSES)

INDIVIDUAL WASTEWATER TREATMENT FACILITY NOTES:

- SYSTEMS IS DESIGNED TO CONFORM TO THE NEW YORK STATE DEPARTMENT OF PUBLIC HEALTH STANDARDS.
- THE CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM SHALL BE INSPECTED AND CERTIFIED BY THE DESIGN ENGINEER.
- RISERS MUST BE USED IF THE TANK IS BURIED DEEPER THAN 12".
- IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS BEEN TEMPORARILY OR PERMANENTLY CEASED, TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES SHALL BE INSTALLED AND/OR IMPLEMENTED WITHIN SEVEN (7) DAYS FROM THE DATE THE SOIL DISTURBANCE ACTIVITY CEASED. THE SOIL STABILIZATION MEASURES SELECTED SHALL BE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE TECHNICAL STANDARD, NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- THE PROPOSED ABSORPTION FIELD AREA SHOULD BE STAKED OUT TO PREVENT ENTRY OF VEHICLES AND MATERIALS. IF THIS AREA IS TO BE DISTURBED, NEW PERCOLATION TESTS MAY BE REQUIRED AND SEPTIC SYSTEM APPROVAL MAY BE REVOKED.
- TIGHT JOINTS MUST BE USED FOR SEPTIC TANK INFLUENT AND EFFLUENT PIPE.
- NON-WASTEWATER FLOWS (I.E. SUMPS, ROOF DRAINS, ETC.) SHOULD NOT BE ADDED TO THE SYSTEM.
- THIS SYSTEM IS NOT SIZED TO FLOW FROM A SPA-TUB OR MULTI-HEAD 'SURROUND SHOWER' HEAD SYSTEMS OR SIMILAR.
- ALL TANKS, ETUs AND SYSTEM COMPONENTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED TO ACCOUNT FOR HIGH GROUND WATER CONDITIONS THAT ARE PRESENT ON SITE.
- ABSORPTION FIELD AREA SHALL BE SEEDED AND MAINTAINED AS LAWN AREA.
- THE PRESBY SYSTEM SHALL BE INSTALLED BY A PRESBY CERTIFIED INSTALLER.

SEPTIC SYSTEM INVERT SCHEDULE

HOUSE FF	INV. AT HOUSE	SEPTIC TANK IN	SEPTIC TANK OUT	PUMP TANK
760.4	752.8	752.5	752.3	752.2



PUMP SIZING CALCS:

STATIC HEAD - 25'
PIPE DIAMETER - 1.5" (D=130)
PIPE LENGTH - 170'
90° x 4 = 447'4020.8'
CHECK VALVE - 1 = 15x1=15'
TOTAL EQ. PIPE LENGTH: 170+29.6+15 = 214.6 = 215'

TOTAL HEAD:
@ 5gpm = 25 + 215/100*0.45 = 26.0'
@ 20gpm = 25 + 215/100*0.82 = 37.5'
@ 40gpm = 25 + 215/100*21.02 = 70.2'

PUMP WILL OPERATE AT 15gpm AND A TDH OF ~33.0'
(SEE PUMP CURVE ABOVE)

PROJECT STATISTICS

1. GENERAL:

- 1.1 PROPERTY OWNER -** STEVEN DAY
9 POINCIANA DRIVE
PITTSFORD, NY 14534
- 1.2 PROPERTY ADDRESS -** 4841 WEST LAKE ROAD
CANANDAIGUA, NY 14424
- 1.3 TAX ACCOUNT -** 140.18-1-4.1

2. PARCEL STATISTICS:

- 2.1 AREA -** 1.09-acres

GENERAL

- MAPPING** - THE EXISTING UNDERGROUND UTILITIES WERE PLOTTED BASED ON RECORD MAPPING SUPPLIED BY OTHERS. THE ENGINEER MAKES NO WARRANTY AS TO THE LOCATION, SIZE, TYPE, ELEVATION, AND/OR NUMBER OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE VICINITY OF THE NEW INFRASTRUCTURE.
- UTILITY STAKEOUT** - THE CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK (1-800-962-7962) FOR A UTILITY STAKEOUT 48 HOURS IN ADVANCE OF COMMENCING WORK. STAKEOUT OF PRIVATE UTILITIES SHALL BE COORDINATED WITH THE OWNER.
- PROPERTY Protection** - THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING PAVEMENT, CURBS, WALKS, LAWNS, TREES, ETC. CAUSED BY THEIR CONSTRUCTION OPERATIONS. ALL DAMAGE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE OWNER'S SATISFACTION AT NO ADDITIONAL EXPENSE.
- ACCESS** - THE CONTRACTOR SHALL PROVIDE SATISFACTORY VEHICULAR ACCESS TO ALL ADJOINING PROPERTIES, PRIVATE ROADWAYS, PARKING FACILITIES, AND PUBLIC STREETS DURING CONSTRUCTION.
- EXCAVATIONS** - ALL EXCAVATIONS SHALL BE BACKFILLED/BARRICADED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONCLUSION OF EACH WORKING DAY.
- MAINTENANCE** - PUBLIC STREETS, PRIVATE DRIVES AND PARKING FACILITIES SHALL BE KEPT FREE OF FOREIGN MATERIALS. ALL AREAS SHALL BE SWEEPED CLEAN AT THE END OF EACH WORKING DAY AND/OR AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE.

NOTES

- CONSTRUCTION STORAGE** - STORAGE OF EQUIPMENT AND MATERIALS SHALL BE WITHIN A SPECIFIED AND SECURED AREA AS DETERMINED IN CONTRACT DOCUMENTS OR AS SPECIFIED BY THE OWNER'S ON-SITE REPRESENTATIVE.
- PERMIT(S)** - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS FROM THE APPLICABLE MUNICIPALITY OR AGENCY. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS AND INSURANCES AND THE OWNER IS RESPONSIBLE FOR PERMIT FEES UNLESS OTHERWISE STATED IN THE OWNER/ CONTRACTOR AGREEMENT.
- INTERIM CONDITIONS** - THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AND WITHIN PROJECT AREA TO A STABILIZED OUTLET THROUGHOUT THE CONSTRUCTION PERIOD. THIS MAY REQUIRE INTERIM GRADING, SHIMMING OF PAVEMENT ETC. THAT IS NOT SPECIFICALLY SHOWN ON THE PLANS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

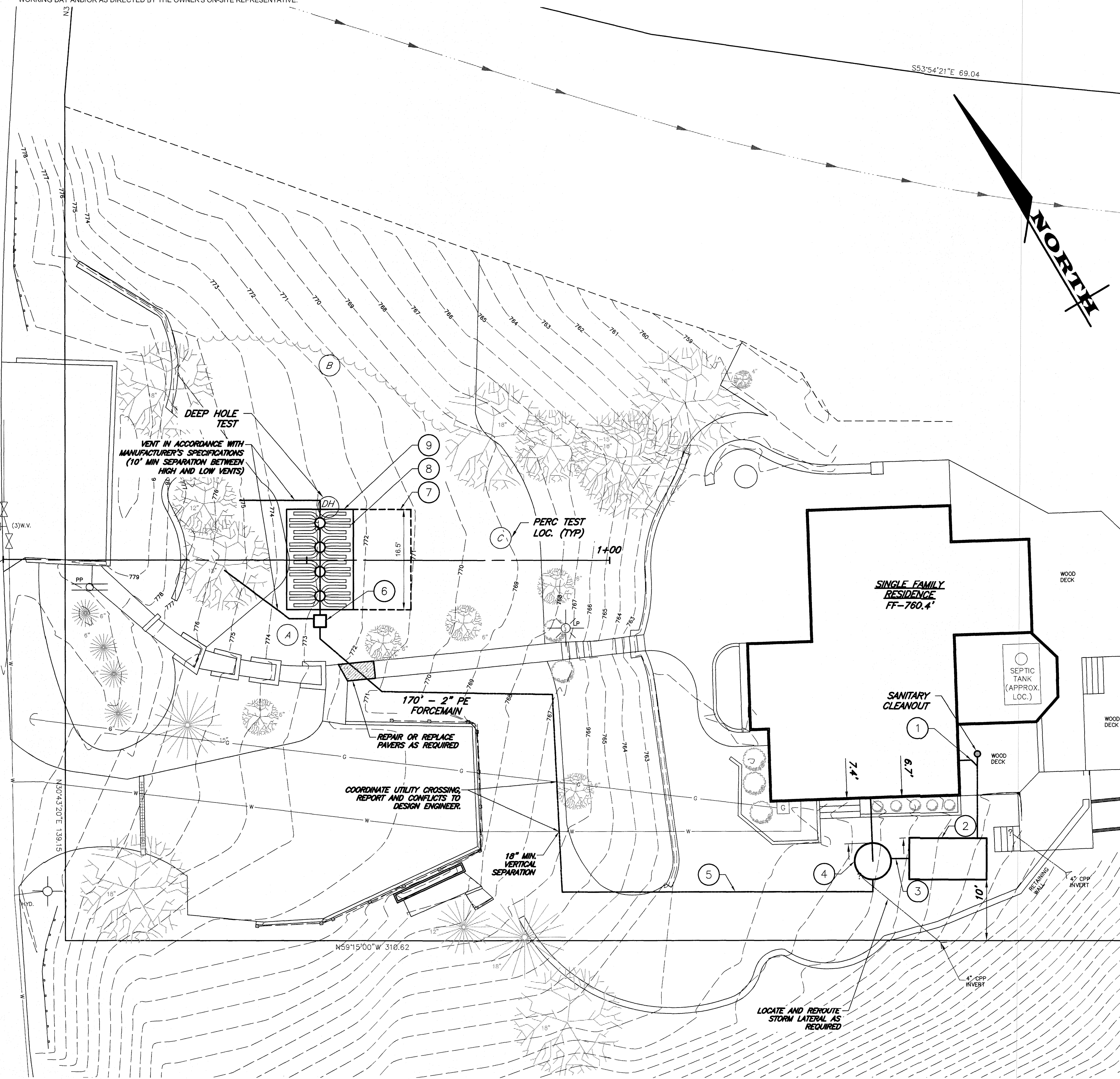
CONSTRUCTION

- STAKEOUT** - THE CONSTRUCTION STAKEOUT SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR USING CONTROL PROVIDED ON THE "LAYOUT PLAN".
- BOUNDARY** - BOUNDARY INFORMATION WAS TAKEN FROM "MAP OF A SURVEY, LANDS TO BE CONVEYED BY SHERMAN FARNHAM, JR." PREPARED BY O'NEILL-RODACK LAND SURVEYING ASSOCIATES, P.C. DATED 07/16/2008 AND IS SHOWN FOR GRAPHICAL REPRESENTATION ONLY.

WEST LAKE (WIDTH VARIES) ROAD (CO. RD. #16)

LEGEND

- 4" SCHEDULE 40 PVC PIPE @ 1/4" / FT MINIMUM SLOPE.
- 1500- gal POLYPROPYLENE SEPTIC TANK (2 CHAMBER, ROTH OR INFILTRATOR BRAND ACCEPTABLE)
- 4" SCHEDULE 40 PVC PIPE @ 1/8" / FT. MINIMUM SLOPE.
- KISTNER 'PP-PT-06' PUMP TANK
- 2" PVC FORCE MAIN
- DISTRIBUTION BOX WITH VELOCITY REDUCER BAFFLE
- SYSTEM SAND EXTENSION
- PRESBY ENVIROFIN UNIT
- FULL DEPTH SYSTEM SAND BED TREATMENT AREA



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SEPTIC SYSTEM DESIGN for STEVE DAY

STATE OF NEW YORK

4841 WEST LAKE ROAD

TOWN OF CANANDAIGUA

JOB NO: 0365-18
SCALE: 1" = 10'
DRAWN: PBG
DESIGNED: RPB
DATE: 05/22/2019

REVISIONS		
DATE	BY	REVISION
12/12/19	PG	REVISED SYSTEM TYPE
2/7/2020	PG	OCSWCD COMMENTS DATED 1/31/2020
2/24/2020	PG	OCSWCD COMMENTS DATED 2/14/2020

I, the undersigned, being a duly licensed Professional Engineer in the State of New York, do hereby certify that I am the author of the design and construction of the above described project, and that I am a duly licensed Professional Engineer in the State of New York.

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DRAWING TITLE:
SEPTIC PLAN

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SHEET No: C1.0
0365-18
JOB No: DRAWING No: