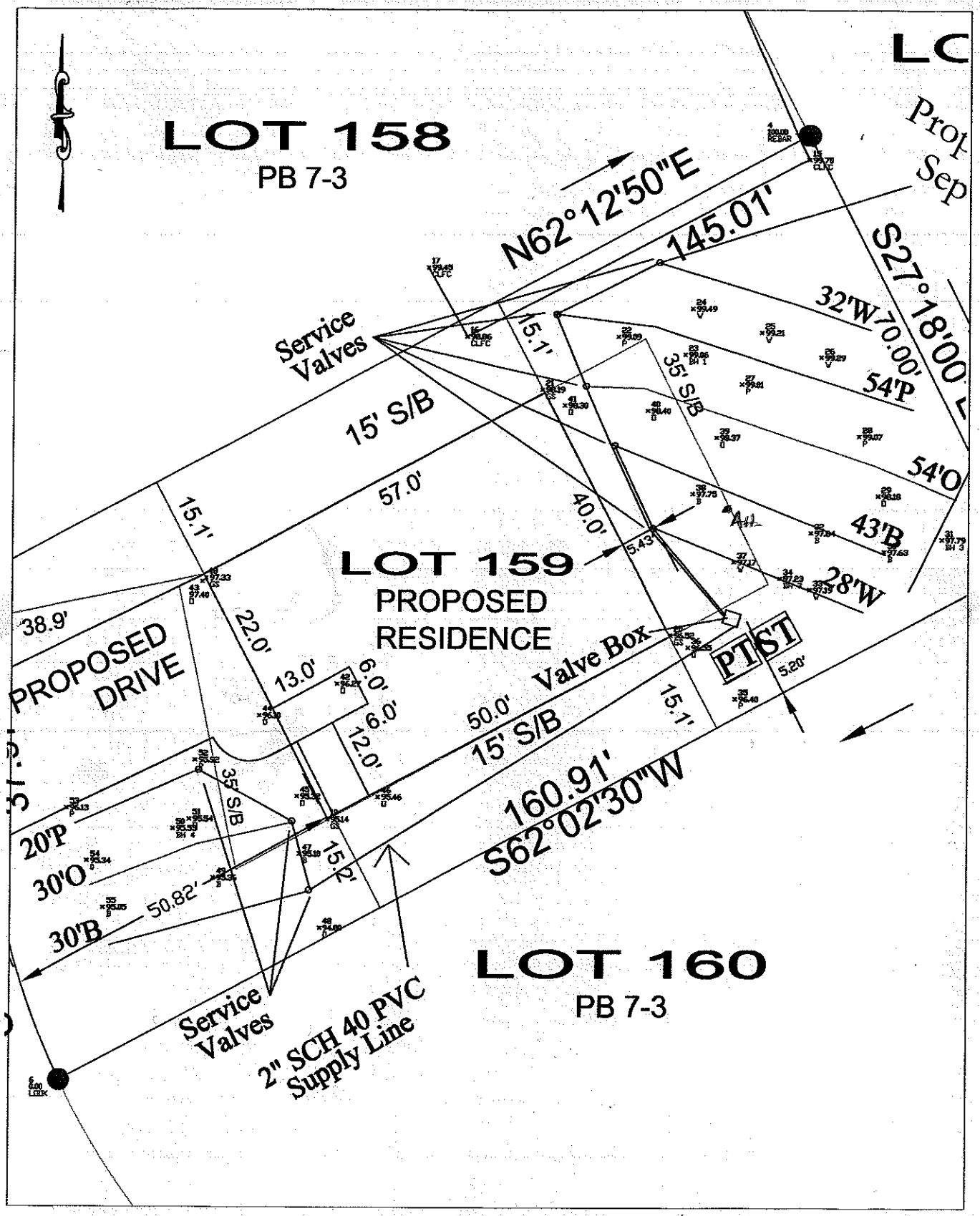


SEPTIC ENVIRONMENTAL SOLUTIONS, INC.
3019 SPRING FANCY LANE, INDIAN TRAIL, NORTH CAROLINA, 704-502-5588

20' 0' 10' 20'
1" = 20'

DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

PROPERTY ID #: _____
COUNTY: Iredell
4635693648.ws

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**
(Complete all fields in full)

Approved MD 7/23/14

OWNER: Ramirez Conecho TRE Homes APPLICATION DATE _____
ADDRESS: Berkan Ridge Dow Cut, Mooresville DATE EVALUATED: 5-2-14
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: <0.25
LOCATION OF SITE: Lot 159 Commodore Pennsula PROPERTY RECORDED: Aeon 1983
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LC 2%	0-14	SCL/cr/WK	FR/NS/NP/NAP	2.5YR 4/3	60+ mica mi	SA/SAP/NA	60+	I 0.30
		14-24	C/WK/SBK	FI/FR/SS/SP/NP	2.5 YR 4/6				
		24-60	CL/WK/SBK	FR/NS/NP/NAP	2.5YR 4/8				
2	LC <2%	0-12	SCL/cr/WK	FR/NS/NP/NAP	2.5YR 4/6	60+	NA Soil	60+	I 0.30
		12-21	C/WK/SBK	FI/SS/SP/NAP	2.5YR 4/6				
		21-35	C/WK/SBK	FR/NS/NP/NAP	2.5YR 4/8				
		35-60	CL/WK/SBK	VFR/NS/NP/NAP	mica				
3	LC <2%	0-5	CL/cr/WK	FR/NS/NP/NAP	10 5YR 6/6	60+	NA Soil/SAP	60+	I 0.30
		5-12	C/WK/SBK	FI/FR/SS/SP/NAP	10YR 4/6				
		12-22	CL/WK/SBK	FR/NS/NP/NAP	10 2.5YR 4/6				
		22-60	SiCL/CL/WK/SBK	VFR/NS/NP/NAP	5YR 4/6				
4	LC <2%	0-10	SiCL/SCL/cr/WK	VFR/NS/NP/NAP	2.5YR 4/3		NA	60+	I 0.30
		10-22	SiCL/SCR/WK	FR/NS/NP/NAP	2.5YR 4/6				
		22-34	C/FI/SBK/WK	FI/SS/SP/NAP	2.5YR 4/8				
		34-48	C/FI/SBK/WK	FI/SS/SP/NAP	10YR 5/6				
				10 2.5YR 4/4					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	291	Before 1972
System Type(s)	LPP ATER	NA
Site LTAR	0.30	NA

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _____
OTHER(S) PRESENT: _____

LICENSED SOIL SCIENTIST
KENNETH L. OWENS
1134
STATE OF NORTH CAROLINA

COMMENTS: _____

Updated February 2014

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet ___ of ___
PROPERTY ID #: 4635694649
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: True Homes
ADDRESS: _____ APPLICATION DATE _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): 360 gpd DATE EVALUATED: 7-15-16
LOCATION OF SITE: 300 Commodore Lp PROPERTY SIZE: _____
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other _____ PROPERTY RECORDED: 1962
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	OTHER PROFILE FACTORS .1943 SOIL DEPTH	OTHER PROFILE FACTORS .1956 SAPRO CLASS	OTHER PROFILE FACTORS .1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L 2%	D-13	Brw SCL						PS .3
		13-25	R C/CL	m-w SBK	SS, SP, SExP,		FR		
		25-48"	R/Brw	FL w SBK	SS, SP, SExP,		FR		
				w/ Inclus of SAP					
2									
3									
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	PPBPS	Partial PPBPS
Site LTAR	.3	.3

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: Kenny Owens / Maria Dotson
OTHER(S) PRESENT: _____

COMMENTS: _____

Design Specifications for Lot 159 Commodore Loop, Iredell, North Carolina

Daily Design Flow	360	gals
Number of Bedrooms	3	bedrooms
Basement or Crawspace	Craw Space	
Parcel ID/Address		
Dellinger Septic Tank Size	1000	gals, Effluent Poly Lock PL68 Filter or equal.
Dellinger Pump Tank Size	1000	gals, Sim/Tech Effluent Filter on Pump Tank
Sim/Tech Effluent Filter on Pump Tank	Yes	Connection inside pump tank vault and on supply line.
Primary System Loading Rate (LTAR)	0.30	gpd/ft^2 LTAR including Soils Evaluations were determined by Iredell County. Soils Evaluations and LTAR were not Conducted by Septic Environmental Solutions, Inc.
Number of Lines	8	Total LP PPBPS, See Scaled Dwg.
Primary System	291	ft.
Trench Width	3	ft
Trench Spacing	9	ft
Trench Maximum Depth	36	inches
Pump required	Yes	
Distribution Device	Yes	Gate Valve Box with LPP Panel Distribution
Maintenance Agreement Required	Yes	Contracted by Septic Environmental Solutions, Inc.
Length and Diameter of Supply Line	15	2" SCH 40 PVC 1 1/4" SCH 40 PVC
Lateral Diameter	Yes	1 1/4 inch SCH 40 PVC
Barrel Diameter	Yes	4" SCH 80 PVC
Number of T&J Panels	Yes	Total panels for primary system
Flow Rate through System	34	gpm– use 5/32" holes with 3ft head
Elevation Head	6	ft.
Pressure Head	3	ft.
Friction Head	1	ft.
20% Contingency	2	ft.
Total Head	12	ft.
Pump Requirements	34	gpm. with 12-ft of Head; Use Goulds WE03M Pump or Equivelent with Compatible Electrical
Dosing Volume	242	gallon
Pump run time per dose, approximate	7.1	min
Check Valve	Yes	
Maintanance Valves	Yes	
Siphon Break Hole	Yes	
Repair System Loading Rate	NA	gpd/ft2
Repair System	NA	Deed before 1962
Total foot of Repair	NA	ft

Before placement of cap block, one panel on each line near the center of the field should be observed filling to make certain that it does not overflow top chamber into air chambers of panel. If overflow occures, reduce floats by 25 gallons and reset until no overflow is observed.

LPPPPBPS Design Worksheet (Primary System)					File #/Name:	Commodore Loop
System Requirements					Tax #:	46356946.000
Number of bedrooms	3				Lot	159
Craw Space/Basement	Craw Space					
Daily Design Flow	360	gpd			Address:	Iredell County
LTAR	0.300	gpd/ft.^2			Consultant:	Septic Environmental Solutions Inc.
Linear footage	400.00	ft. (Conventional)			Phone:	704-502-5588, Fax 704-684-1469
Linear footage	200.00	ft. (50% Reduction)				
Trench Maximum Depth	36	inches				

Laterals	Length (ft)	# Panels	Calculated
Line # 1	28	7	7
Line # 2	43	10	10
Line # 3	54	13	13
Line # 4	54	13	13
Line # 5	32	7	7
Line # 6	30	7	7
Line # 7	30	7	7
Line # 8	20	5	5
Line # 9		0	0
Line # 12		0	0
Totals	291	67	67

*Lines longer than 70 ft. must be center-fed to comply with sewage rules.

T&J Panel Summary Table	
Linear Feet	# Panels
20	5
30	7
40	9
50	11
60	14
70	16
80	18
90	21
100	23
110	25
120	17
130	30
140	32
150	34
160	37
170	39
180	41
190	43
200	46

Absorption Area			
Length (ft)	Width (ft)	Spacing	Area (ft^2)
291	3	9	3000+

System Pressure Head	3	ft.	Value selected by system designer (must be between 2-5 ft.)
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)
Flow Rate per Orifice/Panel	0.5	gpm	Determined from orifice flow design table (use table from Flow Rate tab)
Total System Flow Rate	34	gpm	Total number of panels required multiplied by the orifice flow rate
System Dose Volume	242	gal.	Total number of panels required multiplied by 3.6 gal./panel
Doses Per Day	1.5	cycles	Number of dose cycles per day based on daily design flow. Daily design flow divided by system dose volume.
Pump Run Time	7.12	min.	System dose volume divided by the total system flow rate
Pump Tank Volume / Inch	21	gal./in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch. 1,500 gal. pump tank, volume is approximately 29 gallons per inch. Contractor is responsible in verifying tank gallons per inch.
Pump Tank Drawdown	11.52	in.	System Dose Volume divided by gallons per inch for the designed tank size.
Supply Line Length	15.00	ft	
Elevation head+pump height	6.00	ft.	
Friction Head	1.00	ft.	
20% Contingency	2.00	ft.	
Total Head	12.0		

Comments:

1. Install system using 2 ft. wide trenches.
2. Install drainlines on 8 ft. centers (to be specified by the designer) and must be level and on contour.
3. System design requires effluent pump for distribution. Yes
4. Requires repair septic system. Yes
5. Maintanance Agreement Required Yes

Cells with blue shading require user input.
Cells with yellow shading are automatically calculated.