SEPTIC ENVIRONMENTAL SOLUTIONS

1 March 2015 AD

To: Iredell County Environmental Health Department
Mooresville, North Carolina Office

From: Kenneth L. Owens, NCLSS
Septic Environmental Solutions, Inc.

RE: Rock Ridge Point Subdivision, True Homes Individual Lots

Per your request, Septic Environmental Solutions, Inc. has prepared this letter briefly summarizing the scope of services that was completed on individuals lots located at Rock Ridge Point Subdivision. It is our understanding that all soils work in the subdivision was completed and approved by Iredell County Health Department personnel (ICEHD). Therefore, for this scope of service, Septic Environmental Solutions, Inc. completed septic drainfield line layout for each available lot in the subdivision. Each septic line was laid out level and on contour per the Fast Tract requirement. In addition please see the following survey with the attached design proposal per your request. It should be noted that this is not an Improvement Permit or Authorization to Construct, and is only to assist ICEHD with the *SITE* Evaluation (soils approved in 2006 per the existing Improvement Permits for each lot) including field verification of property lines, corners, house pads, driveways, building setbacks, easements and septic drainfield layouts per the individual lots. The septic systems should be installed in accordance with the ICEHD permits, policies, and per the North Carolina Rules and Regulations. Verification of all information is the responsibility of ICEHD before issuing any septic permits.

Sincerely,

Kenneth L. Owens

Septic Environmental Solutions, Inc.
Kenneth L. Owens, President
NCLicensed Soil Scientist #1134

3019 Spring Fancy Lane• Indian Trail, North Carolina 28079
Mobile (704) 502.5588 • Fax (704) 684.1469

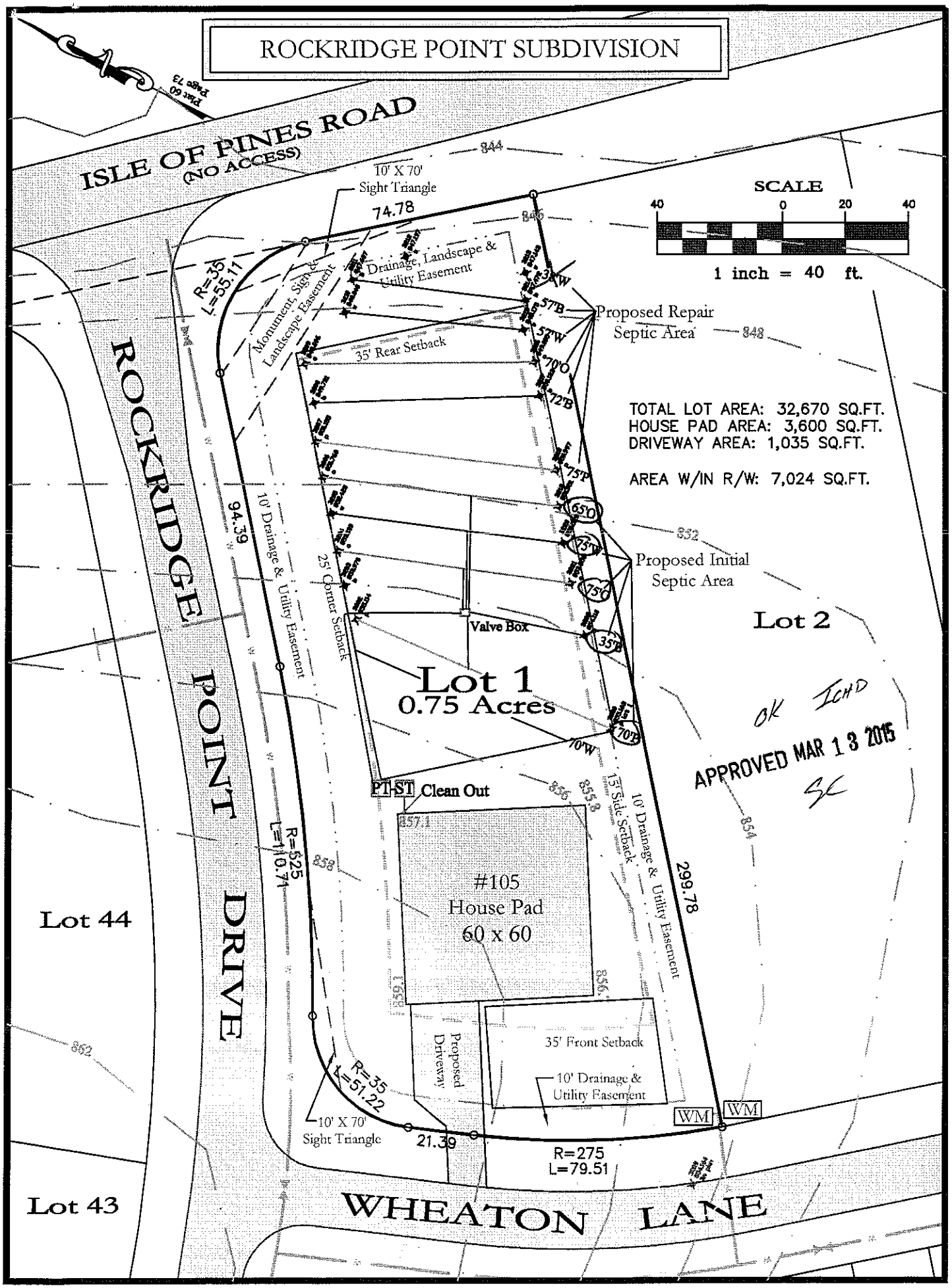
Design Specifications for Lot 1 Rock Ridge Point, Iredell, North Carolina

Daily Design Flow	480	gals
Number of Bedrooms	4	bedrooms
Basement or Crawspace	Craw Space	
Dellinger Septic Tank Size	1500	gals, Effluent Poly Lock PL68 Filter or equal.
Dellinger Pump Tank Size	1500	gals
Sim/Tech Effluent Filter on Pump Tank	Yes	Connection inside pump tank vault and on supply line.
Primary System Loading Rate (LTAR)	0.25	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	5	Total LP PPBPS, See Scaled Dwg.
Primary System	320	ft.
Trench Width	2	ft
Trench Spacing	8	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	91	2" SCH 40 PVC 1 1/4" SCH 40 PVC
Number of T&J Panels	73	Total panels for primary system
Flow Rate through System	37	gpm– use 5/32" holes with 3ft head
Elevation Head	4	ft.
Pressure Head	3	ft.
Friction Head	2.05	ft.
20% Contingency	2	ft.
Total Head	10.9	ft.
Pump Requirements	37	gpm. with 11-ft of Head; Use Goulds WE03L Pump or Equivelent with Compatible Electrical
Dosing Volume	263	gallon 1.9 does/day@design flow*
Pump run time per dose, approximate	7.1	min
Check Valve	Yes	
Siphon Break Hole	Yes	
Repair System Loading Rate	0.25	gpd/ft2
Repair System	Yes	LP PPBPS, See attached dwg.
Total foot of Repair	337	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:	Rock Ridge		
System Requirements					Tax #:	4636233131.01		
Number of bedrooms	4				Lot	1		
Craw Space/Basement	Craw Space							
Daily Design Flow	480	gpd			Address:	Iredell County		
LTAR	0.25	gpd/ft.^2			Consultant:	Septic Environmental Solutions Inc.		
Linear footage	640.00	ft. (Conventional)			Phone:	704-502-5588, Fax 704-684-1469		
Linear footage	320.00	ft. (50% Reduction)						
Trench Maximum Depth	36	inches						
Laterals	Length (ft)	# Panels	Calculated					
Line # 1	70	16	16					
Line # 2	35	8	8					
Line # 3	75	17	17					
Line # 4	75	17	17					
Line # 5	65	15	15					
Line # 6		0	0					
Line # 7		0	0					
Line # 8		0	0					
Line # 9		0	0					
Line # 10		0	0					
Line # 11		0	0					
Line # 12		0	0					
Totals	320	73	73					
	*Lines longer than 70 ft. must be center-fed to comply with sewage rules.							
Absorption Area								
Length (ft)	Width (ft)	Spacing	Area (ft^2)					
320	2	8	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	37	gpm	Total number of panels required multiplied by the orifice flow rate					
System Dose Volume	263	gal.	Total number of panels required multiplied by 3.6 gal./panel					
Doses Per Day	1.9	cycles	Number of dose cycles per day based on daily design flow. Daily design flow divided by system dose volume.					
Pump Run Time	7.11	min.	System dose volume divided by the total system flow rate					
Pump Tank Volume / Inch	29	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	9.07	in.	System Dose Volume divided by gallons per inch for the designed tank size.					
Supply Line Length	91.00	ft						
Elevation head+pump height	4.00	ft.						
Friction Head	2.05	ft.						
20% Contingency	1.81	ft.						
Total Head	10.9							
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		Cells with blue shading require user input.				

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


ROCKRIDGE POINT SUBDIVISION
ISLE OF PINES ROAD
(NO ACCESS)
10' X 70'
Sight Triangle
74.78
SCALE
40 0 20 40
1 inch = 40 ft.
R=35
L=55.11
Monument, Sign & Landscape Easement
Drainage, Landscape & Utility Easement
Proposed Repair
Septic Area
35' Rear Setback
TOTAL LOT AREA: 32,670 SQ.FT.
HOUSE PAD AREA: 3,600 SQ.FT.
DRIVEWAY AREA: 1,035 SQ.FT.
AREA W/IN R/W: 7,024 SQ.FT.
ROCKRIDGE POINT DRIVE
94.39
10' Drainage & Utility Easement
25' Corner Setback
Proposed Initial
Septic Area
Valve Box
Lot 2
Lot 1
0.75 Acres
OK ICHD
APPROVED MAR 13 2015
PT-ST Clean Out
15' Side Setback
10' Drainage & Utility Easement
299.78
#105
House Pad
60 x 60
R=525
L=110.71
Lot 44
Proposed Driveway
35' Front Setback
10' Drainage & Utility Easement
WM
WM
R=35
L=51.22
10' X 70'
Sight Triangle
21.39
R=275
L=79.51
Lot 43
WHEATON LANE