DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: _____ PROPERTY RECORDED: _____
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	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1		0-7	BSL GR	fr: SSsP					PS
		7-17	RC SaM	f: SS/SSP					-3
		17-53	RCL MSaM	fr SSSP	Common Sat				
2		0-6	BSL GR	fr: SSsP					PS
		6-22	RCL SaM	f: SP					-3
		22-54	RCL MSaM	fr SSSP	Quartz veins				
3									
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

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

COMMENTS: _____

for ON-SITE WASTEWATER SYSTEM

OWNER: Danny Ervin/Lippard Springs APPLICANT: _____
ADDRESS: _____ APPLICATION DATE: _____ DATE EVALUATED: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: _____ PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1948 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	.1955 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
P 1411 1	L/0-2%	0-27	RB c mf Abk	Fr SS P SE XP	few sap incl; quartz vein 42-50"				PS-CB 0.275 0.3
		27-42	R cl wf-m Abk/Mk	Fr SS SP SE XP					
		42-60	very sl mass	L NS NP NE XP					
P 1411 2	L/5-12%	0-28	RB c mf Abk	Fr SS P SE XP	comm sap incl				PS-SA 0.275 0.3
		28-52	R cl wm sbk	Fr SS SP SE XP					
P 1410 3	L/5-10%	0-24	RB c wf Abk	Fr SS P SE XP	comm sap incl				PS-CB 0.275 0.3
		24-48	R cl wf sbk	Fr SS SP SE XP					
		48-60	very ls mass	L NS NP NE XP					
P 1410 4	L/5-10%	0-36	R c m Abk	F SS P SE XP	few sap incl				PS-SA 0.275 0.3
		36-52	R cl ws bk	Fr SS SP SE XP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

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

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

PROPERTY ID #: _____
DATE OF EVALUATION: _____
COUNTY: _____

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	PROFI CLAS & LTA
P 141 E.	L/5-10	0-28	R C mk6k/sbk	Fr-SS P SE KP					
		28-52	R c/l wsbk	Fr SS SP SE KP					
		52-68	very f/ mass	Fr SS SP SE KP					
P 53B	L/6-10	0-24	R C msbk/sbk	Fr SS P SE KP					
		24-34	R c/l wsbk	Fr SS SP SE KP	many SAP				
		34-60	very f/ mass	" " " "					
P 53A	L/10-15	0-8	B sl cr	Fr SS SP SE KP					
		8-32	R C mfsbk	Fr SS P SE KP					
		32-46	R C wmsbk	F-Fr SS P SE KP	vfew SAP				
		46-60	very f/s mass	L NS NP NE KP					
P 53C	L/10-15	0-18	R C mfsbk	Fr SS SP SE KP					
		18-30	R c/l wmsbk	" " " "	common SAP				
		30-60	very f/ mass	" " " "					
P 53A	L/0-5	0-36	R C wmsbk/mbk	Fr SS P SE KP	few SAP				
		36-57	R c/l vwsbk	Fr SS SP SE KP	common SAP				

COMMENTS: _____

Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner: Dean Murdock
Att: Danny Ervin
Address: PO Box 185
Troutman, NC 28166
Phone: 704-528-5678
County: Iredell
Location: LIPPARD SPRINGS LOT 141

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 480
System Flow: NA

Design Specifications

Drainfield Size: 401
Loading Rate (gpd/ft.^{2}): 0.30
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: ~~1000~~ N/A

Estimated Supply Line Length: 15
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: 2.61
Dosing Volume: NA
Supply Manifold: DROP-BOX
Supply Manifold Length: NA
Supply Manifold Volume: N/A

Recommended Float Controls: NA

Recommended Control Panel: NA

Pressure Head: NA
Friction Head: NA
Elevation Head: NA
Total Dynamic Head: NA

Threaded Union: NA
Gate Valves: NA
NA
Check Valves: NA
Anti-Siphon Hole: NA
Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services.

LIPPARD SPRINGS LOT 141

DESIGN FLOW:	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	1203
TOTAL LATERAL LENGTH:	401
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	15
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

LIPPARD SPRINGS LOT 141

Project #: 01-1179

LAYOUT FOR 4 BEDROOM HOME

January 5, 2007

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		NA			NA		
INSTR. 1			NA				
HOUSE CRN				NA	NA		
P. TANK				NA	NA		
1	PINK			NA	NA	48	48
2	RED			NA	NA	60	60
3	ORANGE			NA	NA	84	84
4	BLUE			NA	NA	66	66
5	***PINK***			*NA*	*NA*	*96*	*96*
6	BLUE			NA	NA	60	60
7	***RED***			*NA*	*NA*	*113*	112
8	***ORANGE***			*NA*	*NA*	*81*	80
9	***BLUE***			*NA*	*NA*	*66*	68
10	***PINK***			*NA*	*NA*	*45*	44
					Total	719	718

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
** System*	*400*	*0.30*	*ACCEPT.*		*25% RED.*	GRAVITY DISTRIBUTION
Repair	318	0.30	*MOD.*		PPBPS	LOW PRESSURE

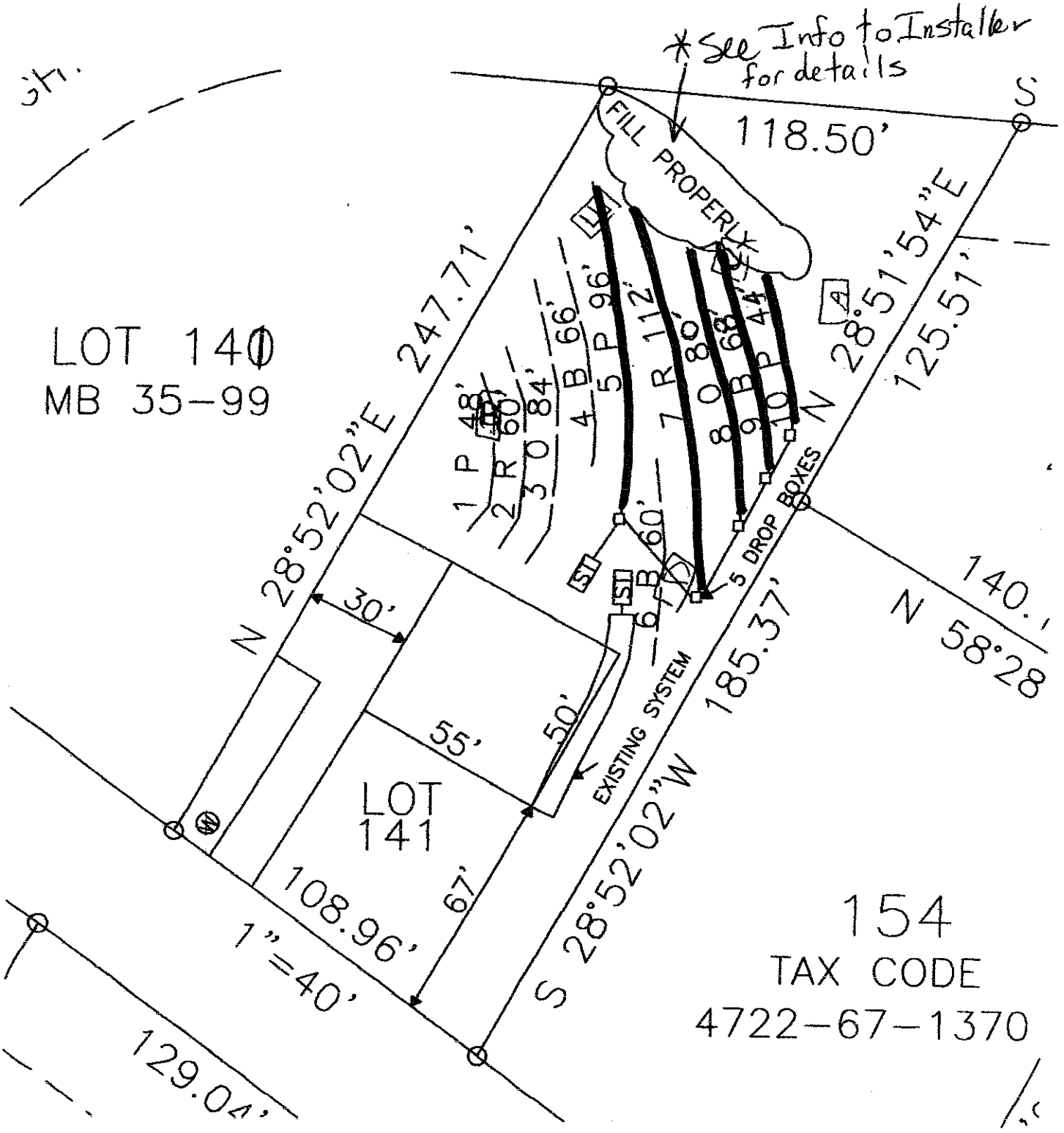
Notes:

** TBM Is Not Required.

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings


*See Info to Installer for details
FILL PROPERLY
118.50'
S
N 28°51'54"E
125.51'
N 28°52'02"E 247.71'
LOT 140
MB 35-99
1 P 48'
2 R 60'
3 O 84'
4 B 66'
5 P 96'
7 R 112'
8 O 80'
9 B 68'
10 P 44'
5 DROP BOXES
ST
ST
60'
30'
55'
50'
EXISTING SYSTEM
LOT
141
108.96'
67'
1"=40'
129.04'
S 28°52'02"W 185.37'
N 58°28
140.
154
TAX CODE
4722-67-1370

CALCULATIONS

Location LIPPARD SRPINGS

Project Number 01-1179

Lot No: Lot 141

No. of Bedrooms 4

Design Flow 480 $^{gal}/_{day}$

LTAR 0.30 $^{gal}/_{ft^2\ day}$

25% RED.? (YES OR NO) YES

Supply Line Length 15 ft.

Supply Line Volume 2.61 gal.

Required Feet of Line 400 ft.
Amount of Line from Layout 401 ft.

Gallons per Minute NA $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Lateral Line Volume 261.853 gal.

Dosing Volume NA gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down NA *Generic Draw Down of 21 gal.per in.*

Pump Run Time NA minutes

Elevation Head NA ft.
Pressure Head NA ft.
Friction Factor NA ft./100 ft. *(From the interpolater.)*
Friction Head NA ft.

Total Dynamic Head (+15%) NA ft.

FRICTION FACTOR
INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42