Recd
09-25-13



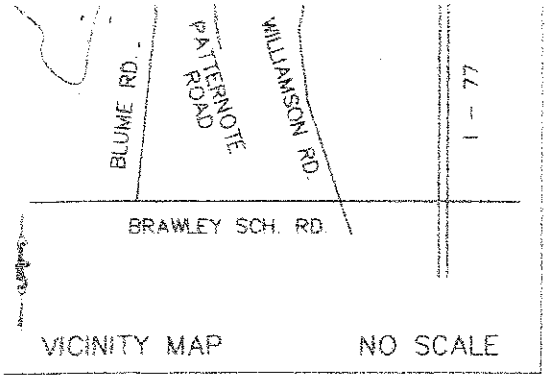
MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
1999 CANDLEWICK DRIVE
FORT MILL, S.C. 29715
803-802-4403 (office)
803-802-4402 (fax)

Reference: Data Sheet for 316 Beaten Path, Mooresville, NC, PIN 4627939011
House Footprint: See attached
Building Setbacks: 35' front, 15' side, 50' lake
Water Source: Private well
Number of Bedrooms: 3/360 GPD
Proposed LTAR: 0.35 GPD/FT2 (initial), 0.3 GPD/FT2 (repair)
Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low Pressure
Flow per Tap: 0.59 GPM
Hole Size & Material: 3/16"
System Flow: 22.42 GPM
Dosing Volume: 136.8 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 11.1'
Friction Head: 1'
Pressure Head: 2'
Total Dynamic Head: 14.1'
Supply Line Length: 75'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 36"
Proposed Trench Width: 24"

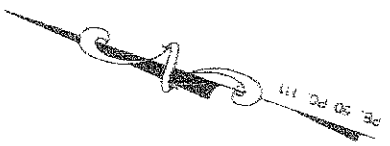
Line	Design Length	Actual Length	Elevation
White 1	**20' (4 panels)**	**21'**	**808.9'**
Blue 2	**42' (9 panels)**	**43'**	**806.5'**
Orange 3	**50' (11 panels)**	**50'**	**804.2'**
Pink 4	**60' (14 panels)**	**60'**	**802.2'**
White 5		60'	800.4'
Blue 6		47'	798.7'
Pink 7		28'	780.1'
White 8		24'	777.6'
Blue 9		42'	775.5'

Initial System: 172' **Repair System:** 201'
Pump tank: 797.8' **House corner:** 796.7' **Benchmark:** 807.7'

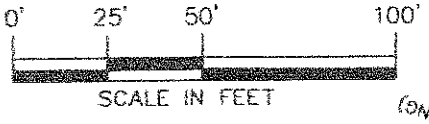
Comments:
In order to obtain an improvement permit for this lot a lift station/grinder pump will be necessary. In order to comply with State rules a separate 1000 gallon tank will be required in addition to the 1000 gallon septic and pump tanks. Please note MA&A has shot the elevations of all three tanks and it appears that unless there are modifications to the site, traffic graded tanks will be required. In order to keep all parts of the system 100' from the well, the tanks will have to be placed above the house. The system is laid out on 8' centers. A surface water diversion will need to be constructed along the property line below the house in the event that the repair system is ever installed. There is more repair possible in the area of AB 3.



VICINITY MAP NO SCALE



760 CONTOUR LINE TABLE		
LINE	BEARING	LENGTH
L16	N 55°00'39" W	2.82'
L17	N 55°00'39" W	15.60'
L18	N 27°11'58" W	9.97'
L19	N 05°28'25" E	5.48'
L20	N 31°22'22" W	10.70'
L21	N 31°22'22" W	16.15'
L22	N 25°15'02" W	10.28'
L23	N 07°24'40" E	14.28'
L24	N 26°22'02" E	20.27'
L25	N 12°31'45" E	27.32'
L26	N 36°18'27" E	25.31'
L27	N 49°05'12" E	19.19'
L28	N 52°28'34" E	28.28'
L29	N 59°52'19" E	25.44'
L30	N 18°39'35" E	12.62'
L31	N 06°05'56" E	30.41'



NOTES

1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENT AND/OR RIGHTS-OF-WAY OF RECORD.
2) AREA COMPUTED BY THE COORDINATE METHOD.
3) EXISTING 760' & 761' CONTOUR ELEVATION BASED ON LAKE NORMAN LAKE LEVEL AT COWAN'S FORD DAM (READING ON 4/16/12) ELEVATION: 757.40'
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.

PROPOSED HOUSE BOX & SEPTIC SURVEY

OF

LOT 1 CRESCENT LAND & TIMBER CORPORATION

SCALE 1" = 50' DAVIDSON TWSP., IREDELL CO., N.C.

ACQUIRED BY: BLUE HARBOR BANK

LEGEND
- P.P. = POWER POLE
- DUKE POWER TRANS.
- E.I.P. = EXISTING IRON FOUND
- I.P.S. = #4 REBAR SET
- R/W = RIGHT-OF-WAY
- W = WELL

FIELD BOOK:
FILE: 13234REC
DC FILE:
TAX MAP NO: 4627939011

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

Sheet ____ *of* ____
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: 3 bedroom _____ PROPOSED DESIGN FLOW (.1949): 360 GPD ____ PROPERTY SIZE: _____
LOCATION OF SITE: _316 Beaten Path _____ 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)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
PIT 1	LS 12%	0-26	R C SBK	FR SS SP		70"			PS 0.3-0.4
		26-70	R CL WSBK	FR SS SP			Few SAP		
PIT 2	LS 7%	0-6	FILL			42"	PS		PS 0.3-0.4
		6-26	R C SBK	FR SS SP					
		26-42	R CL WSBK	FR SS SP					
		42-70	Ver SL SAP M	VFR SS SP					
PIT 3	LS 15%	0-17	R C SBK	FR SS SP		17"	PS		PS 0.4-0.6
		17-22	Ver SL SAP M	VFR SS SP					
		22-65	Ver LS SAP M	VFR NS NP					
AB 1	LS 15%	0-28	Br SCL WSBK	FR SS SP		48"			PS 0.3
		28-48	R C SBK	FR SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	344 FT2	400 FT2
System Type(s)	PPBPS	PPBPS Pretreat
Site LTAR	0.35	0.3

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____

EVALUATED BY: _M A & Associates _____
OTHER(S) PRESENT: _____

COMMENTS: _____

SOIL/SITE EVALUATION

(Continuation Sheet)

Sheet ____ of ____

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	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
AB 2	LS 15%	0-17	RBr CL SWBK	FR SS SP		48"			PS 0.3
		17-48	R C SBK	FR SS SP					
AB 3	LS 15%	0-8	FILL			48"			PS 0.3
		8-30	R C SBK	FR SS SP					
		30-48	R CL WSBK	FR SS SP					

COMMENTS: _____

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

Sheet ____ *of* ____
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE_____
ADDRESS: _____ DATE EVALUATED: _____
PROPOSED FACILITY: 3 bedroom_____ PROPOSED DESIGN FLOW (.1949): 360 GPD____ PROPERTY SIZE: _____
LOCATION OF SITE: _316 Beaten Path_____ 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)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
PIT 1	LS 12%	0-26	R C SBK	FR SS SP		70"			PS 0.3-0.4
		26-70	R CL WSBK	FR SS SP			Few SAP		
PIT 2	LS 7%	0-6	FILL			42"	PS		PS 0.3-0.4
		6-26	R C SBK	FR SS SP					
		26-42	R CL WSBK	FR SS SP					
		42-70	Ver SL SAP M	VFR SS SP					
PIT 3	LS 15%	0-17	R C SBK	FR SS SP		17"	PS		PS 0.4-0.6
		17-22	Ver SL SAP M	VFR SS SP					
		22-65	Ver LS SAP M	VFR NS NP					
AB 1	LS 15%	0-28	Br SCL WSBK	FR SS SP		48"			PS 0.3
		28-48	R C SBK	FR SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	400 FT2	486 FT2
System Type(s)	PPBPS	PPBPS Pretreat
Site LTAR	0.3	0.3

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _M A & Associates_____
OTHER(S) PRESENT: _____

COMMENTS: _____

SOIL/SITE EVALUATION

(Continuation Sheet)

Sheet ____ *of* ____

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)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
AB 2	LS 15%	0-17	RBr CL SWBK	FR SS SP		48”			PS 0.3
		17-48	R C SBK	FR SS SP					

COMMENTS: ____