APPROVED MAR 0 4 2016

3A



MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
561 Ennis Rd.
Weddington, NC 28173
(704) 576-3887

Reference: Data Sheet for 577 Big Indian Lp, CL&T Sec 12 Lot 55
House Footprint: See attached plan
Building Setbacks: 35' front, 15' side, 50' lake
Water Source: Private well
Number of Bedrooms: 4/480 GPD
Proposed LTAR: 0.6 GPD/FT2
Proposed System Type: PPBPS
Proposed Repair System Type: PPBPS
Distribution: Low pressure
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 18.3 GPD
Dosing Volume: 111.6 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 10.5'
Friction Head: 0.3'
Pressure Head: 2'
Total Dynamic Head: 12.8'
Supply Line Length: 40' 2" PVC
Settling/Septic/Pump Tank Size: 1000/1000/1000 gallons
Proposed Trench Bottom: 48"
Proposed Trench Width: 24"
Number of Panels: 31

Line	Design Length	#of Panels	Actual Length	Elevation
Orange 1	**34'**	**8**	**35'**	**4.5'**
White 2	**40'**	**9**	**44'**	**5.3'**
Pink 3	**60'**	**14**	**60'**	**6.2'**
Blue 4			60'	7.5'
Orange 5			34'	8.1'
White 6			29'	9.0'
Pink 7			21'	9.9'

Initial System: 134' **Repair System:** 144'
Pump Tank: 10.0' **House Corner:** 7.4' **Benchmark:** 8.4'

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Comments:

This lot's permit was recently revoked due to a lack of space for the repair area, the encroaching retaining walls that were never previously permitted encroached on the repair area. MA&A has confirmed through lab results that the underlying soil is of a texture that will enable this lot to achieve a higher LTAR than was previously approved. Please note all information on this site plan has been located by use of DAS Surveying to ensure exact location. A grinder pump will be used and pump to a settling tank, which will flow to a septic tank and finally to a pump tank. The prescribed septic system has maintained a 100 setback from all wells. Please note this system will be installed at a trench bottom of 48" and air vents will need be installed per manufactures specifications. Also a pre-construction meeting will take place between the County, MA&A and Richard Abernathy (installer) prior to any installation of this system.

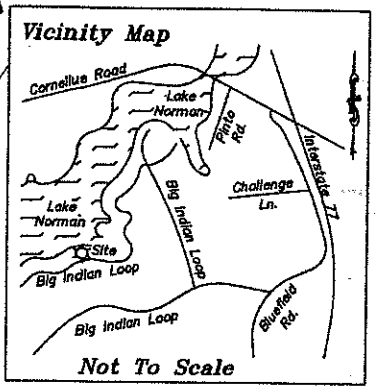
Soil Samples & Associated Depths:

Sample 1: Pit 1 @48"
Sample 2: Pit 1 @72"
Sample 3: Pit 2 @80-84"
Sample 4: Pit 3 @48"
Sample 5: Pit 3 @ 72"
Sample 6: Pit 4 @72"

L4	S 66°10'03" E	31.97'
L5	N 37°18'57" E	32.53'

LAND SURVEYOR
WILLIAM M. ALLEN

APPROVED MAR 0 4 2016



LAKE NORMAN

LOT 54
JUDY L. WILHELM
1714\160

LOT 55
0.78 Ac.

LOT 56
RICHARD L. REESE
2184\1472

1/2" PIPE Found
L1
L2
L3
L4
L5
760 Contour Line Field Located
761 CONTOUR (FLOOD LINE)
4 Rebar Found
Wood Retaining Wall
50' SETBACK
60.8
15' Setback
15.8
100' radius
FOUNDATION
H.L. 7.4'
25' from house
27.3
(BASE BEARING)
S33°43'00"E
227.23
15' Setback
35' Setback
25' from wall
Over Head Power
Well
W
Pump
Pit
S
B
BM 8.4'
4 Rebar Found
S75°10'49"W 158.30
4 Rebar Found
N77°47'36"E 119.02 Tie
Over Head Power
CMP
24"
Big Indian Loop
60' Public R/W
R/W

Line	Design Length	Elevation
Orange 1	34'	4.5'
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NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) UNDERGROUND POWER
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.

0' 25' 50' 100'
SCALE IN FEET

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

SEPTIC LAYOUT SURVEY

OF

577 BIG INDIAN LOOP
LOT 55 CRESCENT LAND & TIMBER CORP., SECT. 12

SCALE 1" = 50'

DAVIDSON TWSP., IREDELL CO., N.C.

ACQUIRED BY: STEVEN J. & CHERYL L. ROTMAN

FIELD BOOK: 500-d
FILE: CL&t lot 55 sect 12
DC FILE:
TAX MAP NO: 4648244340

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

Sheet _1___ of _1___
PROPERTY ID #: 4648244340
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

APPROVED MAR 0 4 2016

OWNER: Steve Rotman APPLICATION DATE 2-17-16
ADDRESS:577 Big Indian DATE EVALUATED: 12-1-16
PROPOSED FACILITY: 4 bedroom PROPOSED DESIGN FLOW (.1949): 480gpd PROPERTY SIZE: .78ac
LOCATION OF SITE: Lot 55 CLT, Sect. 12 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	
1	LS 3%	0-5	FILL		N/A	20"	F-C INCL PS	N/A	PS .6
		5-25	R CL WSBK	FR SS/SP SEXP					
		25-80	Ver. SL/LS SAP Mass	VFR NS/NP NEXP					
2	LS 3%	0-6	FILL		N/A	0"	PS	N/A	PS .6
		6-27	Ver. L SAP Mass	VFR SS/SP SEXP					
		27-84	Ver. SL/LS Sap Mass	VFR NS/NP NEXP					
3	LS 5-6%	0-17	R CL WSBK	FR SS/SP SEXP	N/A	17"	F-C INCL PS	N/A	PS .6
		17-84	Ver. SL/LS Sap Mass	VFR NS/NP NEXP					
4	LS 5-6%	0-27	R CL WSBK	FR SS/SP SEXP	N/A	27"	F-C INCL PS	N/A	PS .6
		27-84	Ver. SL/LS Sap Mass	VFR NS/NP NEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	268 FT2	288 FT2
System Type(s)	PPBPS	PPBPS

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: MA&ASSOC, INC.
OTHER(S)PRESENT:ICHD

Site LTAR	.6	.6

COMMENTS:

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	NEXP (Non-expansive)	SG (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			SEXP (Slightly Expansive)	M (Massive)
D (Drainage Way)					EXP (Expansive)	CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

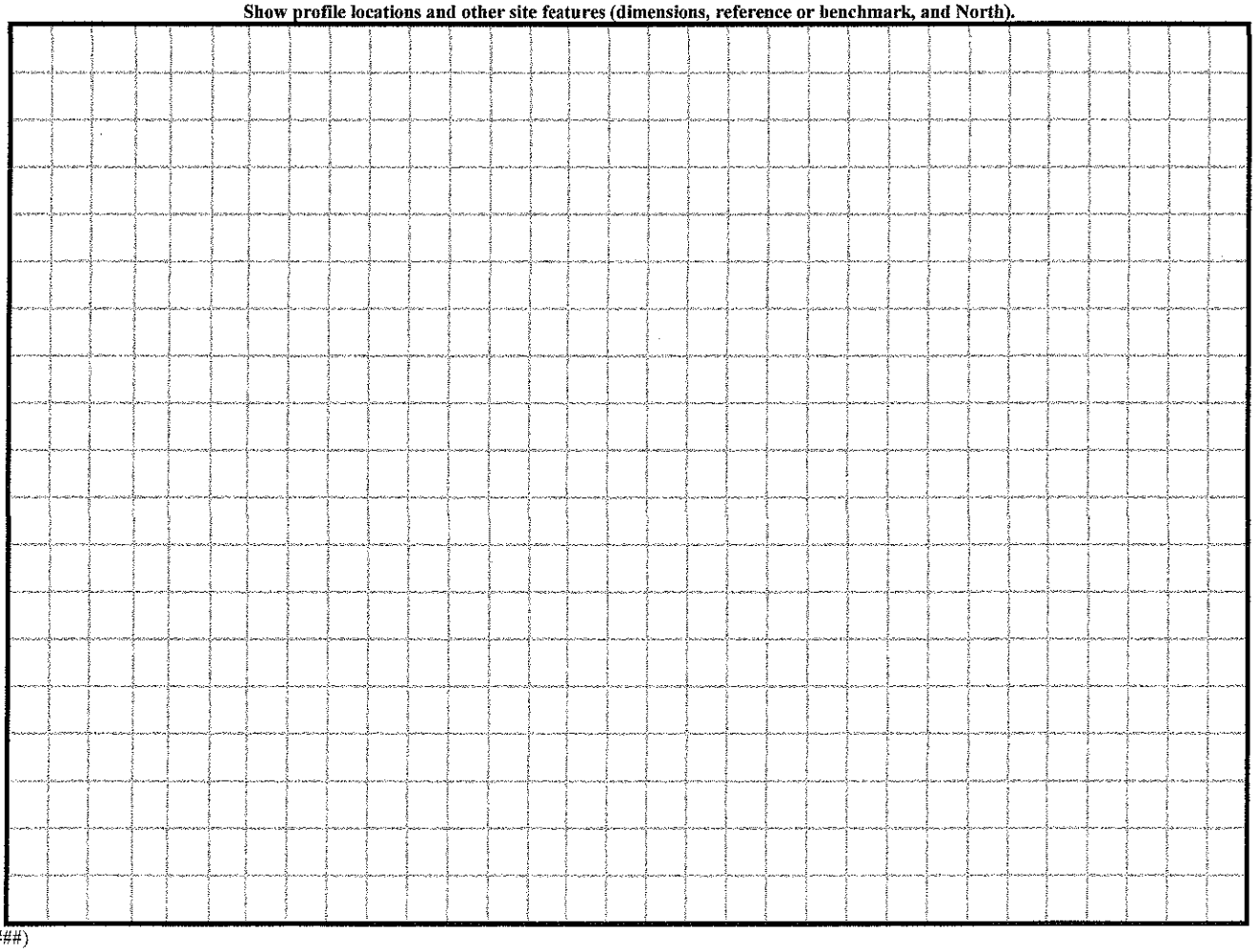
NOTES

HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S(suitable) or U(unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

Show profile locations and other site features (dimensions, reference or benchmark, and North).



DENR (######)

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Waypoint ANALYTICAL

7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

TEXTURE ANALYSIS

Client :	Grower :	Report No : 16-036-0542
MICHAEL ATHANAS & ASSOC INC	577 BIG INDIAN RD	Cust No : 78275
561 ENNIS ROAD	MOORESVILLE, NC	Date Printed : 02/10/2016
WEDDINGTON, NC 28173		Page : 1 of 1
	Farm:	Date Received : 02/05/2016

Lab No	Field ID	Sample Identification	Percent Sand	Percent Silt	Percent Clay	Textural Classification
20693		1	66.4	26.0	7.6	Sandy Loam
20694		2	64.4	28.0	7.6	Sandy Loam
20695		3	62.4	32.0	5.6	Sandy Loam
20696		4	72.4	18.0	9.6	Sandy Loam
20697		5	62.4	30.0	7.6	Sandy Loam
20699		6	62.4	34.0	3.6	Sandy Loam

Analysis prepared by: Waypoint Analytical Virginia, Inc.