7/14/2015

Reference: 112 Billy Joe Rd, Mooresville NC, Lot 53 Mallard Head Country Club

Carolina Soil & Septic Consulting is fine with the Septic and Pump Tanks moving to any part of the lot other that where they are shown as long as 25 ft. is maintained off of the drainage feature on the left side of the property. If there are any additional questions please let me know.

Adrian L. Pruett

Carolina Soil & Septic Consulting, PLLC

1498 Carson Rd.

Cleveland, NC 27013

Carolina Soil & Septic Consulting, PLLC

162 West B St Kannapolis, NC 28081

Phone: (704) 202-5791 Email: adrianpruett@yahoo.com

NC Licensed Soil Scientist, SC Professional Soil Classifier,
Certified Septic System Operator, Licensed Septic Installer,
Certified Septic Inspector

Design proposal for a PPBPS Septic System with low pressure distribution for a 3 bedroom single family residence on Lot 53 of Mallard Head Country Club , Iredell County, North Carolina.

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Design Information

- Install Specifications---------- 2
- Field Layout Specifications---------- 3
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Soil Profile Descriptions---------- 9

August 27, 2013
Design By: Adrian L. Pruett LSS

LOW PRESSURE PPBPS SYSTEM
INSTALL SPECIFICATIONS

Location: MALLARD HEAD COUNTRY CLUB, LOT 53

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 360
System Flow: 19.68

Design Specifications

Drainfield Size: 209
Required Drainfield Size: 200
Loading Rate (gpd/ft.^{2}): 0.3
Depth of Gravel in Trench: NA (PPBPS)
Gravel Size: NA (PPBPS)
Trench Depth: 36 in.
Trench Width: 24 in.

Septic Tank Size: 1000
Pump Tank Size: 1000

Estimated Supply Line Length: 701
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 121.97
Dosing Volume: 115.78

Recommended Pump: Iredell County approved.

Recommended Float Controls: Iredell County approved.

Recommended Control Panel: Iredell County approved.

Pressure Head: 2 ft.
Friction Head: 5.89
Elevation Head: 5.00
Total Dynamic Head: 15.47

Threaded Union: In Tank
Gate Valves: 1 in Tank
1 per lateral
Check Valves: In Tank
Anti-Siphon Hole: N/A
Additional Comments: Soil suitability performed by Carolina Soil & Septic Consulting, PLLC

Owner/Applicant Information
Owner/Applicant Name: Eddie Odom
Address:

Phone Number: 704-953-5912

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

MALLARD HEAD COUNTRY CLUB, LOT 53
FIELD LAYOUT SPECIFICATIONS

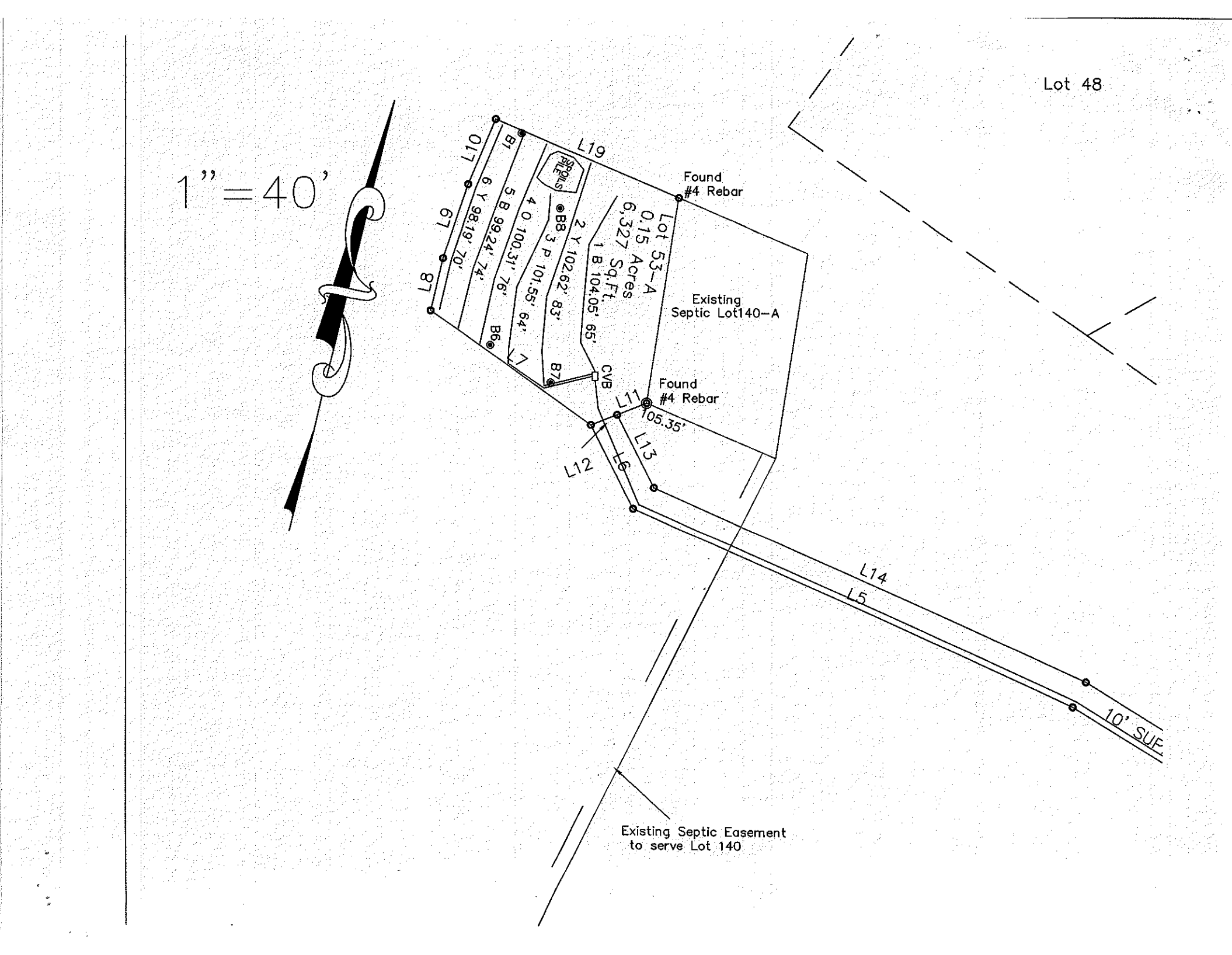
LAYOUT FOR 3 BEDROOM HOME

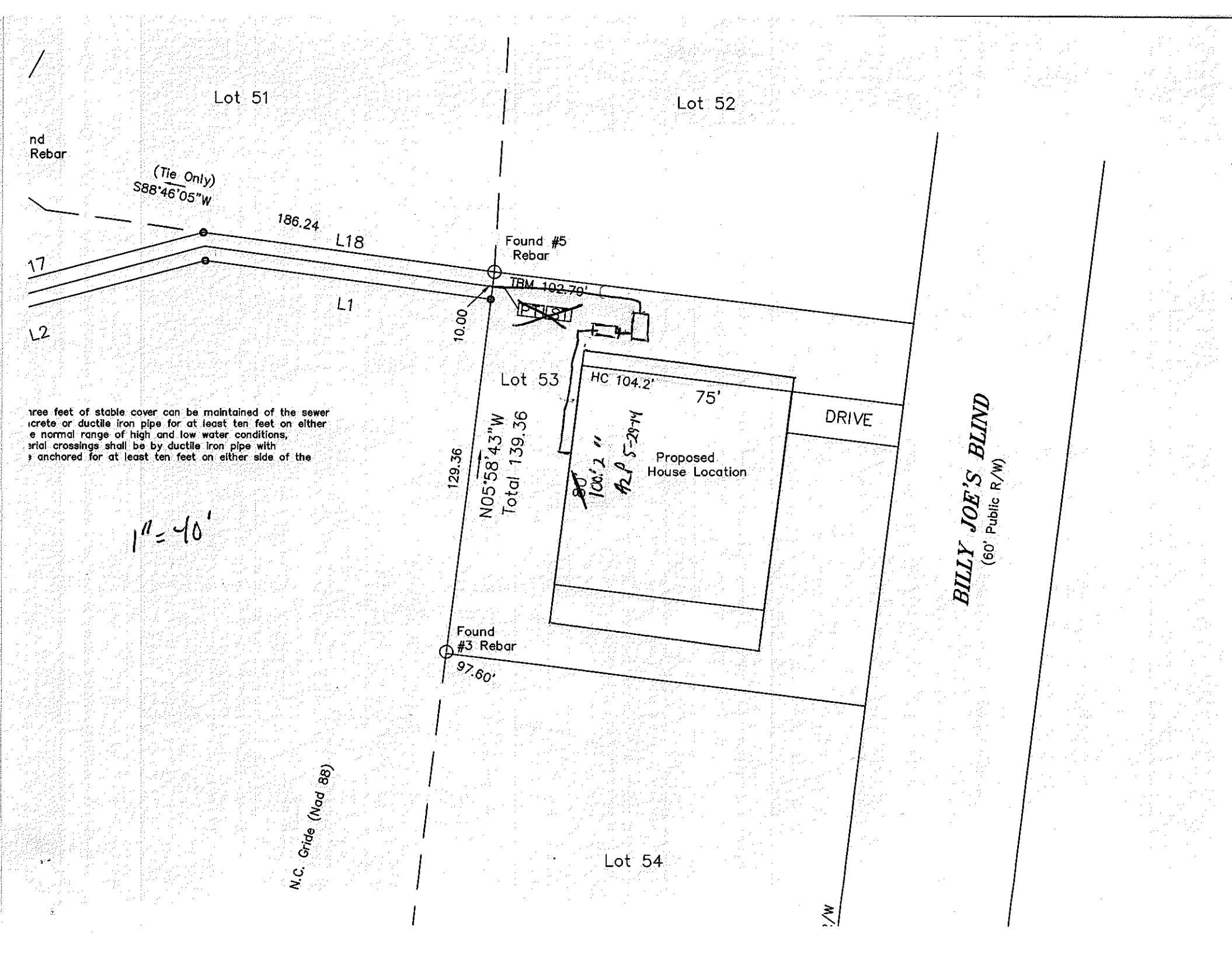
August 27, 2013

LINE #	FLAG COLOR	IH	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM			102.79	102.79		
INSTR. 1						
HOUSE CNR			104.20	104.20		
P. TANK			104.06	104.06		
1	***BLUE***		***104.05***	***104.05***	***65***	***65***
2	***YELLOW***		***102.62***	***102.62***	***83***	***83***
3	***PINK***		***101.55***	***101.55***	***64***	***61***
4	ORANGE		100.31	100.31	76	76
5	BLUE		99.24	99.24	74	74
6	YELLOW		98.19	98.19	70	70
				Total	**432**	**429**

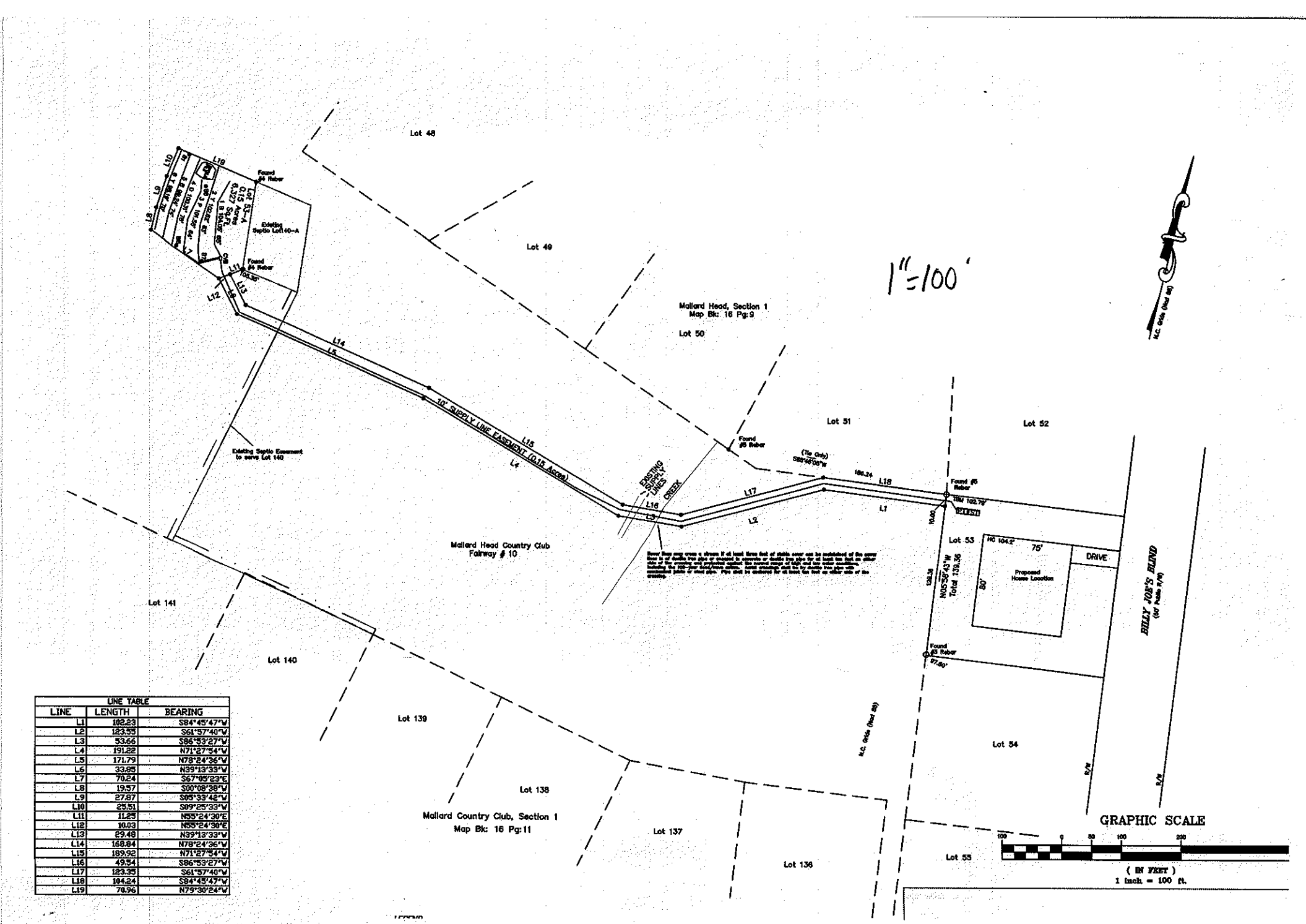
	LINE LENGTH	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	***209***	***MOD.***	***0.300***	***PPBPS***	***LOW PRESSURE***
Repair	220	MOD.	0.300	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground at EIP at corner of lot (see site plan)
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**IH, and FS indicate rod readings


1"=40'
Lot 48
L10
L9
L7
L8
B1
6 Y 98.19' 70'
5 B 99.24' 74'
4 O 100.31' 76'
B8
3 P 101.55' 64'
2 Y 102.62' 83'
1 B 104.05' 65'
PUMPING FIELD(S)
L19
Found #4 Rebar
Lot 53-A
0.15 Acres
6,327 Sq.Ft.
Existing Septic Lot140-A
B6
L1
B7
CVB
Found #4 Rebar
L11
105.35'
L12
L6
L13
L14
L5
10' SUE
Existing Septic Easement to serve Lot 140



ree feet of stable cover can be maintained of the sewer
crete or ductile iron pipe for at least ten feet on either
e normal range of high and low water conditions,
erial crossings shall be by ductile iron pipe with
anchored for at least ten feet on either side of the



LINE TABLE		
LINE	LENGTH	BEARING
L1	102.23	S84°45'47"W
L2	123.55	S61°57'40"W
L3	53.66	S86°53'27"W
L4	191.22	N71°27'54"W
L5	171.79	N78°24'36"W
L6	33.85	N39°13'33"W
L7	70.24	S67°05'23"E
L8	19.57	S00°09'38"W
L9	27.87	S05°33'42"W
L10	25.51	S09°25'33"W
L11	11.25	N55°24'36"E
L12	10.03	N55°24'36"E
L13	29.48	N39°13'33"W
L14	168.84	N78°24'36"W
L15	189.92	N71°27'54"W
L16	49.54	S86°53'27"W
L17	123.35	S61°57'40"W
L18	104.24	S84°45'47"W
L19	70.96	N79°30'24"W

LOW PRESSURE PPBPS TAPSHEET -MALLARD HEAD COUNTRY CLUB, LOT 53

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*BLUE*	*104.05*	*65*	0.156	**0.41**	195	15
2	*YELLOW*	*102.62*	*83*	0.156	**0.41**	249	19
3	*PINK*	*101.55*	*61*	0.156	**0.41**	183	14
							48
	total	**feet =**	**209**	**gal/min =**	**19.68**		
			Des. Flow	**360**			
			Pump Run=	**5.88**			
			soil LTAR	**0.3**			

.156 equals 5/32 inch hole

DOSING CALCULATIONS

Location Mallard Head Country Club

Lot No: Lot 53

No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	701	ft.
Supply Line Volume	121.974	gal.
Required Feet of Line	200	ft.
Amount of Line from Layout	209	ft.
Gallons per Minute	19.68	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	48	
Dosing Volume	115.78	gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

Tank Draw Down	5.5	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	5	ft.
Pressure Head	2	ft.
Friction Factor	0.84	ft./100 ft. *(From the interpolater.)*
Friction Head	5.89	ft.
Total Dynamic Head (+20%)	15.47	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

)ENR/DEH

)N-SITE WASTEWATER SECTION

Sheet 1 of 1
PROPERTY ID #: 4636861847
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

)WNER: Eddie Odom APPLICATION DATE 8/2013
\DDRESS: DATE EVALUATED: 8/14/2013
'ROPOSED FACILITY: 3 Brm PROPOSED DESIGN FLOW (.1949): 360 gpd PROPERTY SIZE: 0.48 ac
.OCATION OF SITE: Mallard Head Country Club Lot 53 Offsite area located behind Lot 48 PROPERTY RECORDED: No
VATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring X Other Community Well
:VALUATION METHOD: X Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: X 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
B 1	LSS 9%	0-20	R C WFSBK	FR, SS, SP, SEXP	-Few Sap.	48"	PS	-	PS
		20-27	R C WFSBK	FR, SS, SP, SEXP	-Com. Sap.				
		27-44	R CL WSBK	FR, SS, SP, SEXP					0.3-0.325 gpd/sqft
		44-48	YR SL SAP M	FR, SS, SP, SEXP	-Com. Cl incl. >51% Sap.				
B 6	LSS 10%	0-22	R C WFSBK/ABK	FR, SS, SP, SEXP	-Com. Sap.	48"	-	-	PS
		22-48	R CL WFSBK	FR, SS, SP, SEXP					0.3 gpd/sqft
B 7	LSS 5%	0-3	B SCL GR	FR, SS, SP, SEXP	-Com. sap.	48"	-	-	PS
		3-25	R C WFSBK	FR, SS, SP, SEXP					0.3 gpd/sqft
		25-48	R CL WFSBK	FR, SS, SP, SEXP					
B 8	LSS 6%	0-3	FILL	FR, SS, SP, SEXP	-Com. sap.	48"	-	-	PS
		3-6	B SCL GR	FR, SS, SP, SEXP					0.3 gpd/sqft
		6-24	R C WFSBK	FR, SS, SP, SEXP					
		24-48	R CL WFSBK	FR, SS, SP, SEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	LP PPBPS	LP PPBPS
Site LTAR	0.3 GPD/SQFT	0.3 GPD/SQFT

OTHER FACTORS (.1946): NONE
SITE CLASSIFICATION (.1948): PS

EVALUATED BY: ADRIAN L. PRUETT
OTHER(S) PRESENT: NONE

COMMENTS: