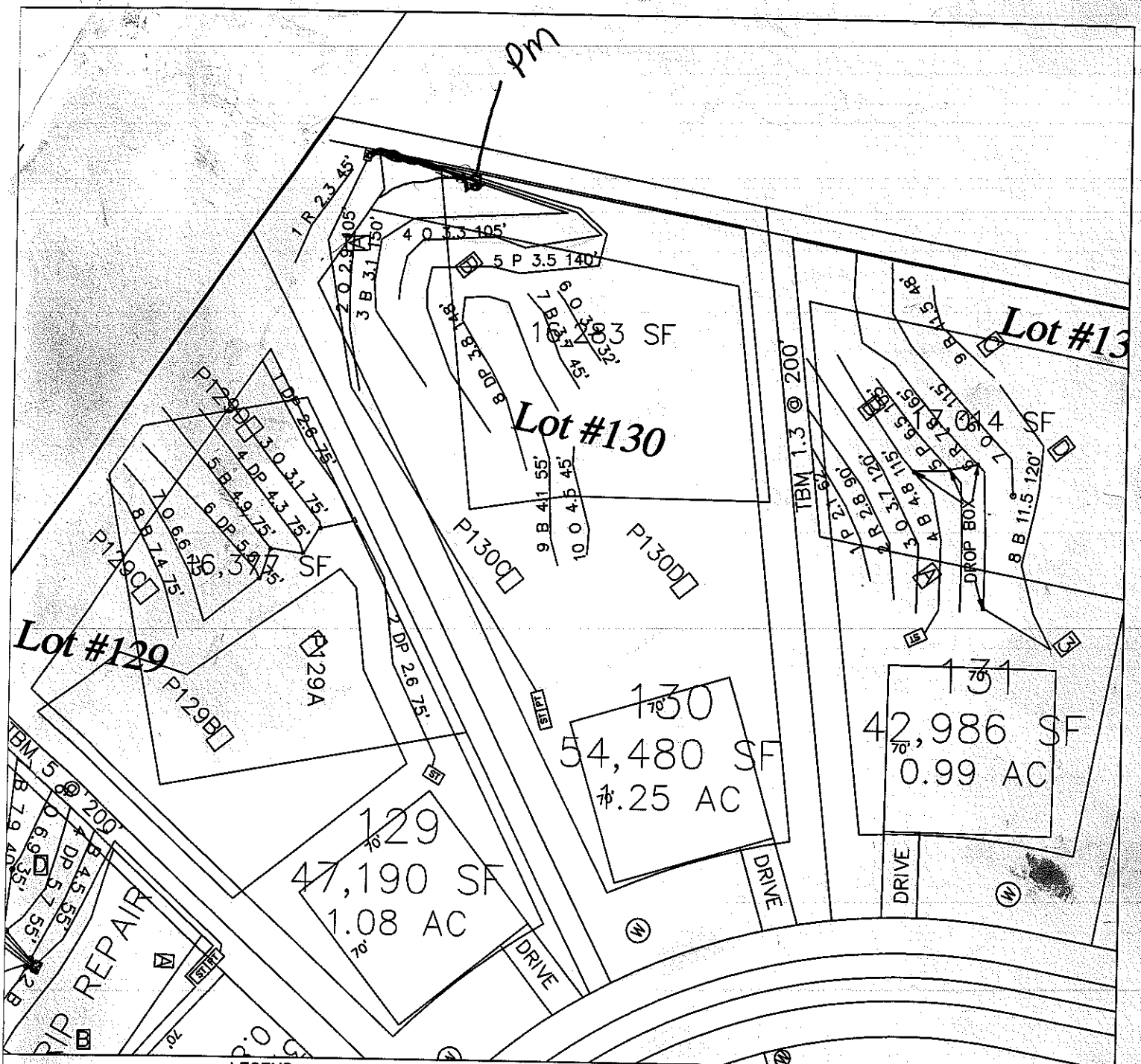


LEGEND

- Areas contain soils with 24 inches or more of useable material and have potential for conventional, modified conventional and low-pressure pipe (lpp) septic systems.
- House Footprint (All 70' x 70')
- System lines.
- Repair lines.
- TBM.
- Well Location.
- [A] RS&ES Pit Location.
- (25) RS&ES Boring Location.
- (28) Health Dept. Pit Location.

GRAPHIC SCALE
1" = 60'

60 0 60 120

FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE FINAL APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND COMPLEX TOPOGRAPHIC FEATURES. THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS.

PLEASE REFER TO ATTACHED SOIL REPORT FOR ADDITIONAL SITE SPECIFIC INFORMATION

ROLLANS SOIL & ENVIRONMENTAL SERVICES
470 NORTH BROAD ST., SUITE D
MOORESVILLE, NC 28115
PHONE: 704.658.1723 FAX: 704.658.1724
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746 - 5046
EMAIL: ROLLANS@WINDSTREAM.NET

MAP TITLE:	SITE PLAN & DRAINFIELD AREAS
LOCATION/DATE:	SHEARER CHAPEL ROAD, IREDELL COUNTY, NORTH CAROLINA, APRIL 2006
PROJECT NAME:	NIBLOCK DEVEOPMENT CORP. / ANNISTON PHASE IV
JOB # :	01-1005
FILE:	C:\JOBS\01-1005
PROJECT MGR.:	S.A.R.
FIELD WORK:	S.A.R.
DRAWN BY:	S.A.R.

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner:	Niblock Development Corp.
Address:	300 McGill Ave. NW Concord, NC 28027
Phone:	704 361 1201
County:	Iredell
Location:	ANNISTON Lot # 130
Source of Wastewater Flow:	5 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	600 gpd
System Flow:	34.42

Design Specifications

Drainfield Size:	500
Loading Rate:	0.3
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1500 gal.
Pump Tank Size:	1500 gal.
Estimated Supply Line Length:	281
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	48.89
Dosing Volume:	228.55
Supply Manifold:	4 in. SCH 80 PVC
Supply Manifold Length:	4 ft. (minimum)
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	6.66
Elevation Head:	6.80
Total Dynamic Head:	17.78
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 at Pressure Manifold
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services.

ANNISTON Lot # 130
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	1500
TOTAL LATERAL LENGTH:	500
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	500
SUPPLY LINE LENGTH:	281
TOTAL DYNAMIC HEAD:	17.78
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	228.55
PUMP TANK DRAW DOWN*:	7.4
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	1500 gal.

**Pump tank draw down based on a volume basis of 31 gallons per inch. Draw down may vary among pump tank manufacturers.*

ANNISTON LOT # 130

Project #: 01-1005

LAYOUT FOR 5 BEDROOM HOME

July 14, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		2.4			100.00		
INSTR. 1			102.40				
HOUSE CNR				8.00	94.40		
P. TANK				7.00	95.40		
1	RED			2.30	100.10	45	45
2	***ORANGE***			***2.90***	***99.50***	***105***	***105***
3	***BLUE***			***3.10***	***99.30***	***152***	***150***
4	***ORANGE***			***3.30***	***99.10***	***106***	***105***
5	***PINK***			***3.50***	***98.90***	***148***	***140***
6	ORANGE			3.70	98.70	32	32
7	BLUE			3.70	98.70	45	45
8	DARK PINK			3.80	98.60	148	148
9	BLUE			4.10	98.30	55	55
10	ORANGE			4.50	97.90	45	45
					Total	**881**	**870**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
**** System***	***500***	***0.300***	***ACCEPT.***	***0.300***	***25% RED.***	**PRESSURE**
Repair	370	0.300	*MOD.*	0.300	PPBPS	**MANIFOLD** LOW PRESSURE

Notes:

** TBM located at 200' on right side of lot (see site plan)
**TBM is assumed to be 100'
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**BS, HI, and FS indicate rod readings

PRESSURE MANIFOLD TAPSHEET - ANNISTON LOT# 130

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Ar	Line LTAR
2	*ORANGE*	99.5	*105*	SCH 40 1/2	**7.11**	315	0.16
3	*BLUE*	99.3	*150*	SCH 80 3/4	**10.1**	450	0.16
4	*ORANGE*	99.1	*105*	SCH 40 1/2	**7.11**	315	0.16
5	*PINK*	98.9	*140*	SCH 80 3/4	**10.1**	420	0.17
	total	**feet =**	**500**	**gal/min =**	**34.42**		
			Des. Flow	**600**			
			Pump Run=	**6.64**			
			soil LTAR	**0.3**			
			LTAR +5%	**0.315**			
			LTAR with ACCEPTED	**0.4**			
			LTAR with ACCEPTED + 5%	**0.42**			

CALCULATIONS

Location ANNISTON PH4

Project Number 01-1005

Lot No: 130

No. of Bedrooms	5	
Design Flow	600	$^{gal}/_{day}$
LTAR	0.3	$^{gpd/ft^2}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	281	ft.
Supply Line Volume	48.894	gal.
Required Feet of Line	500	ft.
Amount of Line from Layout	500	ft.
Gallons per Minute	34.42	$^{gal}/_{min}$
Required Septic Tank Capacity	1500	gal.
Minimum Standard Tank Size	1500 gal.	
Lateral Line Volume	326.5	gal.
Dosing Volume	228.55	gal.

Note: Dosing Volume based on70% of lateral line volume

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

Tank Draw Down	7.4	*Generic Draw Down of 31 gal.per in.*
Pump Run Time	6.64	minutes
Elevation Head	6.8	ft.
Pressure Head	2	ft.
Friction Factor	2.37	ft./100 ft. *(From the interpolater.)*
Friction Head	6.66	ft.
Total Dynamic Head (+15%)	17.78	ft.

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

PROPERTY ID #: _____
COUNTY: _____

Anniston

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____
ADDRESS: _____ APPLICATION DATE _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ DATE EVALUATED: _____
LOCATION OF SITE: _____ PROPERTY SIZE: _____
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	
P 1 130 A	L/0-5%	0-26	rbc mmabK/sbK	fr,ss,sp sexp fsap	—	52"	—	—	PS 0.3
		26-52	rycl wfsbK	fr,ss,sp sexp csap	—		—	—	
P 2 130 B	L/0-5%	0-25	rbc mfabK/sbK	fr,ss,sp sexp fsap	—	48"	—	—	PS 0.3
		25-48	rycl wfsbK	fr,ss,sp sexp csap	—		—	—	
P 3 130 C	L/0-5%	0-24	rbc mmabK/sbK	fr,ss,sp sexp fsap	—	52"	—	—	PS 0.3
		24-52	rycl mfsbK/abK	fr,ss,sp sexp csap	—		—	—	
P 4 130 D									

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: _____

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: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: Anniston Lot 130 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	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	130-B 0-3% NS	0-24	mAbkC	Pr SSS pSexp	few Sap				PS .3
		24-48	wSbkCL	Pr SSS pSexp	Com Sap				
2	130-C L 3-5% Repair	0-10	mAbkC	Pr SSS pSexp					PS .3
		10-50	wSbk/AbkCL	Pr SS SpSexp	few Sap				
3									
4									

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

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

Ashley Rollans
to Benjamin Aldridge

Fri, Jul 31 6:05 PM

Anniston Lot 130

Ben
Kevin Kirkpatrick wanted me to authorize reducing the pump tank size from 1500 gallon to 1000 gallon.
I am good with that modification to the design.
Thanks
Ashley