Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner: IREDELL GROUP

Address: 109-C Williamson Road
Mooresville, NC 28115

Phone: 704-663-4050

County: Iredell

Location: Walden Ridge Subdivision Lot #11

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: NA

Design Specifications

Drainfield Size: 500

Loading Rate: 0.25

Depth of Gravel in Trench: NA (25% reduction)

Gravel Size: NA (25% reduction)

Trench Depth: 30 in.

Trench Width: 36 in.

Septic Tank Size: 1000

Pump Tank Size: N/A

Estimated Supply Line Length: 10

Supply Line Diameter: 3 in. SCH 40 PVC

Supply Line Volume: 1.74

Dosing Volume: NA

Supply Manifold: Flow Equalizer

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.

WALDEN RIDGE SUBDIVISION LOT 11

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1500
TOTAL LATERAL LENGTH:	500
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	480
SUPPLY LINE LENGTH:	10
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	N/A

WALDEN RIDGE LOT #11

Project #: 01-1069

LAYOUT FOR 4 BEDROOM HOME

March 14, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		N/A			100.00		
TANK		N/A	N/A				
HOUSE		N/A	N/A				
INSTR. 1			N/A				
1	***RED***			*N/A*	*N/A*	***102***	***100***
2	***BLUE***			*N/A*	*N/A*	***114***	***100***
3	***PINK***			*N/A*	*N/A*	***121***	***100***
4	***ORANGE***			*N/A*	*N/A*	***125***	***100***
5	***RED***			*N/A*	*N/A*	***131***	***100***
6	BLUE			N/A	N/A	134	134
7	PINK			N/A	N/A	141	141
8	ORANGE			N/A	N/A	149	149
9	RED			N/A	N/A	156	156
10	BLUE			N/A	N/A	110	110
					Total	**1283**	**1190**

* System	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
System	***500***	***0.25***	***ACCEPT.***	***0.25***	***25% RED.***	**GRAVITY**
Repair	690	0.25	*ACCEPT.*	0.25	25% RED.	**DISTRIBUTION** GRAVITY DISTRIBUTION

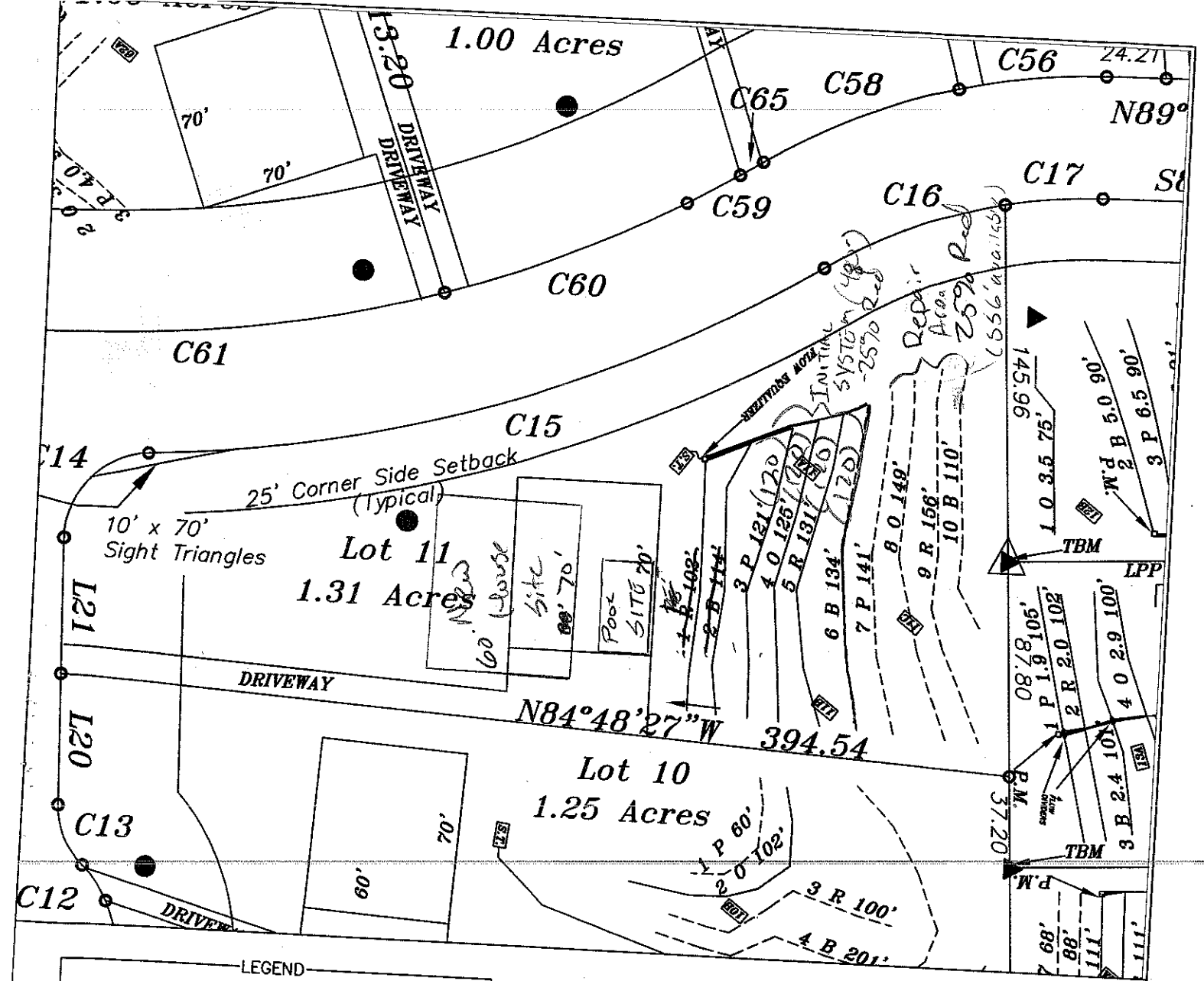
Notes:

** TBM NOT REQUIRED

**All measures in feet

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

**BS, HI, and FS indicate rod readings



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.
- Unsuitable areas.
- System lines.
- Repair lines.
- Temporary Bench Mark (TBM)
- Well 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
2120 GRAHAM ROAD
MOUNT ULLA, NC 28125
PHONE/FAX: (704) 278-0989
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746-5046
EMAIL: ROLLANSFORTC@AOL.COM

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: WEDELL GROUP LLC/WALDEN RIDGE SUBDIVISION

LOCATION/DATE: TEETER ROAD, IREDELL COUNTY, NORTH CAROLINA, DECEMBER 2005

JOB #: 01-1069
FILE: C:\JOBS\01-1069
PROJECT MGR.: CBF
FIELD WORK: CBF AND AP
DRAWN BY: CBP AND AP

CALCULATIONS

Location WALDEN RIDGE SUBDIVISION

Project Number 01-1069

Lot No: Lot 11

No. of Bedrooms 4

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

LTAR 0.25 $^{gal}/_{ft^2\ day}$

25% RED.? (YES OR NO) YES

Supply Line Length 10 ft.

Supply Line Volume 1.74 gal.

Required Feet of Line 480 ft.
Amount of Line from Layout 500 ft.

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

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

Lateral Line Volume 326.5 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

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

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

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: IREDELL GROUP _____ APPLICATION DATE 3/06
ADDRESS: 109-C WILLIAMSON ROAD MOORESVILLE _____ DATE EVALUATED: 3/06
PROPOSED FACILITY: RES _____ PROPOSED DESIGN FLOW (.1949): 480 _____ PROPERTY SIZE: ____ AC _____
LOCATION OF SITE: _____ Walden Ridge Lot 11 _____ PROPERTY RECORDED: Y _____
WATER SUPPLY: X Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring X Pit ☐ Cut TYPE OF WASTEWATER: X 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
11A	LSS ~~5-10%~~ 5-8%	0-8	BSCL GR	fri SSSP Sesp	N/A	0 52"	N/A	N/A	PS .3 gpd/ft²
		8-22	RC MFSBK	Fri SSSP Sesp					
		22-52	RCL MWSBK	fri SSSP Sesp					
11B	LSS ~~5-10%~~ 5-8%	0-10	BSCL GR	fri SSSP Sesp	N/A	53"	N/A	N/A	PS .225-.25 gpd/ft²
		10-38	RC WABK	fri SSSP Sesp (m) inc.					
		38-53	RCL WSBK	fri SSSP Sesp few YB's					
11C	LSS 5-8%	0-14	BRSCL GR	fri SSSP Sesp	MA	48"	MA	N/A	.3 gpd/ft²
		14-30	RCL MFSBK	fri SSSP Sesp					
		30-48	RCL MFSBK	fri SSSP Sesp common SAP					
4	4-5% ~3%	0-9	WSBK/PBK	SCL FRSSSP	few-common yellow mottles	20"+			.225
		9-48	ABK RED C/L	fi fr SPSESP	few 3				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	1500 ft²	2070 ft²
System Type(s)	25% Red	25% Red
Site LTAR	.25	.25

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): PS _____
EVALUATED BY: ROLLANS SOIL & ENVIRONMENTAL SERVICES
OTHER(S) PRESENT: _____

COMMENTS: _____