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 #8

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: NA

Design Specifications

Drainfield Size: 480

Loading Rate: 0.25

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

Gravel Size: NA (25% reduction)

Trench Depth: 36 in.

Trench Width: 36 in.

Septic Tank Size: 1000

Pump Tank Size: N/A

Estimated Supply Line Length: 20

Supply Line Diameter: 3 in. SCH 40 PVC

Supply Line Volume: 3.48

Dosing Volume: NA

Supply Manifold: DROP BOX

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 8

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1440
TOTAL LATERAL LENGTH:	480
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	480
SUPPLY LINE LENGTH:	20
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 #8

Project #: 01-1069

LAYOUT FOR 4 BEDROOM HOME

March 23, 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	***PINK***			***N/A***	***N/A***	***81***	***80***
2	***BLUE***			***N/A***	***N/A***	***80***	***80***
3	***RED***			***N/A***	***N/A***	***178***	***160***
4	***ORANGE***			***N/A***	***N/A***	***184***	***160***
5	PINK			N/A	N/A	183	183
6	BLUE			N/A	N/A	164	164
7	RED			N/A	N/A	101	101
8	ORANGE			N/A	N/A	65	65
					Total	**1036**	**993**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
** System*	***480***	***0.25***	***ACCEPT.***	***0.25***	***25% RED.***	**GRAVITY DISTRIBUTION**
Repair	513	0.25	*ACCEPT.*	0.25	25% RED.	LOW PRESSURE

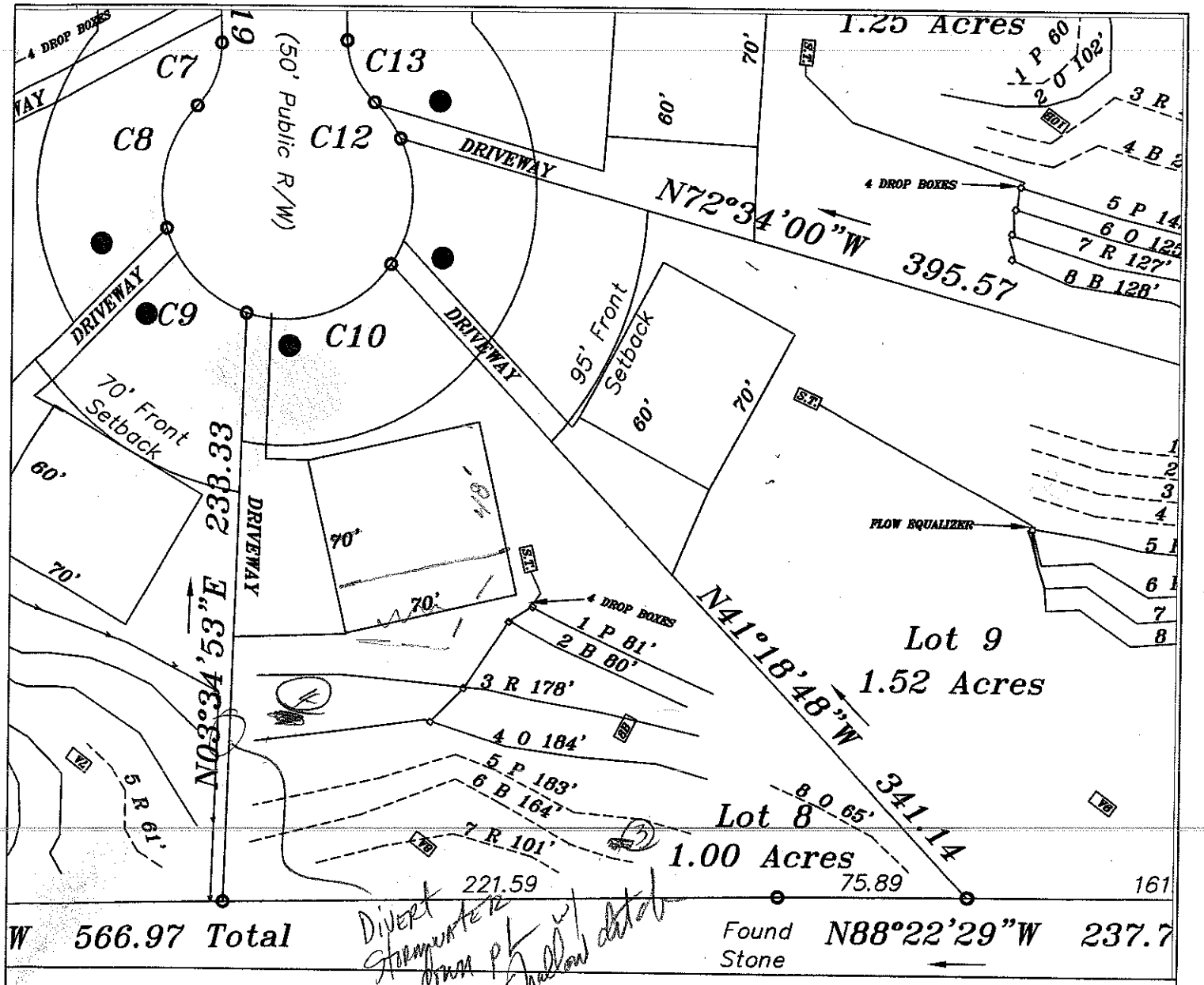
Notes:

** 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: ROLLANSFORTCJ@AOL.COM

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: IREDELL 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 8

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	20	ft.
Supply Line Volume	3.48	gal.
Required Feet of Line	480	ft.
Amount of Line from Layout	480	ft.
Gallons per Minute	NA	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	313.44	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
ADDRESS: 109-C WILLIAMSON ROAD MOORESVILLE — APPLICATION DATE 3/06
PROPOSED FACILITY: RES — PROPOSED DESIGN FLOW (.1949): 480 — DATE EVALUATED: 3/06
LOCATION OF SITE: Walden Ridge Lot 8 — PROPERTY SIZE: ____ AC ____
WATER SUPPLY: X Private ☐ Public ☐ Well ☐ Spring ☐ Other — PROPERTY RECORDED: Y
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	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
8A	LSS 8-10%	0-17	BSk2 wSBk	fri SSSP sexp	2 chromas @ 34"+	53"	N/A	@ 34"	PS .25 gpd/ft2 to 34"
		17-34	RC MABk/SBk	fri SSSP sexp					
		34-53	RC ABk	fi SP					
8B	LSS 8-10%	0-7	BSCL WR	fri SSSP SExP		54"	N/A	@ N/A	PS .25 gpd/ft2
		7-32	RC ABk	fi SP sexp					
		32-54	RCL MFSBk	fri SSSP sexp+ low chromas 3&4's					
3		0-13	wkSBk brwn scl	fr SSSP	33"-48"				.25 @ 20 gpd/ft2
		13-33	wk m-fsbk red c	fr SSSP SExP					
		33-48	ABk red/c/br	FR SSSP common gray/brn mottles, few 2					
		48-51	red c	fi fr SP SSSP					
4	6%	0-16	wkSBk brwn scl	fr SSSP					.25
		16-49	m-fsbk red c	fi-fr SP SExP	grey/brn mottles				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	1440 ft2	1539 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: