Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner:	Virgil Ray Short, Jr.
Address:	PO BOX 3792 Mooresville, NC 28117
Phone:	704-871-1894
County:	Iredell
Location:	Walden Ridge LOT #24
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	NA

Design Specifications

Drainfield Size:	400
Loading Rate (gpd/ft.^{2}):	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:	1000
Pump Tank Size:	N/A
Estimated Supply Line Length:	15
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	2.61
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 LOT #24

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	15
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 #24

Project #: 01-1069

LAYOUT FOR 4 BEDROOM HOME

June 8, 2007

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	***DARK PINK***			***N/A***	***N/A***	***40***	***40***
2	***BLUE***			***N/A***	***N/A***	***95***	***95***
3	***ORANGE***			***N/A***	***N/A***	***125***	***125***
4	***PINK***			***N/A***	***N/A***	***140***	***140***
5	DARK PINK			N/A	N/A	151	151
6	BLUE			N/A	N/A	140	140
					Total	**691**	**691**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
** System*	***400***	***0.30***	***ACCEPT.***	***0.30***	***25% RED.***	**GRAVITY DISTRIBUTION**
Repair	291	0.30	*MOD.*	0.30	PPBPS	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

CALCULATIONS

Location WALDEN RIDGE

Project Number 01-1069

Lot No: Lot 24

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.30	$^{gal}/_{ft^2\ day}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	15	ft.
Supply Line Volume	2.61	gal.
Required Feet of Line	400	ft.
Amount of Line from Layout	400	ft.
Gallons per Minute NA		$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	261.2	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