PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner:	Nation Land Company LLC
Address:	4330 Sterilite Street SE Massillion, OH 44646
Phone:	330-832-4091
County:	Iredell
Location:	Lakewood Crossing Subdivision Lot #19
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	NA

Design Specifications

Drainfield Size:	455
Loading Rate:	~.25GPD/FTSQ
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:	1000
Estimated Supply Line Length:	10
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	1.74
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.

LAKEWOOD CROSSING SUBDIVISION LOT 19
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480	
SOIL APPLICATION RATE:	~.25GPD/FTSQ	
TOTAL AREA TRENCH BOTTOM:	1365	
TOTAL LATERAL LENGTH:	455	
NUMBER OF FIELDS:	1	
LATERAL LENGTH REQUIRED PER FIELD:	455	
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:		1000

LAKEWOOD CROSSING LOT #19

Project #: 01-1089

LAYOUT FOR 4 BEDROOM HOME — September 6, 2005

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		2.1			100.00		
TANK		4.00	98.10				
HOUSE		7.20	94.90				
INSTR. 1			102.10				
1	***BLUE***			***4.70***	***97.40***	***65***	***65***
2	***PINK***			***6.00***	***96.10***	***80***	***80***
3	***ORANGE***			***7.60***	***94.50***	***90***	***90***
4	***BLUE***			***9.80***	***92.30***	***100***	***100***
5	***PINK***			***11.30***	***90.80***	***120***	***120***
6	ORANGE			12.20	89.90	140	140
7	BLUE			13.90	88.20	75	75
8	PINK			16.30	85.80	75	75
9	ORANGE			18.50	83.60	65	65
					Total	**810**	**810**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
** System*	*455*	*~.25*	*ACCEPT.*	*0.25*	*25% RED.*	**GRAVITY**
Repair	355	0.25	*MOD.*	0.25	PPBPS	**DISTRIBUTION** LOW PRESSURE

Notes:

** TBM located on pine tree triple blue flag (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

CALCULATIONS

Location LAKEWOOD CROSSING SUBDIVISION

Project Number 01-1089

Lot No: Lot 19

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\ day}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	10	ft.
Supply Line Volume	1.74	gal.
Required Feet of Line	455	ft.
Amount of Line from Layout	455	ft.
Gallons per Minute	NA	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	297.115	gal.
Dosing Volume	NA	gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down	NA
Pump Run Time	NA
Elevation Head	NA
Pressure Head	NA
Friction Factor	NA
Friction Head	NA
Total Dynamic Head (+15%)	NA

Generic Draw Down of 21 gal.per in.

minutes

ft.
ft.
ft./100 ft. *(From the interpolater.)*
ft.

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

CALCULATIONS

Location LAKEWOOD CROSSING SUBDIVISION

Project Number 01-1089

Lot No: Lot 19

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\ day}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	10	ft.
Supply Line Volume	1.74	gal.
Required Feet of Line	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.

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