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 #13

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: 32.88

Design Specifications

Drainfield Size: 480
Loading Rate: .25 gpd/ft²
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: 109
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 18.97
Dosing Volume: 219.41
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: 2.58
Elevation Head: 14.30
Total Dynamic Head: 21.72

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.

LAKEWOOD CROSSING SUBDIVISION LOT 13
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480	
SOIL APPLICATION RATE:	.25 gpd/ft²	
TOTAL AREA TRENCH BOTTOM:	1440	
TOTAL LATERAL LENGTH:	480	
NUMBER OF FIELDS:	1	
LATERAL LENGTH REQUIRED PER FIELD:	480	
SUPPLY LINE LENGTH:	109	
TOTAL DYNAMIC HEAD:	21.72	
MANIFOLD SIZE:	4 in.SCH 80 PVC	
DOSING VOLUME:	219.41	
PUMP TANK DRAW DOWN*:	10.4	
SEPTIC TANK SIZE:		1000
PUMP TANK SIZE:		1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

LAKEWOOD CROSSING LOT #13

Project #: 01-1089

LAYOUT FOR 4 BEDROOM HOME — October 7, 2005

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		3.1			100.00		
TANK		9.30	93.80				
HOUSE		3.90	99.20				
INSTR. 1			103.10				
1	***RED***			***2.00***	***101.10***	***80***	***80***
2	***ORANGE***			***3.00***	***100.10***	***80***	***80***
3	***PINK***			***3.70***	***99.40***	***80***	***80***
4	***BLUE***			***4.20***	***98.90***	***80***	***80***
5	***RED***			***5.30***	***97.80***	***80***	***80***
6	***ORANGE***			***6.50***	***96.60***	***85***	***80***
7	BLUE			7.50	95.60	55	55
8	RED			8.40	94.70	55	55
9	ORANGE			9.30	93.80	53	53
10	RED			10.20	92.90	50	50
11	ORANGE			11.70	91.40	50	50
12	RED			12.50	90.60	53	53
13	ORANGE			13.30	89.80	43	43
					Total	**844**	**839**

	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.***	**PRESSURE**
Repair	359	0.25	*MOD.*	0.25	PPBPS	**MANIFOLD** LOW PRESSURE

Notes:

** TBM located on corner of lot 13 and 14 (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 - LAKEWOOD CROSSING LOT#13

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Area
1	RED	101.1	**80**	SCH 80 1/2	**5.48**	240
2	ORANGE	100.1	**80**	SCH 80 1/2	**5.48**	240
3	PINK	99.4	**80**	SCH 80 1/2	**5.48**	240
4	BLUE	98.9	**80**	SCH 80 1/2	**5.48**	240
5	RED	97.8	**80**	SCH 80 1/2	**5.48**	240
6	ORANGE	96.6	**80**	SCH 80 1/2	**5.48**	240

total	**feet =**	**480**	**gal/min =**	**32.88**
		Des. Flow	**480**	
		Pump Run=	**6.67**	
		soil LTAR	**0.25**	
		LTAR +5%	**0.2625**	
		LTAR with ACCEPTED	**0.275625**	
		LTAR with ACCEPTED + 5%	**0.28940625**	