PRESSURE MANIFOLD SYSTEM FOR WASTEWATER TREATMENT

Owner:	MID-ATLANTIC CUSTOM BUILDERS
Address:	P.O. BOX 3792 Mooresville, NC 28117
Phone:	704-202-5568
County:	Iredell
Location:	WATERTREE LANDING LOT# 76
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	35.55

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:	1000
Estimated Supply Line Length:	123
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	21.40
Dosing Volume:	182.84
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:	2.92
Elevation Head:	10.50
Total Dynamic Head:	17.73
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.

WATERTREE LANDING LOT# 76
PRESSURE MANIFOLD DESIGN

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:	123
TOTAL DYNAMIC HEAD:	17.73
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	182.84
PUMP TANK DRAW DOWN*:	8.7
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.*

WATERTREE LANDING LOT# 76

Project #: 01-1430

LAYOUT FOR 4 BEDROOM HOME

June 2, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		3.6			100.00		
INSTR. 1			103.60				
HOUSE CNR				8.30	95.30		
P. TANK				10.90	92.70		
1	RED			2.50	101.10	100	100
2	ORANGE			3.10	100.50	108	108
3	BLUE			3.30	100.30	56	56
4	***PINK***			***2.80***	***100.80***	***90***	***80***
5	***BLUE***			***3.80***	***99.80***	***80***	***80***
6	***RED***			***3.80***	***99.80***	***95***	***80***
7	***ORANGE***			***4.60***	***99.00***	***109***	***80***
8	***BLUE***			***5.60***	***98.00***	***101***	***80***
9	PINK			7.00	96.60	100	100
					Total	**839**	**764**

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
**** System***	***400***	***0.30***	***ACCEPT.***	***0.30***	***25% RED.***	**PRESSURE MANIFOLD**
Repair	364	0.30	*MOD.*	0.30	PPBPS	LOW PRESSURE

Notes:

** TBM located on left center point of lot (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 - WATERTREE LANDING LOT# 76

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Area
4	***PINK***	97.1	**80**	SCH 40 1/2	**7.11**	240
5	***BLUE***	96.9	**80**	SCH 40 1/2	**7.11**	240
6	***RED***	96.2	**80**	SCH 40 1/2	**7.11**	240
7	***ORANGE***	95.7	**80**	SCH 40 1/2	**7.11**	240
8	***BLUE***	95.4	**80**	SCH 40 1/2	**7.11**	240
	total	**feet =**	**400**	**gal/min =**	**35.55**	
			Des. Flow	**480**		
			Pump Run=	**5.14**		
			soil LTAR	**0.30**		
			LTAR +5%	**0.315**		
			LTAR with ACCEPTED	**0.4**		
			LTAR with ACCEPTED + 5%	**0.42**		