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Attached is a proposed design for a PPBPS Septic System with low pressure distribution for a 4 bedroom single family residence on Lot # 54 in WATERTREE LANDING Subdivision, Iredell County, North Carolina.

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December 6, 2007
Project #: 01-1430
Design By: Rollans Soil & Environmental Services

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	MID-ATLANTIC CUSTOM BUILDERS
Address:	P.O. BOX 3792 Mooresville, NC 28117
Phone:	704-202-5568
County:	Iredell
Location:	WATERTREE LANDING LOT 54
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	25.42

Design Specifications

Drainfield Size:	270
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	93
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	16.18
Dosing Volume:	149.54
Supply Manifold:	N/A
Supply Manifold Length:	N/A
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:	1.66
Elevation Head:	8.60
Total Dynamic Head:	14.09
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

WATERTREE LANDING LOT 54
LP PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	810
TOTAL LATERAL LENGTH:	270
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	93
TOTAL DYNAMIC HEAD:	14.09
MANIFOLD SIZE:	N/A
DOSING VOLUME:	149.54
PUMP TANK DRAW DOWN*:	7.1
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 54

Project #: 01-1430

LAYOUT FOR 4 BEDROOM HOME

December 6, 2007

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		3.4			100.00		
INSTR. 1			103.40				
HOUSE CNR				4.50	98.90		
P. TANK				6.70	96.70		
1	***ORANGE***			***3.10***	***100.30***	***75***	***75***
2	***BLUE***			***3.60***	***99.80***	***104***	***100***
3	***PINK***			***4.20***	***99.20***	***95***	***95***
4	RED			4.70	98.70	100	100
5	ORANGE			5.40	98.00	97	97
6	BLUE			5.50	97.90	90	90
7	PINK			5.90	97.50	84	84
					Total	**645**	**641**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	***270***	***0.3***	***MOD.***	***0.300***	***PPBPS***	***LOW PRESSURE***
Repair	371	0.3	MOD.	0.300	PPBPS	LOW PRESSURE

Notes:

** TBM located top of ground at EIP at corner 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

LP PPBPS TAPSHEET -WATERTREE LANDING LOT# 54

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*ORANGE*	100.3	*75*	0.156	**0.41**	225	17
2	*BLUE*	99.8	*100*	0.156	**0.41**	300	23
3	*PINK*	99.2	*95*	0.156	**0.41**	285	22
	total	**feet =**	**270**	**gal/min =**	**25.42**		62

Des. Flow	**480**
Pump Run=	**5.88**
soil LTAR	**0.3**
LTAR +5%	**0.315**
LTAR with mod.	**0.6**
LTAR with mod.. + 5%	**0.63**

.156 equals 5/32 inch hole