LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: S&L HOMES

Address: 110 Charleston Dr. Suite 108
Mooresville, NC 28117
Phone:
County: Iredell
Location: Twin Creeks Subdivision Lot 51

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: 26.24

Design Specifications

Drainfield Size: 280
Loading Rate: .3 gpd/ft.^{2}
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: 161
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 28.01
Dosing Volume: 154.37
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: 2.87
Elevation Head: 14.70
Total Dynamic Head: 22.50

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

TWIN CREEKS LOT 51
LP PPBPS

DESIGN FLOW:	480
SOIL APPLICATION RATE:	.3 gpd/ft²
TOTAL AREA TRENCH BOTTOM:	840
TOTAL LATERAL LENGTH:	280
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.67
SUPPLY LINE LENGTH:	161
TOTAL DYNAMIC HEAD:	22.50
MANIFOLD SIZE:	N/A
DOSING VOLUME:	154.37
PUMP TANK DRAW DOWN*:	7.4
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.*

LP PPBPS TAPSHEET - TWIN CREEKS LOT 51

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*BLUE*	99.5	*70*	0.156	**0.41**	210	16
2	*BLUE*	99.5	*70*	0.156	**0.41**	210	16
3	*PINK*	99.1	*70*	0.156	**0.41**	210	16
4	*PINK*	99.1	*70*	0.156	**0.41**	210	16
							64
	total	**feet =**	**280**	**gal/min =**	**26.24**		
			Des. Flow	**480**			
			Pump Run=	**5.88**			
			soil LTAR	**0.25**			
			LTAR +5%	**0.2625**			
			LTAR with mod.	**0.27**			
			LTAR with mod.. + 5%	**0.2835**			

.156 equals 5/32 inch hole

CALCULATIONS

Location TWIN CREEKS

Project Number

Lot No: Lot 51

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\,day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	161	ft.
Supply Line Volume	28.014	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	280	ft.
Gallons per Minute	26.24	$^{gal}/_{min}$
	Note: Flow/hole (.41gpm) x # of panels	
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	64	
Dosing Volume	154	gal.
	Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel	
Tank Draw Down	7.4	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	14.7	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	2.87	ft.
Total Dynamic Head (+15%)	22.50	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