LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	Anniston, LLC
Address:	17824 Statesville Rd., Suite 112 Cornelius, NC 28031
Phone:	(704) 362-5007
County:	Iredell
Location:	Anniston Lot 73
Source of Wastewater Flow:	5 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	600 gpd
System Flow:	38.13

Design Specifications

Drainfield Size:	400
Loading Rate:	0.25
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1500 gal.
Pump Tank Size:	1500 gal.
Estimated Supply Line Length:	15
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	2.61
Dosing Volume:	224.32
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:	0.45
Elevation Head:	3.80
Total Dynamic Head:	7.19
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 per lateral
Check Valves:	In Tank
Anti-Siphon Hole:	YES
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

Anniston Lot 73
LP PPBPS

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	15
TOTAL DYNAMIC HEAD:	7.19
MANIFOLD SIZE:	N/A
DOSING VOLUME:	224.32
PUMP TANK DRAW DOWN*:	7.2
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	1500 gal.

**Pump tank draw down based on a volume basis of 29 gallons per inch. Draw down may vary among pump tank manufacturers.*

Anniston Lot 73

Project #:01-1005

LAYOUT FOR 5 BEDROOM HOME

June 9, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		18.4			100.00		
INSTR. 1			118.40				
HOUSE CNR				5.40	113.00		
P. TANK				5.30	113.10		
1	***PINK***			***6.50***	***111.90***	***77***	***60***
2	***RED***			***7.70***	***110.70***	***69***	***60***
3	***ORANGE***			***9.10***	***109.30***	***72***	***60***
4	***BLUE***			***10.20***	***108.20***	***76***	***70***
5	***PINK***			***11.40***	***107.00***	***98***	***95***
6	***RED***			***12.70***	***105.70***	***55***	***55***
7	REPAIR			0.00	0.00	9820sqft	6000sqft
					Total	447	400

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
**** System***	***400***	***0.25***	***MOD.***	***0.25***	***PPBPS***	***LOW PRESSURE***
Repair	6000sqft	0.1	INNOV.	0.10	DRIP IRRIGATION	LOW PRESSURE

Notes:
** TBM located top of ground (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 - Anniston Lot 73

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*PINK*	*111.90*	*60*	0.156	**0.41**	180	14
2	*RED*	*110.70*	*60*	0.156	**0.41**	180	14
3	*ORANGE*	*109.30*	*60*	0.156	**0.41**	180	14
4	*BLUE*	*108.20*	*70*	0.156	**0.41**	210	16
5	*PINK*	*107.00*	*95*	0.156	**0.41**	285	22
6	*RED*	*105.70*	*55*	0.156	**0.41**	165	13
	total	**feet =**	**400**	**gal/min =**	**38.13**		93

Des. Flow	**600**
Pump Run=	**5.88**
soil LTAR	**0.25**
LTAR +5%	**0.2625**
LTAR with mod.	**0.5**
LTAR with mod.. + 5%	**0.525**

.156 equals 5/32 inch hole

CALCULATIONS

Location Anniston Subdivision

Project Number 01-1005

Lot No: Lot 73

No. of Bedrooms	5
Design Flow	600 $^{gal}/_{day}$
LTAR	0.25 $^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES
Supply Line Length	15 ft.
Supply Line Volume	2.61 gal.
Required Feet of Line	400 ft.
Amount of Line from Layout	400 ft.
Gallons per Minute	38.13 $^{gal}/_{min}$
	Note: Flow/hole (.41gpm) x # of panels
Required Septic Tank Capacity	1500 gal.
Minimum Standard Tank Size	1500 gal.
Panel Volume	3.6 gal.
# of Panels	93
Dosing Volume	224 gal.
	Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel
Tank Draw Down	7.2 *Generic Draw Down of 31 gal.per in.*
Pump Run Time	5.88 minutes
Elevation Head	3.8 ft.
Pressure Head	2 ft.
Friction Factor	3.03 ft./100 ft. *(From the interpolater.)*
Friction Head	0.45 ft.
Total Dynamic Head (+15%)	7.19 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