Presby Environmental, Inc.

The Next Generation of Wastewater Treatment Technology

143 Airport Rd., Whitefield, NH 03598
Tel: 800-473-5298 Fax: 603-837-9864
www.PresbyEnvironmental.com

Project: _____ Date: _____

1) Daily Design Flow = _____Bedrooms or GPD, Perc Rate = _____MPI, Soil Class = _____

A) Presby Pipe Required from Table (below) =_____ft

Minimum AES Pipe Requirements

Perc. Rate (MPI)	Bedrooms 2	3	4	5	6	Additional Room	*Commercial per 100 GPD
1-60	100	150	200	250	300	50	50
61-90*	160	240	320	400	480	80	85
	AES Pipe Required min. (ft.)						

*Note: 61-90 MPI beds limited to 500 GPD each

B) Daily Design Flow (if over 500) _____GPD ÷ 500 = _____Sections (round up to whole number)
Note: multiple beds required when flow is greater than 500 GPD for 61-90 MPI

C) Pipe Req'd (from 1A)_____ft ÷ _____Number of Sections = _____ft / section min.

2) System Sand Bed Area (SSBA)

A) Long Term Acceptance Rate = _____ GPD/sq ft (1-60 MPI use Table B, 61-90 MPI use 0.25)

Table B: Long Term Acceptance Rate (1-60 MPI)

Perc. Rate (MPI)	Soil Class I	Soil Class II	Soil Class III	Soil Class IV
≤5	1.233	1.000		
6	1.166	1.000		
7	1.133	1.000		
8	1.100	1.000		
10		1.000		
15		0.933	0.616	
20		0.883	0.566	
25		0.666	0.550	
30		0.550	0.483	
40			0.416	
50			0.333	0.333
60			0.250	0.250
	LTAR Maximum (GPD/sq. ft.)			

When percolation rate is between those listed in Table B, the next slower rate shall be used for design purposes.

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B) System Sand Bed Area (SSBA) = _____sq ft (1-60 MPI use Table C, 61-90 MPI use Table F)

Table C: System Sand Bed Area Required Minimum (1 – 60 MPI)

LTAR (GPD/sq.ft.)	Number of Bedrooms					Additional Bedroom (110 GPD)	*Commercial Per 100 GPD
	2 Bedrooms (220 GPD)	3 Bedrooms (330 GPD)	4 Bedroom (440 GPD)	5 Bedroom (550 GPD)	6 Bedroom (660 GPD)		
1.233	400	400	400	447	536	90	82
1.166	400	400	400	472	567	95	86
1.133	400	400	400	486	583	98	89
1.100	400	400	400	500	600	100	91
1.000	400	400	440	550	660	110	100
0.933	400	400	472	590	708	118	108
0.883	400	400	499	623	748	125	114
0.666	400	496	661	826	991	166	151
0.616	400	536	715	893	1,072	179	163
0.566	400	584	778	972	1,167	195	177
0.550	400	600	800	1,000	1,200	200	182
0.483	456	684	911	1,139	1,367	228	208
0.416	529	794	1,058	1,323	1,587	265	241
0.333	661	991	1,322	1,652	1,982	331	301
0.250	880	1,320	1,760	2,200	2,640	440	400
	System Sand Bed Area Minimum (sq ft)						

Table F: System Sand Bed Area (61-90 MPI)

Daily Design Flow	System Sand Bed Area Min.(sq ft)
2 Bedrooms	880
3 Bedrooms	1,320
4 Bedrooms	1,760
Each Additional Bedroom	440
Commercial per 100 GPD	400

Note: Tables C and F already include the state approved bed size reduction

3) System Slope = _____% (1-60 MPI = 25% max., 61-90 MPI systems per Table E requirements)

Table E: Allowable System Slope (61-90 MPI)

Perc. Rate Range (MPI)	System Slope Max. (%)
61-70	15
71-80	10
81-90	5

4) Presby Pipe

A) Presby Pipe Row Length to be used = _____ ft (1-60 MPI 100 ft max., 61-90 MPI per Table G)

Table G: Row Length Minimum (61-90 MPI)

Perc. Rate Range (MPI)	Bedrooms				Commercial per 100 GPD
	2	3	4	Each Add'l	
61-70	60	70	80	10	35
71-80	70	80	90	10	40
81-90	80	90	100	10	45
	Row Length Min. (ft.)				

B) Pipe Used (≥ 1A) _____ft ÷ Row Length _____ft = _____Rows
(note: number of rows must be whole number when divided by number of serial sections required from 1C)

C) Row Length _____ ft + 2 ft = _____ ft = System Sand Bed Length (SSBL)

D) (<10% 1-60 MPI) SSBA 2B = _____sq ft ÷ SSBL 4C_____ft - 2 ft = _____ Pipe Layout Width min.

(>10% 1-60 MPI) SSBA 2B = _____sq ft ÷ SSBL 4C_____ft - 5 ft = _____ Pipe Layout Width min.

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E) Pipe Layout Width from Table D = _____ft when using _____ ft Row Spacing

Table D: Number of Rows and Pipe Layout Width

Length ft.	Total Linear Feet of Enviro-Septic®													
30	60	90	120	150	180	210	240	270	300	330	360	390	420	450
35	70	105	140	175	210	245	280	315	350	385	420	455	490	525
40	80	120	160	200	240	280	320	360	400	440	480	520	560	600
45	90	135	180	225	270	315	360	405	450	495	540	585	630	675
50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
55	110	165	220	275	330	385	440	495	550	605	660	715	770	825
60	120	180	240	300	360	420	480	540	600	660	720	780	840	900
65	130	190	260	325	390	455	520	585	650	715	780	845	910	975
70	140	210	280	350	420	490	560	630	700	770	840	910	980	1050
75	150	225	300	375	450	525	600	675	750	825	900	975	1050	1125
80	160	240	320	400	480	560	640	720	800	880	960	1040	1120	1200
85	170	255	340	425	510	595	680	765	850	935	1020	1105	1190	1275
90	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350
95	190	285	380	475	570	665	760	855	950	1045	1140	1235	1330	1425
100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
# of Rows	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Spacing														
1.50	2.50	4.00	5.50	7.00	8.50	10.00	11.50	13.00	14.50	16.00	17.50	19.00	20.50	22.00
1.75	2.75	4.50	6.25	8.00	9.75	11.50	13.25	15.00	16.75	18.50	20.25	22.00	23.75	25.50
2.00	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00	25.00	27.00	29.00
2.25	3.25	5.50	7.75	10.00	12.25	14.50	16.75	19.00	21.25	23.50	25.75	28.00	30.25	32.50
2.50	3.50	6.00	8.50	11.00	13.50	16.00	18.50	21.00	23.50	26.00	28.50	31.00	33.50	36.00
2.75	3.75	6.50	9.25	12.00	14.75	17.50	20.25	23.00	25.75	28.50	31.25	34.00	36.76	39.50
3.00	4.00	7.00	10.00	13.00	16.00	19.00	22.00	25.00	28.00	31.00	34.00	37.00	40.00	43.00
3.25	4.25	7.50	10.75	14.00	17.25	20.50	23.75	27.00	30.25	33.50	36.75	40.00	43.25	46.50
3.50	4.50	8.00	11.50	15.00	18.50	22.00	25.50	29.00	32.50	36.00	39.50	43.00	46.50	50.00
3.75	4.75	8.50	12.25	16.00	19.75	23.50	27.25	31.00	34.75	38.50	42.25	46.00	49.75	53.50
4.00	5.00	9.00	13.00	17.00	21.00	25.00	29.00	33.00	37.00	41.00	45.00	49.00	53.00	57.00
4.25	5.25	9.50	13.75	18.00	22.25	26.50	30.75	35.00	39.25	43.50	47.75	52.00	56.25	60.50
4.50	5.50	10.00	14.50	19.00	23.50	28.00	32.50	37.00	41.50	46.00	50.50	55.00	59.50	64.00
4.75	5.75	10.50	15.25	20.00	24.75	29.50	34.25	39.00	43.75	48.50	53.25	58.00	62.75	67.50
5.00	6.00	11.00	16.00	21.00	26.00	31.00	36.00	41.00	46.00	51.00	56.00	61.00	66.00	71.00
	Pipe Layout Width ft. (outermost edges of rows)													

5) System Sand Bed Dimensions

A) Calculate System Sand Bed Length (SSBL):

Row Length _____ ft + 2 ft = _____ft System Sand Bed Length (SSBL)

B) Calculate System Sand Bed Width (SSBW):

1) SSBA (from 2B) _____ sq ft ÷ _____ ft SSBL = _____ ft SSBW min.

2) Pipe Layout Width = _____ft + 2 ft = _____ft SSBW needed to cover all Presby Pipes

3) Beds >10% Slope: PLW = _____ ft + 5 = _____ft SSBW with System Sand Extension

4) System Sand Bed Width used = _____ft (B1, B2 or B3 above - whichever is larger)

C) System Sand Bed Area Provided (SSBA):

SSBL (from A) = _____ft x _____ft SSBW (from B4) = _____sq ft SSBA provided

Notes: _____

_____

_____

_____

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6) System Illustration (optional):